

# Towards a New Era of Retail

A Dynamic Capabilities Analysis into Omni Channel Retailing  
Transformation

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## **Intellectual property and publication statements**

The candidate confirms that the work submitted is her own and that appropriate credit has been given where reference has been made to the work of others.

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*“...eftir allt saman verður þetta þess virði”<sup>1</sup>*

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<sup>1</sup> Artist: Auður. Title: Hvítur og tvítugur. Album: Afsakanir.

## **Abstract**

With the retail industry experiencing both domestic challenges and global competition, retailers are increasingly adopting Omni channel retailing (OCR) to survive. OCR is a customer centric strategy designed to achieve the integration of all available channels so a seamless and personalised customer experience can be achieved. In this context the main purpose of this research is to investigate how retail firms transform in a highly dynamic marketplace by identifying the specific processes, microfoundations and types of dynamic capabilities (DCs) developed and deployed. The DCs theory was adopted as it aims to explain how firms can develop new capabilities to maintain evolutionary fitness. Due to the novelty of the phenomenon examined, the current study adopts an inductive case study approach. Four case studies of OCR firms form the foundations of this research, supported by one System expert case and one Cross-industry case. Multiple sources of evidence were collected to address validity, reliability and generalizability. Semi-structured interviews were chosen as primary data source. Overall, twenty-six interviews were conducted between February 2017-2019. Secondary data sources include both internal confidential documents and external public documents. The findings indicate that successful transformation requires developing twenty-five processes in seven microfoundational clusters that aggregate to twelve second-order DCs and eight higher-order DCs to continuously sense, seize and transform. Furthermore, the findings suggest that OCR is an eternal transformational process. The current study provides theoretical underpinnings and empirical understanding into OCR transformation which to date has mainly been conceptual and industry driven and explains how retail firms can maintain evolutionary fitness in a highly dynamic environment. The frameworks emerging from the study explain how retail firms can transform their resource base which can help retail firm owners, executives, managers and industry associations to understand how better to transform in a highly dynamic environment. Our research advances the extant dynamic capabilities (DCs) literature by contributing to the knowledge of the microfoundations and processes deployed for sensing, seizing and transforming and their sequencing into distinct types of second-order and higher-order DCs.

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## **List of acronyms**

AMCs	Adaptive marketing capabilities
AC	Absorptive capacity
B2B	Business-to-business
BM	Business model
CX	Customer experience
CXM	Customer experience management
CRM	Customer relationship management
DCs	Dynamic capabilities
DRCs	Dynamic retailing capabilities
IT	Information technology
KPIs	Key performance indicators
MO	Market orientation
MCR	Multi-channel retailing
OCs	Ordinary capabilities
OCM	Omni channel marketing
OCR	Omni channel retailing
PMO	Proactive market orientation
RBV	Resource based view of the firm
RFID	Radio frequency identification
RMO	Responsive market orientation
VUCA	Volatile, uncertain, complex and ambiguous

# INTRODUCTION

## 1. Introduction

The retail landscape has become more dynamic than ever before, driven by increasing customer expectations (Rigby, 2011) and changes in purchase behaviour (Verhoef et al., 2015). Omni channel retailing (OCR) has emerged as ‘the’ strategy for retailers who wish to survive in this highly dynamic environment. OCR is a customer centric strategy designed to achieve the integration of all available channels so a seamless and personalised customer experience can be achieved. The main objective of this study is to answer a call for more theoretical understanding and empirical knowledge about OCR (Verhoef et al., 2015, Beck and Rygl, 2015, Saghiri et al., 2017, Galipoglu et al., 2018), specifically to identify how organisations can transform from multi-channel retailing (MCR) to OCR in a highly dynamic retail environment.

Research into OCR is still in its infancy and to date no knowledge exists about the distinct dynamic retailing capabilities (DRC) needed for successful OCR transformation. This research aims to fill this gap in the literature. In doing we aim to advance the knowledge of developing DCs for OCR transformation by empirically investigating the adoption of OCR at the organisation level through the lens of the dynamic capabilities (DCs) theory.

The DCs theory was chosen as a theoretical lens as it aims to explain how organisations can change to adapt to dynamic market changes. We employ Teece’s (2007) DCs framework as the backbone of our research framework. A specific focus is on identifying the specific types of higher-order and second-order sensing, seizing and transforming DCs (Day and Schoemaker, 2016), associated microfoundations and processes (Teece, 2007). While there is vast amount of research on DCs it has primarily been conceptual (Helfat and Peteraf, 2009) and there is a call for more knowledge of how organisational adaption processes connect with higher order sensing, seizing and transforming DCs (Schoemaker et al., 2018). Furthermore, empirical research has mainly focused on identifying the microfoundations for successful product-, technology- and service transformation (Kindström et al., 2013) while limited knowledge exists about successful customer centric transformation, specifically in the retail industry.

The main research question addressed here is: *How do retail firms transform to OCR in a highly dynamic environment?* An inductive research approach is adopted to enhance the current DCs theory by empirically investigating sensing, seizing and transforming in a real life setting and to inductively identify the microfoundations, processes and types of DCs involved (Dubois and Gadde, 2002). Deploying a case study design (Eisenhardt, 1989, Cassel and Symon, 1994) our study contributes to the understanding of how retail firms can develop DRCs which includes a framework for OCR transformation that consists of a hierarchy of DCs in each cluster of sensing, seizing and transforming.

## **2. Motivation of the study: A new era of retail**

The motivation for this study is presented in this chapter which due to the novelty of the phenomenon includes a discussion of both academic and industry research. First, the dynamism of the retail environment and the retail strategy evolution is discussed. Second, the OCR phenomenon is presented which includes OCR definitions and key features. The chapter concludes by addressing the identified knowledge gap motivating the study.

### **2.1 The dynamic retail environment**

Traditional retailing has significantly transformed in the past two decades. The advent of the Internet in the 1990s enabled pure online retailers such as Amazon.com to enter the traditional retail market, which tremendously increased the competition for traditional physical store retailers. However, it wasn't long until traditional retailers started to adopt e-commerce capabilities (Prasarnphanich and Gillenson, 2003, Kalakota and Robinson, 1999). But the development of new technology and the emergence of new channels such as social media and mobile in the 2000s significantly transformed customers purchase behaviours, needs and expectations (Verhoef et al., 2015). This evolution has resulted in a more competitive retail environment than ever before (Brynjolfsson et al., 2013, Guillot, 2015), store visits are declining year on year (Sopadjieva et al., 2017) and retailers are struggling to survive.

Store closures on UK high streets and the loss of retail jobs has become daily news. For example, in 2016, British Home Store went out of business after 88 years of trading which resulted in 11.000 jobs lost (Ruddick, 2016), followed by Woolworth closing 807 stores and 27.000 people losing their jobs in 2018, Maplin electronics and Toy's R US closing all stores

in 2018 (Butler, 2018), Arcadia announced 23 store closures in 2019 (Jahshan, 2019), Debenhams announced 22 store closures in 2019 (Stevens, 2019), Select announced store closures with the loss of 2000 jobs in 2019 (Nazir, 2019a), M&S announced 100 store closures by 2020 (Nazir, 2019b), and this is just to name a few. In 2018 it was reported that 14 stores were closing down daily on average (Stevens, 2018) and in October 2019 it was reported that 3.200 stores had closed down on the high streets in the past four years (Szajna-Hopgood, 2018). And it is not just UK retailers that are struggling. In the US, the department store giant Sears filed for bankruptcy in 2018 (Garcia, 2018) and in May 2019, 6.378 store closures were announced by retailers with an estimation of 12.000 stores closing down in total (Unglesbee, 2019). To survive, compete and differentiate in this dynamic retail environment, retailers are advised to transform their traditional retail strategies and adopt OCR (Rigby, 2011, Forrester, 2014, Verhoef et al., 2015, von Briel, 2018, Forrester, 2018). Consequently, retail brands like Abercrombie and Fitch announced adopting OCR to survive (Banker, 2018) and Pets at Home has strengthened its position as a leading UK pet care retailer by adopting OCR (Briggs, 2019).

OCR has become the strategy in a new 20<sup>th</sup> century retailing era “*when digitalization social media, big data and other emerging technologies (e.g. Artificial Intelligence (AI), virtual reality (VR), augmented reality (AR), blockchain etc) are transforming the retail business model*” (Cai and Lo 2020, p.1). One of the major challenges identified for traditional retailers and brand manufacturers in this new retailing era is the transformation of the supply chain as it requires aligning the supply chain strategy to OCR. The alignment requires ‘traditional’ product focused retail supply chain operation models to become “*customers oriented, data driven, and provide cross channel services and experiences for both internal and external users* (Deloitte, 2017).

Before investigating OCR transformation it is important to clearly define the terms ‘retailer’ and ‘retailing’ (Peterson and Balasubramanian, 2002) as the terms are often mistakenly used interchangeably. A summary of selected retailer definitions are presented in table 2.1. and retailing definitions in table 2.2.

Table 2.1 Selected retailer definitions

Definition	Source
<i>“Any individual, firm, or corporation that performs the last step in the marketing of goods from producer to consumer. He buys from wholesaler, commission merchant, or manufacturer and sells direct to consumer. To be significant as a distinct economic unit, the retailer must act as a purchasing agent for the community rather than as a distributing agent for manufacturers”</i>	Wingate (1931)
<i>“firms engaged primarily in retailing”</i>	James, Walker & Etzel, 1981
<i>“merchant whose primary activity is to sell directly to consumers”</i>	Rosenberg, 1993
<i>“a business that sells products and services to ultimate consumers”</i>	Levy & Weitz, 1996
<i>“any business establishment that directs its marketing effort toward the final consumer for the purpose of selling goods or services”</i>	Lewison, 1997
<i>“any establishment engaged in selling merchandise for personal or household consumption and rendering services incidental to the sale of such goods”</i>	Baker, 1998

Source: Adapted from Peterson and Balasubramanian, 2002, p.10.

Based on these selected definitions, a retailer and retailing are both focused on advertising and selling products and services directly to a consumer, however there is also a clear distinction between the two. A retailer is the business (i.e. retailer stores such as a department store, supermarket, specialty store, discount store, online store etc.) whereas retailing is the numerous activities performed by the retailer, such as advertising, selling and distributing products and services (Peterson and Balasubramanian, 2002).

Table 2.2 Selected retailing definitions

Definition	Source
<i>“The activities of the merchant in bringing about the most advantageous proportion between sales, stocks, and profits. It includes not only the buying of goods, but the active solicitation of the patronage of customers through aggressive promotion of sales.”</i>	Fri, 1925
<i>“All the activities associated with the sale of offerings for final consumption.”</i>	James, Walker, & Etzel, 1981
<i>“Consists of the selling of goods and services to their ultimate consumers, that is, individuals who buy something for personal or household use.”</i>	Morgenstein & Strongin, 1983
<i>“Process of selling goods and services to ultimate consumers, or those buying on behalf of such consumers, particularly when carried out through store outlets and, when further specified, mail order, etc.”</i>	Baron, Davies, & Swindley, 1991
<i>“Form of distribution that involves selling goods or services to final consumers to fill their needs and wants; all the activities that must take place before the retailer can sell the goods (services); and including an exchange process between consumer and retailer.”</i>	Burstiner, 1991
<i>“Consists of all activities involved in the sale of goods and services to the ultimate consumer.”</i>	Mason, Mayer, & Ezell, 1991
<i>“The activities involved in selling goods or services to ultimate consumers who purchase them for personal or household use.”</i>	Caruth & Stovall, 1994
<i>“All activities involved in the marketing of goods and services directly to consumers.”</i>	Lucas, Bush, & Gresham 1994

<i>“A set of business activities carried on to accomplishing the exchange of goods and services for purposes of personal, family, or household use, whether performed in a store or by some form of non-store selling.”</i>	Bennett, 1995
<i>“The promoting and selling of merchandise directly to customers, augmented by advertising, store promotions, and personal contacts in the community where the retailer’s outlet is located. Retailing is the selling of finished goods and services to the consumer for personal or family consumption. It includes store retailing, such as department stores, nonstore retailing, such as direct selling and mail order, or service retailing, such as dry cleaning.”</i>	Cross, 1995
<i>Retailing (retail trading): “All business activities involved in selling goods and services directly to ultimate or final users for personal, nonbusiness consumption or use.”</i>	Koschnick, 1995
<i>“The set of business activities involved in selling products and services to ultimate consumers.”</i>	Levy & Weitz, 1996
<i>“Consists of the final activity and steps needed to place merchandise made elsewhere in the hands of the consumer or to provide services to the consumer.”</i>	Dunne & Lusch, 1999
<i>“Business activities involved in selling goods and services to consumers for their personal, family, or household use.”</i>	Berman & Evans, 2001

Source: Adapted from Peterson and Balasubramanian, 2002, p.10.

The focus of our study is to investigate specifically the retailing transformation required for OCR. We adopt the definition by Cross (1995, p.312) that retailing is *“The promoting and selling of merchandise directly to customers, augmented by advertising, store promotions, and personal contacts in the community where the retailer’s outlet is located. Retailing is the selling of finished goods and services to the consumer for personal or family consumption. It includes store retailing, such as department stores, nonstore retailing, such as direct selling and mail order, or service retailing, such as dry cleaning”*. While OCR is applicable and has been adopted by service providers, such as Netflix and Spotify, and brand manufacturers (selling through retailers), such as Hummel and Proctor & Gamble, our study focuses on the transformation of the retailing activities (performed by retailers) involved of promoting, selling and distributing products directly to consumers, namely OCR.

An overview of the retailing strategy evolution towards OCR will now be discussed, highlighting key features and difference between each strategy. Section 2.3 then specifically discusses OCR in detail.

## **2.2 The retail strategy evolution**





Retailing strategies have evolved from a single channel strategy, to multi-channel strategy, cross-channel strategy and finally to Omni-channel strategy. Retailers adhering to a single

channel strategy provide customers with a single channel to research, purchase, collect and return products but with the emergence of the internet, retailers started adopting a multi-channel strategy by adding the online channel, the mobile channel and social media channels to the retail channel mix. A multi-channel retailer operates all available channels in silos (Picot-Coupey et al., 2016, Beck and Rygl, 2015), such as separate online and physical store. With the enhancement of new technology solutions, multi-channel retailers were able to further evolve and adopt an integrated cross-channel strategy, enabling customers cross-channel movements (Picot-Coupey et al., 2016) and cross-channel information sharing, such as providing information about store assortment availability online and store location information (Herhausen et al., 2015).

While operating a cross-channel strategy enables customers to use multiple channels simultaneously (e.g. e-commerce, physical stores, mobile and social media) and to interact with retailers throughout the purchase journey (from awareness to purchase and after sales activities) (Shankar et al., 2011) for both transactional purposes, (e.g. buying and exchanging products, as well as non-transactional purposes (e.g. product feedback and product information search) (Polo and Sese, 2016) cross-channel strategy does not meet today's customer expectations for a seamless shopping experience (Verhoef et al., 2015, Rigby, 2011, von Briel, 2018, Forrester, 2014, Forrester, 2018). The cross-channel retail strategy has therefore further advanced to what is referred to as OCR. Retailers operating OCR enable customers to move seamlessly between all available channels and touchpoints throughout the purchase journey; *“while the emergence of new channels has transformed the retail industry over the last decades, over the next decade the retail industry's ongoing transformation will be driven by the integration of these and other channels in to a single seamless customer experience: Omni channel retail”* (von Briel, 2018, p. 217). The key difference between OCR and preceding retail strategies is the focus. Single-, multi- and cross channel strategies are primarily channel focused whereas OCR focuses on the customer experience and the primary goal is to create seamless and personalised shopping experiences (Verhoef et al., 2015, Rigby, 2011, von Briel, 2018, Forrester, 2014, Forrester, 2018). Hence, in OCR the customer is at the heart of decision making. Figure 2.1 summarizes the key features and differences between each of the retail strategies discussed.



Figure 2.1. Key features of the retail strategies

Retail Strategy	Single-channel	Multi-channel	Cross-channel	Omni-channel
				
Number of Channels	One channel	Multiple channels and brand touch points	Multiple channels and brand touch points	Multiple channels and brand touch points
Channel Type	Transactional	Transactional & non transactional	Transactional & non transactional	Transactional & non transactional
Channel Integration	NA	No channel integration	Partial to full channel integration	Full channel integration
Retail Strategy focus	Channel focus: Focuses on meeting the retailer's needs	Channel focus: Focuses on meeting the retailer's needs	Channel focus: Focuses on meeting the retailer's needs	Customer focus: Focuses on meeting target customer needs and expectations
Customer experience	Channel experience	Channel experience	Channel experience	Brand experience
Customer journey	One channel	Siloed	Fragmented	Seamless
Retailer activities / capabilities	Single channel operations	Siloed channel operations	Integrated but channel focused operations	Seamless customer journey operations

Source: Critical analysis and synthesis<sup>2</sup>

### 2.3 Omni-channel retailing

The word omni is a Latin prefix which means ‘all’ or ‘every’, but a mutual definition for OCR has not been reached among research scholars (Beck and Rygl, 2015) or industry practitioners (eMarketer, 2017). This section starts by reviewing existing OCR definitions, followed by a discussion of OCR key features.

A summary of selected key definitions is presented in table 2.3. Rigby (2011) provided the first definition of OCR which emphasises integration between the physical store and the online store to enhance the customer shopping experience; “*an integrated sales experience that melds the advantages of physical stores with the information-rich experience of online shopping*” (p. 67). In a similar vein but adding more channels, Beck and Rygl (2015) define OCR in terms of full customer interactions and full retailer integration on all available and widespread channels; which they define as the physical store, online store, mobile store, catalogue and phone. Verhoef et al. (2015) adopt the notion of multiple channels and additionally add optimizing

<sup>2</sup> Images adapted from industry. Omni channel image is the authors creation, published on the authors website: [www.beomni.is](http://www.beomni.is)

channel performance by defining OCR as: *“the synergistic management of the numerous available channels and customer touchpoints, in such a way that the customer experience across channels and the performance over channels is optimized”* (p. 176). This is supported by Picot-Coupey et al. (2016) who add the notion of a seamless customer experience by defining OCR as: *“a strategy that manages channels as intermingled touch points to allow consumers to live a seamless experience within a brand ecosystem”* (p. 342). Accordingly, in an explanatory paper describing the successful OCR transformation at the European sports brand Hummel, OCR is referred to as *“delivering a seamless customer experience”* (Hansen and Sia, 2015 p.51).

Table. 2.3 Omni channel definitions

Author	Omni channel definitions
Rigby (2011)	<i>“An integrated sales experience that melds the advantages of physical stores with the information-rich experience of online shopping”</i>
Levy et al. (2013)	<i>“A coordinated multichannel offering that provides a seamless experience when using all of the retailers shopping channels”</i>
Beck and Rygl (2015)	<i>“Full interaction can be triggered by customer” and “full integration is controlled by retailer” on “all channels widespread at that time”</i>
Verhoef et al. (2015)	<i>“The synergistic management of the numerous available channels and customer touchpoints, in such a way that the customer experience across channels and the performance over channels is optimized”</i>
Picot-Coupey et al. (2016)	<i>“A strategy that manages channels as intermingled touch points to allow consumers to live a seamless experience within a brand ecosystem”</i>
Brynjolfsson et al. (2016)	<i>“Seamless Omni channel retailing experience”</i>
Guillot (2016)	<i>“Retailers are blending their operations into a seamless experience the industry calls omni channel retailing”</i>
Hansen and Sia (2015)	<i>“Delivering a seamless customer experience”</i>
Saghiri et al. (2017)	<i>“Aims to coordinate processes and technologies across supply and sales channels”</i>
von Briel (2018)	<i>“Omni channel retailing refers to the integration of retail channels like stores, online, and mobile into a single seamless customer experience”</i>
Wulf (2019)	<i>“Customer interactions in B2C markets that create value by relating to the complete scope of channels and customer lifecycle phase”</i>

Despite the lack of a mutual definition for OCR, we find from our critical analysis and synthesis that the available definitions share two key features; (1) cross-channel integration and (2) seamless customer experience. Each key feature will now be discussed in turn.

### 2.3.1 Cross-channel integration

Cross-channel integration is a key feature of OCR as it facilitates seamless purchase experiences (von Briel, 2018). Retail channels are specifically defined as: *“a customer contact point or a medium through which the company and the customer interact”* (Neslin et al., 2006,

Beck and Rygl, 2015 p.170). Chen and Lamberti (2016) specifically identify twenty-five channels used by firms which they categorize into three channel groups: (1) traditional channels; mass media, outlets, call-centre and industry specific initiatives (i.e. trade shows), (2) Internet-enabled channels; websites, social networks, email, text messages and web applications and (3) the mobile channel (m-commerce). Whereas other scholars have made a distinction between traditional channels and brand touch points. Traditional retail sales channels operate as transactional channels, such as physical stores and e-commerce (Verhoef et al., 2015, Rigby, 2011), defined as “*channels that involve direct profitable interactions between customers and the firm*” (Polo and Sese, 2016 p.5). Contrastingly, brand touch points are non-transactional channels, such as advertising channels like television and radio (Verhoef et al., 2015, Rigby, 2011), defined as “*customer interactions with the firm that do not immediately contribute to profits*” (Polo and Sese, 2016 p.5). The benefits and perceived costs of each channel has been found to influence what channel the customer chooses to use (Polo and Sese, 2016). For instance, customers use online channels for detailed product information and reviews, price comparison and convenience, while they use physical stores for personal interaction, to return and collect products, to touch and try products and to enjoy shopping as an experience (Rigby, 2011, Prasarnphanich and Gillenson, 2003). Overall, customers choose different channels for transactional purposes, such as buying and exchanging products, and non-transactional purposes, like giving product feedback and searching for product information (Polo and Sese, 2016).

Despite the individual channel features and usage differences identified, the boundaries between online and offline channels are blurring (Brynjolfsson et al., 2013). This is mainly due to the rise of digital channels; such as mobile, social media (Verhoef et al., 2015), smartphones and apps, which has resulted in global customer connectivity and as a result changed customers purchase behaviors (Grewal et al., 2017). Consumers no longer think in terms of individual channels but use numerous channels simultaneously and for multiple purposes; such as e-commerce, mobile and physical stores to simultaneously research, shop and after for sales services (Shankar et al., 2011). This evolution has become a major challenge for retailers, especially in mature markets (Reinartz et al., 2011), as it requires them to “*create seamless shopping experiences and offerings across all channels, including not just well-established brick and mortar stores, catalogues and online stores but also mobile apps and social media*” (Grewal et al., 2017, p. 261).

The development of seamless shopping experiences requires retailers to shift from silo operated channels to seamlessly integrated channels (Rigby, 2011). Cross-channel integration refers to the integration of online and offline channels with the primary aim to “*provide a superior customer experience that is consistent and seamless across channels*”(Goersch, 2002, p. 757). Cao and Li (2015) define cross-channel integration as: “*the degree to which a firm coordinates the objectives, design, and deployment of its channels to create synergies for the firm and offer particular benefits to its consumers*” (p. 200). Contrastingly, Beck and Rygl (2015) claim that cross-channel integration does not include all ‘widespread’ channels (which need to be defined) but does enable customers to initiate interactions with the retailer on multiple channels which entails full integration by the retailer on those channels. Additionally, cross-channel integration does not mean doing everything on all channels, but to create channel synergies and to optimize each individual channel. Retailers are therefore advised to utilize any capability and advantage they have built within each channel (Rigby, 2011, Prasarnphanich and Gillenson, 2003). According to Chen and Lamberti (2016) retailers can e.g. obtain channel synergies by using mass media to communicate practical information to the target customer, physical outlets for transaction purposes, social networks to interact with customers, email/SMS to provide target customers with tailored solutions and mobile for both communication and transaction purposes.

From a performance perspective, cross-channel integration has mainly been found to have a positive impact. Cao and Li (2015) find that channel integration positively affects sales growth through improved consumer trust, increased consumer loyalty, higher consumer conversion rates and greater opportunities to cross sell, but also find that loss of special channel features can negatively impact sales growth. Herhausen et al. (2015) identify that integration of the physical store into the online channel provides competitive advantage and channel synergies and enhances customers search, purchase intentions and willingness to pay in the online channel. Gallino et al. (2017) find that using centralised warehouse inventory to fulfil Click and Collect orders (i.e. buy online, collect in store) results in higher contribution from low selling products on total sales whereas Akturk et al. (2018) find that fulfilling Click and Collect orders using centralised warehouse inventory results in an increase in store sales but a decrease in online sales and also results in an increase in online purchase returns to physical stores which in turn result in additional in store sales. Despite the positive impact of cross-channel

integration on retailers' overall performance a 2019 survey conducted in 12 countries reports that only 32% of retailers have developed Click and Collect capabilities (Adyen, 2019).

### 2.3.2 The customer experience

The second key feature of OCR is the customer experience (CX) which has become a top priority among business executives (Foresee, 2015); *“after decades of adding new channels to the retail mix, the retail industry will move in the next decade toward integrating these channels into a seamless omnichannel experience”* (von Briel, 2018, p. 224). A mutual definition for the CX does not exist. Meyer and Schwager (2007) define CX as *“the internal and subjective response customers have to any direct or indirect contact with a company”* (p.118) whereas Verhoef et al. (2009) suggest a more holistic definition of the CX to entail the whole customer journey, which includes; search, purchase, consumption and after sales. From an industry perspective, the CX is primarily about creating competitive advantage; *“customer experience is about strategic questions. It's not that necessary for brands to create great customer experiences, but to create better customer experiences than their competitors, which lies with your resources and capabilities”* (BusinessReporter, 2016).

It is argued that customers *“will continue to seek out and remain loyal to those retailers that deliver the best value and a great experience”* (Grewal et al., 2009, p. 8). In that vein, distinct elements have been identified to influence the CX which the retailer either has control of such as assortment and price, or no control of such as the purpose of the purchase. Additional influential elements include; the social environment, the service interface, the retail atmosphere, promotions, customer experience in other channels, the retail brand (Verhoef et al., 2009), goals, schema, information processing, memory, involvement, attitudes, affect, atmospherics, attributions and choices (Puccinelli et al., 2009). Puccinelli et al. (2009) further identify that each CX element plays a distinct role on different steps of the customer journey.

Retailers can also improve the CX using smart retail technologies, which has been labelled as 'smart' CXs and defined as *“a component of smart retailing which focuses specifically on the technology-mediated (e.g. connected technology like Internet of Things) retailing experience”* (Roy et al., 2017, p. 258). Smart retailing enables retailers to provide seamless CXs by e.g. using tablets and interactive screens in store and by providing customers with free Wi-Fi to track their behaviours. Roy et al., (2017) differentiate between smart retailing and smart

retailing technologies. They define smart retailing as *“an interactive and connected retail system which supports the seamless management of different customer touchpoints to personalize the customer experience across different touchpoints and optimize performance over these touchpoints”* (p.259) whereas the authors define smart retailing technology as *“value-creating, connected and synchronized smart objects or devices that interact with one another, sense the environment and guide and control their functions autonomously”* (p. 258). Examples of smart retailing technologies include interactive displays, smart shopping carts, radio frequency identification (RFID), augmented reality technologies (Roy et al., 2017), smart speakers and voice assistants (Adyen, 2019). Investing in smart retailing enables retailers to develop new capabilities such as monitoring and optimizing (Porter and Heppelmann, 2014) and further provides new opportunities to sell and engage with customers (Adyen, 2019). The main purpose of introducing new technology in store should however be to improve the customer experience and new technology should not be implemented if it becomes a barrier for customers that are less familiar with the new technology (Piotrowicz and Cuthbertson, 2014).

Managing the CX requires the retailer to *“engineer the customer’s experience in such a way as to create value both to the customer and the firm”* (Verhoef et al., 2009, p.38). In that vein a distinction is made between CX management (CXM), customer relationship management (CRM) (Verhoef et al., 2009) and market orientation (MO) (Homburg et al., 2017). According to Verhoef et al. (2009) CXM focuses on the customer’s current experience, defined as *“a business strategy designed to manage the customer experience. It represents a strategy that results in a win-win value exchange between the retailer and its customers”* (Grewal et al. 2009, p.1). Homburg et al. (2017) add cultural mindset and sustaining customer loyalty to their CX definition *“the cultural mindsets towards customer experiences, strategic directions for designing customer experiences, and firm capabilities for continually renewing customer experiences, with the goals for achieving and sustaining long-term customer loyalty”* (p.384). Additionally, the authors argue that CXM is a ‘higher order resource’ with the primary goal of developing profitable customer relationships which requires cross-channel integration and personalisation enabled by *“effective use of market data through the periodic planning implementation and monitoring of customer relationships”* (p.395).

Contrastingly, CRM focuses on documented history of the CX (Verhoef et al., 2009). The primary goal of CRM is achieving customer loyalty and long-term growth which requires “*effective use of market data through the continual design, prioritization, monitoring and proactive adaptation of customer experiences*” and a cultural mindset focused on ‘experiential response, touchpoint journey and alliance orientation’. Developing CXs that drive loyalty requires “*thematic cohesion, consistency, context sensitivity and connectivity of touchpoint journeys*” (Homburg et al., 2017 p.395).

Lastly, the primary goal of MO is to satisfy the customer which requires “*effective use of market data through generating, interpreting and disseminating relevant data within the organisation*” (Homburg et al., 2017, p.395) and a cultural mindset focused on ‘customer orientation, cross functional coordination and competitor orientation’ (Homburg et al., 2017). To summarize, CXM, CRM and MO each have different customer centric goals; i.e. retention (CXM), loyalty (CRM) and satisfaction (MO) as well as different performance goals; i.e. profit maximisation (CXM), long-term growth (CRM) and market performance (MO).

### 2.3.3 The customer journey

The CX entails the whole customer journey, from search, to purchase, to consumption and after sales services (Verhoef et al., 2009). Yet depending on the industry, the stages of the customer journey may differ. Deloitte (2014) breaks the customer journey into five stages: awareness, research, purchase, fulfilment and loyalty, while Saghiri et al. (2017) propose four stages; pre-purchase, payment, delivery and return, and suggest that each stage can include numerous channel types and channel agents (i.e. the unit or firm that manages the channel type). Researching the insurance industry, Barwitz and Maas (2018) identify eight stages of the customer journey to be; need recognition, search, evaluation, purchase, in-force (contract duration), claim, contract adaption and contract termination. Lemon and Verhoef (2016) categorise the individual stages of the customer journey into three phases; pre-purchase phase, purchase phase, and post-purchase phase. From a customer perspective, Puccinelli et al. (2009) identify five key decision making stages to be; need recognition, information search, evaluation, purchase and post-purchase. As such, each phase of the customer journey consists of specific customer behaviours and needs (Lemon and Verhoef, 2016).

An OCR journey enables customers to move seamlessly between each stage (Saghiri et al., 2017). As such, a customer can e.g. become aware of a product on Instagram (one channel and customer journey stage), research and add the product to basket on mobile (another channel and customer journey stage), place the order on laptop (another channel and customer journey stage), collect the product in store (another channel and customer journey stage) and provide feedback via email (another channel and customer journey stage). This is an example of a linear customer journey, moving seamlessly from one stage to the other. It has however been identified that the customer journey is indeed complex, individualistic (Barwitz and Maas, 2018), dynamic and iterative (Lemon and Verhoef, 2016).

Based on the discussion in this section we find that OCR has two key features that further advance the features derived from existing definitions at the start of this chapter. We find the key features of OCR to be; (1) seamless customer journey; which consists of different, individual and iterative stages, includes all available channels and touchpoints and is enabled by cross-channel integration and (2) personalised customer experience; to meet individual customer needs and expectations throughout the seamless journey aimed at long-term success (Figure 2.2). Through a process of synthesis and interpretation the following definition is proposed;

*Omni channel is a customer centric retail strategy, aimed at long-term success by to providing seamless customer journeys and personalised experiences throughout.*

## **2.4 Knowledge gap**

Adopting OCR to meet customer expectation for a seamless and personalised shopping experience requires retailers to develop new capabilities by building on existing retailing capabilities (Prasarnphanich and Gillenson, 2003). While research on OCR capabilities has started to emerge, it is still in its infancy and to date has mainly been conceptual and industry driven. Current OCR studies have identified several distinct ordinary OCR capabilities (OCs) that retail firms need to develop however existing evidence indicates that OCR literature lacks<sup>3</sup> knowledge about how retail firms change existing retailing capabilities to develop these new OCR capabilities (reviewed in detail in chapter 4. Developing OCR capabilities). Additionally,

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<sup>3</sup> To the best of the researcher's knowledge, March 2020



there is a call for more theoretical understanding and empirical knowledge of OCR (Beck and Rygl, 2015, Verhoef et al., 2015, Saghiri et al., 2017). The identified knowledge gap is the main motivation and contribution of this study, generating the overarching research question; *How do retail firms transform to OCR in a highly dynamic environment?*

The thesis is structured as follows.

### **Chapter 3: Dynamic capabilities literature review**

The purpose of this chapter is threefold. First, to present the theory motivating this study. Second, to identify key components of the DCs theory to inform the development of the research framework. Third, to address how existing theoretical knowledge can be advanced to inform the research questions. This chapter starts with a brief discussion of the firm's resource base which includes the firm's resources, capabilities and DCs. Second, the key features of DCs are discussed, which includes the nature and role of DCs, developing DCs and the outcome of developing DCs. Third, this chapter reviews existing literature for each sensing, seizing and transforming DCs to identify how existing knowledge can be enriched for each construct of the framework. The review shows that there is need for a comprehensive empirical understanding of the microfoundations and associated processes for developing each cluster of sensing, seizing and transforming and how they operate as second-order and higher-order DCs to enable firms to develop new capabilities to maintain evolutionary fitness. This chapter concludes by presenting the research questions and the research framework deriving from the review.

### **Chapter 4: Developing Omni-channel retailing capabilities**

The purpose of this chapter is to review existing OCR literature to identify existing knowledge about OCR adoption. Again, due to the novelty of the phenomenon both scholarly and industry papers are reviewed. The literature is reviewed and analysed with respect to the key constructs of the research framework (presented in chapter 3). While research into OCR capabilities has started to emerge, it is still in its infancy and specifically lacks<sup>4</sup> knowledge about how retailers change existing retailing capabilities to develop OCR capabilities as a response to the dynamic retail environment. In this chapter we find that despite existing knowledge about OCR, existing literature has not yet provided enough theoretical underpinnings or empirical understanding

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<sup>4</sup> To the best of the researcher's knowledge, March 2020

into OCR transformation. To date the research has mainly been conceptual and industry driven, and several scholars call for more empirical understanding of OCR.

### **Chapter 5: Research design**

This chapter presents the methods selected to reach the aims of this study of further enriching the DCs theory with empirical research and to answer the question; *How do retailers transform to OCR in a highly dynamic environment?* An overview of the overall research design process is visually presented. The chapter starts by discussing the rationale for choosing the interpretivist research philosophy. Second, the rationale for choosing the qualitative research design, the inductive research approach, the multiple case study and selection of cases is discussed. Finally, the rationale for choosing multiple data collection methods, holistic coding and the template analysis methods is outlined.

### **Chapter 6: Results**

This chapter presents the analysis of identified activities, processes and microfoundations in accordance with the research framework. The analysis presented is structured around each cluster of sensing, seizing and transforming. First, the results from the four primary cases are presented in each cluster of sensing (6.1), seizing (6.2) and transforming (6.3) supported with selected quotes from the interviews, internal confidential documents and secondary data. Second, the results from the System expert case and Cross-industry case are collectively presented in each cluster to support and deepen the knowledge about the identified activities and processes in the primary cases. Overall, this study found twenty-five distinct processes for sensing, seizing and transforming which we categorise into seven distinct microfoundational clusters.

### **Chapter 7: Discussion**

This chapter presents the research findings from the case study results discussed in chapter 6 and how they advance existing knowledge about the three sensing, seizing and transforming DCs (chapter 3). To answer the research questions (outlined in section 3.6) aggregation of the identified processes and microfoundational clusters into specific types of second-order DCs and higher-order DCs are presented for: sensing (7.2), seizing (7.3) and transforming (7.4) and a framework for each cluster is developed. The key findings of this chapter are twelve distinct

types of second-order DCs and eight types of higher order sensing, seizing and transforming retailing DCs.

## **Chapter 8: Conclusion**

This final chapter reports the key findings of the current study for each of the research questions. The dynamic retailing capabilities (DRC) framework that emerges from the study is presented. Second, the research contribution and knowledge advancement to both the DCs theory and the retailing literature is discussed. We advance existing knowledge by identifying how organisational adaption processes connect with higher order DCs, how retailer firms develop sensing, seizing and transforming DCs to maintain evolutionary fitness in a highly dynamic retail environment and as such we confirm the relevance of DCs for evolutionary fitness in a highly dynamic retail environment. Next the practical implications identified are discussed and finally, this chapter concludes by highlighting the key limitations of the current study and suggestions for future research.

## THEORETICAL DISCUSSION

The theoretical discussion is presented in two chapters (3 and 4). The key purpose of the theoretical discussion in chapter 3 is to identify key constructs of DCs and existing knowledge concerning sensing, seizing and transforming DCs and corresponding processes that enable firms to adapt to changes in highly dynamic environments. In chapter 4 we specifically review DCs development and deployment in the context of OCR. We find that there is a gap with respect to the microfoundational and process understanding of sensing, seizing and transforming development within the context of OCR. This serves as the primary basis for our investigation.

### 3. Dynamic capabilities literature review

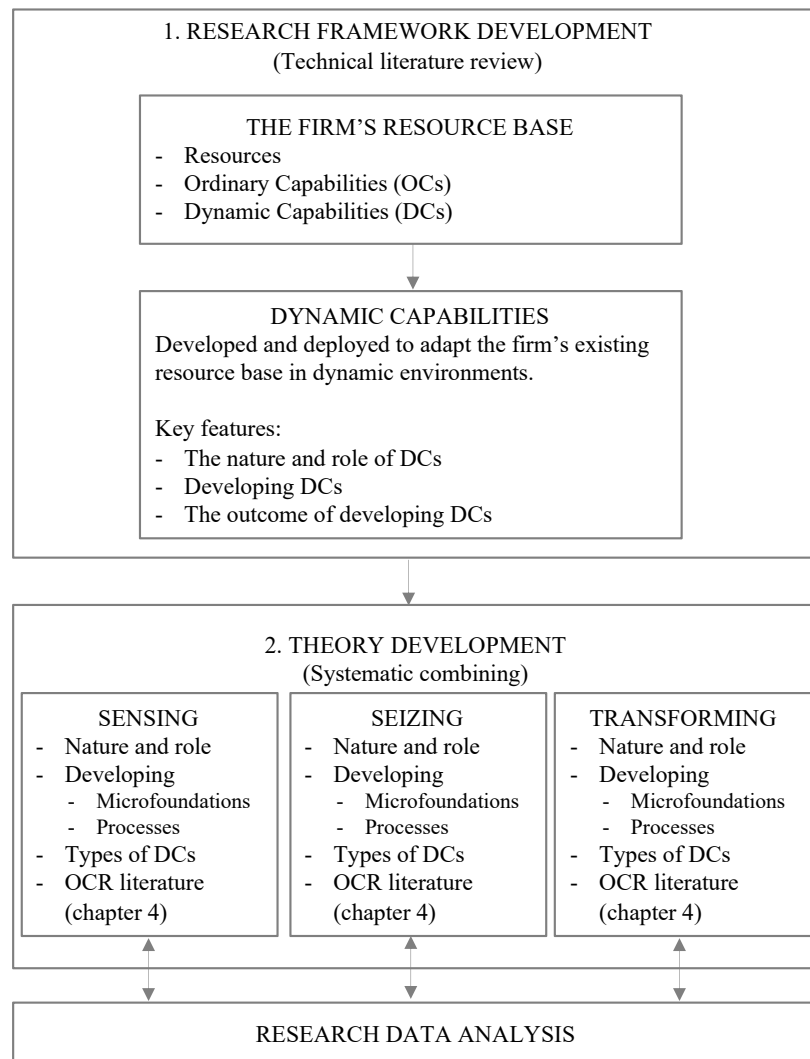
Following the aim of this study to advance existing knowledge and understanding of OCR transformation through an in-depth investigation of four major retail firms and to enrich existing DCs theory by matching it with reality (Dubois and Gadde 2002, 2014) by identifying how organisational change processes connect with higher order sensing, seizing and transforming DCs (Schoemaker et al., 2018), the purpose of this chapter is threefold. First, to present the underlying theory motivating this study. Second, to identify the key components of the DCs theory to inform the development of the research framework. Third, to review existing knowledge with respect to the development of each sensing, seizing and transforming DCs cluster to inform the research questions.

To answer the overarching research question emerging from the literature review in the previous chapter; *How do retailers transform to OCR in a highly dynamic environment?* alternative theories were initially considered for this study, specifically the process theory, the variance theory, the Resource based view of the firm (RBV) and the dynamic capabilities (DCs) theory as they have all been used for studying organisational change. As variance theory is mainly focused on outcome and process theory is primarily used to explain long-term development of outcomes, they are not considered suitable to study how retailers change existing retailing capabilities to develop new OCR capabilities as a response to the dynamic retail environment. While the RBV stresses firm specific resources and capabilities (i.e. the resource base) as fundamentals for a firm's performance and competitive advantage (Penrose, 1995, Wernerfelt, 1984, Teece and Pisano, 1994, Teece et al., 1997, Helfat and Lieberman, 2002) it does not explain how firm specific resources and capabilities can be transformed

(Teece et al., 1997, Wang and Ahmed, 2007) and does not take into consideration the impact of market dynamism (Eisenhardt and Martin, 2000, Wang and Ahmed, 2007). Hence, the RBV is not considered suitable to investigate how organisations can change their resource base to succeed in dynamic environments, specifically the development of OCR capabilities in a highly dynamic retail environment. The DCs theory however addresses these missing elements of the RBV. The DCs was therefore chosen as a theoretical lens as it enables studying and explaining how organisations can change its resource base to adapt to dynamic market changes. The DCs theory is considered suitable as it has for example been used as a theoretical lens to study innovation-related capability transformation (Ellonen et al., 2011), information technology enabled transformation (Niehaves et al., 2011), service transformation (Kindström et al., 2013), marketing transformation, product transformation (Day and Schoemaker, 2016) and digital transformation (Warner and Wäger, 2019) but is yet to be studied in the context of OCR transformation.

An overview of the theoretical literature review is presented in figure 3.1. We start with a brief discussion of the firm's resource base which includes the firm's resources, capabilities and DCs (3.1). Second, the key features of DCs are discussed, which includes the nature and role of DCs, developing DCs and the outcome of developing DCs (3.2), this section concludes with a summary of key features to inform the development of the conceptual research framework. Third, this chapter reviews existing literature for each DCs cluster of sensing (3.3), seizing (3.4) and transforming (3.5) to identify how existing knowledge can be enriched for each construct of the framework. The review shows that there is need for a more comprehensive empirical understanding of the microfoundations and associated processes for developing each cluster of sensing, seizing and transforming and how they operate as second-order and higher-order DCs that enable firms to develop new capabilities to maintain evolutionary fitness. The chapter concludes by presenting the research questions and the research framework (3.6) deriving from the review.

Figure 3.1. Overview of the theoretical literature review



Source: Critical analysis and synthesis

The literature review process in our study consisted of two phases. The first phase focused on identifying the key features, contributions and the evolution of the DCs theory, both conceptual and empirical, which Dubois and Gadde (2002, p. 559) claim enables entering “*the research situations with some background*”, also referred to as ‘technical literature’ (Strauss and Corbin, 1990). The literature selection and review phase mainly included seminal papers and key scholars in the field of DCs. The purpose of the second phase was to review existing theory with respect to the development of each construct of sensing, seizing and transforming iteratively and in combination with the research data analysis “*to expand understanding of both theory and empirical phenomena*” (Dubois and Gadde, 2002, p.555). This process enabled developing the DRCs framework presented in chapter 8. Only peer reviewed published papers written in English were included in the overall literature review which entails both conceptual,

empirical, qualitative and quantitative research papers. The review processes stopped when all of the research data had been analysed, and no new discoveries emerged (figure 3.1).

### **3.1 The firm's resource base**

A firm's resource base comprises of its resources, ordinary capabilities (OCs) and DCs (Helfat and Peteraf, 2003, Teece, 2016). While the role of OCs is to enable a firm to use its resources (Day, 1994a, Helfat and Lieberman, 2002, Helfat and Peteraf, 2003) for current operations the role of DCs is to change the firm's resource base (Teece and Pisano, 1994, Helfat and Lieberman, 2002, Winter, 2003, Helfat and Peteraf, 2003, Teece, 2007, Wang and Ahmed, 2007, Helfat et al., 2009, Easterby-Smith et al., 2009) in order to respond to changes in dynamic environments (Teece et al., 1997) or to create change in the marketplace (Eisenhardt and Martin, 2000, Teece, 2018).

#### *Resources*

Resources can be traded, imitated or bought but as firm specific assets (Wernerfelt, 1984, Helfat and Lieberman, 2002) they cannot be easily copied by other firms (Teece et al., 1997), defined as “*an asset of input to production (tangible or intangible) that an organization owns, controls or has access to on a semi-permanent basis*” (Helfat and Peteraf, 2003, p. 999). These firm specific resources can be categorised as; (1) physical resources; such as technology, products, specialised equipment, geographic location; (2) human resources; such as managers, employees, experience, training, expertise in chemistry; and (3) organizational resources; such as planning, reporting, internal and external relationships, superior sales force (Wernerfelt, 1984, Wernerfelt, 1995, Barney, 1991, Eisenhardt and Martin, 2000). Mahoney and Pandian (1992) further categorise firm superior resources as rare tangible resources, human resources and intangible resources, such as marketing assets (i.e. brand name and reputation), technological know-how, patented process or design and know-how shared among employees. According to the RBV, firm specific resources can lead to sustainable competitive advantage (Wernerfelt, 1984, Barney, 1991, Peteraf, 1993, Barney, 2001), high profits (Wernerfelt, 1984), explain superior performance (Mahoney and Pandian, 1992) and influence market expansion and motivation for growth (Wernerfelt, 1984, Penrose, 1995).

#### *Capabilities*

As opposed to resources that can be traded, imitated or bought, capabilities are developed (Teece and Pisano, 1994) to enable a firm to use its resources (Day, 1994, Helfat and Lieberman, 2002, Helfat and Peteraf, 2003). Capabilities are; the ‘glue’ that combines resources so they can be used for the firm’s advantage (Day, 1994a), the firm’s ability to use its tangible and intangible resources to perform a coordinated set of tasks to achieve a specific outcome (Helfat and Lieberman, 2002, Helfat and Peteraf, 2003) and critical to the firm’s competitive advantage, such as a biotech firm’s molecular biology capabilities (Eisenhardt and Martin, 2000). Capabilities used for current operations are referred to as ordinary capabilities (OCs), which according to Winter (2003) are high-level routines that enable the firm to make a living now, the firm’s current knowledge. OCs are for example used for typical operational activities which includes offering the same products and services to the same customers, order fulfilment, billings, purchasing, financial controls, inventory controls, financial reporting, marketing, sales and service delivery (Day, 1994a, Teece, 2007). Hence, OCs enable the firm ‘to maintain the status quo’ (Day, 1994a, Zollo and Winter, 2002, Helfat and Winter, 2011), to meet its current objectives and to be efficient (Teece, 2016).

#### *Dynamic capabilities*

In contrast to OCs the role of DCs is to change the firm’s resource base (Teece and Pisano, 1994, Helfat and Lieberman, 2002, Winter, 2003, Helfat and Peteraf, 2003, Teece, 2007, Wang and Ahmed, 2007, Helfat et al., 2009, Easterby-Smith et al., 2009) to either respond to dynamic environments (Teece et al., 1997) or to create change in the marketplace (Eisenhardt and Martin 2000, Teece, 2018); “*ordinary capabilities are about doing things right, dynamic capabilities are about doing the right thing, at the right time*” (Teece, 2016, p. 210). As such, DCs operate to extend, modify or create new OCs such as for new product development, new production processes, new customers or markets new technological capability, new project capability, new technological adoption, new integration capability and new service capability (Winter, 2003, Helfat and Lieberman, 2002, Wang and Ahmed, 2007). DCs are about learning, improvement, innovation, effectiveness and being entrepreneurial and as the business environment is becoming increasingly more VUCA it is argued that firms need to develop DCs to adapt (Schoemaker et al., 2018).

Despite their difference, both OCs and DCs are included in the firm’s capabilities portfolio (Helfat and Peteraf, 2003, Teece, 2016) but operate on different levels (Teece and Pisano, 1994,



Winter, 2003, Wang and Ahmed, 2007) which suggests a hierarchy of DCs. Winter (2003) classifies OCs as zero-level capabilities and DCs as first-order capabilities whereas Wang and Ahmed (2007) argue that resources are zero-order, capabilities are first-order, core-capabilities are second-order and DCs are third-order. Teece's (2007) also claims that DCs are higher-order and distinguishes between three clusters as sensing, seizing and transforming and selected microfoundations for the development of each cluster. Teece (2018) has further advanced his framework to entail two levels, plus a sub-level. He classifies the firm's OCs as base-level capabilities and posits that the second level contains two layers of DCs; (1) second-order micro-foundational DCs and (2) higher-order DCs. The second-order micro-foundational DCs are needed to change existing OCs and to develop new OCs, such as new product development and new market expansion, i.e. "*actions that constitute astute managerial decision making under uncertainty*" (Teece 2018, p.41). These second-order micro-foundational DCs are guided by higher order sensing, seizing and transforming DCs which enable the firm to upgrade and direct its base level OCs towards 'high payoff endeavours'. Together, the three higher-order DCs direct and form the firm's base-level OCs and second-order micro-foundational DCs. Teece (2018) for example argues that changes to a firm's business model is an outcome of higher-order DCs. However, very limited empirical knowledge currently exists about the specific nature of these second-order micro-foundational DCs. An exception is a study by Day and Schoemaker (2016) who specifically identify two sub-DCs for each cluster of sensing, seizing and transforming from existing theory and best practice studies which they apply to two firms in the biofuel and pharmaceutical industry. Apart from these findings, hardly any empirical knowledge<sup>5</sup> exists about the distinct types of second-order microfoundational DCs. We adopt the notion of a DCs hierarchy for our study.

### **3.2 Key features of dynamic capabilities**

Before the research data is collected, analyzed and interpreted a research framework is advised to guide the investigation. To study organisational change through the lens of DCs theory we find requires understanding the nature of DCs (Helfat et al., 2009) and how DCs can be developed (Teece, 2007). However, existing research aimed to understand organisational change through the lens of DCs has mainly focused on proposing and identifying; specific types of DCs, the microfoundations and processes for developing DCs and hierarchical classifications of DCs.

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<sup>5</sup> Google Scholar and ABI/Inform database search March 2020

It has been acknowledged that different types of DCs serve different purposes in organisational change (Helfat et al., 2009). Several researchers have contributed to this stream by identifying specific types of DCs such as benchmarking (Vorhies and Morgan, 2005), organisational, managerial, relational, acquisition, alliance, innovation, entrepreneurial activity and new product development (Helfat et al., 2009), idea generation, market disruptiveness, new product development, marketing, new process development (Easterby-Smith et al., 2009), collaboration (Allred et al., 2011), and strong managerial DCs (Teece, 2016). However, distinct DRCs are yet to be identified.

Another stream of research has developed classifications of higher-order DCs based on their purpose such as adaptive, absorptive and innovative capabilities and corresponding processes of search, internal and external knowledge combination and linking resources and capabilities to the market (Wang and Ahmed, 2007), sensing to identify opportunities and threats, seizing to grasp identified opportunities and transforming to change the firm's resource base (Teece, 2007), adaptation DCs to enable catch up and survival and innovation DCs to enable competitive advantage (Dixon et al., 2014). Higher-order adaptive marketing capabilities for outside in exploration of new opportunities as opposed to inside-out explorative orientation of DCs has also been proposed (Day, 2011).

A third stream of research has proposed distinct processes and microfoundations for developing DCs, which has mainly been conceptual (e.g. Teece 2007, Helfat et al. 2009, Teece, 2016, Schoemaker et al 2018, Teece, 2018) and as such, limited empirical knowledge exists. An exception includes identification of specific sensing, seizing and transforming processes for innovation-related capability development (Ellonen et al., 2011), developing information system capabilities (Niehaves et al., 2011), service innovation microfoundations (Kindström et al., 2013), digital transformation microfoundations (Warner and Wäger, 2019), processes that support sensing (de Waard et al., 2012), collaboration processes (Allred et al, 2016), resource alteration processes (Danneels, 2011) and alliance building processes (Donada et al., 2016).

While it has been claimed that different types of DCs are needed for sensing, seizing and transforming such as strong managerial DCs needed in each cluster of sensing, seizing and transforming (Helfat et al., 2009, Teece, 2016), very limited knowledge exists about the distinct

types of DCs in each cluster and corresponding processes. With the exception of Day and Schoemaker (2016) who identify two types of DCs for each cluster and corresponding processes for successful transformation in the biofuel and pharmaceutical industry as previously mentioned. This study aims to contribute to this theoretical development by holistically investigating successful transformation in the retail industry by identifying the processes and distinct types of DCs for each cluster of sensing, seizing and transforming. As such, answering a call for empirical investigation of how organisational adaption processes connect with higher order DCs (Schoemaker et al., 2018).

To identify the key components of DCs, which will inform the development of the research framework for this study, this section starts by reviewing existing literature related to the nature of DCs (i.e. what constitutes as DCs) followed by how DCs can be developed and finally the outcome of developing DCs.

### 3.2.1 The nature and role of DCs

There are contrasting views about what DCs are and as such a mutual definition for DCs does not exist. The debate mainly evolves around the nature of DCs as abilities (Teece et al., 1997), processes (Eisenhardt and Martin, 2000) or routines (Zollo and Winter, 2002, Winter, 2003). According to the Cambridge dictionary the nature of something refers to its type and key characteristic. Table 3.1 highlights the key types and characteristics of the DCs definitions reviewed in this chapter.

Table 3.1 The nature of dynamic capabilities

Types	Key characteristics	Paper
Abilities	Specific firm skills	Teece et al (1997)
	Embedded in organisational processes	Teece et al (1997), Makadok (2001), Wang and Ahmed (2007)
	Used to change the firm's competences in rapidly changing environments	Teece et al (1997)
	Adds to his (2007) definition the firm's ability to create change in the business environment	Teece (2018)
Resources	Firm specific resources Used to improve the firm's resource base	Makadok (2001)
Processes	Specific, identifiable, strategic and operational routines Used to change the firm's resource base That use resources to respond to and/or create change	Eisenhardt and Martin (2000)
Routines	Learned, patterned and repetitious behaviour Created partly from tacit (implicit) knowledge	Zollo and Winter (2002) Winter (2003)

	Used to change the firm's operating routines	Zollo and Winter (2002) Winter (2003) Helfat and Peteraf (2003)
	Change the firm's resource base through Operational capabilities (OCs) and therefore indirectly impacts firm performance	Winter (2003) Helfat and Peteraf (2003)
Capacities	A repeatable function performed by the DC Patterned activity (not ad hoc problem-solving activity) used to purposefully (specific intent) change the resource base Part of the firm's resource base	Helfat, C.E., Finkelstein, S., Mitchell, W., Peteraf, M., Singh, H., Teece, D. and Winter, S.G., (2007).
	Capacities to change by sensing, seizing and transforming	Teece, 2007, Helfat, C.E., Finkelstein, S., Mitchell, W., Peteraf, M., Singh, H., Teece, D. and Winter, S.G., (2007). Barreto (2010)

Teece et al. (1997) initially introduced the concept of DCs and defined them as; *“the firm's ability to integrate, build and reconfigure internal and external competences to address rapidly changing environments”* (p.516). Their definition highlights the nature of DCs as specific organisational abilities that enable successful transformation in response to dynamic market changes. According to Teece et al. (1997) and Makadok (2001) DCs are embedded in organisational processes, such as order fulfilment, new product development and service delivery (Day, 1994, Teece et al., 1997, Wang and Ahmed, 2007). Since the initial definition Teece has further modified it to specifically entail sensing, seizing and transforming as specific clusters of DCs (Teece, 2007) and additionally to create changes in the marketplace (Teece, 2018), as opposed to simply responding to market changes.

Contrastingly, Eisenhardt and Martin (2000) define DCs as processes; *“the firm's processes that use resources – specifically the processes to integrate, reconfigure, gain and release resources - to match and even create market change”* (p.1107). Despite the contrasting views of these key DCs scholars about the nature of DCs, they agree that DCs are deployed to change the resource base in order to either respond to or to create change in the marketplace. Organisations entering a new market (Wang and Ahmed, 2007) by producing a new product or offering a new delivery service (Helfat and Lieberman, 2002) is an example of such change.

Zollo and Winter (2002) and Winter (2003) provide yet another explanation of DCs by defining DCs as operational routines; learned, patterned and repetitious behaviour, created partly from tacit (implicit) knowledge, to change the firm's operational routines for improved performance,

such as replication (e.g. of a product development process), acquisition and joint ventures (Helfat and Peteraf, 2003). Helfat et al (2009) and Teece (2018) argue that defining DCs as operational routines is too restrictive as for example sensing the need to change (Helfat et al, 2009) and seizing an identified opportunity, such as business model creation, does not act upon routines (Teece, 2012) as organisational processes cannot choose the best available business model, but can however evaluate short-term results from the chosen business model e.g. with frequent status meetings (Teece, 2018).

In a joint effort for a mutual explanation about the nature of DCs, Helfat et al. (2009) provide the following definition; *“a dynamic capability is the capacity of an organisation to purposefully create, extend, or modify its resource base”* (p.4). In their definition, capacity refers to a repeatable function performed by DCs, i.e. a patterned activity as opposed to an ad hoc problem-solving activity. The resource base includes the firm’s tangible, intangible and human assets (resources) and the firm’s capabilities (owned or accessible capabilities). Hence, the authors argue that capabilities are in essence resources and additionally that DCs are part of the firm’s resource base which further can create, modify or extend other DCs. Such as an organisation’s dynamic managerial capability which can create, modify and extend dynamic innovation, acquisition and alliance capabilities, and as such, posit that there are many different types of DCs (Helfat et al., 2009). Winter (2003) however claims that DCs change the resource base through OCs, which includes new product development, new production processes, new customers and new geographical markets served, and classifies DCs as first-order capabilities that operate to extend, modify or create zero level OCs. This view is somewhat supported by Helfat and Peteraf (2003, p.999) who posit that; *“dynamic capabilities do not directly affect output for the firm in which they reside, but indirectly contribute to the output of the firm through an impact on operational capabilities”*.

In line with Teece’s (2007) disaggregation of DCs into sensing, seizing and transforming, Barreto (2010) defines DCs as; *“the firm’s potential to systematically solve problems, formed by its propensity to sense opportunities and threats, to make timely and market-oriented decisions, and to change its resource base”* (p. 271). The author refers to the firm’s capacity to systematically change into something in the future, which is in line with Helfat et al (2009) notion of purposeful transformation, i.e. that DCs have an element of specific intent, such as

the intent to develop a new product, as opposed to ‘pure luck’ or operational automatic routines that are patterned and predictable.

The key DCs definitions reviewed in this section are chronologically presented in table 3.2.

Table 3.2. Dynamic capabilities definitions

Author	Definition
Teece et al (1997)	<i>“The firm’s ability to integrate, build and reconfigure internal and external competences to address rapidly changing environments”</i>
Eisenhardt and Martin, (2000)	<i>“The firm’s processes that use resources – specifically the processes to integrate, reconfigure, gain and release resources - to match and even create market change. Dynamic capabilities thus are the organisational and strategic routines by which firms achieve new resources configurations as markets emerge, collide, split, evolve and die”</i>
Teece (2000)	<i>“The ability to sense and then seize opportunities quickly and proficiently”</i>
Zollo and Winter (2002)	<i>“A dynamic capability is a learned and stable pattern of collective activity through which the organisation systematically generates and modifies its operating routines in pursuit of improved effectiveness”</i>
Winter (2003)	<i>“Those (capabilities) that operate to extend, modify, or create ordinary capabilities”</i>
Helfat and Peteraf (2003)	<i>“Dynamic capabilities do not directly affect output for the firm in which they reside, but indirectly contribute to the output of the firm through an impact on operational capabilities”.</i>
Wang and Ahmed (2007)	<i>“A firm’s behavioural orientation constantly to integrate, reconfigure, renew and recreate its resources and capabilities and, most importantly, upgrade and reconstruct its core capabilities in response to the changing environment”</i>
Helfat et al (2007)	<i>A dynamic capability is the capacity of an organisation to purposefully create, extend, or modify its resource base.”</i>
Teece (2007)	<i>“Dynamic capabilities can be disaggregated into the capacity (1) to sense and shape opportunities and threats, (b) to seize opportunities, and (c) to maintain competitiveness through enhancing, combining, protecting, and, when necessary, reconfiguring the business enterprise’s intangible and tangible assets”</i>
Barreto (2010)	<i>“A dynamic capability is the firm’s potential to systematically solve problems, formed by its propensity to sense opportunities and threats, to make timely and market-oriented decisions, and to change its resource base”</i>
Day (2014)	<i>“A dynamic capability is not an ad hoc solution to a problem, but a repeatable and deeply embedded set of skills and knowledge exercised through processes”</i>
Teece (2018)	<i>“Dynamic capabilities are the firm’s ability to integrate, build and reconfigure internal competences to address, or in some cases bring about changes in the business environment”</i>

To summarize, it can be argued that consensus has been obtained among leading DCs scholars that the primary role of DCs is to purposefully change the resource base (Teece and Pisano, 1994, Helfat and Lieberman, 2002, Winter, 2003, Helfat and Peteraf, 2003, Teece, 2007, Wang and Ahmed, 2007, Helfat et al., 2009, Easterby-Smith et al., 2009, Barreto, 2010) through repeatable and patterned activities as opposed to ad hoc problem solving (Teece 2007, Helfat et al. 2009). Each of these features will be discussed further in the following section.

*DCs operate to change the firm's resource base*

As highlighted in the previous section DCs operate to purposefully change the organisation's resource base as a response to dynamic market changes (Teece and Pisano, 1994, Eisenhardt and Martin, 2000, Helfat and Lieberman, 2002, Winter, 2003, Helfat and Peteraf, 2003, Teece, 2007, Wang and Ahmed, 2007, Ambrosini et al., 2009, Helfat et al., 2009, Easterby-Smith et al., 2009) or to create change in the marketplace (Eisenhardt and Martin 2000, Teece, 2018) which entails developing new DCs or adapting current DCs (Teece and Pisano, 1994, Eisenhardt and Martin, 2000, Helfat and Lieberman, 2002, Winter, 2003, Helfat and Peteraf, 2003, Teece, 2007, Wang and Ahmed, 2007, Ambrosini et al., 2009, Helfat et al., 2009, Easterby-Smith et al., 2009). Day (2011) makes a distinction between exploring change from the inside-out versus outside in and argues that the DCs theory adopts an inside-out firm orientation to explore change focused on evolutionary fitness and evolutionary effectiveness that entails systematic sensing and scanning to respond to change. The author claims that developing 'Adaptive capabilities' is needed for an outside-in market orientation to anticipate change in highly dynamic markets; *"The ability of firms to understand and quickly adjust to their fast-changing markets ultimately depends on their adaptive capabilities. The full benefit of these capabilities will be realized by firms that adopt an outside-in approach to the development of their dynamic capabilities"* (Day, 2014, p. 27) (figure 3.2). As such, both capabilities focus on responding to change as opposed to driving change in the marketplace.

Figure 3.2. Adaptive versus dynamic market orientation capabilities

Orientation \ Function	Exploiting existing knowledge	Exploring new opportunities
	Inside-out	Resource-based view of the firm (RBV)
Outside-in	Capabilities of market-driven organizations (MDO)	Adaptive marketing capabilities (ACs)

Source: Day (2011)

Adopting Day's (2011) view, it can be argued that organisations need DCs to reactively respond to changes currently happening in the marketplace while they need adaptive capabilities to proactively respond to changes that are going to happen. While Teece (2018) claims that to proactively and continuously respond to change as it arises requires sensing, seizing and transforming; "*continuously sense and seize opportunities, and to periodically transform aspects of the organisation and culture so as to be able to proactively reposition to address yet newer threats and opportunities as they arise*" (p.43) not much knowledge exists about the reactive and proactive features of DCs. An exception is Holsapple and Oh (2014) who claim propose proactive DCs to change outside existing market (i.e. leader) and reactive DCs to change inside existing market (i.e. follower). In that vein, Stopford and Baden-Fuller (1994) argue that proactiveness is a common attribute of entrepreneurial organisations.

#### *Repeatable functions & patterned activities*

As change is constantly happening to some extent it may be difficult to define what type of change requires DCs versus OCs (Helfat and Winter, 2011). According to Winter (2003) and Helfat and Peteraf (2003) all capabilities have the potential to adapt and change via so called 'ad hoc' problem solving, hence DCs are not necessarily needed to change the firm's existing OCs. However, ad hoc problem solving differs from DCs as it is not routine, patterned nor repetitious, which DCs are argued to be (Winter, 2003). Additionally, Helfat and Winter (2011) posit that certain capabilities can be used for both operational and dynamic reasons which they refer to as 'dual purpose' and 'multiple variant' capabilities such as market access capabilities which can be used to promote both new and existing products. Accordingly, the authors argue that OCs can have dynamic elements despite not being classified as DCs. Overall, to be classified as DCs they have to change the way in which the firm currently makes a living, such as through acquisitions, alliances and new product development.

The routinely and repetitive nature of DCs has also been addressed in relation to environmental dynamism. Teece and Pisano (1994) explain dynamism as changes in the external environment and the capabilities needed to meet these changes; "*...adapting, integrating and re-configuring internal and external organisational skills, resources and functional competences toward a changing environment*" (p.538). Teece and Pisano (1994) argue that DCs are needed "*to address rapidly changing environments*" supported by Wang and Ahmed (2007) who argue that the more dynamic the market the more DCs a firm exhibits. Eisenhardt and Martin (2000)



however differentiate between moderately and highly dynamic markets and posit that in moderately dynamic markets, DCs rely on existing knowledge where the process resembles routines: “*detailed, analytic, stable processes with predictable outcomes*” (p. 1105) whereas in highly dynamic markets DC require developing new ‘situation specific knowledge’ mainly through experiential learning, such as prototyping and testing, real-time information, cross functional relationships. The process is unstable, repetitive, includes developing alternatives and the outcome is unpredictable. Contrastingly O'Connor (2008) argues that it is high-uncertainty, not high velocity market characteristics, that drives the need for developing DCs. Hence it is not the speed of change but the uncertainty of the change that impacts the development of DCs.

Additionally, there is a debate around DCs as firm specific or best practice. Teece et al. (1997) argues that DCs do not share commonalities as they are firm specific and unique which is supported by Makadok (2001) who argues that capabilities cannot be transferred between organisations because they are “*embedded in the organisation and its processes*” (p. 388). Contrastingly, Eisenhardt and Martin (2000) argue that DCs are identifiable strategic- and operational processes that are idiosyncratic, path dependent and share commonalities between effective firms, referred to as ‘best practice’ such as product development processes, - strategic decision making and – alliances. As such DCs have common features but are not identical. Best practice for new product development for example involves cross functional teams, customer feedback routines and external communication routines. Wang and Ahmed (2007) specifically identify three common DCs features as; (1) adaptive; the firm’s capabilities to adapt to changes ‘in a timely fashion’ via effective search, exploration and exploitation strategies, (2) absorptive: the firm’s capabilities to combine external and internal knowledge for internal use and (3) innovative: the firms capabilities to link its resources and capabilities with the market. But agree that their deployment can be firm - and industry specific (i.e. idiosyncratic); “*at a firm-specific level, resources and capabilities may differ across firms, firms may start at different points in the competitive ‘race’, and the paths to dynamic capabilities may be specific to the firm or the industry*” (p. 36).

This view is challenged by Teece (2016) who argues that ‘best practices’ are easily distributed in an open competitive environment which neutralizes the unique competitive differentiation of the capability, i.e. once a ‘best practice’ becomes widely adopted its competitive advantage

dissipates. He emphasises building strong DCs which lead to greater organisational differentiation and competitive advantage; “*successfully building strong dynamic capabilities allows firms to challenge competitors that are enamoured with the resources they currently possess, that ignore (or are ignorant of) changing customer needs, that cherish the status quo, that fail to empower internal entrepreneurs and change agents, and that prioritize efficiency over innovation*” (Teece, 2016, p.211). Peteraf et al. (2013) attempt to bridge this debate between Teece et al. (1997) and Eisenhardt and Martin (2000) by proposing that DCs as ‘best practices’ in moderately dynamic markets cannot be perfectly substituted as they are “*idiosyncratic in their details*” (Eisenhardt and Martin, 2000, p. 1105) and hence can be firm specific as Teece et al. (1997) posit. As such there may be elements that are widely shared between practitioners, but experience and the competitive context makes the capability idiosyncratic in its detail, which is impacted by the firm’s culture and embedded routines (Teece, 2018).

We adopt the view that DCs are identifiable, repeatable and patterned activities developed to purposefully change the resource base to respond to or create change in highly dynamic markets for our study.

### 3.2.2 Developing DCs

Developing DCs has been found to be directed by the firm’s overarching strategy such as differentiation or cost leadership strategy (Wang and Ahmed, 2007, Teece, 2018) and developed through distinct processes (e.g., Teece and Pisano, 1994, Teece et al., 1997, Teece, 2007, Eisenhardt and Martin, 2000, Helfat et al., 2009). These processes involve numerous different activities (Schoemaker et al., 2018) and differ depending on the situation (Day and Schoemaker, 2016, Donada et al., 2016).

#### *Processes to develop DCs*

A process has been explained as “*a sequence of interdependent events*” (Felin et al. 2012, p.1362) that can be strict, flexible, trial and error and ad hoc problem solving. According to Teece and Pisano (1994) and Teece et al. (1997) DCs are developed through internal and external managerial skills and organizational processes; or routines of doing things in the organization. These processes are shaped by the firm’s use of its assets (i.e. position) and the strategic alternatives available to the firm (i.e. paths). This is supported by Eisenhardt and

Martin (2000) who claim that DCs are indeed specific and identifiable processes which alter the resource base of the firm. The authors argue that these processes share commonalities (i.e. have the same end result), are substitutable (i.e. deployed differently across firms but the processes are constant across firms) and fungible (i.e. share best practices across industries).

Three distinct processes for developing DCs are proposed by Zollo and Winter (2002) as; (1) integration, (2) learning and (3) re-configuration and transformation. Integration processes entail integration between external activities and technologies, which they argue are idiosyncratic and difficult to replicate as they involve managerial coordination of activities inside the firm, such as strategic alliances, virtual corporation, buyer-supplier relations and technology collaboration. The learning processes consists of organisational routines and experience accumulation, knowledge articulation and knowledge codification. Organisational routines consist of known routinised process (existing operations) or systematic search routines to bring about change to existing operations. In markets where competition is high, and changes are rapid the firm can develop search DCs through learning, referred to by the authors as experience accumulation; the semiautomatic learning process of developing operating routines. An example of experience accumulation learning processes is hiring specialists and experts or creating a specific function or team responsible for the change. These search DCs need to be updated repeatedly as market changes are unpredictable. Developing DCs through knowledge articulation (sharing implicit knowledge) involves processes of discussions, brainstorming and performance evaluation to figure out what works and what doesn't work (sense making), such as learning from experience, whereas developing DCs through knowledge codification involves more than a learning process of sharing individual experiences, it is a process of codifying knowledge into e.g. memos, manuals, blueprints, spreadsheets and decision support systems, such as identifying and codifying best practice. The authors point out that knowledge articulation is required in order to achieve knowledge codification and also argue that scanning activities are inputs to the process of developing DCs, not a specific DC, whereas Teece (2007) argues that sensing the need to change a key requirement for developing DCs.

It has additionally been suggested that distinct processes are required for specific types of DCs. A dynamic managerial capability for example, entails a specific process while a dynamic acquisition-based capability entails another process and changing the resource base using alliances (partnerships) requires yet another process to develop the alliance capabilities (Helfat

et al., 2009). The authors further emphasise that understanding the underlying organisational and managerial processes of DCs entails not only an understanding of how DCs are developed but also how they are put into use, such as how search processes, decision making processes and change management processes are changed and deployed.

#### *Processes and microfoundations to sense, seize and transform*

Developing each cluster of sensing, seizing and transforming requires distinct processes and microfoundations (Teece, 2007). The DCs framework introduced selected microfoundations for sensing, seizing and transforming which Teece (2007) defines as “*distinct skills, processes, procedures, organisational structures, decision rules and disciplines*” (p.1319) that require routines and managerial skills (Teece 2018). Recent literature has suggested different groups of microfoundations such as managerial, organisational (Bendig et al, 2018), individuals, processes, interactions, and structure which can influence the development of routines and capabilities (Felin et al 2012).

Sensing requires processes to sense and shape opportunities and threats, such as sensing user needs (Teece, 2007, 2018), seizing requires processes to grasp identified opportunities (i.e. deciding which opportunities to pursue) and transforming requires processes to transform the resource base in order to implement the changes identified (Teece, 2007). As an example of successful transformation by deploying DCs is IBM’s addition to existing technological and quality OCs, is the processes developed to respond to customer needs, which resulted in a transformation from a product centric to a customer centric company (Harreld et al., 2007). Teece (2007) claims that developing and deploying the three clusters of DCs on an ongoing basis enables organisations to adopt to fast changing markets and technologies and to sustain itself as customers, competitors and technologies change (Teece, 2016).

The processes involved in re-configuration and transformation according to Zollo and Winter (2002) are learned organisational skills which entails the firm’s ability to sense the need for change by constantly investigating markets and technologies and to adopt best practice. The authors claim that responding to change entails scanning, evaluating and reconfiguring before the competition does which is in line with the three DCs of sensing, seizing and transforming proposed by Teece (2007). While some firms can be good at sensing new opportunities but weak at exploiting them (Teece, 2018), Teece (2007) claims that firms need abilities to develop

and deploy all three. Hence it is important to understand how firms can develop each cluster of sensing, seizing and transforming to change as *"these three clusters are crucial to setting the directions for firm adaption, yet they are often invisible to outsiders"* (Schoemaker et al., 2018, p.16).

While it has been acknowledged that successful transformation requires distinct processes to develop all three clusters of DCs (Teece, 2016) consensus has not been reached about the relationship between sensing, seizing and transforming as sequential, non-linear or simultaneous. Teece (2007) suggests a linear process where sensing guides the seizing which guides the transformation. This is supported by Donada et al. (2016) who empirically identify a three-phase sequence-building process for developing alliance capabilities as; identifying, building and integrating which all entail specific types of activities. The authors correlate the phases to Teece's (2007) sensing, seizing and transforming phases, the step by step process suggested by Eisenhardt and Martin (2000) and the capabilities lifecycle stages proposed by Helfat and Peteraf (2003). Contrastingly, Thomas et al. (1993) suggest that the sensemaking process, which includes scanning, interpretation, action and performance, is non-linear and Dixon et al. (2014) suggest *"virtuous circles of reinforcing dynamic capabilities"* (p. 200).

The view that DCs are identifiable, strategic and operational processes that have common features but are not identical and developed through sensing, seizing and transforming processes that operate as distinct microfoundations is adopted for our study.

### 3.2.3 The outcome of developing DCs

The final key feature of DCs informing the development of the research framework is the outcome of DCs development and deployment. The outcome of DCs on firm performance has mainly been discussed in relation to success, failure, survival, competitive advantage, sustainable competitive advantage, profit, superior performance (Barreto, 2010), evolutionary fitness and technology fitness (Helfat et al. 2009).

#### *Sustainable competitive advantage*

Initially, the DCs theory was argued to explain firm's foundation for achieving sustainable competitive advantage (Teece and Pisano, 1994, Helfat and Peteraf, 2003). In that vein it was argued that DCs can lead to sustainable competitive advantage (Teece and Pisano, 1994, Helfat

and Peteraf, 2003, Teece, 2007) if they are difficult for competitors to replicate such as copying technological processes, despite being logical and observable (Teece and Pisano, 1994, Teece et al., 1997). More recently, Teece (2018) argues that strong DCs, that are deeply rooted in the firm, can be a source of sustainable competitive advantage. Along those lines, Helfat and Peteraf (2003) propose the capability lifecycle framework as fundamental for explaining competitive advantage and to identify where superior DCs and OCs can be created and sustained. Makadok (2001) agrees with the relationship to performance and the possession of resources to build capabilities and argues that economic profit can only be achieved after the firm has obtained the required resources; *the purpose of a capability – by definition – is to enhance the productivity of the other resources that the firm possesses*” (p. 389).

Contrastingly, Eisenhardt and Martin (2000) argue that DCs are continuously evolving and can therefore only result in short-term competitive advantage, supported by Wang and Ahmed (2007) who agree that DCs cannot lead to sustainable competitive advantage. But due to their path dependent nature, DCs are however important to the firm’s long-term survival and success which indirectly impacts firm performance; *“dynamic capabilities are conducive to long-term firm performance, but the relationship is an indirect one mediated by capability development which in turn, is mediated by firm strategy; dynamic capabilities are more likely to lead to better firm performance when particular capabilities are developed in line with the firm’s strategic choice*” (p. 42). Peteraf et al., (2013) attempt to unify the contrasting views of Teece et al. (1997) and Eisenhardt and Martin (2000) by proposing that; *“dynamic capabilities may enable firms to attain a sustainable competitive advantage in certain conditional cases*” (p. 1407). The authors deploy the VRIN conditions to evaluate if DCs can result in sustainable advantage and propose that in high velocity markets DCs can be a source of short-term competitive advantage if it provides an uncommon added-value advantage. DCs can however be a source of sustainable competitive advantage if it is a stable higher-order DC, a generally applicable DC or an essential part of a dynamic bundle of resources and capabilities. Peteraf et al. (2013) further argue that a ‘best practice’ capability in one industry can also provide competitive advantage in another industry where the capability is not as widespread.

### *Evolutionary Fitness*

In light of this debate the outcome of DCs on firm performance evolved from mainly focusing on competitive advantage to focus on long-term success and *‘evolutionary and entrepreneurial*

*fitness*' (Teece, 2007). This led to the discussion of evolutionary fitness as a performance measure. In that vein, Helfat and Petaraf (2009) argue that DCs should not be defined by their outcomes but instead should be measured in relation to evolutionary fitness (Helfat et al 2007). Evolutionary fitness as a performance measure refers to the ability of the firm to survive, grow, create value, compete and profit, it is context specific and influenced by technical fitness, market demand and competition; "*evolutionary fitness refers to how well a dynamic capability enables an organisation to make a living by creating, extending or modifying its resource base* (Helfat et al, 2007, p.7). This view is supported by O'Reilly and Tushman, (2007) who claim that "*dynamic capabilities hold the potential to promote ongoing adaptation so that disruptive change becomes less necessary*" and Day (2011) who claims that the focus of DCs is evolutionary fitness and evolutionary effectiveness.

We adopt the view of evolutionary fitness as a performance measure for our study as it refers to the firm's ability to survive, grow and prosper (Helfat et al. 2009).

#### 3.2.4 Summary of key features

After critically analysing and synthesising the evolution of the DCs theory to date, the key features of DCs emerging from the review in this chapter has informed the development of the research framework as follows;

- **DCs:** comprises of sensing, seizing and transforming to maintain evolutionary fitness.
- **Processes:** comprises of bundles of patterned, repeatable and systematic activities deployed to purposefully adapt to changes in a highly dynamic environment.
- **Microfoundations:** comprises of groups of processes for each cluster of sensing, seizing and transforming.
- **Second order DCs:** refers to the aggregation of each microfoundational cluster into a distinct type (nature) of second order sensing, seizing and transforming DC.
- **Higher order DCs:** refers to the aggregation of each second order DC into a distinct type (nature) of higher order sensing, seizing and transforming DC.

The literature on sensing, seizing and transforming will now be reviewed to identify how existing theoretical knowledge with respect to the key features identified to inform the research questions.

### 3.3 Sensing literature review

Sensing is categorised as a higher-order DC which guides the development of second-order micro-foundational DCs (Teece, 2018), defined as “*the successful identification and calibration of technological and market opportunities*” needed “*to identify and shape opportunities by scanning, searching and exploring across technologies and markets, both local and distant*” (Teece, 2007, p.1322). As such sensing refers to the firm’s capability to sense the need for reconfiguring and transforming the resource base (Teece and Pisano, 1994) and to shape identified opportunities and threats (Teece, 2007).

Several sense building stages have been proposed in the literature such as cognitive stages of noticing, interpreting and incorporating stimuli (Kiesler and Sproull, 1982), searching and shaping opportunities and threats, interpreting new knowledge (Teece, 2007), information distribution, interpretation, information utilization, evaluation of outcomes (Day, 1994), gap identification, building, implementing, learning, calibrating the gap (Day, 2011), framing and abduction (Dong et al., 2016). However, knowledge about the distinct phases for sensing and related processes is missing.

Table 3.3 summarises the selected literature reviewed for sensing in a chronological order which highlights existing knowledge and the knowledge gap for each of the key features identified (chapter 3.2.4 Summary of key features). As the table shows, the majority of the research has focused on identifying and explaining specific sensing processes or microfoundations, this includes innovation-related capability sensing (Ellonen et al., 2011), information technology enabled sensing (Niehaves et al., 2011), service innovation sensing (Kindström et al., 2013), marketing innovation sensing, product innovation sensing (Day and Schoemaker, 2016) and digital transformation sensing (Warner and Wäger, 2019) but is yet to be studied in the context of customer-centric OCR transformation sensing.

Despite the identification of numerous sensing processes, very few studies have explained the aggregation of these distinct processes into specific types of second-order and higher-order DCs. An exception is Peripheral vision, Vigilant learning (Day and Schoemaker, 2016) and Generative sensing (Dong et al., 2016) which have been identified as second order sensing DCs and higher order Absorptive DCs (Cohen and Levinthal, 1990, Wang and Ahmed, 2007) and Adaptive DCs (Wang and Ahmed, 2007, Day, 2011). While an empirical study by Dixon et al.,



(2014) provides knowledge about the sequencing of selected microfoundations into distinct second-order capability constructs and higher-order DCs, the findings do not specifically distinguish the distinct sensing microfoundations and their sequencing. Therefore, there is a need to distinguish the specific microfoundations and processes, second-order sensing DCs and higher-order sensing DCs in a highly dynamic environment to better understand and explain their sequencing. Knowledge about retail innovation sensing and distinct DCs is additionally missing. One of the aims of this study is to contribute to the identified knowledge gap in the literature and by doing so answering a call for “*a greater understanding of how dynamic capabilities develop through organisational learning*” (Argote 2011, p.442).

Table 3.3. Sensing literature summary

Sensing processes and microfoundations	Second order sensing capabilities	Higher order sensing capabilities	Focus	Paper
Three cognitive processes 1. Noticing 2. Interpreting 3. Incorporating stimuli			Conceptual	Kiesler and Sproull (1982)
Acquire new knowledge Integrate new knowledge Exploit new knowledge		Absorptive capacity	Conceptual	Cohen and Levithal, (1990)
1. Exploration of new possibilities: - search, discovery, innovation 2. Exploitation of old certainties: - refinement and extension of existing competences, technologies and paradigms			Conceptual	March (1991)
Strategic sense making - Scanning - Interpretation			Empirical: Quantitative path analysis in hospitals	Thomas et al, (1993)
1. Outside in processes to anticipate change -Inquiry initiated or continued -Information acquisition -Information distribution -Interpretation -Information Utilization -Evaluation of outcomes  2. New skills, abilities and processes; -Close communication and joint problem solving Coordinating activities	1. Market Sensing 2. Customer linking		Conceptual	Day (1994)
External knowledge integration			Empirical	Tripsas (1997)

The 4I Exploration and exploitation organisational learning model: intuiting, interpreting, integrating and institutionalizing			Conceptual	Crossan, Lane and White (1999)
Technological knowledge Knowledge of customer needs			Conceptual	Helfat and Lieberman (2002)
	Managerial capability		Conceptual	Teece et al. (2002)
1. Search stage 2. Gap assessment stage 3. Capability improvement/ enhancement stage		Benchmarking	Empirical	(Vorhies and Morgan, 2005)
Market orientation and Innovativeness together create a dynamic capability that will produce superior competitive advantage.		Market Orientation & Innovation	Empirical	Menqec and Auh (2006)
-Processes to direct R&D and select new technologies -Processes to exploit supplier and complementor innovation -Processes to use developments in exogenous science and technology -Processes to identify target market segments, changing customer needs and customer innovation.			Conceptual	(Teece, 2007)
Sensing guides Seizing which guides the Transformation	Distinct types of DCs		Conceptual	Helfat et al (2007)
(1) Search (2) Combining internal and external knowledge		1.Adaptive 2.Absorptive	Conceptual	Wang and Ahmed (2007)
Simultaneously explore and exploit opportunities -Strategy making process associated with variation -Resources devoted to competitive intelligence -Tracking technological change -Forums for discussions of new opportunities -Balance in centralization and decentralisation of control to encourage feedback from market-facing units -A culture of openness that encourages debate, -Commitment of resources by senior leaders (financial and time) to encourage long-term thinking -Senior management team that fosters a long-term mindset and promotes exploration		Ambidexterity	Conceptual  Inspired by theory and existing empirical research	O'Reilly and Tushman (2008)
	Strategic political management		Conceptual: Propositions	Oliver and Holzinger (2008)

Explore: Outside-in -Enhancing deep market insights with an advance warning system to anticipate market changes and unmet needs -Continuously learn from experiments -Forging relationships with those at the forefront of new media and social networking technologies and mobilizes the skills of current partners.	1.Vigilant market learning 2. Adaptive market experimentation 3. Open marketing	Adaptive	Conceptual	Day (2011)
-Monitoring of business processes and process change at competitors, developments -Monitoring the existing IT solutions in the own organization -Monitoring of the IT market and its latest technological developments		Information technology enabled Sensing	Empirical In-depth case study	Niehaves et al (2011)
-Building the partner and industry contact network		Innovation-related capability Sensing	Empirical Single case study	Ellonen et al (2011)
Building social networks			Empirical: Quantitative survey, Spanish CEOs	Fernández-Pérez et al. (2012)
Learning by doing processes; 1. Modular organizing: reconfiguration process to recombine new or existing independent components 2. Lateral coordination: organizational learning process that facilitates intra- and inter- organizational information sharing to develop deeper knowledge			Empirical	Waard et al (2012)
Microfoundations: 3. Customer linked service sensing 4. Service system sensing 5. Internal service sensing 6. Technology exploration		Service innovation sensing	Empirical	Kindström et al (2013)
Using online communities			Empirical	Wagner and Wagner (2013)
1. Catch-up and survival processes; Knowledge acquisition, - internalisation, - dissemination and resource reconfiguration, - divestment, – integration. 2. Potential competitive advantage processes; Search, experimentation, risk taking and	1.Exploitation and Deployment 2.Exploration and path creation	1. Adaptation 2. Innovation	Empirical Longitudinal case study: oil company	(Dixon et al. 2014)

Project selection, - funding and - implementation				
Identify market changes - Outside in			Conceptual	Day (2014)
Proactive learning: exploratory knowledge acquisition Reactive learning: exploitative knowledge acquisition			Conceptual	Holsappe and Oh (2014)
Analytical processes around customer needs, competitor behaviour and industry developments Reactive market orientation Proactive market orientation				Jaeger et al (2016)
Peripheral Vision learning processes: 1. Scoping - Learning from the past - Examining the present - Envisioning new futures 2. Scanning - Passive (reinforce) - Active (hypothesis)  Vigilant learning processes: - Fostering a robust market orientation - Filtering out the filterers - Suppressing Biases - Triangulating perspectives on a complex issue	1. Peripheral vision  2. Vigilant learning		Empirical  1.Sub-DCs identified from existing theory and research 2. Applied to two case studies: biofuels and pharmaceuticals	Day and Schoemaker, (2016)
1. Framing: - Job to be done - Abstract variations - Problem decomposition  2. Abduction: generating and testing hypothesis - Explanatory - Innovative	Generative sensing		Conceptual	Dong et al. (2016)
- Formal and informal cooperation with other companies - External stimuli via sensing 'agents' - Learning through experimenting		Alliance Capabilities	Empirical  Longitudinal case study: car manuf.	(Donada, et al. 2016)
- Identification of opportunities - Conceptualization of new resource combinations and business models for exploiting opportunities - Continuous research and development routines (large org.) - External scanning for new technologies (large org.) - Co-development activities with alliance partners			Conceptual	Teece (2016)
Sensing in a VUCA world - Develop strong peripheral vision			Conceptual	Schoemaker et al (2018)

- Enable the rapid dissemination of new knowledge laterally and vertically - Think big without feeling constrained by the status quo				
- Scanning - Interpreting - Learning			Conceptual	Teece (2018)
Simultaneously explore and exploit - Iterative learning process; intuiting, interpreting, integrating and institutionalization, with feedback loops.			Empirical Longitudinal case study	Nielsen et al. (2018)
Three Microfoundations: 1. Digital scouting: - Scanning for technological trends - Screening of digital competitors - Sensing customer-centric trends 2. Digital scenario planning: - Analysing scouted signals - Interpreting digital future scenarios - Formulating digital strategies 3. Digital mindset crafting: - Establishing a long-term digital vision - Enabling an entrepreneurial mindset - Promoting a digital mindset		Digital Sensing	Empirical Multiple Case study	Warner and Wäger (2019)

The main purpose for developing sensing capabilities is to learn about changes in the market environment. Crossan and Berdrow (2003) explain organisational learning as “*a means to develop capabilities that are valued by customers, are difficult to imitate and hence, contribute to competitive advantage*” (p.1089). Organisational learning has been found to entail creating knowledge, retaining knowledge, transferring knowledge (Argote, 2011), knowledge articulation, knowledge codification, experience accumulation (Zollo and Winter, 2002), scanning, interpreting (Thomas et al., 1993), searching, exploring (Teece, 2007), evaluating markets and competitors (Teece et al., 1997), identifying opportunities within and beyond current technological standards and to conceptualize identified opportunities (Teece, 2016). Day (2011) makes a distinction between outside-in and inside-out sensing orientation and suggests that sensing from a DCs perspective is primarily inside-out orientated as it starts with the firm and entails systematic sensing and scanning. He argues that an outside-in orientation is additionally needed to “*anticipate trends and events before they are fully apparent and then adapting effectively*” (p.187) which requires experimental learning. As such, Day claims that developing inside-out DCs is targeted towards evolutionary fitness whereas further building on

these inside-out sensing DCs by developing outside-in adaptive marketing capabilities (AMCs) enables the firm to anticipate and respond, by advancing from “*a reactive to a sense-and-respond approach*” (p.188), i.e. from firm-oriented decision making to customer-oriented decision making.

As mentioned, numerous organisational learning processes have been identified in the literature which we categorise as explorative and exploitative learning processes, firm-oriented learning (inside-out) processes, customer-oriented learning (outside-in) processes and internal and external learning processes. Each will now be discussed in turn.

### 3.3.1 Explorative and exploitative learning processes

It has long been acknowledged that organisational learning takes place through exploration of new possibilities and exploitation of existing certainties. Exploration includes processes such as search, variation, risk taking, experimentation, flexibility, discovery and innovation with the key purpose of new opportunity experimentation whereas exploitation includes processes such as refinement, choice, production, efficiency, selection, implementation and execution with the key purpose of refining and extending existing abilities and technologies. While exploration returns are considered uncertain, exploitation returns are considered predictable (March, 1991). Day (2011) differentiates between inside-out and outside-in oriented exploration and exploitation and maintains that inside-out orientation requires DCs to explore and exploiting existing resources (i.e. the RBV) whereas outside-in orientation requires AMCs to explore and exploiting market driven capabilities.

Distinct exploration and exploitation learning processes have additionally been identified in existing literature. Exploration has been found to entail; (1) intuiting; which refers to preconscious identification, (2) interpreting; to explain insights and (3) integrating; to develop mutual understanding while institutionalized learning entails defining tasks, actions and putting organisational mechanisms in place to implement the actions (Crossan et al., 1999). A distinction between proactive explorative learning and reactive exploitative learning has additionally been proposed. Holsapple and Oh (2014) define proactive learning as “*an ability to effectively integrate, build and reconfigure internal and external knowledge to address rapidly changing environment outside of a market*” (p.12) which entails exploratory knowledge acquisition to learn about what is happening outside the market, effective

knowledge selection/search, knowledge generated to discover new opportunities, knowledge assimilation focused on distributing the new knowledge within the organisation, pull approach to knowledge emission, knowledge coordination and knowledge leadership. The authors define reactive learning as *“an ability to efficiently and quickly integrate, build and reconfigure targeted internal and external knowledge to address a rapidly changing environment inside a developing market”* (p.12) which entails exploitative knowledge acquisition to learn about what is happening inside the market, efficient knowledge selection, knowledge generated to respond to known problems, knowledge assimilation focused on storing the new knowledge in repositories, push approach to knowledge emission, knowledge measurement and knowledge control. To succeed in dynamic market environments the authors suggest that organisations either need to lead by creating a new market or follow by entering the new market created and claim that successful leaders exhibit proactive DCs whereas successful followers exhibit reactive DCs, which they argue explains how both leaders and followers can succeed in rapidly changing markets. Proactive DCs focus on change outside the existing market and deployed to change an existing market with market features unknown to the firm whereas reactive DCs focus on change inside a developing market and deployed to respond to new markets with the market features known to the firm.

Exploration and exploitation have additionally been identified as a second-order DCs. Dixon et al. (2014) find that exploration that together with path creation aggregates to a higher-order Innovation DC which may result in sustainable competitive advantage. Search, experimentation and risk taking are identified as specific microfoundations for exploration whereas identified microfoundations for path creation are project selection, - funding and - implementation. Exploitation and deployment are found as second-order DCs that aggregate to a higher-order ‘Adaptation’ DC to enable catch up and survival. Knowledge acquisition, - internalisation, - dissemination are identified as specific microfoundations for exploitation whereas identified microfoundations for deployment are resource reconfiguration, - divestment, – integration. To simultaneously explore and exploit opportunities is furthermore proposed by O’Reilly III and Tushman (2008) as a distinct DC which they refer to as ‘Ambidexterity’. The authors claim that “Ambidexterity” entails; strategy making process associated with variation, resources devoted to competitive intelligence, tracking technological change, forums for discussions of new opportunities, balance in centralization and decentralisation of control to encourage feedback from market-facing units, a culture of

openness that encourages debate, commitment of resources by senior leaders (financial and time) to encourage long-term thinking, senior management team that fosters a long-term mindset and promotes exploration, to which they add crafting a vision and strategy, consensus within the management team about the strategy and aligning the organisation and the current business model to the strategy, such as exploring new business models whilst exploiting the firm's existing business simultaneously (O'Reilly III and Tushman, 2011). Nielsen et al. (2018) find that simultaneously exploring and exploiting is an iterative learning process with feedback loops.

### 3.3.2 Firm-oriented learning processes

Identifying and shaping opportunities from the inside-out (Day, 2011) involves searching, shaping, scanning, exploring (Teece 2007), learning and interpreting (Teece, 2018). Teece (2007) suggests four processes as microfoundations for building sensing capabilities; (1) to direct R&D and select new technologies, (2) to exploit supplier and complementor innovation, (3) to use developments in exogenous science and technology and (4) to identify target market segments, changing customer needs and customer innovation. To which he later adds conceptualization of new resource combinations and business models for exploiting opportunities, co-development activities with alliance partners, continuous research and development routines and external scanning for new technologies specifically in large organisations (Teece, 2016). Several distinct sensing microfoundations have been empirically identified. This includes microfoundations for service innovation sensing as: (1) customer linked service sensing, (2) service system sensing, (3) internal service sensing and (4) technology exploration (Kindström et al, 2013) and microfoundations for digital sensing as: (1) digital scouting; by scanning for technological trends, screening of digital competitors and sensing customer-centric trends, (2) digital scenario planning; by analysing scouted signals, by interpreting digital future scenarios and by formulating digital strategies and finally (3) digital mindset crafting; by establishing a long-term digital vision, enabling an entrepreneurial mindset and promoting a digital mindset (Warner and Wäger, 2019). As these findings clearly show, the processes differ in relation to the context and as such cannot be directly deployed for to explain customer-centric OCR sensing.

Despite the notion that developing sensing DCs entails different such as searching (Teece, 2007), learning and interpreting (Teece, 2018), the distinct processes in each phase are yet to



be empirically acknowledged. Day and Schoemaker (2016) do however differentiate between the role of scoping and scanning when searching for new opportunities by claiming that scoping activities entail learning from the past, examining the present and envision new futures whereas scanning activities are either passive (reinforce) - or active (hypothesis driven). The authors further propose that scoping and scanning together aggregate to 'Peripheral Vision' which they propose as a second-order DC and vital in VUCA environments to enable rapid dissemination of new knowledge laterally and vertically and thinking big without feeling constrained by the status quo (Schoemaker et al., 2018). 'Generative Sensing' as a second-order DC has also been proposed for hypothesis driven sensing; *"proactively generate hypothesis about observed events and then test these hypotheses to generate new data in a recursive way"* (Dong et al. 2016

, p.97). The authors propose two processes for building generative sensing to be framing and abduction. Framing refers to reframing identified problems which includes functionalisation to describe functions as opposed to things such as improve productivity vs. improving facilities, abstract reframing of identified problems such as pricing intangible value as opposed to pricing risk and problem decomposition and to frame identified problems in relation to sub-problems, that is there are various goals and ways to solve the problem. Abduction on the other hand, is the reasoning individuals use to explain new information by generating and testing hypothesis (as opposed to deduction where evidence to support decision making exists or induction where new knowledge is generated to reinforce existing knowledge to support decision making). The authors claim that abduction enables organisations to *"sense and shape new opportunities through actions that affirm the hypothesis"* (p.107), these actions include experimentation and prototyping. The authors propose two types of abduction as: explanatory; scanning for new explanations to surprising problems (creating hypothesis – "inference to the best explanation"), and innovative; suggestions based on the explanatory explanations ("inference to the best solution").

Benchmarking has additionally been found to enable systematically sensing and scanning for opportunities. Stopford and Baden-Fuller (1994) find competitor analysis and benchmarking activities primarily to innovate as opposed to imitate the competition and Vorhies and Morgan (2005) propose benchmarking as a higher order 'learning to learn' marketing capability that entails a structured learning process consisting of a search stage, gap assessment stage and

capability improvement stage. The authors do point out that they lack empirical insights for developing and enhancing the capability is missing.

### 3.3.3 Customer-oriented learning processes

It has been established that understanding customer needs to make customer-centric decisions requires MO capabilities. MO has been explained as a “*set of beliefs that puts the customer interest first*” (Deshpandé et al., 1993, p.27) and “*superior skills in understanding and satisfying customers*” (Day 1994, p.37). Day (1994) argues that MO firms have greater market-sensing and customer-linking capabilities and proposes market sensing processes to anticipate change as; inquiry initiated or continued, information acquisition, information distribution, interpretation, information utilization and evaluation of outcomes and customer linking processes to entail new skills, abilities and processes such as; close communication, joint problem solving and coordinating activities.

MO firms focus on identifying and responding to customer needs, as opposed to making and selling products (Day, 2014) which requires analytical processes around customer needs, competitor behaviour and industry developments (Kohli and Jaworski, 1990, Narver and Slater, 1990, Jaeger et al., 2016). Customer needs have been categorised as either expressed or latent (Jaworski and Kohli, 1996, Slater and Narver, 1995). Sensing customers’ expressed needs refers to needs communicated by the customer and defined as responsive market orientation (RMO) whereas sensing customers’ latent needs refers to firms’ anticipating customers’ needs and defined as proactive market orientation (PMO). Discovering opportunities related to customers expressed needs entails activities such as surveys and concept testing whereas to discover opportunities related to latent customer needs entails activities such as monitoring customer complaints, monitoring product returns and monitoring customer’s behaviour (Narver et al., 2004, Jaeger et al., 2016). Both RMO and PMO sensing capabilities have been found to enable firms to identify, understand and better meet their customer needs (Day, 1994, Moorman and Day, 2016). The key difference between RMO and PMO is that the former is deployed to respond to customer needs whereas the latter is deployed to anticipate customer needs. Firms are advised to satisfy customers’ expressed needs by developing RMO capabilities as the customer is aware of those needs before developing PMO capabilities to respond to latent needs which the customer is unaware of. However, the competition can more easily offer the same response to customers expressed needs firm’s need PMO capabilities to

e.g. avoid price competition and to exceed customer expectations to maintain sustainable competitive advantage (Narver et al., 2004). In that vein, (Voola and O'Cass, 2010) argue that RMO and PMO capabilities can be pursued individually but advise that both should be nurtured to implement competitive strategies. A direct positive link from RMO and PMO to firm performance has been identified which provides evidence to the importance of developing both types of capabilities (Narver et al., 2004, Voola and O'Cass, 2010). Jaeger et al. (2016) specifically find that both RMO and PMO have a positive impact on firm performance but only PMO can enable sustainable competitive advantage and claim that PMO is a continuous explorative process as *“customers latent needs are highly volatile, so firms must collect them continuously if they are to serve as a foundation for radical innovations and new ways of doing business”* (p.776).

It has been argued that MO alone does not qualify as a DC but when bundled with other internal resources and capabilities MO qualifies as a DC (Menguc and Auh, 2006, Morgan et al., 2009). Morgan et. al. (2009) suggest that MO as a knowledge asset and marketing capabilities to deploy MO together qualifies as a DC to enable sustainable competitive advantage. Menguc and Auh (2006) empirically examine the interplay between MO and innovativeness and its effect on firm performance and also argue that MO alone does not qualify as a DC, however when bundled together with internal complementary resources, such as innovativeness, it operates as PMO and as such qualifies as a DC that can create superior competitive advantage. Fostering a robust MO to understand, attract and retain valuable customers and to understand competitors has been identified as prerequisite for developing vigilant market learning capabilities which additionally includes filtering out the filterers and an explorative frame of mind (Day and Schoemaker, 2016). Schoemaker et al. (2018) specifically claim that sensing in VUCA worlds entails quick distribution of new knowledge both laterally and vertically, suppressing biases, interpreting ambiguous information with an open mind and triangulating perspectives on a complex issue which entails looking at things from various points of view such as using various enquiry methods to interpret vague indications, and then investigate to learn more about the opportunity.

Vigilant learning is identified as a distinct second-order sensing DC by Day and Schoemaker, (2016) while Day (2011) claims that vigilant market learning is required to develop AMCs in order to address increasing dynamism of the market environment. According the author

developing AMCs is a continuous four step learning process that consists of; gap identification, building AMCs, implement, learn and calibrate the gap which in addition to vigilant market learning requires adaptive market experimentation by continuously learning from experiments and open marketing by building relationships with marketing leaders and use current partner skills. deWard et al. (2012) find learning by doing in highly volatile environments to be developed through modular organizing; creating new system designs by recombining new or existing independent mechanisms and lateral coordination; facilitating intra- and inter-organizational information sharing.

### 3.3.4 External and internal learning processes

Both external and internal sensing has been identified in the literature and argued to be fundamental when studying organisational learning (Noblet, 2011) and to have a positive effect on e.g. product-service change (Thomas et al. 1993). External learning includes monitoring competitors (Niehaves et al., 2011), customer linked service sensing, service system sensing, technology exploration (Kindström et al., 2013), technology developments, monitoring the market (Niehaves et al., 2011), building social networks (Fernández-Pérez et al., 2012) and using online communities (Wagner and Wagner, 2013). Teece (2007) claims that sensing activities must include external collaborators that are active in innovative activity which includes customers, suppliers and complementors. Hence, firms need capabilities to; understand customer needs, to tap into supplier innovation and to establish broad based search. Internal learning however includes capturing employee ideas (Day 2004, Teece, 2007), internal service sensing (Kindström et al., 2013) and existing organizational solutions (Niehaves et al. 2011).

Combining internal and external knowledge to relate the firm's resources and capabilities to the market has been found to require organisations to develop absorptive capacity (AC) (Wang and Ahmed, 2007). Cohen and Levinthal (1990) define AC as "*the ability of a firm to recognise the value of new, external information, assimilate it and apply it to commercial ends*" (p.128) or as later explained by Berggren et al. (2017) "*as the organizational ability to absorb and utilize new external knowledge and apply it in novel processes and products*" (p.57). Developing AC is a path dependent process that entails several knowledge development steps (Cohen and Levinthal, 1990, Zahra and George, 2002, Verona and Ravasi, 2003, Todorova and Durisin, 2007) such as acquisition, assimilation, exploitation (Cohen and Levinthal, 1990),

transformation (Zahra and George, 2002) and value recognition (Todorova and Durisin, 2007). Knowledge acquisition entails understanding and acquiring external knowledge, knowledge assimilation refers to knowledge interpretation, understanding and formalization whereas knowledge exploitation refers to using the obtained external knowledge (Noblet et al., 2011). Todorova and Durisin (2007) propose assimilation as an alternative process to transformation and value recognition as an important first step before acquiring new external knowledge “*the ability to learn – that is, to absorb external knowledge – depends to a great extent on the ability to value the new external knowledge*” (p.777).

AC together with adaptive capability and innovative capability are according to Wang and Ahmed (2007) “*the most important component factors of dynamic capabilities and underpin a firm’s ability to integrate, reconfigure, renew and recreate its resources and capabilities in line with external changes*” (p.39). The authors argue that the three component factors are linked but in concept they are separate. A number of studies have conceptualized AC as a distinct DC (Narasimhan et al., 2006, Todorova and Durisin, 2007, Wang and Ahmed, 2007, Noblet, 2011) that fosters change and evolution in organisations to match dynamic market conditions (Cohen and Levinthal 1990, Zahra and George, 2002, Todorova and Durisin, 2007). However, there are contrasting view as to whether AC entails knowledge exploration or knowledge exploitation. Dixon et al., (2014) find knowledge exploitation together with knowledge acquisition and knowledge assimilation as distinct microfoundations that aggregate to a second-order exploitation construct which enables catch up and survival. Contrastingly, Lichtenthaler and Lichtenthaler (2009) relate AC to external knowledge exploration but Desorptive capacity to external knowledge exploitation and additionally highlight the need “*for examining a firm’s strategy in capability development*” (p.1332).

AC has been found to have a positive effect on innovation capability “*by integrating external knowledge and then transforming it into the firm’s competence*” (Liao et al., 2007, p.357) and to be enhanced by knowledge sharing. For open innovation, Verona and Ravasi (2003) find knowledge creation (i.e. acquisition) and knowledge absorption to be fundamental, knowledge integration (i.e assimilation) to be fundamental for continuous innovation and knowledge reconfiguration to be fundamental for continuous reconfiguration of resources. The authors find the building blocks of knowledge creation and absorption to entail a separate research facility, structure that fosters autonomous use of research budget and a culture that fosters

unrestricted exploration, open attitude and willingness to share research results. The building blocks of knowledge integration to entail new workplace layout, cross-functional team structures and a culture that fosters creativity, interaction and dialogue and absence of departmental identification whereas the building blocks of knowledge reconfiguration e.g. entail flexible workplace design, development group structures and continuous evaluation of proposals, and a culture that fosters openness to individual proposals, creativity and involvement in strategic processes. Despite existing knowledge discussed on AC research has mainly been theoretical and needs operationalizing (Noblet et al., 2011).

### **3.4 Seizing literature review**

Seizing follows sensing and guides the development of another set of second-order micro-foundational DCs; *“Once a new (technological or market) opportunity is sensed, it must be addressed through new products, processes or services”* (Teece, 2007, p.1326). The purpose of seizing is to respond to identified opportunities (Teece, 2007), to prepare a response to the opportunity (Helfat et al., 2009), to realize the opportunities potential, to exploit the opportunity (Kindström et al., 2013), to develop new ideas (Garud et al., 2013) and to decide which opportunities to respond to (Teece, 2016). In VUCA worlds seizing is explained as *“successfully innovating and implementing new systems that take advantage of external changes”* (Schoemaker et al., 2018, p.21).

Table 3.4 summarises the selected literature reviewed for seizing to highlight existing knowledge and the knowledge gap for each of the key features identified (chapter 3.2.4 Summary of key features). Despite the notion that developing seizing DCs entails preparing an opportunity for exploitation (Helfat et al, 2010, Kindström et al 2013) and deciding which opportunities to respond to (Teece 2007, 2016), a clear distinction between the specific processes and capabilities involved in each phase is still missing. As in the case of sensing, the table shows that the majority of research in relation to seizing has focused on identifying and explaining specific seizing processes and microfoundations, this includes innovation-related capability seizing (Ellonen et al., 2011), information technology enabled seizing (Niehaves et al., 2011), service innovation seizing (Kindström et al., 2013), marketing innovation seizing, product innovation seizing (Day and Schoemaker, 2016) and digital transformation seizing (Warner and Wäger, 2019) but is yet to be studied in the context of customer-centric retail innovation seizing. Additionally, very few studies have explained the aggregation of these

seizing processes into specific types of second-order and higher-order DCs. An exception is Day and Schoemaker (2016) who specifically find ‘Probe and learn’ and ‘Deploying real options’ as second-order seizing DCs and associated processes to build them and Teece (2016, 2018) who conceptually discusses the importance of dynamic managerial capabilities to seize opportunities.

While a study by Dixon et al., (2014) does provide empirical knowledge about the processes underpinning DCs microfoundations and their sequencing into second-order capability constructs and higher-order DCs, the findings do not specifically distinguish the distinct seizing microfoundations and their sequencing. Therefore, there is a need to identify the specific processes, microfoundations, second-order seizing DCs and higher-order seizing DCs for successful transformation to better understand their sequencing. Additionally, from the research context perspective, knowledge about the specific processes for developing seizing DCs for customer-centric retail innovation is still missing.

Table 3.4. Seizing literature summary

Seizing processes and microfoundations	Second order seizing capabilities	Higher order seizing capabilities	Focus	Paper
Attributes of entrepreneurial organisations: 1. Proactiveness 2. Aspirations beyond current resources 3. Team-orientation 4. Capability to resolve dilemmas 5. Learning capability			Empirical: Ten firms in four European industries: appliance, textile, pump and cutlery	Stopford and Baden-Fuller (1994)
Complementary resources and capabilities			Conceptual	Helfat and Lieberman (2002)
Exploitative decision making vs. Explorative decision making			Empirical: Field study in five high tech firms	Danneels (2002)
Entrepreneurial proclivity	Market Responsiveness		Empirical Survey, small retailers	Griffith et al (2006)
1. Delineating the customer solution and the business model 2. Selecting decision making protocols 3. Selecting enterprise boundaries to manage complements and control platforms			Conceptual	Teece (2007)

4. Building loyalty and commitment				
1. Acquisition selection capabilities/skills 2. Acquisition identification capabilities/skills	Acquisition-based dynamic capabilities		Conceptual	Helfat et al (2009)
-Textual modelling of business processes -Development of suitable business processes in a project team consisting of personnel from different departments -Articulation of requirements for (customization of) new software -Analysis of suitable IT-solutions -Creation of recommendations for decision on new IT -Creation of a roadmap for IT introduction			Empirical: In depth case study, SME in the paper, office supplies and stationery industry  <i>Conference paper</i>	Niehaves et al (2011)
- Customer driven decision making		Adaptive Marketing Capabilities	Conceptual	Day (2011)
- Collaboration strategy meetings - Executive steering committee - Collaboration workshops - Cross-functional teams - S&OP - Supply chain advisory boards - Co-located managers - "C"-suite SC executive		Collaboration	Empirical: Multimethod survey and interview approach	Allred et al (2011)
-Refinement of the decision-making protocols -New partnerships and platforms			Empirical: Single case study, leading Scandinavian newspaper	Ellonen et al. (2011)
- Using online communities				Wagner and Wagner (2013)
- Service interactions and co-development - Managing the service delivery process - Structuring the service development process - Adopting new revenue mechanisms			Empirical: Multiple case study, product centric firms	Kindström et al (2013)
Innovation processes: - Within firms - Across multi party networks - Within communities		Developing	Conceptual	Garud et al (2013)
Innovation capability routines: - Search for new technologies - Process and equipment development - Cross-functional product development			Empirical Quantitative 189 manufacturing plants in 6 countries	Peng et al (2013)



Improvement capability routines: - Continuous improvement - Process management - Leadership involvement in quality				
1. Catch-up and survival processes; Knowledge dissemination  2. Potential competitive advantage processes; Project selection and project funding	1. Exploitation and Deployment  2. Exploration and path creation	1. Adaptation  2. Innovation	Empirical  Longitudinal case study: oil company	Dixon et al. (2014)
- Trial and error learning via small, well designed experiments	Probe and learn		Empirical: Existing literature and two case studies in pharma and biotech	Day and Schoemaker (2016)
- Preserving and protecting options - Scouting options - Exploratory options	Deploying real options			
- Evaluate and select suppliers - Set goals and codify them in operational plans - Internal coordination - External and internal shaping factors	Alliance capabilities		Empirical: Longitudinal case study, Renault car manufact.	Donada et al (2016)
Entrepreneurship: -to develop a new business model -foster experimentation and search -support and direct Leadership: -to convince the organisation and its partner firms of the new path -risk management Agility: Large organisations need lean start-up model to quickly test, update and replace ideas and business models	Dynamic Managerial Capabilities		Conceptual	Teece (2016)
-Entrepreneurial skills (e.g. decision making and developing a new business model) -Leadership skills	Dynamic Managerial Capabilities		Conceptual	Teece (2018)
Successfully innovating and implementing new systems that take advantage of external changes.			Conceptual	Schoemaker et al (2018)
Three Microfoundations: 1. Rapid Prototyping - Creating minimum viable products - Considering a lean start-up methodology - Using a digital innovation lab 2. Balancing digital portfolios		Digital Seizing	Empirical: Multiple case study of incumbent firms in traditional industries	Warner and Wäger (2019)

<ul style="list-style-type: none"> <li>- Balancing internal and external options</li> <li>- Scaling up innovative business models</li> <li>- Setting an appropriate speed of execution</li> </ul> <p>3. Strategic agility</p> <ul style="list-style-type: none"> <li>- Rapidly reallocating resources</li> <li>- Accepting redirection and change</li> <li>- Pacing strategic responses</li> </ul>				
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The main purpose of developing seizing capabilities is to select opportunities to pursue and to decide how to pursue them. Hence seizing entails decision making and selection (O'Reilly III and Tushman, 2008), deciding whether to invest in new or improved products and services, deciding whether to evolve with the industry (Helfat and Lieberman, 2002), selecting which technologies and market segments to invest in and which not to, deciding when to invest in the opportunity and how much to invest in it as well as continuously interpreting current changes (Teece, 2007, 2016). Teece (2007) claims that seizing involves *“maintaining and improving technological competences and complementary assets and then, when the opportunity is ripe, investing heavily in the particular technologies and designs most likely to achieve marketplace acceptance”* (p.1326). Seizing an opportunity can require quick actions and it can take a long time, all depending on the opportunity identified (Schoemaker et al, 2018). The decision making and selection processes are found both on a group level e.g. in organisational units, and on an individual level such as managerial decision making (Helfat et. al. 2009).

Developing new ideas has been proposed as step two in the innovation process which entails elaboration of the new ideas which entails processes within firms, across multi party networks and within communities. Within firms, projects are highlighted as a way to overcome problems related to developing new ideas *“projects are mezzo-level organisational arrangements that serve as forums for pursuing new opportunities. Moreover, projects serve as forums for action and interaction among diverse set of organizational actors to facilitate the emergence, formation and transformation of beliefs, routines and practice”* (Garud et al., 2013, p.786). In a similar vein, Dixon et al., (2014) identify project selection, project funding and project implementation as specific microfoundations for 'Path-creation' which they posit is a second-order capability construct that aggregates to a distinct Innovation DC. Development processes across multi-party network members entails distribution of resources and assets whereas development within communities entails *“private entrepreneurial firms to commercialize the*

*innovation for profit*” (Garud et al 2013, p.788). For continuous innovation Verona and Ravasi (2003) find knowledge integration (i.e assimilation) to be fundamental. The authors find that knowledge integration entails new workplace layout, cross functional team structures and a culture that fosters creativity, interaction and dialogue and absence of departmental identification.

A distinction has also been made between Innovation capability and Improvement capability and their underlying routines (Peng et al., 2008). The authors identify routines for improvement capability to consist of: continuous improvement, process management and leadership involvement in quality whereas routines for innovation capability consist of; search for new technologies, process and equipment development and cross-functional product development. The authors claim that cross-functional activities enable quick product introduction processes, incorporating the customer’s voice into the design process and reducing design problems and further that cross-functional cooperation can be used for both new product/process development and improvement.

We categorise the numerous processes for developing seizing capabilities identified from existing literature as path dependent decision-making processes, firm centric decision-making processes and customer centric decision-making processes. Each will now be discussed in turn.

### 3.4.1 Path dependent decision making

Market entry decisions are often impacted by the firm’s existing resources and capabilities (Helfat and Lieberman, 2002, Teece and Pisano, 1994 and Teece et al., 1997) as entering a new market may require developing new resources and capabilities or adapting existing resources and capabilities (Helfat and Lieberman, 2002). Acquisition and alliances are for example deployed by firms that lack resources and capabilities outside of their existing knowledge base to seize identified opportunities.

Building alliance DCs to grasp new opportunities has been found to be a step by step process that entails developing relational DCs. Helfat et al. (2009) claim that alliance capabilities can be a simple and cost-effective approach and developed through four steps; (1) knowledge articulation, (2) knowledge codification, (3) knowledge sharing and (4) knowledge internalization. Donada et al. (2016) however identify three steps as; (1) identify, (2) build and

(3) integrate. Identifying refers to formal and informal cooperation with other firms, external stimuli, sensing agents and learning through experimenting. Building entails activities to evaluate and select suppliers, goal setting and codification into operational plans, internal coordination and external and internal shaping factors. Integrate refers to shaping the capability through dedicated organisational structure (i.e. alliance function), internal shaping factors, leadership, structure aligned with strategy and roll out of integrative processes.

Selecting acquisition to develop new resources and capabilities is also a step by step process of resource renewal that entails: (1) selection process, (2) identification process and (3) reconfiguration process. Selection refers to deciding that acquisition is the most appropriate way to move forward, identification refers to finding, evaluating and negotiating with targets (firm) whereas reconfiguration refers to the transfer of resources to and from the acquired firm. Firms exhibiting strong acquisition based DCs have extensive skills in all three (Helfat et al. 2007).

### 3.4.2 Firm-centric decision making

The centrality of the decision making has also been found to impact the selection process, specifically the impact of firm - and product centric (inside-out) vs. service centric or customer centric (outside-in). Day (2011) argues that the DCs theory is inside-out focused, hence it can be argued that the seizing microfoundations proposed by Teece (2007) are firm-centric. Teece (2007) proposes specific 'enterprise structures, procedures, designs and incentives' to seize opportunities that entail four processes; (1) selecting new product and business model design which entails developing hypothesis about customer needs and how to efficiently meet those needs, (2) selecting the firm boundaries, (3) 'selecting decision-making protocols' e.g. to manage complementary assets and (4) 'building loyalty and commitment' to encourage change. From an information systems business change perspective, Niehaves et al. (2011) investigate and identify five baseline seizing capabilities as; (1) textual modelling of business processes, (2) development of suitable business processes in a project team consisting of personnel from different departments, (3) articulation of requirements for (customization of) new software, (4) analysis of suitable IT-solutions, (5) creation of recommendations for decision on new IT and (6) creation of a roadmap for IT introduction. In a recent study, Warner and Wäger (2019) specifically find three microfoundations for digital innovation seizing to be: (1) rapid prototyping; by creating minimum viable products, considering a lean start-up methodology

and using a digital innovation lab, (2) balancing digital portfolios; by balancing internal and external options, scaling up innovative business models and setting an appropriate speed of execution and finally (3) strategic agility; by rapidly reallocating resources, accepting redirection and change and pacing strategic responses.

The role of managers has also been highlighted in decision making (Teece, 2016, 2018). Teece claims that managers need decision making capabilities to forecast technological developments and market responses (competitor, suppliers and customers) as well as entrepreneurial and leadership capabilities to select or create a suitable business model. Managers need leadership capabilities to persuade the organisation and board of directors about the appropriateness of a suggested business model. When a suitable business model has been selected, the management needs to decide which activities will be outsourced and which activities will be controlled by the firm (Teece, 2016). This is in line with Stopford and Baden-Fuller (1994) who posit that moving from the sensing stage to process renewal stage requires organisations to have proactiveness and aspirations beyond current resources by top team and individual as well as team-orientation; top team, extensive within function, capability to resolve dilemmas; resolution within functions and learning capability; investment in information systems. The authors further find inertia, lack of top management team-work, failure to align clear definitions of identified problems to be obstacles for moving from sensing to process renewal.

Collaboration, Probe and learn and Deploying real options have been identified as distinct DCs. While not specifically identified for seizing, Allred et al. (2011) find that Collaboration as a DC between the firm and the supply chain “*mediates the conflict resulting from functional orientations*” (p.129) and leads to “*the ability to work together*” (p.149). The authors find that developing Collaboration capabilities is a two-step process that entails changing the mindset first and then the structure. To improve a firm’s collaborative capability requires; collaboration strategy meetings, executive steering committee, collaboration workshops, cross-functional teams, supply and operations, supply chain advisory boards, Co-located managers and C-suite supply chain executive. Purposely deploying Teece’s (2007) framework, Day and Schoemaker (2016) find ‘Probe and learn’ and ‘Deploying real options’ as distinct second-order seizing DCs. Probe and learn entails trial and error learning via small, well designed experiments whereas Deploying real options includes preserving, protecting and scouting options as well as exploratory options. Preserving and protecting options entail carefully developed experiments

that test different strategic responses, scouting options entail “*cautious investments made to discover new technologies*” (p. 64) whereas exploratory options such as small R&D investments, joint ventures and start-ups is focused on minimizing “*fixed investment and sunk costs until sufficient commercial feasibility has been established...to acquire additional business experiences that can later be parlayed into larger strategic commitments*” (p. 64).

### 3.4.3 Customer-centric decision making

Despite the numerous firm-centric decision making processes identified in the literature, it has been suggested that product centric business models are no longer appropriate for a business that aspires to become service centric; “*firm decision-making processes geared towards products can miss service innovation opportunities that would be seized by a more service-oriented capability*” (Kindström et al., 2013, p.1065). The authors specifically identify four microfoundations for service centric decision making as; (1) service interactions and co-development, (2) managing the service delivery process, (3) structuring the service development process and (4) adopting new revenue mechanisms. Wagner and Wagner (2013) find that using online communities to seize opportunities by suggesting the idea to the online community for further development. Along those lines, Kindström et al., (2013) posit that service interactions entail “*interacting and co-developing with customer and partners to understand, visualize and deliver value propositions. Involves processes, roles and skills to interact and change together with customers*” (p.1067). In a similar vein, Day (2011) argues that advancing from “*a reactive to a sense-and-respond approach*” (p.188), entails advancing from firm centric decision making to customer centric decision making and Allred et al. (2011) find that improving customer satisfaction to be a key driver for developing Collaboration capabilities is “*and a core reason to build close customer relationships, establish dedicated account teams, and accommodate customer’s special needs*” (p.146).

Market responsiveness has been proposed as a DC to quickly seize market opportunities. As such, Griffith et al. (2006) surveyed 269 small retailers and found that entrepreneurial proclivity enables retail firms to proactively respond to market needs quicker than retailers lacking entrepreneurial proclivity; “*Retail performance is driven by the retailer’s ability to develop knowledge resources and convert them into the DC of market responsiveness. The capability of converting knowledge resources into market responsiveness DC is entrepreneurial proclivity*” (p.60). This is in line with Stopford and Baden-Fuller (1994) posit

that moving from the sensing stage to process renewal stage requires organisations to have proactiveness attributes. Danneels (2002) investigates the dynamics of product innovation and also supports previous studies that find customers strongly impact new product development and need to be involved in the process, such as by giving input, and argues that the “*ability to identify, evaluate, and incorporate new technological and/or customer competences into the firm*” (p.1097) is a second-order competence. The author further differentiates between exploitative decision making and explorative decision making. The prior is deployed by firms deploying existing “*technological and market knowledge to make accurate projections*” (p.1117) whereas the latter requires evaluating the firm’s strategy and vision in relation to the opportunity and entails asking questions such as; Is this the right market? Is this the right direction? Can we use existing resources?

### **3.5 Transforming literature review**

Transforming follows seizing (Teece, 2007) and refers to the firm’s ability to implement actions (Helfat et al., 2009, Thomas et al., 1993) to maintain evolutionary fitness by recombining or reconfiguring the firm’s resource base (Teece, 2007). The main purpose of developing transforming capabilities is to enable successful implementation by aligning the firm’s resource base (i.e. resources and capabilities) to identified changes (sensing) and selected opportunities (seizing) (Teece, 2007); “*sensing and seizing capabilities help create business opportunities for firms, but their full commercial potential may only be realized if the firm can properly execute its new strategies, which in turn may require organizational transformation*” (Day and Schoemaker, 2016, p.64). Transforming, together with sensing and seizing directs and forms the firm’s base-level OCs and second order micro-foundational DCs (Teece, 2018).

Transforming capabilities are developed and deployed to upgrade and adapt the firm’s OCs (Teece, 2018) which requires abilities “*to recombine and to reconfigure assets and organisational structures*” (Teece 2007, p.1335). The DCs framework conceptually proposes selected microfoundations that enable “*continuous alignment and realignment of specific tangible and intangible assets*” (Teece 2007, p.1340) in order to maintain ecological fitness (O’Reilly III and Tushman, 2008) as; (1) decentralization and near decomposability, (2) co-

specialization, (3) governance and (4) knowledge management. Empirical studies however show that the distinct processes differ between industries (Day, 1994) and context.

Table 3.5 summarises the selected literature reviewed for organisational transformation to highlight existing knowledge and the knowledge gap for each of the key features identified (chapter 3.2.4 Summary of key features). As in the case of sensing and seizing, the table shows that the majority of research on organisational transformation capabilities has mainly focused on identifying and explaining distinct processes and microfoundations for developing transforming DCs, this includes innovation-related capability transformation (Ellonen et al., 2011), information technology enabled transformation (Niehaves et al., 2011), service innovation transformation (Kindström et al., 2013), marketing innovation transformation, product innovation transformation (Day and Schoemaker, 2016) and digital transformation (Warner and Wäger, 2019) but is yet to be studied in the context of customer-centric OCR transformation.

Additionally, very few studies have explained the aggregation of these seizing processes into specific types of second-order and higher-order DCs for successful transformation. An exception is Organisational redesign and External shaping which have been identified as second-order transforming DCs (Day and Schoemaker, 2016), Exploitation and Deployment as a distinct second-order capability constructs that aggregate to Adaptation DC and Exploration and Path creation as distinct second-order capability constructs that aggregate to Innovation DC (Dixon et al., 2014), Continuous Improvement DC (Anand et al., 2009), Acquisition DCs (Helfat et al. 2007) and Alliance DCs (Donada et al., 2016). While a study by Dixon et al. (2014) does provide empirical knowledge about the processes underpinning the microfoundations of DCs and how they are sequenced into second-order capability constructs and higher-order DCs, the findings do not specifically identify the distinct transforming microfoundations and their sequencing. Therefore, there is a need to identify the specific processes, microfoundations, second-order transforming DCs and higher-order transforming DCs for successful transformation to better understand their sequencing. Additionally, from the research context perspective, knowledge about the specific processes for developing DCs for customer-centric retail transformation is still missing.



Table 3.5. Transforming literature summary

Transforming processes and microfoundations	Second order transforming capabilities	Higher order transforming capabilities	Focus	Paper
-Minor changes such as changes in procedures -Major changes such as product service changes, revisions in overall strategy, redesign of organisational structures			Empirical: Questionnaire, manufacturing and service firms in Spain	Dutton and Duncan (1987)
Strategic sense making -Action			Empirical: path analysis of 156 hospitals	Thomas et al (1993)
Three common attributes of entrepreneurial organisations: (1) proactiveness (2) aspirations beyond current resources (3) team-orientation (4) capability to resolve dilemmas (5) learning capability			Empirical: 10 manufacturing firms	Stopford and Baden-Fuller (1994)
-Competence deployment processes		Strategic renewal	Conceptual	Floyd and Lane (2000)
-Integrated marketing and product development processes -Teamwork to bridge formal boundaries and speed response to change			Empirical: Single case study-NCR	Rosenbloom (2000)
-Resource Exploitation: Using existing resources to develop a product - -Resource Exploration: Obtaining new resources to develop a product		New product development	Empirical: Feld study-high tech firms producing B2B products	Danneels (2002)
Knowledge reconfiguration building blocks -Actors -Physical resources -Structures and systems -Culture		New product development	Empirical: Single case study – hearing aid industry	Verona and Ravasi (2003)
-Decentralization and near decomposability -Co-specialization -Governance -Knowledge Management			Conceptual	Teece (2007)
-Obtaining new resources to improve evolutionary fitness	Acquisition-based DCs		Conceptual	Helfat et al (2007)
Simultaneously explore and exploit opportunities -Strategy making process associated with variation		Ambidexterity	Conceptual Inspired by theory and existing	O'Reilly and Tushman (2008)

<ul style="list-style-type: none"> <li>-Resources devoted to competitive intelligence</li> <li>-Tracking technological change</li> <li>-Forums for discussions of new opportunities</li> <li>-Balance in centralization and decentralisation of control to encourage feedback from market-facing units</li> <li>-A culture of openness that encourages debate</li> <li>-Commitment of resources by senior leaders (financial and time) to encourage long-term thinking</li> <li>-Senior management team that fosters a long-term mindset and promotes exploration</li> </ul>			empirical research	
<p>Bundles of patterned and systematic activities;</p> <p><u>Purpose</u></p> <ul style="list-style-type: none"> <li>-Organisational direction and CI goals</li> <li>-Balanced innovation and improvement (ambidexterity)</li> </ul> <p><u>Processes</u></p> <ul style="list-style-type: none"> <li>-Constant change culture</li> <li>-Parallel participation structures</li> <li>-Standardized processes</li> <li>-Standardized improvement method</li> </ul> <p><u>People</u></p> <ul style="list-style-type: none"> <li>-Training and career paths</li> <li>-Information technology support</li> </ul>		Continuous improvement	Empirical: Multiple case study – five industries	Anand et al (2009)
<ul style="list-style-type: none"> <li>-Leveraging existing resources</li> <li>-Creating new resources</li> <li>-Accessing external resources</li> <li>-Releasing resources</li> <li>-Managerial resource cognition</li> </ul>			Empirical: case study- typewriter manufacturing	Danneels (2010)
<ul style="list-style-type: none"> <li>-Communication of new processes using intranet or noticeboards</li> <li>-Implementation of new applications with basic functionality</li> <li>-Roll-out of IT solutions</li> <li>-Learn how to operate new IT</li> <li>-Creation and realization of training sessions for new systems</li> </ul>			Empirical: single case study – office supplies industry <i>conference paper</i>	Niehaves et al (2011)
<ul style="list-style-type: none"> <li>-Leadership and incentives foster commitment</li> <li>-Knowledge sharing between different projects</li> <li>-Investment in new resources</li> </ul>			Empirical: Single case study, leading Scandinavian newspaper	Ellonen et al (2011)
<ul style="list-style-type: none"> <li>-Orchestrating the service system</li> <li>-Balancing product and service innovation related assets</li> <li>-Creating a service oriented mental model</li> </ul>			Empirical: Multiple case study, product	Kindström et al (2013)

			centric firms	
Implementation of new ideas -Within firms -Across multi party networks -Within communities		Implementation	Conceptual	Garud et al (2013)
-Resource reconfiguration -Resource divestment -Resource integration	Deployment	Adaptation	Empirical: Longitudinal case study-oil industry	Dixon et al (2014)
-Project implementation	Path creation	Innovation		
-Align online branding globally -Enhance E-commerce support for B2B partners -Build Omnichannel customer community -Complement the physical store experience			Empirical: Single case study – sports industry	Hansen and Sia (2015)
-Bringing in new skills -Organisational separation	Organisational Redesign		Empirical: 1.Sub-DCs identified from existing theory and research	Day and Schoemaker (2016)
-Relying on external networks -Creating new industry standards -Reshaping the firm’s business ecology	External shaping		2. Applied to two case studies: biofuels and pharmaceutical industry	
-Dedicated organisational structure -Internal shaping factors -Leadership -Structure aligned with strategy -Roll out of integrative processes through re-engineering the organisation = dedicated organisational structure (alliance function)		Alliance capabilities	Empirical: Longitudinal case study- car industry	Donada et al (2016)
-Strategy implementation -Periodic organisational fit considerations			Conceptual	Teece (2016)
-Periodic organisational renewal -Adapt to changes incrementally -Reshape themselves and perhaps their ecosystems			Conceptual	Schoemaker, Heaton and Teece (2018)
-Business model innovation -Business model implementation -Business model change			Conceptual	Teece (2018)
Three Microfoundations: 1. Navigating innovation ecosystems - Joining a digital ecosystem - Interacting with multiple external partners		Digital Transforming	Empirical Multiple Case study	Warner and Wäger (2019)

<ul style="list-style-type: none"> <li>- Exploiting new eco-system capabilities</li> <li>2. Redesigning internal structures <ul style="list-style-type: none"> <li>- Hiring a chief digital officer</li> <li>- Digitalization of business models</li> <li>- Designing team-based structures</li> </ul> </li> <li>3. Improving digital maturity <ul style="list-style-type: none"> <li>- Identifying digital workforce maturity</li> <li>- External recruiting of digital natives</li> <li>- Leveraging digital knowledge inside firms</li> </ul> </li> </ul>				
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As highlighted above, the majority of existing literature with respect to organisational transformation has focused on identifying specific transformation processes and microfoundations. As such, several potential and alternative processes for developing transformation capabilities have been identified both theoretically and empirically, this includes organisational renewal, operational renewal, exploitation and exploration renewal and continuous renewal. Each will now be discussed in turn.

### 3.5.1 Organisational renewal

Numerous organisational renewal processes have been identified that enable firms to transform and reconfigure the resource base, this includes redesigning the organisational structure, redesigning organisational orientation, organisational knowledge renewal and organisational strategy renewal.

#### *Redesigning the organisational structure*

Existing literature has identified redesigning the organisational structure to entail organisational separation (Kindström et al., 2013, Donada et al., 2016, Day and Schomeaker 2016, Warner and Wäger, 2019) and team based structures (Day 1994, Warner and Wäger, 2019). Organisational separation has been argued to be a major transformation (Dutton and Duncan, 1987) that requires processes such as: a dedicated organisational division to build Alliance DCs (Donada et al., 2016), ‘balancing product and service innovation related assets’ as a distinct microfoundation for service transformation which entails creating specific service roles on every level of the organisational structure (Kindström et al., 2013), ‘redesigning internal structures’ as a distinct microfoundation for digital transformation which requires decentralization of organisational units, creation of independent subsidiaries and distinct activities; i.e. hiring a chief digital officer, digitalization of business models and designing

team-based structures (Warner and Wäger, 2019), creating separate divisions and bringing in new skills and has additionally been suggested as a distinct ‘Organisational Redesign’ sub-DCs (Day and Schoemaker, 2016). Teece (2007) claims that decentralization is an important microfoundation of transforming DCs which he claims to require adopting loosely coupled structures, embracing open innovation and developing integration and coordination skills. A balance between centralization and decentralisation of control has also be argued to encourage feedback from market-facing units (O’Reilly and Tushman, 2008). In that vein, Teece (2007) stresses that near decomposability is needed to balance the autonomy of organisational units for quick decision making and connection to coordinated activities (Teece, 2007).

Further on the notion of designing team-based structures (Warner and Wäger, 2019), existing literature has suggested lateral and vertical team-orientation as a key attribute of entrepreneurial organisations which e.g. enables firms to address dilemmas within each function (Stopford and Baden-Fuller, 1994) and teamwork to enable agile transformation and to bridge formal organisational boundaries (Rosenbloom, 2000).

#### *Redesigning organisational orientation*

Changing an organisation’s orientation has been found to impact successful transformation and to require distinct processes, this includes transforming from product orientation to service orientation, customer orientation or ecosystem orientation. Creating a service oriented mental model has been identified as a key microfoundation when changing the firm’s mindset from product- to service orientation (Kindström et al., 2013), navigating innovation ecosystems has been identified as a key microfoundation when changing the firm’s mindset from product- to customer orientation for digital transformation which entails joining a digital ecosystem, interacting with multiple external partners and exploiting new eco-system capabilities (Warner and Wäger, 2019), reconfiguring the organisational structure to be required for transforming towards customer centricity (Hoogveld and Koster, 2016) and periodic organisational renewal such as redesigning the business model to a platform based business model when transforming from product- to ecosystem orientation (Schoemaker et al., 2018). Despite this knowledge, changing from channel orientation to customer orientation (a key feature when transforming from MCR to OCR) is yet to be clarified.

### *Organisational knowledge renewal*

Knowledge reconfiguration can be explained as the creation of an “*open structure that makes it possible to redefine role systems and relational patterns in a flexible way in order to make it easier to recombine resources continuously; this process of recombination allows the company to keep the new product pipeline filled*” (Verona and Ravasi, 2003, p.579). The authors find four categories of knowledge reconfiguration building blocks as actors, physical resources, structures and systems and culture. According to the authors actors in knowledge reconfiguration entail contributive and motivated employees and experienced senior managers, physical resources entail flexible workplace design and cogitate incognita on the company walls, structure and systems entail absence of departments, development group, continuous collection and evaluation of proposals, free allocation of time and skills, centralized allocation of financial resources and culture entails openness to individual proposals and individual creativity and broad involvement in strategic processes.

Knowledge management is argued essential in organisational transformation to continuously learn, integrate and transfer knowledge (Teece, 2007). In that vein, both employee knowledge management and customer knowledge management has been discussed in the literature. From a customer learning perspective, Ellonen et al., (2011) identify knowledge sharing of best practices and lessons learnt from online innovation projects to reconfigure existing market capabilities. The activities identified include engaging in discussions with customers online to obtain input for further development of new products, as a result new ‘customer-communication-related market capabilities’ were developed. Investment in new software and recruitment of experts (new resources) was however needed to further develop the capability to obtain real-time knowledge of online customer behaviour. From an employee learning perspective, Warner and Wäger (2019) find it essential for digital transformation to improve employees digital maturity which entails identifying the workforce’s digital maturity, external recruiting of digital natives and leveraging digital knowledge inside the firm. In a similar vein, Niehaves et al., (2011) identify employee learning how to operate new IT and creation and realization of training sessions for new systems as baseline dynamic IS capabilities.

### *Organisational strategy renewal*

Achieving strategic fit is argued to be a continuous process (Teece 2007) and strategic renewal has been identified as a major change (Dutton and Duncan, 1987), defined as “*an evolutionary*

*process associated with promoting, accommodating and utilizing new knowledge and innovative behaviour in order to bring about change in an organization's core competencies and/or change in its product market domain*" (Floyd and Lane 2000, p.155). Strategic renewal requires entrepreneurial managers to share the strategic vision across the organisation and continuously address the firm's 'fit' in relation to selected opportunities to enable gradual adaptation (Teece, 2016). Additionally, Floyd and Lane (2000) Floyd and Lane (2000) argue that strategic renewal to maintain adaptiveness *"requires both exploiting existing competencies and exploring new ones – and, more important that these two facets of organisational learning are inseparable (p.155).*

Strategic renewal has specifically been found to entail redesigning the firm's existing BM (O'Reilly III and Tushman, 2008) which entails BM innovation, implementation, change (Teece, 2018) and incremental adaptation (Schoemaker et al., 2018). Strategic renewal for digital transformation has been empirically identified to include three areas; (1) the BM, (2) collaborative approach and (3) organisational culture. Business model renewal is found to be the first step in digital transformation followed by renewal of collaborative approaches which finally enables renewal of the firm's culture, and as such all three are contingent (Warner and Wäger, 2019).

### 3.5.2 Operational renewal

Successful transformation has been found to require new processes, such as integrated marketing and product development processes (Rosenbloom, 2000) defined as *"designed sequences of tasks aimed at creating value-adding transformations of inputs – material and information – to achieve intended outputs"* (Anand et al 2009, p.445). To enable product development driven by customer needs Rosenbloom (2000) for example identifies how the National Cash Register company changed its product- and marketing processes from hierarchical and slow to integrated processes, which required teamwork to break down organisational silos and adapting the organisational culture. In a similar vein, Niehaves et al., (2011) identify baseline DCs for successful IT transformation to entail communication of new processes using intranet or noticeboard as gradual implementation, i.e. implementation of new applications with basic functionality and roll-out of IT solutions.

Implementing new processes has also been found to require commitment from employees which can be hard, especially in firm's that are performing well (Teece, 2016). In that vein, Ellonen et al., (2011) identify that leadership and incentives fosters employee commitment to online innovation. The authors identify that to engage staff and foster commitment for online transformation requires leadership managers to personally promote the transformation, reward successful online projects and initiatives, implement an incentive system and incorporate a responsive attitude as a criteria for promotions and bonuses. Similarly, Kindström et al., (2013) identify 'Orchestrating the service system' as a microfoundation for successful service transformation which entails developing an incentive system that benefits both sellers and end user, roles and structures.

### 3.5.3 Explorative and exploitative renewal

It has long been acknowledged that resource base renewal is achieved by leveraging existing resources, creating new resources, accessing external resources or releasing resources (Eisenhardt and Martin, 2000). Danneels (2010) investigates how DCs enable resource renewal and finds the processes to entail; (1) leveraging existing resources such the brand, the distribution and customer understandings, (2) creating new resources such as R&D resources and acquisition (Helfat et al., 2009) (3) accessing external resources such as alliances, (4) releasing resources such as laying off employees and moving manufacturing abroad. In addition, the author argues that a missing element is (5) managerial resource cognition which impacts how firms try to use DCs for resource alteration in order to respond to a changing environment; *"it is necessary to consider managerial resource cognition in order to understand the actual or potential exercise of dynamic capability. It is not only resources that affect dynamic capability but also cognition about those resources"* (p.26). Further advancing knowledge about leveraging existing resources and creating new resources, Danneels (2002) makes a distinction between resource exploration and resource exploitation. He explains leveraging existing resources as pure resource exploitation that entails creating new linkages between existing technological and customers abilities whereas creating new resources as pure resource exploration which entails drawing on existing abilities to create new technological and customer abilities.

Exploitation and exploration have additionally been proposed as second order constructs. Danneels (2002) claims that the ability to build new customer and technological competences



is a second order competence, similarly Dixon et al., (2014) propose exploitation and exploration as second order capability constructs. The authors identify exploitation as second-order construct that together with a second order deployment construct aggregates to Adaptation DC, and further identifies that resource reconfiguration, - divestment and -resource integration are microfoundations for deployment, whereas knowledge acquisition, - internalisation and – dissemination are microfoundations for exploitation. Whereas the authors find exploration as second-order construct together with path creation as aggregates to Innovation DC, and further identifies that search, experimentation and risk-taking as microfoundations for exploration whereas project selection, - funding and -implementation s microfoundations for path creation.

To simultaneously explore and exploit has been proposed as a distinct Ambidexterity DC which requires crafting a vision and strategy, consensus within the management team about the strategy and aligning the organisation and the current business model to the strategy (O'Reilly and Tushman, 2008). An example of Ambidexterity as a DC is exploring new business models whilst exploiting the firm's existing business simultaneously (O'Reilly and Tushman, 2011), which is therefore related to organisational strategic renewal (3.2). Teece (2007) however argues that exploring and exploiting can provide competitive advantage while reconfiguring the resource base is needed for long term success.

#### 3.5.4 Continuous resource base renewal

Transforming has been claimed to require continuous and agile processes of resource base renewal (Teece 2007). In that vein, Anand et al., (2009) have proposed 'Continuous Improvement' as a distinct DC defined as "*a systematic effort to seek out and apply new ways of doing work, i.e. actively and repeatedly making process improvements*" (p.444) and claim that changes to a firm's routinized operational processes constitute as a DC, such as improving the efficiency of product production processes. The authors identify three categories to enable continuous improvement which consist of bundles of patterned and systematic activities; (1) purpose improvements entail organisational direction and continuous improvement goals, (2) processes improvements entail a culture of constant change, parallel participation structures such as cross-functional teams and standardized processes and (3) people improvements which entail training, career paths and information technology support.

Distinct continuous improvement activities such as Lean production, Kaizen and Six Sigma can enable the firm to make agile improvements to improve performance (Anand et al., 2009) and fostering an agile mindset is highlighted as a key feature of an organisations transforming capability (Day and Schoemaker, 2016). Teece et al. (2016) define agility as “*the capacity of an organization to efficiently and effectively redeploy/redirect its resources to value creating and value protecting (and capturing) higher-yield activities as internal and external circumstances warrant*” (p.17). Three distinct types of agile IT capabilities have been identified as; (1) customer agility, such as co-creating user experiences, (2) partnering agility, such as organizing external partner ecosystem and (3) operational agility, such as improving speed and accuracy (Sambamurthy et al., 2003, Warner and Wäger, 2019).

### **3.6 Research framework and questions**

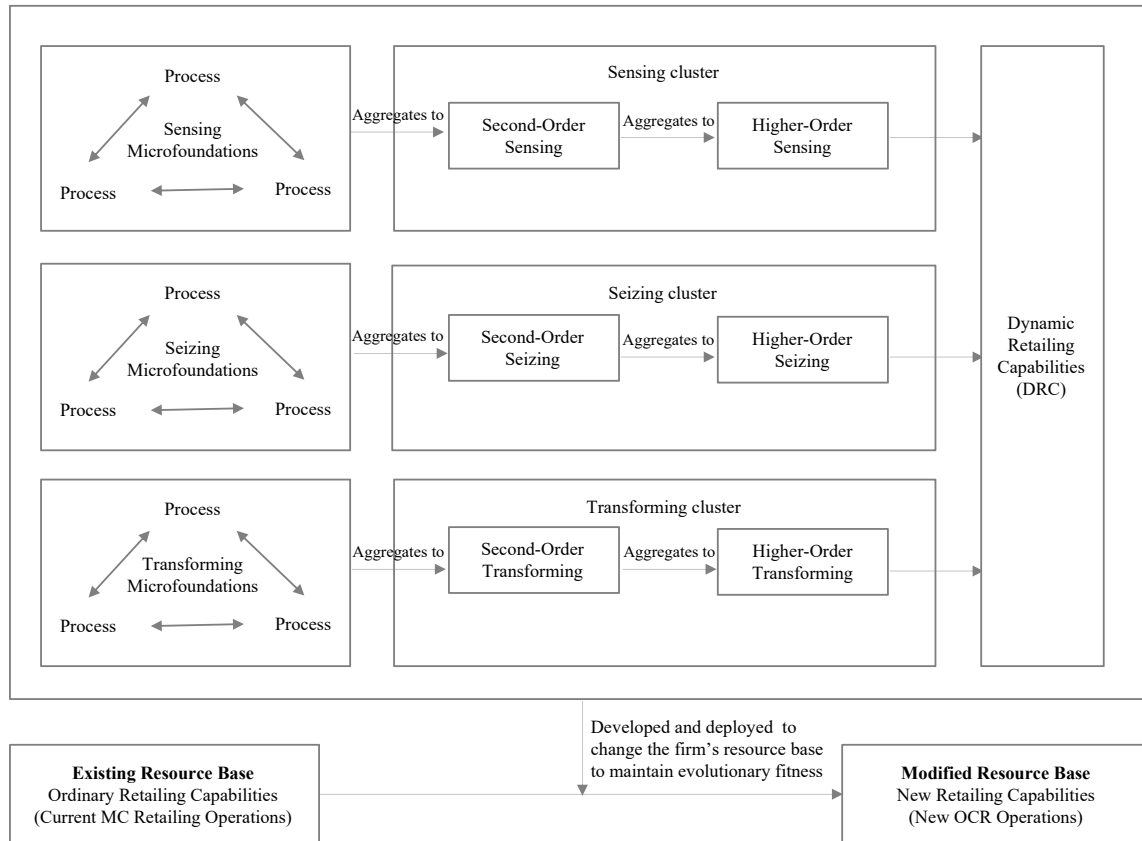
While vast amount of research has been conducted on DCs, it has primarily been conceptual (Helfat and Peteraf, 2009) and there is a call for more empirical studies. Specifically, knowledge of how organisational change processes connect with higher order sensing, seizing and transforming DCs (Schoemaker et al., 2018). Additionally, despite the dynamism of the retail environment, limited knowledge exists about successful customer centric transformation, which is a key element in transforming from MCR to OCR (chapter 4). This study aims to contribute to the identified knowledge gap in both the DCs and retailing literature by empirically investigating and identifying the DCs developed for customer-centric OCR transformation using the three DCs clusters of sensing, seizing and transforming (Teece, 2007) so we can advance our knowledge on this new dynamic era of the retail industry.

#### *The research framework*

The research framework presented in figure 3.3. was developed to contribute to the knowledge of how organisational change processes connect with higher order sensing, seizing and transforming DCs. The research framework adopts the key features of DCs identified in the literature review which need to be holistically advanced; a DCs hierarchy consisting of the three DCs clusters of sensing, seizing and transforming (Teece, 2007), second-order DCs for each cluster (Day and Schoemaker, 2016) and associated microfoundations (Schoemaker et al. 2018) consisting of organisational processes (Helfat et al., 2009) to maintain evolutionary fitness (Teece, 2007, Helfat et al., 2009). The framework will enable investigating distinct

microfoundations, processes, second and higher-order DCs in each cluster of sensing, seizing and transforming to better understand their sequencing.

Figure 3.3. The research framework



- *Existing resource base*: refers to the firm’s existing retailing capabilities and know how that are used ‘to maintain the status quo’ and to meet current objectives (Day, 1994, Helfat and Winter, 2011, Zollo and Winter, 2002).
- *Sensing*: refers to the capability to sense and shape opportunities and threats (Tece, 2007), to identify the need/opportunity for change (Helfat et al., 2010) and to scan for opportunities (Thomas et al., 1993). The aim is to identify the distinct sensing microfoundations and learning processes that enable retail firms to sense the need to change their retailing processes and services to OCR and how they function as specific types of second-order and higher-order sensing DCs to better understand their specific nature and sequencing.

- *Seizing*: refers to the capability to seize opportunities (Teece, 2007), to prepare a response to that need/opportunity (Helfat et al., 2010) and to interpret the opportunity (Thomas et al., 1993). The aim is to identify the distinct seizing microfoundations and decision-making processes that enable retail firms to seize the need to change their retailing processes and services to OCR and how they function as specific types of second-order and higher-order seizing DCs to better understand their specific nature and sequencing.
- *Transforming*: refers the capability to enhance, combine, protect and reconfigure the organisation's intangible and tangible assets (Teece, 2007) and to implement actions (Helfat et al., 2010, Thomas et al., 1993). The aim is to identify the distinct transforming microfoundations and reconfiguration processes that enable retail firms to transform change their retailing operations to OCR and how they function as specific types of second-order and higher-order seizing DCs to better understand their specific nature and sequencing.
- *Modified resource base*: refers to OCR capabilities as the outcome of developing and deploying sensing, seizing and transforming DCs to change the retail firms current capabilities (Zollo and Winter, 2002) to maintain evolutionary fitness (Teece, 2007).

### *The research questions*

The current study addresses key research questions on OCR capability development and successful transformation that will provide a clear comprehension of how the new retail era is changing existing understanding of the traditional DCs framework. The research questions enable investigating each construct of the research framework and the construct sequencing.

#### RQ.1. How do retail firms develop OCR capabilities?

- 1.1. How do retail firms sense the need for OCR transformation?
- 1.2. How do retail firms seize identified OCR opportunities?
- 1.3. How do retail firms transform to OCR?

#### RQ.2 What type of second and higher order DCs do retail firms need to develop OCR capabilities?

- 2.1. What type of second and higher order Dynamic Sensing Capabilities do retail firms develop when transforming to OCR?
- 2.2. What type of second and higher order Dynamic Seizing Capabilities do retail firms develop when transforming to OCR?
- 2.3. What type of second and higher order Dynamic Transforming Capabilities do retail firms develop when transforming to OCR?

In the following chapter (4) a thorough review of existing OCR literature is reviewed and analysed in relation to each cluster of sensing, seizing and transforming.

#### **4. Developing Omni-channel retailing capabilities**

Developing OCR capabilities has become a key strategic priority for retailers (Grewal et al., 2009, Grewal and Levy, 2009) mainly motivated by economic factors such as cost savings and revenue growth, competitive factors (Chen and Lamberti, 2016), new technology and changes in customer expectations (Piotrowicz and Cuthbertson, 2014). Numerous benefits have been identified as a result from adopting OCR which includes sales increase (Sopadjieva et al., 2017, Cao and Li, 2015), improved customer experience (Herhausen et al., 2015) and improved customer trust (Cao and Li, 2015), however industry studies show that there is *"a significant gap between what consumers want from an omni-channel retailer and the omni-channel capabilities that retailers are providing today"* (Forrester, 2014 p.5).

The purpose of this chapter is to review existing OCR literature to identify existing knowledge about OCR adoption. Due to the novelty of the phenomenon both scholarly and industry papers are reviewed. The same methods, criteria and techniques outlined in *chapter 3. Dynamic capabilities literature review* was applied for the literature review process in this chapter. The literature is reviewed and analysed with respect to the key constructs of the research framework (presented in chapter 3.6).

Despite the dynamism of the retail environment, very limited knowledge exists about how retailers can adopt OCR and to date no research has identified the distinct dynamic retailing capabilities (DRCs) required to maintain evolutionary fitness. Existing knowledge about OCR transformation has mainly focused on identifying the new OCs and resources that retailers need to operate OCR.

##### **4.1 Dynamic retailing capabilities**

As highlighted above, very limited knowledge exists about the DCs that retailers need to develop to maintain evolutionary fitness in a highly dynamic environment. While academic research into OCR is still in its infancy (Hosseini et al., 2017), existing retailing literature has found that adopting OCR requires developing new retailing capabilities by building on existing retailing capabilities (Prasarnphanich and Gillenson, 2003). But industry studies show that most retailers are not prepared (kbbreview, 2019). A study by Forrester (2014) e.g. reports that only a third of retailers have developed basic OCR operational capabilities and a more recent survey conducted in 12 countries shows that only 32% of retailers have developed Click and

Collect capabilities and only 29% have developed Buy online - return in store capabilities (Ayden, 2019). OCR operational capabilities include channel related capabilities such as click and collect, cross channel inventory sharing capabilities (Forrester, 2014), inventory visibility, store fulfilment, mobile (source), cross-channel returns, inventory integration, digital receipts from in store purchases (eMarketer, 2017), logistics integration capabilities (Shaohua et al. 2018) and new processes (Forrester, 2018). Other distinct OCR capabilities identified includes OCR marketing capabilities which entails customer profiling, personalised communication, single customer accounts and a single customer view (eMarketer, 2017), strategic OCR capabilities such as constantly revisiting the OCR strategy, abolishing siloed channel strategies, lack of well-defined OCR goals (Forrester, 2014), employee training, changing incentives, responsibilities and metrics, cross functional partnerships and - buy in as well as adapting the organisational structure (Forrester, 2018) and adapting the organizational mindset (von Briel, 2018). OCR adoption has also been found to require new technology adoption (Forrester, 2014) which further requires new information systems capabilities (Hosseini et al., 2017).

While a hierarchy of retailing capabilities has been suggested; OCs to operate current stores, first-order capabilities to open new stores and second-order capabilities to change the process of creating new stores (Zollo and Winter, 2002), very limited knowledge exists about distinct retailing DCs. An exception is a study by Wilson and Daniel (2007) who find two types of DCs for business-to-business (B2B) retail firm MCR transformation as innovative and integrative. Innovative DCs focus on active review of market entry, alignment of market entry, creation of channel combinations and customer value development, whereas Integrative DCs focus on integration of processes and information technology, organisational structure as well as integration of metrics and rewards.

#### **4.2 Sensing the need for OCR**

Very limited knowledge exists about how retailer sense the need for OCR transformation apart from collecting customer data and single customer view analysis (Shankar et al., 2011, Rigby, 2011, Forrester, 2014) and studies that have found that retailers lack resources to collect, analyse and make relevant use of available customer data (Reinartz et al., 2011, Brynjolfsson et al., 2013).

*“Rather than ask what we are good at and what else can we do with that skill, you ask, who are our customer? What do they need? And then you say we’re going to give that to them regardless of whether we have the skills to do so and we will learn these skills no matter how long it takes”.*

Jeff Bezos, founder and chairman of Amazon.com (InternetRetailing, 2019, p.11).

### *Collecting customer data*

Using customer data to understand current and future customer needs is key to successfully adopt OCR (Shankar et al., 2011, Rigby, 2011, Forrester, 2014) which requires collecting and analysing data about customers’ purchase behaviours, needs and expectations (Guillot, 2015). It is however important for retailers to recognise that not all customers have the same needs, such as the need to use technology on the purchase journey (Piotrowicz and Cuthbertson, 2014). OCR requires retailers to collect new types of data that provides them with a complete understanding of their target customers shopping behaviours (Shankar et al., 2011) and needs on every step of their purchase journey, what channels they use and for what purpose in order to provide them with personalised solutions (Rigby, 2011).

Academic studies have categorised customer needs as either expressed needs or latent needs (Jaworski and Kohli, 1996, Slater and Narver, 1995). The prior refers to needs that are communicated by the customer whereas the latter are needs that are hidden or unknown to the customer (Voola and O’Cass, 2010). In that vein, industry experts have advised retailers to listen to what the customer wants to express (i.e. expressed needs) which is referred to as the voice of the customer (VOC) as well as analysing available behavioural data (i.e. latent needs) (CXNetwork, 2019) which I refer to as behaviour of the customer (BOC).

### *Single customer view analysis*

Numerous customer data sources are available for retailers today which includes both online and offline channel sources such as point-of-sale data, loyalty card data sources, e-commerce data, in-store videos, customer tracking, RFID tags, face recognition technology (Fisher and Raman, 2018) social listening, keyword monitoring, real-time chat, heat mapping, surveys and listening to store employees about customer needs. Available data sources have been categorised as 1<sup>st</sup> party data which entails the retailer’s own data about the customer across



services and departments, 2<sup>nd</sup> party data which is data shared between retail partners and 3<sup>rd</sup> party data which is unstructured data from the marketplace (CXNetwork, 2019). Analysing customer data from numerous data sources has been found to require developing new analytical capabilities (Brynjolfsson et al., 2013), implementing digital technologies (Wetzlinger et al., 2017) and outside in-operational information systems capabilities (Hosseini et al., 2017).

### **4.3 Seizing OCR opportunities**

Very little knowledge exists about how retailers seize identified OCR opportunities. However, adopting OCR has been found to require the development of a specific OCR strategy. The retailing literature has identified four strategic types to exist in retail firms as; the defender (protective nature), the prospector (constantly redefining the market), the analyser (analytical and prudent adaptive nature) and the reactor (inconsistent in adapting to the market and hence unsuccessful) (Moore, 2005). According to Moore (2005) *“by avoiding reactive behaviour and behaving more consistently across the business retailers can better protect their competitive position”* (p. 702). In an explanatory study of Hummel’s successful adoption of OCR, it is explained how the brand’s OCR strategy focused on strengthening and supporting their B2B retail partners. Hummel’s OCR strategy entailed four strategic goals; to align online branding globally, enhance e-commerce support for B2B partners, build an Omni channel customer community and complement the physical store experience (Hansen and Sia, 2015). Strategic activities such as defining key performance indicators (KPIs) and aligning objectives have additionally been identified to successfully adopt OCR (Forrester 2018).

In addition to strategy development, it has been identified that OCR decisions need to be based on customer behaviour data (Brynjolfsson et al., 2013), knowledge of customer needs and customer expectations and to require cross functional initiatives (Forrester, 2018). The retailing literature has identified that *“the retailer’s ability (in relation to competitors) to respond to new and existing customer needs”* (Griffith et al. 2006, p.56) enables market responsiveness. Retailers capability of converting knowledge resources into market responsiveness DCs enhances their competitive positioning and requires ‘Entrepreneurial Proclivity’ to quickly seize market opportunities (Matsuno et al., 2002).

While not specifically identified for seizing, cross functional partnerships, assigning accountability, eliminating multi-channel thinking and identifying challenges and performance

of OCR opportunities which includes business case development and organisational buy-in, has additionally been suggested to adopt OCR (Forrester, 2018).

#### **4.4 Transforming to adopt OCR**

There is limited knowledge in the OCR literature about how retailers transform to OCR, an exception are frameworks proposed by Saghiri et al. (2017) and Hoogveld and Koster (2016). Saghiri et al. (2017) propose a framework for developing OCR systems that consists of; (1) channel stage, (2) channel type and (3) channel agent. Channel stage refers to the customer journey, channel type refers to available channels and touchpoints on that journey whereas channel agent refers to the unit that manages each channel type. Hoogveld and Koster (2016) propose a framework for OCR success that consists of; (1) OCR strategy aligned with the overall business strategy, (2) internal, cross functional collaboration, (3) organisational structure reconfigured to customer centricity, (4) information systems enabling integration of customer data across channels and (5) agile processes to continuously improve. Despite the important insights the two frameworks provide, they do not explain how retail firms transform their resource base to adopt OCR.

Existing literature has however identified several resource base changes which includes cross-channel integration, Omni channel marketing, organisational changes, new technology and staged implementation. Each will now be discussed in turn.

##### **4.4.1 Cross-channel integration**

Cross-channel integration is a key feature of OCR as highlighted in section 2.3.1. and as such required for developing OCR systems in addition to channel visibility (Saghiri et al., 2017) and new processes (Forrester, 2018). Channel visibility functions include; product-, demand-, order-, payment-, stock-, -shipment, delivery-, supply visibility (Saghiri et al., 2017) and inventory visibility (eMarketer, 2017) while channel integration functions include; integrated promotions, -transaction, -pricing, -order fulfilment, -reverse logistics, -product information and -customer service (Saghiri et al., 2017), store fulfilment, mobile, cross-channel returns, inventory integration, digital receipts from in store purchases, click and collect (eMarketer, 2017) and abolishing siloed channel strategies (Forrester, 2014). Integrating all available channels to develop seamless experiences has been found to be impacted by existing information-technology capabilities, the firm's diversity (Cao and Li, 2018) and to require

restructuring incentive strategies (Gallino and Moreno, 2014). Contrastingly, cross-channel integration is not found to be influenced by competitors cross-channel integration or the firms' size (Cao and Li, 2018).

### *Cross-Channel Fulfilment*

Cross-channel integration also enables OCR fulfilment services such as Click and Collect (also referred to as BOPIS, BOPUS), buy online-return in store and Order from Store (Piotrowicz and Cuthbertson, 2014). Click and Collect enables customers to buy online and pick-up instore, hence, integrating the online and the offline store across the purchase and fulfilment stage of the customer journey. Offering Click and Collect requires retailers to develop store pick-up capabilities which further requires in-store inventory accuracy (Forrester, 2014). To develop store pick-up capabilities Akturk et al. (2018) propose two ways; (1) using centralized warehouse inventory, referred to as ship to store or (2) using in-store inventory, to which they refer to as Click and Collect. Order from Store requires mobile devices such as tablets to be available in store so that customers can search for information and purchase products from online (Verhoef et al., 2015). Hence, integrating the online and the offline store across the research and purchase stage of the customer journey.

Developing OCR fulfilment capabilities requires forward distribution operations, back-end fulfilment operations and backward distribution operations. Developing forward distribution operation requires home delivery capabilities, store delivery capabilities and store pick up capabilities (Hübner et al., 2016). Developing back-end fulfilment operations requires abilities to pick customer orders either at a central warehouse, instore or at a separate fulfilment centre (Hobkirk, 2015), supported by Melacini et al. (2018) who identify three options as; (1) separate instore and online distribution center, (2) shared instore and online distribution center and (3) shared instore, online and in store delivery distribution center. Developing backward distribution operations requires abilities to enable customer returns to store, distance distribution center or a separate returns center (Hübner et al., 2016). Ailawadi and Farris (2017) find that the first step in managing OCR distribution is identifying the specific performance metrics for both the retailer and supplier. The performance metrics proposed for the supplier to evaluate the retailer's performance are advocacy (i.e. brand reviews), cross-channel conversions, cross-channel delivery and cross-channel returns whereas the proposed metrics

for the retailer to evaluate the supplier's performance are advocacy, own channel support and cross channel support.

Internal development of logistics integration capabilities has been found to require information integration, process integration, organization integration (Shaohua et al., 2018) and benchmarking activities (Kuźmicz, 2015). Mena et al. (2016) explain OCR logistics as "*only one common logistics interface to the customer and distance orders can also be processed through the stores as well as orders placed in store for home delivery*" (p.18). The authors specifically identify seven categories for OCR fulfilment as: (1) Inventory: integrated inventory in one warehousing solution, (2) Picking: one zone picking, (3) Assortment: more extensive assortment online than offline, (4) Delivery: postal delivery and pick-up, (5) Return: multiple channels for returns, (6) Organisation: single integrated logistics units and (7) IT systems: joint, cross channel ERP systems with real time access.

In addition to developing new services and operational capabilities, cross-channel integration has been found to require restructuring of incentive structures (Fawcett et al., 2008, Gallino and Moreno, 2014), creation of new success metrics (Forrester, 2014) as well as integrating technology systems and processes, such as integrating the e-commerce platform with the in-store, point of sale software (Adyen, 2019).

Several cross-channel integration challenges have been identified specifically related to cross-channel fulfilment, channel management and inventory management. Cross-channel fulfilment challenges include optimising picking and packing strategies per channel (Hobkirk, 2015), supply chain investments and returns -, delivery options - and reverse flow challenges (Piotrowicz and Cuthbertson, 2014). Channel management challenges (Verhoef et al., 2015, Rigby, 2011) include dealing with channel conflicts (Rosenbloom, 2007, Wiener et al., 2018), eliminating siloed channel strategies (Forrester 2014), channel balance (Briel, 2018), cross-channel performance metrics (Rosenbloom, 2007, Verhoef et al., 2015), channel mix, channel optimization (Rosenbloom, 2007, Rigby, 2011), managing the online channel in house, (Guillot, 2015) and the cost of multichannel offering (Zhang et al., 2010). The mobile channel and social media channels are also specifically identified as challenging for retailer to integrate (Piotrowicz and Cuthbertson, 2014). Inventory management challenges (Piotrowicz and Cuthbertson, 2014) include inventory channel allocation, inventory accuracy (Guillot, 2015)

and real time inventory (von Briel, 2018). In addition there are retailers need to address financial challenges of building integrated operations (Barnes et al., 2004), legal and regulatory related challenges which add to the costs of operation (Reinartz et al., 2011).

#### 4.4.2 Omni-channel marketing

Limited knowledge exists about OCM (Cummins et al., 2016) and OCM capabilities which include single customer view, customer profiling, personalised communication and single customer accounts (eMarketer, 2017). An exception is a conceptual framework for OCM proposed by Payne et al. (2017) which consists of consumer touchpoints, consumer brand engagement, customer profitability and moderators impacting the path to purchase, an Omni-channel framework in the context of personal selling and sales management derived from review of the literature (Cummins et al., 2016) and a systematic review of the literature which describes the challenges, advantages and how to transition to OCM (Berman and Thelen, 2018). The authors find that transforming from MC marketing to OCM is a four-stage approach that consists of current situation analysis, gap analysis and developing actions to move to the next stage. The first stage entails a MC marketing program, the second stage entails brand and product consistency, the third stage entails consistent cross-channel ordering, returns and customer information and the final stage entails a true OCM experience. In the fourth and final stage, the highest level of cross-channel integration is achieved, consistency in promotion and prices, a single cross-channel loyalty program, single data source of customers purchase history, cross-channel synergies, cross-channel incentives and seamless shopping experiences across the whole customer journey.

In addition to creating seamless shopping experiences, OCM additionally entails creating personalised shopping experiences (Verhoef et al., 2015, Rigby, 2011, von Briel, 2018, Forrester, 2014, Forrester, 2018). Seamless refers to the customer's ability to move transparently throughout the purchase journey, no matter the channel whereas personalisation requires retailers *"to identify each segment's unique paths and pain points and create tailored solutions rather than the one-size-fits all approach that has characterized much retailing in the past"* (Rigby, 2011 p.71). Personalisation refers to customer expectations towards retailers and brands to engage with them as individuals (Droesch, 2019a), which requires retailers to identify customers on each channel and touchpoint (von Briel, 2018) and have knowledge and understanding of their needs and expectations (Grewal et al., 2009). Providing personalised

experiences requires real time integration of customer insights across all channel and touchpoints (von Briel, 2018). From a performance perspective, personalisation is found to improve sales, customer loyalty (Droesch, 2019b) and customer satisfaction (Roy et al., 2017). A 2019 consumer behaviour research indicates that customers would purchase more when offered personalised recommendations and increase their loyalty (Droesch, 2019b). However, retailers struggle to deliver OCR personalisation as only 3% of US companies report offering OCR personalisation (Droesch, 2019a).

Developing personalised CXs requires a single source of data, i.e. a single customer view. In the marketing literature developing a single customer view is required to develop shopper marketing capabilities *"a complete 360-degree view of the shopper, whatever the product categories marketed by the firm (manufacturer or retailer)"* (Shankar et al., 2011 p.S30) which is found to increase the likelihood of cross-channel shopping and shopper value (Shankar et al., 2011). In shopper marketing the focus is on the buyer as opposed to the consumer (Stolze et al., 2016) and entails planning and implementing marketing activities aimed at influencing the shopper on each step of the purchase journey. Different shopper segments have been identified in the literature which require different strategic approaches. Stolze et al. (2016) identify three types of shopper segments to whom they align three different supply chain strategies: goal shopper with efficient supply chain, bargain shopper with coordinated supply chain and social shopper with responsive supply chain. Each group has different marketing focus, production focus, logistics focus and purchasing focus. Focusing on the customer, as opposed to the shopper, Herhausen et al. (2019) identify five segments; store focused customer, pragmatic online customer, extensive online customer, multiple touchpoint customer and online-to-offline customer, to which they propose specific strategic recommendations. For the multiple touchpoint segment and the online-to-offline segment the strategic recommendations include providing a seamless customer journey.

Several challenges for OCM have also been identified (Picot-Coupey et al., 2016) such as analysing, understanding and using relevant customer data (Reinartz et al., 2011, Rigby, 2011), customer data integration (Barnes et al., 2004) to offer the right retailing mix (Picot-Coupey et al., 2016), product customization (von Briel, 2018) and to provide personalised services to customers (Rigby, 2011, von Briel, 2018) Directly related to personalisation are challenges around customer data accuracy and privacy (von Briel, 2018) such as finding the right

marketing ‘push’ balance (Piotrowicz and Cuthbertson, 2014). From a customer perspective, Xu and Jackson (2019) find customers’ OCR familiarization, OCR adoption and OCR utilization as a critical challenge for retailers which requires understanding customer perceptions.

#### 4.4.3 Organisational changes

Existing literature has identified that adopting OCR requires new organisational infrastructure (Groß, 2015), organisational structure reconfigured to customer centricity (Hoogveld and Koster, 2016), adapting the organisational structure and cross-functional buy-in (Forrester, 2018). OCR implementation requires store staff understanding of online processes such as when adopting tablets to enable Order from Store OCR services (Wiener et al., 2018) which requires instore employee training (Forrester, 2014), developing new incentive structures to mitigate store staff resistance to change e.g. by allocating Click and Collect revenues to the respective store (von Briel, 2018) and senior management leadership; *“senior management will have to recognize and accept the changing nature of retail and rethink their traditional view of consumers and services in order to develop the seamless omnichannel strategies that customers will demand”* (von Briel, 2018, p. 224). Internal transformational champions, changing incentives, responsibilities and metrics have additionally been identified (Forrester, 2018).

Several organisational challenges have been identified for OCR adoption which includes channel conflicts (Forrester, 2014), resistance to change, transformational agility (Rigby, 2011), e.g. in relation to sales measurement systems and metrics procedures (Shankar et al., 2011), financially related challenges such as minimizing labour costs (Guillot, 2015), different manager motives (Picot-Coupey et al., 2016), managerial fear of technology innovations (Shankar et al., 2011), adapting the organisational mindset, developing OCR skills in store and at the corporate level, cross functional collaboration (von Briel, 2018). Picot-Coupey et al. (2016) claim that strategic challenges are the highest priority at the first stage of OCR adoption whereas operational challenges have the highest priority at the second stage of OCR adoption.

#### 4.4.4 New technology

Successful OCR adoption requires adapting new technology (Forrester, 2014), new operational systems and new production systems (Hobkirk, 2015) e.g. to provide customers with real time

inventory information (Forrester, 2014), new experienced OCR technology solution providers (Forrester, 2018) and a serious investment in the new technology (Groß, 2015). von Briel (2018) identifies three types of OCR technologies as; technologies that improve in-store customer experience, - online purchasing convenience and - cross-channel integration. But implementing (Guillot, 2015) and using new technology has been identified as a critical challenge for retailers as it requires information-technology capabilities (Cao and Li, 2018) which may entail hiring qualified employees with the right technical knowledge (Shankar et al., 2011, Rigby, 2011). A study by Forrester (2014) shows that 40% of retailers report challenges when integrating back-office technology across channels. Piotrowicz and Cuthbertson (2014) highlight that new technology implementation requires alignment with the customer, retailer and product manufacturer and additionally that new technology needs to support store employees, as opposed replacing them, such as by introducing tablets to better serve the customer. However, store employees can be a barrier for new technology adoption and hence adopting new technology requires store staff training and support. New instore technology also challenges the store layout which has traditionally focused on the product, product visibility and product flow as opposed to the instore customer experience (Piotrowicz and Cuthbertson, 2014). As such, adopting new instore technology to improve the customer experience requires changing the physical store by coming up with new store processes, layouts and technology (Guillot, 2015).

Technology and OCR systems are identified as one of the key resources retail firms need to adopt OCR and retailers that have successfully implemented OCR are using available technology systems (Hobkirk, 2015). New technology enables retail firms to provide customers with multiple channels for different purposes, seamless shopping experiences, consistent information as well as personalised communication and customization opportunities (Shankar et al., 2011). Retailers need to adapt existing retailing systems to the new systems to provide customers with a seamless shopping environment, such as new integrated inventory systems, in-store shopping systems, decision support systems, mobile recommender systems, navigation systems and mobile tracking systems along with new channels (Groß, 2015).

#### 4.4.5 Staged implementation

Due to the numerous challenges outlined in this chapter, a staged approach for OCR adoption is proposed in the literature (Ashworth et al., 2006, Picot-Coupey et al., 2016, Cao, 2014).



Ashworth et al. (2006) propose five stages for retailers transforming from single channel retailing to OCR to be; (1) web presence, (2) information competence, (3) value integration, (4) enhanced integration and (5) leverage to maximise profits. Cao (2014) specifically addresses cross-channel integration and proposes five stages to include; (1) adoption of multi-channel strategy without integration, (2) minimal integration, (3) moderate integration, e.g. offering Click and Collect, (4) full integration of all channels providing customers with a seamless shopping environment and (5) the development of a new business model. This fifth stage requires redefinition of the whole value chain, such as inviting brand suppliers to open a Web store on an e-commerce platform and also providing financial and logistics services to SME suppliers.

Similarly studies have found that operating all available channels from an OCR perspective to significantly challenge both the retailer's existing BM and its competitive strategies (Verhoef et al., 2015). Sorescu et al. (2011) define retail BM changes "*as a change beyond current practice in one or more elements of retailing business model (i.e. retailing format, activities and governance) and their interdependencies, thereby modifying the retailer's organizing logic for value creation and appropriation*" (p. S7). The authors differentiate between business strategy as the overarching goal whereas the business model articulates the tools used for reaching that goal. The authors propose that retail BM elements should today consist of; (1) retailing format (e.g. channels and their coordination), (2) activities (from acquiring to exchanging goods and services) and (3) governance (employees, customers and partners). The authors argue that changes in one or all of these elements, driven by external or internal changes, requires redesigning the BM (Sorescu et al., 2011). Wiener et al. (2018) empirically investigate the interplay of dual OCR BM; i.e. online and offline business model coexistence, to entail seven dimensions whereof three refer to the configuration of core resources and capabilities required; new cross-channel marketing capabilities, access to new customer data and sharing of online and offline resources, such as integration of support activities into centralized units, e.g. online and offline marketing units integration and customer data sharing.

In addition to the staged, trial and error approach discussed in this section, it has also been suggested that OCR adoption requires a 'trial and error' adoption approach such as a pilot testing by operating a pop-up store (Picot-Coupey et al., 2016), continuous improvement, agility, long-term commitment (Forrester, 2014), constantly revisiting the OCR strategy

(Forrester, 2014), continuous adaptation (von Briel, 2018), continuous adjustment to customer expectations (Rigby, 2011) and continuously monitoring OCR performance and optimize by benchmarking against competitors OCR capabilities (Forrester 2018). Amazon has for example continuously been improving its customer fulfilment experience by further developing its cross-channel logistics collaboration by offering Click and Collect services at partner stores such as Next and by offering free returns via Kohl's stores, which in turn has increased traffic in Kohl's stores (Sword, 2019a). And retailers such as ASDA have trialled same-day delivery and added more Click and Collect points in stores (Sword, 2019b).

#### **4.5 Knowledge gap**

From the reviewed literature on OCR, the key strategic questions proposed in chapter 3.6 are still not fully understood. In comparison with the research framework, current studies have mainly focused on OCR activities, processes and the resource base while knowledge about distinct DRC is missing, specifically in each cluster of sensing, seizing and transforming (table 4.1). Existing literature has additionally not yet provided enough theoretical underpinnings (Galipoglu et al 2018) or empirical understanding into OCR transformation (Beck and Rygl, 2015, Verhoef et al., 2015, Saghiri et al., 2017) as research to date has mainly been conceptual and industry driven and several scholars call for more empirical research. This includes empirical evidence regarding the organisational factors facilitating OCR success (Hoogveld and Koster, 2016), empirical research that can provide guidance to retailers (von Briel, 2018), a maturity model to assess retailers' capabilities and competences (Hüseyinoğlu et al., 2017) and research to fully understand OCR dynamics (Ishfag et al., 2016). The purpose of this research is to contribute to these gaps in the literature by empirically investigating successful OCR transformation through the lens of DCs.

Table 4.1. Omni channel retailing adoption – key findings

Processes & activities	Second order capabilities	Higher order capabilities	OCR Resource base
<b>Sensing</b>			
Collect customer data and analyse customer data (Shankar et al. 2011, Rigby, 2011, Forrester, 2014, Piotrowicz and Cuthbertson 2014, Guillot 2015)			Analytical capabilities (Brynjolfsson et al., 2013)
			Information systems capabilities (Hosseini et al. 2017)
			Digital technologies (Wetzlinger et al, 2017)
<b>Seizing</b>			
OCR strategy development (Hansen and Sia, 2015)			
'Entrepreneurial Proclivity' to quickly seize market opportunities (Matsuno, Mentzer and Ozsomer, 2002)			
Decision making based on customer behaviour data (Brynjolfsson et al., 2013)			
Defining KPIs and aligning objectives (Forrester 2018).			
Cross functional initiatives (Forrester, 2018)			
To respond to new and existing customer needs to enable market responsiveness (Griffith et al. 2006, p.56)			
Cross functional partnerships, assigning accountability and eliminating multi-channel thinking (Forrester, 2018)			
<b>Transforming</b>			
Cross-channel integration (Cao, 2014) and visibility (Saghiri et al. 2017)			New technology (Forrester, 2014, von Briel, 2018)
Abolishing siloed channel strategies (Forrester, 2014)			New information systems to integrate customer data (Hoogveld and Koster, 2016)
Reconfiguring organisational structure (Hoogveld et al. 2016, Groß 2015, Forrester 2018)			Information systems/technology capabilities (Hosseini et al. 2017, Cao and Li, 2018)
Strategy alignment (Hoogveld et al, 2016)			New operational systems and new production systems (Hobkirk, 2015)
Cross functional collaboration (Hoogveld et al, 2016)			New qualified OCR technology employees (Shankar et al., 2011, Rigby, 2011)

Agile processes to continuously improve (Hoogveld and Koster, 2016)			Logistics integration capabilities (Shaohua et al. 2018)
Restructuring incentive strategies (Gallino and Moreno, 2014)			Cross channel fulfilment capabilities (e.g. Piotrowicz and Cuthbertson 2014, Hobkirk 2015, Hübner et al., 2016, Mena et al. 2016, Melacini et al. 2018)
Employee training (Forrester, 2014)			Logistics integration capabilities (e.g. Shaohua et al. 2018, Kuźmicz, 2015)
Staged implementation (Ashworth et al., 2006, Cao, 2014, Picot-Coupey et al., 2016)			Managing OCR distribution (Ailawadi and Farris, 2017)
New business model (Sorescu et al., 2011, Cao, 2014)			Omni channel marketing capabilities (Cummins et al., 2016)
Continuous improvement (Forrester, 2014)			Personalisation capabilities (Verhoef et al., 2015, Rigby, 2011, von Briel, 2018, Forrester, 2014, Forrester, 2018)
			Single customer view (Shankar et al. 2011)
<b>Dynamic retailing capabilities</b>			
MC DCs: Innovative and Integrative (Wilson and Daniel, 2007)			
Market responsiveness DCs (Griffith et al., 2006)			
First-order capability = ability to create new stores Second-order capability = ability to change the process of how new stores have been created (Zollo and Winter, 2002).			

## RESEARCH DESIGN

### 5. Introduction

This chapter presents the research design selected to reach the aims of this study of further enriching the DCs theory with empirical research and to answer the question; *How do retail firms transform to OCR in a highly dynamic environment?* Specifically,

#### RQ.1. How do retail firms develop OCR capabilities?

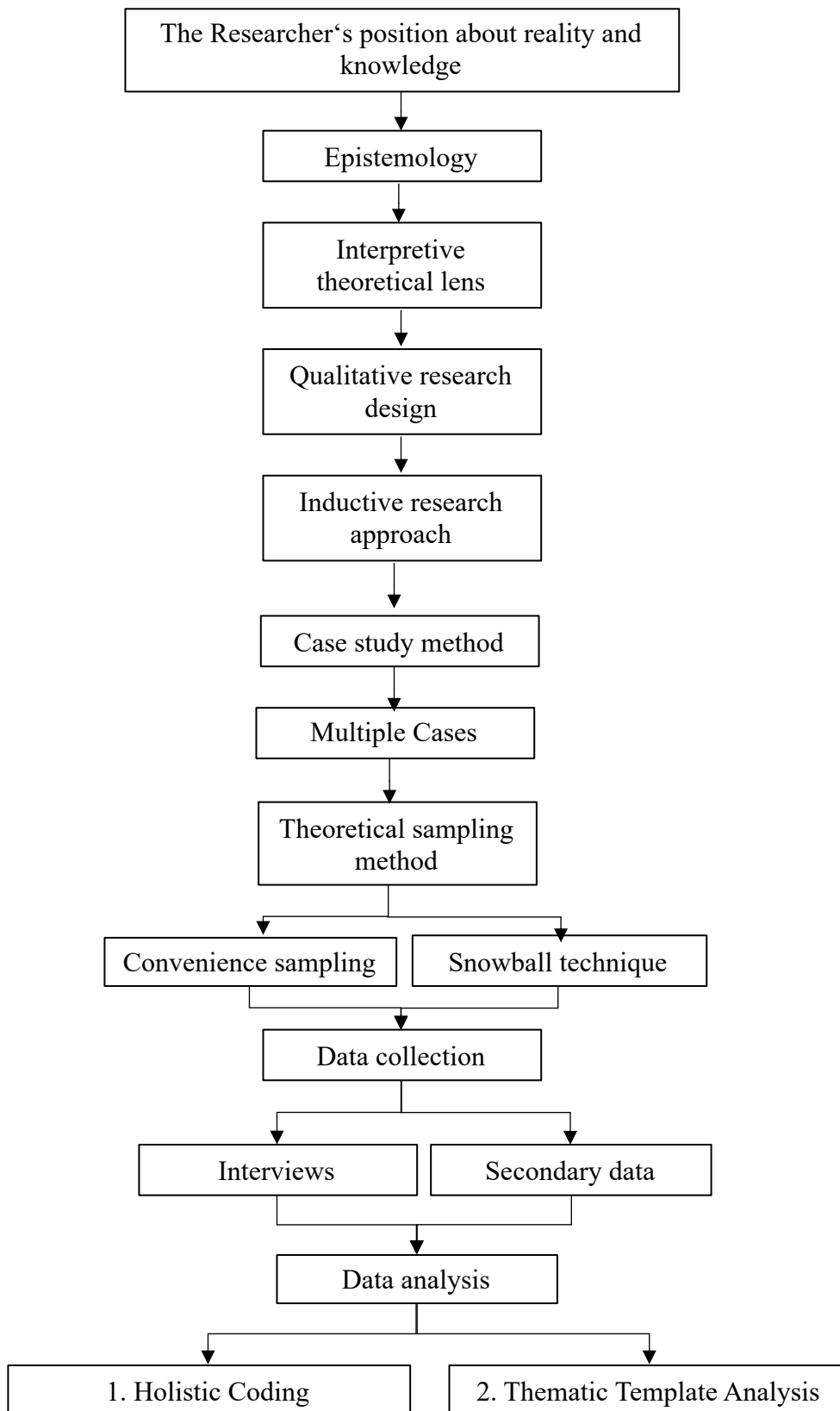
- 1.1. How do retail firms sense the need for OCR transformation?
- 1.2. How do retail firms seize identified OCR opportunities?
- 1.3. How do retail firms transform to OCR?

#### RQ.2 What type of second and higher order DCs do retail firms need to develop OCR capabilities?

- 2.1. What type of second and higher order Dynamic Sensing Capabilities do retail firms develop when transforming to OCR?
- 2.2. What type of second and higher order Dynamic Seizing Capabilities do retail firms develop when transforming to OCR?
- 2.3. What type of second and higher order Dynamic Transforming Capabilities do retail firms develop when transforming to OCR?

The chapter starts by discussing competing research paradigms and the rationale for choosing the interpretivist research philosophy. Second, the rationale for choosing the qualitative research design, the interpretivist research approach, the multiple case study and selection of cases is discussed. Finally, the rationale for choosing multiple data collection methods, holistic coding and the template analysis methods is outlined. Figure 5.1 provides an overview of the overall research design.

Figure 5.1 Overview of the research design



Source: Adapted from literature

## 5.1 Interpretivist research philosophy

Whilst research within the social sciences aims to develop scientific knowledge there are opposing views as to what is considered to be *'knowledge, explanation, evidence, or understanding'*. Before research is conducted and data collection starts the researcher must decide on the philosophical position which is believed to be best suited for the investigation and the discipline the research belongs to (Rosenberg, 2011). The researcher's position about reality and knowledge is epistemology "*ideas about how reality can be known*" as opposed to ontology "*ideas about what can be known (or what reality is)*" (Crouch and Pearce, 2013, p. 57). The epistemological position enables the researcher to discover "*how things really are...and work*" (Guba and Lincoln, 1994, p.108), specifically how retail firms transform to OCR in a highly dynamic environment. Accordingly, the philosophical position adopted provides the appropriate direction for the investigation.

There are several inquiry paradigms a social science researcher can adopt, such as positivism, post-positivism, critical realism, constructivism and interpretivism. Each will now briefly be discussed in turn, focusing on reaching the aims of this study;

- Positivism: as a research focus, positivist researchers are concerned with acquiring scientific evidence to explain and enhance knowledge about society, i.e. individuals, groups and structures (Benton and Craib, 2010, Analoui et al., 2006) by collecting data to formulate, test (Walsham, 1995) and verify prior hypotheses and theories (Guba and Lincoln, 1994). Positivists primarily adopt quantitative methods where the objective is to collect and statistically analyze numbered data from large samples to produce facts (Easterby-Smith and Thorpe, 1991) about the true nature of how things work (Guba and Lincoln, 1994), and is therefore not considered suitable to reach the aims of this study.
- Post-positivism: researchers adhering to post-positivism (transformed from positivism) differ from positivist researchers as they aim to falsify prior hypotheses and theories aimed at producing probable facts about reality (Guba and Lincoln, 1994), which again does not meet the aims of this study. Additionally, both positivist and post-positivist research focuses on generalizations as well as linkages between cause and effect (Guba and Lincoln, 1994).

- Critical realism: the aim of generalizations is also the case in critical realist research which adheres to the notion that “*knowledge consists of a series of structural/historical insights that will be transformed as time passes*” (Guba and Lincoln, 1994, p.113) aiming at more knowledgeable understandings. Critical realists differ from positivist and post-positivist researchers as they do not claim their findings to be true but relative and changeable, and claim that generalization can appear when there is similarity between social, political, cultural and economic settings (Guba and Lincoln, 1994). Additionally, the paradigm focuses mainly on explaining and understanding underlying structures, processes and mechanisms, causal to distinct events, to explain and understand in-depth ‘why things are as they are’ (Easton, 2010), as such critical realist researchers theorize about this relationship and then empirically investigate it. Based on these features of the critical realist paradigm, it is not considered suitable to reach the aims of this study.
- Constructivism: constructivist researchers adopt a relativist ontology and a subjectivist epistemology (Guba and Lincoln, 1994). They adhere to the notion that knowledge develops through their own interaction, which piece by piece enables them to explain and understand both the empirical data collected and the theory. Following the constructivist paradigm, the researcher needs to construct a theory to understand, simplify and explain the data (Levers, 2013). As the aim of this study is not to construct theory, the constructivist paradigm is not considered suitable to reach the aims of this study.
- Interpretivism: as a research focus, interpretivist researchers aim to inductively develop understanding and ideas by interacting with the subject under investigation (Walsham, 1995). They adopt qualitative methods that are primarily concerned with meaning and language (Benton and Craib, 2010, Analoui et al., 2006) to develop an understanding of what is happening. Interpretivists use smaller samples than positivists and post-positivists for their investigation to understand the research subject in more depth (Easterby-Smith and Thorpe, 1991). Following the aims of this study to understand how retail firms transform in a severely dynamic environment, the philosophical paradigm believed to be best suited for this research is that of interpretivism. The key rationale for adopting the interpretivist philosophy is as



mainly twofold. Firstly, due to the novelty of the OCR phenomenon under investigation the interpretivist philosophy enables the researcher to gain in-depth understanding of OCR transformation in order to discover the DCs developed and deployed, knowledge that cannot be gained by testing and verifying prior hypotheses and theories as the facts are yet to be discovered. Secondly, adopting the interpretivist philosophy will enable the researcher to investigate the transformation in the context of the participating cases to identify the activities deployed.

The selected interpretivist philosophy has three main interpretive approaches to choose from; instrumental rationality, rationality as rule following and critical rationality. The rationality as rule-following approach emphasises the significance of cultures, traditions and hermeneutics for understanding human action, i.e. their shared meaning. Whereas the critical rationality approach to knowledge interpretation is falsification; testing of new knowledge which may falsify claims and theory. Following the aim of this study to identify the DCs that enable OCR transformation, the instrumental rationality is argued to be best suited for this study. The instrumental rationality approach adopts 'means to an end' reasoning. The primary focus of instrumental rationality studies is individual meaning and is rooted in two types of understanding; observation and explanatory. The prior is deployed to understand what somebody is doing whereas the latter is deployed to understand the reasons behind it. There are four philosophical approaches within instrumental rationality; phenomenology, rational choice theory, pragmatism and symbolic interactionism. Phenomenology studies people's experiences and is the focus of this research whereas rational choice theory studies people's rational behaviour and choice, pragmatism studies practical effects and purpose and symbolic interactionism studies people's verbal and gestural interaction (Benton and Craib, 2010).

## **5.2 Qualitative research design**

In accordance with the interpretivist philosophy adopted for this research a qualitative research design is adopted instead of quantitative research design. The qualitative design focuses on a specific research case and connects it with the social world (Miles et al., 2014), defined by Creswell (2014, p. 4) as "*...an approach for exploring and understanding the meaning individuals or groups ascribe to a social or human problem*".

Two key reasons support the rationale for choosing the qualitative design to reach the aims of this study. Firstly, the qualitative design is believed to be better suited as the purpose of deploying qualitative design is to collect real life data that can add richness and meaning, such as words, images, films and artefacts whereas deploying the quantitative research design entails collection of numerical data for statistical analysis (Rosenberg, 2011, Crouch and Pearce, 2013). Secondly, as the purpose of this study is not to generalize the findings across a large population, which would require a quantitative design, but contrastingly to gain in-depth understanding from a smaller sample, it requires adopting a qualitative design (Crouch and Pearce, 2013). A qualitative design is additionally commonly used in management research (Karami et al., 2006)

Despite the rationale for choosing the qualitative research design discussed above it has been argued that qualitative research lacks validity, objectivity and generalizability. Kvale (1996) contrastingly points out that qualitative research is indeed valid as long as it has investigated the topic it is reflecting upon. The weaknesses of choosing a qualitative research design and how to overcome them will be discussed in more detail in section 5.5.2 (Multiple case study method).

### 5.2.1 Inductive research approach

Having adopted the qualitative design leads to deciding between three main research approaches; deductive, inductive (Crouch and Pearce, 2013) and abductive (Dubois and Gadde, 2002, Dubois and Gadde, 2014). Table 5.1 summarizes the key features of each approach critically analysed in this section.

Table 5.1 – Key features of research approaches

Approach	Deductive approach	Inductive approach	Abductive approach
Key supporters	Yin (2012) Eisenhardt & Graebner (2007)	Miles & Huberman (1994)	Dubois & Gadde (2002, 2014) Towers et. al. (2020)
Aim of study	<u>Theory confirmation:</u> Develop propositions and hypothesis from existing theory Test and verify Confirmation of existing theory	<u>Theory generation:</u> Development of theoretical models Generate theory from collected data Grounded theory	<u>Theory development:</u> Development of theoretical models Matching theory and reality
Inspiration	<u>Theory</u> Top down	<u>Data</u> Bottom up	<u>Theory and data</u> Top down and bottom up
Theoretical lens	Positivism	Interpretivism	Critical realism

Process	<u>Linear</u> Identify research gap Research questions addressing the gap	<u>Linear</u> Systematic	<u>Non-linear</u> Going back and forth between the theory (framework) and empirical data Cyclical
Framework	Tight and prestructured	Loose and emerging	Tight and emerging Preconceptions
Purpose of multiple data sources	Verification	Discovery	Discovery

Each approach has different research aims. The main purpose of the deductive analysis is to confirm theory by developing propositions and hypothesis from existing theory. The researcher investigates existing knowledge to identify research gaps and then develops research questions to address the identified gap (Strauss and Corbin, 1990). Inspired by theory, the data collected is used to examine if the propositions and hypothesis can be confirmed, often referred to as ‘top down’. Contrastingly, the inductive approach is data inspired as the aim is to develop theory from the data collected, or a ‘bottom up’ approach (Crouch and Pearce, 2013). Hence the researcher is not constrained by existing theory (Strauss and Corbin, 1990). The third abductive approach combines both the deductive-theory inspired and the inductive-data inspired logic to enhance theory; “*what we learn is articulated in the theoretical framework combined with the matching case*” (Dubois and Gadde, 2002, p. 560), hence a combination of a ‘top down’ and ‘bottom up’ approach. Review of existing literature emerges and is conducted during the research process in line with the empirical findings, hence the literature cannot be fully reviewed beforehand (Dubois and Gadde, 2002). As such, the research process in both deductive and inductive approach is linear and systematic while the research process in the abductive approach is non-linear and cyclical.

The deductive, theory confirming linear process is described by Eisenhardt and Graebner (2007, p. 26) as “*sound empirical research begins with strong guidance in related literature, identifies a research gap, and proposes research questions that address the gap*”. Contrastingly, the inductive grounded theory generation process is defined as “*the discovery of theory from data systematically obtained from social research*” (Glaser and Strauss, 1967, p. 2) while abductive scholars argue that this ‘traditional’ systematic research process does “*not reflect the potential uses and advantages of case research*” (Dubois and Gadde, 2002, p. 555) and instead suggest an iterative process to expand the researcher’s overall understanding of both theory and the phenomenon under investigation. This requires the researcher to

constantly iterate between the theory and the empirical data during the research process (Dubois and Gadde, 2002).

The analytical framework in the three types of studies discussed also differs. The deductive framework is described as ‘tight and prestructured’ and accordingly, the framework does not change during the research process. Whereas the inductive framework is described as ‘loose and emerging’ and hence is created during the research (Huberman and Miles, 1994). Finally the abductive framework is described as ‘tight and emerging’ as abductive researchers start with clearly defined ‘preconceptions’ to direct the data collection which then develops over time based on the empirical findings (Dubois and Gadde, 2002). According to Dubois and Gadde (2002, p. 555) “*theory cannot be understood without empirical observation and vice versa*” which they argue requires a continuous process of systematic combining. The key elements of systematic combining are; framework, theory, the case and the empirical world, which are investigated through matching theory and the empirical world as well as direction and redirection to achieve matching.

As the aims of this study is not to confirm existing theory, the deductive research approach is not considered suitable. It can however be argued that both the inductive approach and the abductive approach are suitable as both approaches aim for “*generation of new concepts and development of theoretical models, rather than confirmation of existing theory*” (Dubois and Gadde, 2002). The abductive approach enables the researcher to link evidence to conclusions through continuous research cycles which each consist of several phases, such as (1) identifying existing theoretical framework from the literature review, (2) definition of constructs and linkages between them, (3) reflection of findings and (4) deductive theory testing. The literature review unfolds during the whole research cycle process and the primary and secondary data collected inform the final phase to establish the ‘bridging laws’. The inductive interpretivist approach is however considered more suitable. Firstly, as the aim of this study is to gain in-depth understanding of the development of DRCs as opposed to verifying and testing the theory that emerges. Secondly, it enables the researcher to develop a distinct research framework for the current study, consisting of key DCs theoretical components unfolding from the literature review and their relationships to enrich existing understanding of the theory and its deployment. Finally, the inductive interpretivist approach enables the researcher to develop a framework for the phenomenon under study from existing

theory and the empirical data collected and analysed which will provide retail firms with a detailed understanding of how to develop distinct DCs in a retailing context (Towers et. al, 2020).

### 5.2.2 Multiple case study method

Research scholars adhering to a positivistic approach claim that multiple case studies are better suited than single case studies (Dubois and Gadde, 2014). Two key scholars in business case studies have been identified by Piekkari et al. (2010) to be Eisenhardt (1989) and Yin (1994;2003;2009). Both scholars argue for a multiple case study design as opposed to a single case. Their argument is that multiple case studies are more robust (Yin, 1984, Eisenhardt and Graebner, 2007), grounded, accurate and generalizable (Eisenhardt and Graebner, 2007). Other scholars have challenged this view and argued for rich single case studies (Siggelkow, 2007, Dyer Jr and Wilkins, 1991). This is supported by scholars adhering to the abductive approach who favor in-depth case study design over multiple – hypothesis testing case studies (Dubois and Gadde, 2002, Dubois and Gadde, 2014). However, both single and multiple case studies have been used in management research studying organisational change. For example, Denis et al. (2001) conduct five case studies to understand how strategic change is achieved in pluralistic organisations, Pajunen (2006) studies how to identify and manage the most influential stakeholders during organisational survival in a historical case study and Danneels (2002) investigates product innovation using extended case study to integrate and enrich existing theory.

A multiple case-study method was chosen over other qualitative methods, such as grounded theory, narrative, action research and ethnography. The case study method is defined by (Eisenhardt, 1989, p. 534) as a “*research strategy which focuses on understanding the dynamics present within single settings*” and was selected for several reasons. Firstly, qualitative case studies have been used extensively in business (Analoui et al., 2006) and management research (Yin, 1994;2003;2009) to understand *how* and *why* things happen (Eisenhardt, 1989), frequently used to investigate innovation and change in organizations influenced by the external or internal environment (Cassel and Symon, 1994) and considered especially useful when the topic is less known and the aim is to build theory (Marschan-Piekkari and Welch, 2004). According to Dubois and Gadde (2002, p. 555) “*case studies provide unique means of developing theory by utilizing in-depth insights of empirical*

*phenomena and their context*". Additionally, case studies have been used for various types of research within organisations, this includes industrial relations, organizational processes, emergent organizations, extreme situations, organizational behaviour and comparative research. Second, the benefits of using a qualitative case study for this research is the open-ended process that adds rich meaning, originality, empirical validity and the opportunity for theoretical generalization (Eisenhardt, 1989). Third, building theory using case studies enables overlapping of data analysis with data collection, flexibility to make systematic adjustments such as adding cases (e.g. organisations), data sources (e.g. interviews) and data collection instruments (e.g. questions) in order to "*understand each case individually and in as much depth as is feasible*" (Eisenhardt, 1989, p. 539).

Several weaknesses and challenges have been identified with case study research that the researcher has considered. This includes case studies simply generating rich descriptions without clear conclusions (Eisenhardt, 1989), insufficient data to support the theory or the framework and the use of multiple case studies relying on statistical generalization (Dubois and Gadde, 2002, Easton, 1995). Additionally, despite adding deep meaning and richness to a research topic it is argued that qualitative case studies lack reliability and generalizability for example due to a small and biased sample (Eisenhardt, 1989). This issue is addressed in this study by using a mixture of data sources (Cassel and Symon, 1994) and by iterating between data analysis and interpretation (Yin, 1994;2003;2009).

As previously mentioned, the two types of case study methods to choose from are single case study and multi case study. The multiple case study was adopted as it enables generalizing the findings in relation to the theory (Eisenhardt, 1989, Eisenhardt and Graebner, 2007, Yin, 2014), considered more robust and able to provide better understanding of the phenomenon under investigation (Eisenhardt, 1989, Eisenhardt and Graebner, 2007, Yin, 2014, Miles et al., 2014, Helfat and Peteraf, 2009, Hesse-Biber, 2016). This view is challenged by abductive scholars (Dubois and Gadde, 2002, Dubois and Gadde, 2014), however their argument is that choosing between single case study design and multiple case study design is not the key issue, more importantly the choice should be made based on the research problem, i.e. to compare specific variables for statistical interpretation versus analysing interdependent variables for deeper understanding. The latter view is adopted for this multiple case-study, i.e. to gain a deep understanding using a multiple case study design to enable theoretical generalization, not

focusing on statistical interpretation. Additionally, the replication logic is adopted to search for patterns between the cases (Eisenhardt, 1991, Yin, 2012). Hence adopting the view that “*multiple cases are a powerful means to create theory because they permit replication and extension among individual cases*” (Eisenhardt, 1991, p. 620).

In qualitative case study research, a theoretical framework is fundamental to build and test theories (Eisenhardt, 1989, Cassel and Symon, 1994) and the inductive approach adopted allows the researcher to develop a distinct research framework for current study (Towers et. al, 2020). Hence, the theoretical framework presented in chapter 3.6 was used to guide data collection and analysis.

### 5.2.3 Case selection

In accordance with the inductive research approach adopted for this study, a continuous theoretical sampling (Dubois and Gadde, 2014) was deployed rather than statistical sampling, which is argued to be better suited for theory testing (Eisenhardt, 1989). Following a multiple case study replication logic (Eisenhardt, 1991, Yin, 2012), theoretical sampling (Glaser and Strauss, 1967) enabled the researcher to choose cases that could “*replicate previous cases or extend emergent theory*” (Eisenhardt, 1989, p. 537).

The researcher attended industry conferences on OCR to connect with and get access to retail firms. Consequently, convenience sampling was deployed by using the contacts from the conferences to recruit suitable cases and participants (Crouche and Pearce, 2013). The key criteria for selection of the cases were retail firms that could provide rich information (Eisenhardt, 1989) about OCR transformation which was evaluated based on the following criteria;

1. Organization selection criteria
  - a. Retail firms where OCR had been implemented
  - b. Retail firms where strategic focus had changed from MCR to OCR
2. Participant criteria
  - a. Managers that had been and/or were involved as participants in the OCR transformation and could provide rich insights into the process.

- b. Job role to include positions such as Retail Manager, IT Manager, Operations Manager, E-commerce Manager, Merchandising Manager, UX Manager, Brand Manager and Marketing Manager.

In addition to convenience sampling, the researcher deployed a snowball technique by asking interviewees to recommend other participants in the retail firm that had been involved in the process and fulfilled the participant criteria, and to make a connection with the researcher.

Overall, four primary case studies of OCR firms form the foundation of this research, supported by one System expert case and one Cross-industry case. The primary cases are used to develop the framework whereas the supporting cases are used to further enhance our understanding of the constructs in the framework developed from the primary cases. Table 5.2 provides an overview of the participant cases.

Table 5.2. Participant cases

Primary cases	Core Business	Multi-channel retailing	New OCR (retailing innovation)
Case 1	Apparel retailer Global scope	E-commerce and Bricks and Mortar	Click and Collect, Order from Store, Ship from Store, Integrated inventory, Single customer view
Case 2	Apparel retailer Global scope	E-commerce via franchise and Bricks and Mortar	E-commerce, Click and Collect, Order from store, Integrated returns, online appointment scheduling, Single Customer view.
Case 3	Department store retailer International scope	E-commerce and Bricks and Mortar	Click and Collect, Integrated inventory, Order from store, Single customer view, Integrated deliveries
Case 4	Lifestyle brand Global scope	Siloed DTC and wholesale business management and operations	Develop seamless customer experiences with key partners, Inventory sharing
Supporting cases	Core Business	Description	
System expert case	OCR system providers OCR experts Global scope	<ol style="list-style-type: none"> <li>1. Real time inventory systems provider</li> <li>2. Advertising systems provider</li> <li>3. Customer service provider</li> <li>4. Single customer view systems provider</li> <li>5. Retail analyst</li> </ol>	
Cross-industry case	Cross industry retailers International and global scope	<ol style="list-style-type: none"> <li>1. Outdoor retail industry</li> <li>2. Automobile industry</li> <li>3. Shopping mall</li> <li>4. Grocery industry</li> <li>5. Travel industry</li> </ol>	



### 5.2.3.1 Case descriptions

Case 1 was chosen to inductively start building the theoretical framework (Cassel and Symon, 1994, Eisenhardt, 1989). Case 1 is a European contemporary fashion brand owned by a large international retail group that sells directly to customers globally and through wholesale. Prior to the OCR transformation Case 1 possessed MCR capabilities, which it developed when the retailer opened its first e-commerce store enabling it to sell directly to customers online. In response to new and increasing customer expectations, the retail industry's evolution towards a seamless shopping experience for customers and the brands internal drivers for making more money, maximizing sales, utilizing stock and keeping up with competition, the retailer started developing its OCR capabilities, this includes; (1) Click and Collect; sell online, fulfil from in store, (2) Order from store; sell from online - in store, (3) Ship from store; purchase online, fulfil from store and (4) Integrated inventory; in store stock visible online. The retailer also developed (5) a 360-degree, single view of its customer.

Case 2 was chosen to further explore and expand the framework developed from Case 1 (Eisenhardt, 1989). Case 2 is a European premium apparel brand that sells directly to consumers and through wholesale on a global scale. Prior to adopting OCR Case 2 possessed the capability of MCR by outsourcing its e-commerce operations. The retailer realized that in order to remain competitive, grow market share, increase customer loyalty and customer understanding a transition towards OCR was necessary. As a first step before adapting OCR the retailer insourced its E-commerce operations in order to have full control of the online business, a project which finished early 2016. The OCR project started in 2015 and the first OCR services were launched in August 2016 which has included; (1) Click and Collect, (2) Order from store and (3) In-store returns. The retailer also integrated online and offline by offering (4) Online appointment scheduling and developed (5) a 360-degree, single view of its customers.

Case 3 is an international department retailer that sells products in various categories from multiple brands and was believed to enable further exploration and expansion of the framework (Eisenhardt, 1989) as it is known to be one of the leaders in OCR. In 2015 the department retailer realized that its current OCR propositions plans had evolved to customer driven Omni channel customer propositions plans. The department store offers all the key OCR own retail

services such as Click and Collect, Integrated inventory, Order from store, Single customer view and Integrated deliveries and has further started to integrate its OCR services with its sister retail brand.

Case 4 is a global lifestyle brand that was chosen to further enrich the understanding of OCR transformation among leading retail brands. In addition to the key OCR services mentioned above, Case 4 has started to develop OCR capabilities with key DTC retail partners.

During the data collection process, it was identified that system providers and retail experts play an important role in OCR transformation. Both as a source to identify changes and by actively participating in the transformation. Hence, in order to get a deeper understanding of the framework developed from the four primary cases a System expert case was added that consists of a Real time inventory systems provider, Advertising systems provider, Customer service provider, Single customer view systems provider and a Retail analyst.

It was additionally identified that apparel retailers are impacted by OCR propositions of retailers in other industries as these experiences impact customers' expectations overall. Hence, a Cross-industry case was added to get an even deeper understanding of the framework developed which consisted of representatives from the Outdoor retail industry, Automobile industry, Shopping mall, Grocery industry and the Travel industry.

### **5.3 Data collection and analysis**

In this section the rationale for using multiple data sources, holistic coding and thematic template analysis is discussed.

#### **5.3.1 Multiple data collection methods**

It is believed that a multiple data collection method was most suitable, which included both primary and secondary data sources as multiple sources of evidence address validity, reliability and generalizability issues related to case study research (Eisenhardt, 1989, Eisenhardt and Graebner, 2007, Cassell and Symon, 1994) and further enable data triangulation (Corbin and Strauss, 2015). In accordance with the research approach the focus of the data collection was directed by the research framework. Accordingly, as observing OCR transformation was not

possible and as surveys were not believed to provide a deep enough understanding of OCR transformation due to the inability of probing and lack of flexibility, both interviews and documents were selected as sources of evidence.

Interviews were chosen as a primary source of evidence as they are commonly used in explanatory qualitative research (Eisenhardt and Graebner, 2007, Hesse-Biber, 2016), are a key source of data in case studies (Yin, 2014), used to collect in depth empirical data, used to obtain rich data on a less known subject (Eisenhardt and Graebner, 2007), commonly applied in business research to investigate the adoption of innovation and new strategy development in organisations (Marschan-Piekkari and Welch, 2004) and used when direct observation opportunity is limited (Cassell and Symon, 1994). The interviews were semi structured to enable the choice of key topics, which ensures the same topics to be discussed in each interview, and to provide participants with the opportunity to add relevant discussion (Steinar, 1996, Barnham, 2015, Corbin and Strauss, 2015). The defined preconceptions that guided the data collection (Dubois and Gadde, 2002) were the three DCs clusters of sensing, seizing and transforming. The interview guide is presented in appendix 9.2. Overall twenty-six interviews were conducted between February 2017 to May 2019 (table 5.3), both in person and via telephone. All of the interviews were audio recorded and later transcribed and all of the interviewees are Executives and Managers who have been involved in the decision making and implementation of OCR. Hence, key informants about the transformation.

Secondary data sources included both confidential company documents and publicly available documents, this includes OCR presentations and meeting minutes, annual reports, press releases, news articles, website and industry reports. Table 5.3 provides an overview of the respondents and sources of evidence. Secondary data sources were not used to validate the primary data collected but instead aimed at discovery (Dubois and Gadde, 2002).

Table 5.3. Respondents and sources of evidence

<b>Cases</b>	<b>Respondents and roles</b>	<b>Sector, OCR focus and stage</b>	<b>Interview data</b>	<b>Secondary discovery data</b>
Total data collection	26 interviews	4 x Primary cases 1 x System Expert Case 1 x Cross Industry Case	Interviews: 1.314 minutes (~ 22 hours) Transcripts: 163.079 words / 316 pages	Confidential company documents Publicly available documents

Primary Cases	16 interviews	3 x own business (D2C) 1 x wholesale (B2B)	<u>Interviews:</u> 713 minutes (~ 12 hours) <u>Transcripts:</u> 99.666 words / 203 pages	Confidential company documents Publicly available documents
Case 1	1. Head of IT 2. Head of Retail 3. Head of Retail Operations 4. Omni channel facilitator 5. Head of E-commerce & Customer Service 6. E-commerce Trading Manager 7. Womenswear Clothing Merchandiser	- Apparel - Contemporary - D2C focus  - Ahead of direct competitors but not leading the industry	<u>Interviews:</u> 225 minutes (~ 4 hours)  <u>Transcripts:</u> 30,449 words (~ 78 pages)	<u>Published data</u> Annual reports (2016-2018), press releases, news articles, website and stores, industry reports
Case 2	1. Head of Retail Business Development 2. Order manager E-commerce Operations and Projects Digital Retail	- Apparel - High end - D2C focus  - Ahead of direct competitors but not leading the industry	<u>Interviews:</u> 100 minutes (~ 1.5 hours)  <u>Transcripts:</u> 11,350 words (~20 pages)	<u>Internal confidential data</u> Received February 2019: Omni channel project presentations (205 slides) and Omni channel meeting minutes (13 pages).  <u>Published data:</u> Annual reports (2015-2018), press releases, news articles, website and stores, industry reports
Case 3	1. Senior Merchandiser 2. Prior Head of Direct to Customer Operations 3. UX Manager	- Department store (Fashion, Home etc) - D2C focus - Leading the industry	<u>Interviews:</u> 144 minutes (~ 2.5 hours)  <u>Transcripts:</u> 18,878 words (~ 36 pages)	<u>Internal data</u> Conference Presentation slides  <u>Published data</u> Conference presentation (Transcript 2.509 words) Annual reports (2015-2019), press releases statements, news articles, website and stores, industry reports
Case 4	1. Senior Director Integrated Marketplace Development 2. EMEA market development Director E-comm and B&M 3. EMEA Marketplace Development Director 4. Brand Director	- Lifestyle apparel - B2B research focus - Leading the industry	<u>Interviews:</u> 244 minutes (~ 4 hours)  <u>Transcripts:</u> 38.989 words (~ 69 pages)	<u>Internal data</u> Market place development presentation slides (2018 and 2019) Marketplace assessment survey  <u>Published data</u> News articles, website and stores, industry reports

System expert Case	<ol style="list-style-type: none"> <li>1. Market Development Director EMEA</li> <li>2. Industry Manager</li> <li>3. VP of Business Development</li> <li>4. Chief Marketing Officer</li> <li>5. Owner and founder</li> </ol>	<ol style="list-style-type: none"> <li>1. Real time inventory systems provider</li> <li>2. Advertising Systems provider</li> <li>3. Customer Service provider</li> <li>4. Single Customer View systems provider</li> <li>5. Retail Analyst</li> </ol>	<p><u>Interviews:</u> 315 minutes (~ 5.5 hours)</p> <p><u>Transcripts:</u> 33.202 words (~ 58 pages)</p>	NA
Cross-industry case	<ol style="list-style-type: none"> <li>1. Former Group Marketing Director</li> <li>2. Global Marketing Director</li> <li>3. Managing Director</li> <li>4. Retail Development Manager</li> <li>5. Senior Mobile Commercial Manager</li> </ol>	<ol style="list-style-type: none"> <li>1. Outdoor retail industry</li> <li>2. Automobile industry</li> <li>3. Shopping mall</li> <li>4. Grocery industry</li> <li>5. Travel industry</li> </ol>	<p><u>Interviews:</u> 286 minutes (~5 hours)</p> <p><u>Transcripts:</u> 30.211 words (~ 55 pages)</p>	NA

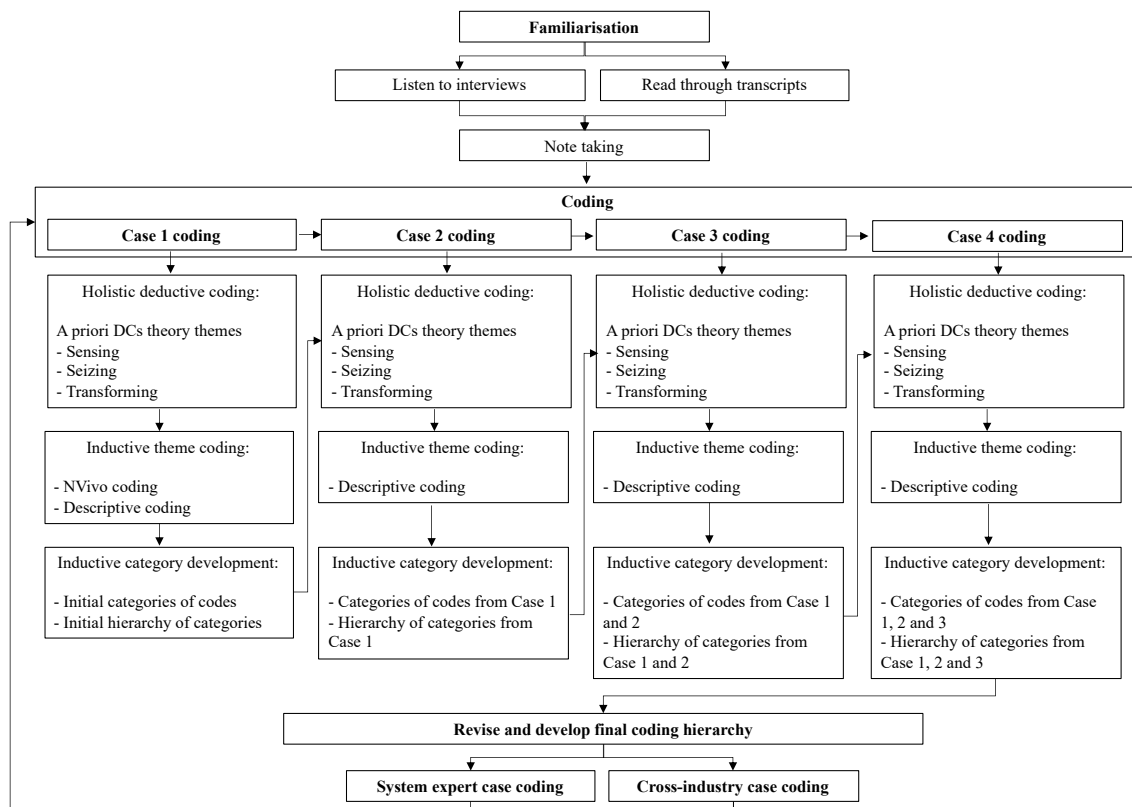
### 5.3.2 Thematic template analysis

One of the key challenges recognised when building theory using case study design is analysing the data collected which is mainly due to lack of standard formats. To overcome this challenge both within-case analysis and cross-case comparison was conducted (Eisenhardt, 1989). Within-case analysis was applied to identify the activities and the processes deployed by each case for adopting OCR. A cross-case comparison was applied to investigate patterns, similarities and differences in the process. Overall, the analytical process was as follows (figure 5.2);

1. Case 1 was comprehensively coded and analysed first and used to develop the initial coding template which further developed with step by step coding of the following primary cases (2, 3 and 4). To further advance the understanding of the framework the System-expert case and the Cross-industry case was analysed accordingly.
2. Holistic coding (Saldaña, 2015) was applied to each interview transcript using a priory themes deducted from the DCs theory; sensing, seizing and transforming (Teece, 2007) to enable fitting the data to the theory (Eisenhardt, 1989). The theme coded text was moved to the computer analytical software NVivo.

3. Thematic template analysis was applied to further analyse the holistic codes (Saldaña, 2015). The text in each theme was coded to inductively identify codes, sub-codes and categories for each theme in each case study and to develop a coding hierarchy (Symon and Cassell, 2012). The coding process stopped when the text in each theme had been coded.
4. After coding all of the cases the codes, sub-codes, categories and related codes went through a second holistic round of analysis (Symon and Cassell, 2012, Crabtree and Miller, 1999, Dubois and Gadde, 2002).
5. Finally, a cross-case comparison was conducted to identify similarities and differences between the cases (Eisenhardt, 1989).

Figure 5.2 Overview of the coding process



Source: Adapted from literature

Holistic coding was applied as it is an exploratory coding method and considered appropriate for researchers learning how to code qualitative data, for studies containing multiple sources of evidence and as “*the researcher has a general idea of what to investigate in the data*” (Saldaña, 2015, p. 166), in this study the three DCs clusters of sensing, seizing and

transforming (Teece, 2007), i.e. a priori, deductive, top down themes. First, each transcript was read through for familiarization. Next, each transcript was coded using a colour scheme for each theme; pink for sensing, blue for seizing, green for transforming and applied with highlighters to the printed text with notes written on the margins (Symon and Cassell, 2012, Crabtree and Miller, 1999). Finally, the color-coded text for each theme was moved into the computer analytical software NVivo. This process enabled fitting the data to the theory (Eisenhardt, 1989).

The thematic template analysis was applied to further analyse the holistic codes identified (Saldaña, 2015). Template analysis was chosen over other analytical techniques and approaches as it enables tailoring the analytical procedure to match the research requirements instead of following specific data collection and analytical processes (Symon and Cassell, 2012, Corbin and Strauss, 2008). Template analysis is furthermore frequently used to interpret interview data and in business and management organizational research. Using this technique requires identifying themes and developing a coding template, i.e. a list of hierarchical codes (Symon and Cassell, 2012). The process is considered to be focused and time efficient for the analysis of vast amounts of qualitative data (Crabtree and Miller, 1999) and is commonly applied in studies that have 15-30 interviews. Template analysis further allows the researcher to apply both 'bottom up' as well as 'top down' approaches and is commonly used for framework analysis (Symon and Cassell, 2012) which is in line with the aims of this study. Hence, deploying the template analysis to analyse the data was considered appropriate as it combines both a structured and flexible analytical process. Using this technique required the development of a coding template by applying both 'bottom up' as well as 'top down' analytical approaches (Symon and Cassell, 2012, Corbin and Strauss, 2008). Which is in accordance with the aims of this study to advance existing theory. Hence, the analytical process entailed constantly iterating between the framework, data collection and the analysis (Dubois and Gadde, 2002). Accordingly, data collection and analysis were done in parallel.

After identifying the codes, a hierarchy of codes (Symon and Cassell, 2012, Crabtree and Miller, 1999) within each theme was developed. Each interview coding template became a starting point for the next interview, hence the coding template developed further with each interview. The coding template developed from all the interviews in Case 1 provided a starting point for coding Case 2. During the overall process, some codes were redefined and/or

discarded. An audit trail of how the coding template developed during the analysis was recorded to enhance quality of the data analysis (Symon and Cassell, 2012, Crabtree and Miller, 1999). New versions of the NVivo document were saved, numbered and dated and notes for the changes made written on the template such as inserting codes, deleting codes, merging of codes, changing the order of codes (Symon and Cassell, 2012). The coding process stopped when the text in each theme had been coded. Table 5.4. shows an example of the coding rationale

Table 5.4. Data coding examples

Holistic codes: A priori themes	Quote examples	Thematic codes & coding hierarchy development example
<p><u>Sensing:</u> Includes all text where the interviewee talks about <i>sensing</i> opportunities and threats (Teece, 2007), the capability to <i>identify</i> the need/opportunity for change (Helfat et al, 2009) such as identifying the opportunity to implement new services like click and collect services.</p>	<p><i>“And it really came from customer feedback, store feedback of what customers are looking for compared with what is immediately available”</i></p>	<ol style="list-style-type: none"> <li>1. Code: Customer</li> <li>2. Interpretation of Code: Monitoring Customer Expectations</li> <li>3. Code category: External monitoring</li> <li>4. Interpretation purpose (step): Identify</li> </ol>
<p><u>Seizing:</u> Includes all text where the interviewee talks about <i>seizing</i> opportunities (Teece, 2007), about <i>preparing</i> a response to the identified opportunity/threat (Helfat et al, 2010) such as how to integrate e-commerce operations with bricks and mortar operations to offer click and collect services.</p>	<p><i>“So instead of going on opinion sort of what we think might be best for the brand it is more looking at data led decision making rather than the technology itself”</i></p>	<ol style="list-style-type: none"> <li>1. Code: Select</li> <li>2. Interpretation of Code: Decision making</li> <li>3. Code category: Data led decision making</li> <li>4. Interpretation purpose (step): Prioritizing</li> </ol>
<p><u>Transforming:</u> Includes all text where the interviewee talks about <i>implementing</i> actions (Helfat et al, 2010) by <i>enhancing, combining, protecting and reconfiguring</i> the retailer’s <i>intangible and tangible assets</i> (Teece, 2007). Such as launching click and collect services.</p>	<p><i>“What we put in last year is what we call Omni light, so it is a light touch approach to it”</i></p>	<ol style="list-style-type: none"> <li>1. Code: Implement</li> <li>2. Interpretation of Code: Step by step</li> <li>3. Code category: Gradual transformation</li> <li>4. Interpretation purpose (step): Implementation</li> </ol>

The iterative nature of thematic template analysis (Symon and Cassell, 2012, Crabtree and Miller, 1999) supported a second round of holistic analysis. Hence, after coding all the primary cases the coding hierarchy (all of the codes, sub-codes, categories and quotes) went through another round of holistic analysis. The coding template in NVivo was updated accordingly. Overall, ten updated version of the NVivo coding hierarchy were saved during the coding and analytical process. Appendix 9.3 provides evidence of the NVivo coding development. The



iterative analytical process stopped when no changes, new codes, new sub-codes or categories were identified.

In accordance with the within-case analysis and cross-case comparison deployed (Eisenhardt, 1989) the results in the next chapter are presented by telling the story of each case within each of the theoretical constructs identified (i.e. processes for sensing, seizing and transforming) as well as highlighting the similarities and differences between the cases.

## RESULTS

### 6. Introduction

This chapter presents the analysis of the data. To reach the aims of this study of further enriching the DCs theory with empirical research and to answer the question; *How do retail firms transform to OCR in a highly dynamic environment?* from a DCs perspective, the analysis is presented in three main sections. First, within-case results are presented by explaining the processes identified in each case for developing DCs for OCR, specifically sensing, seizing and transforming. Second, a cross-case comparison presents patterns, similarities and differences identified. Finally, aggregation of the identified processes and microfoundational clusters into specific types of second-order DCs and higher-order DCs are presented and summarized at the end of this chapter and discussed in detail in Chapter 7; Discussion of research findings.

#### 6.1 Within-Case Analysis

This section presents the results for each of the four primary cases supported with selected quotes from the interviews, internal confidential documents and secondary data. The within-case analysis studies sensing, seizing and transforming in the context of OCR transformation by analysing various activities (the participants description of OCR adoption in each cluster), processes (bundles of repeatable, patterned and systematic activities) and microfoundations (groups of identified processes) in each case. A summary table at the end of each section is presented to provide evidence for the research findings. The tables illustrate the development of the NVivo analysis from holistic coding (Saldana, 2015) using a priori themes deduced from the DC theory to NVivo codes, sub-codes and parent-codes as outlined in chapter 5.3.2 Thematic template analysis.

##### 6.1.1 Case 1

Case 1 is a European contemporary fashion brand owned by a large international retail group that sells directly to customers globally and through wholesale. Case 1 considers itself as ahead of direct competitors in OCR but not leading the retailing industry in OCR. Prior to the OCR transformation Case 1 possessed MCR capabilities, which it developed when the retailer

opened its first e-commerce store enabling it to sell directly to customers online. In response to new and increasing customer expectations, the retail industry's evolution towards a seamless shopping experience for customers and the brands internal drivers for making more money, maximizing sales, utilizing stock and keeping up with competition, Case 1 started developing its OCR services, this includes; (1) Click and Collect; sell online, fulfil from in store, (2) Order from store; sell from online - in store, (3) Ship from store; purchase online, fulfil from store and (4) Integrated inventory; in store stock visible online and (5) a 360-degree, single customer view. Case 1 was therefore considered feasible for the study of transforming to OCR.

Access to Case 1 was initiated at an Omni channel conference in London in February 2017. The researcher approached Head of Retail and presented the research aims which resulted in Case 1 agreeing to participate in the research. A trip to Case 1 offices in London was scheduled where the researcher interviewed Head of Retail, Head of IT, Omni channel facilitator and Head of E-commerce and Customer service. All of the interviews were conducted face to face and recorded. Two interviews with the E-commerce Trading Manager and the Womenswear Clothing Manager were conducted via telephone in 2017 and a follow up interview via phone was additionally conducted early 2019 with the Head of Retail Operations. All of the interviewees had actively participated in the OCR transformation process and were asked to answer the questions outlined in the interview guide (Appendix 9.2). In addition to the interviews conducted, secondary data in the form of annual reports, press releases, news articles, website, stores and industry reports were collected and analysed.

#### 6.1.1.1 Sensing

The key drivers for adopting OCR in Case 1 was to remain competitive, to meet customer needs and to utilise the inventory as much as possible.

Case 1 focused mainly on remaining competitive in the marketplace by identifying gaps in existing retailing capabilities, compared to similar retailers and partners so they can offer at least the same level of seamless customer experiences as their competitors; *“So, everybody is doing it [OCR] so therefore we have got to keep up with our competitors”* (Head of Retail). Monitoring competitors OCR capabilities enabled Case 1 to learn from the competition about new retail services being offered to customers and to identify which retail services and

processes it has to start implementing in order to stay competitive; *“If your competitor suddenly decides to do something sometimes your hand gets forced”* (Case 1, Omni channel facilitator). Monitoring the competition is not a dedicated role within the company, however it fosters a competition conscious culture and open discussions about competitors OCR propositions. Case 1 expects everyone to be knowledgeable about what is happening in the marketplace; i.e. what the competition is doing, both direct competition as well as partners (department stores) which includes signing up for competitors’ newsletters, social media accounts and by being aware of what is happening in their stores and on the high street: *“There is a group of competitors that we analyse, we look at our partner sites, cause potentially they are our own competition”* (Case 1, E-commerce Trading Manager). Case 1 also conducts benchmarking on an ad hoc basis e.g. to identify key competitors’ delivery propositions and price points: *“there is benchmark activities that each team do at sales point so you know like understanding peoples delivery propositions in our team to I guess price point analysis on [Head of Retail] team so It’s quite ad hoc in the season but it always comes up as a discussion week on week”* (Case 1, E-commerce Trading manager).

Case 1 also monitors customers purchase expectations and behaviour to identify how it needs to change in order to meet their needs better. Analysing customer feedback enables Case 1 to identify what and where their customers are shopping and what the best experience is for them. Case 1 has a customer survey form online that customers can fill in any time they want as well as a pop-up survey encouraging customers to fill out their thoughts and feelings about their experiences with the retailer. Customer feedback is collected on all touch points which includes online exit survey, instore feedback, calls and emails to customer service, focus groups and from physical observations in stores. Case 1 has a dedicated customer service team that deals specifically with customer requests; *“Customer services is fairly self-explanatory in terms of looking at service emails and dealing with customer queries. There is an Omni channel element to that cause clearly, we service queries in the stores and make sure that ties up as well”* (Head of E-commerce and Customer Service). Every week a customer service report is distributed to the Management team and regular customer service meetings are held to discuss key customer issues; *“We get a customer service report every week and we have customer service meetings and it always comes up, the biggest number of calls they get was around sourcing [products].....So then it becomes clear that there is a requirement for us to be able to automate that process”* (Case 1, Head of IT). The need to integrate stock between online and instore for

example, i.e. to enable customers to purchase products that are sold out online but are available in store (*Ship from store*) was identified mainly from customer calls and customer requests to the customer service team.; *“We would see customers being frustrated in our various feedback forms that they liked a piece of stock but they couldn’t get it in their size online because the stock hadn’t been allocated if it was in store and not online. So there was a big availability frustration piece from our customers”* (Head of E-commerce and Customer Service). In addition to collecting and analysing customer feedback from multiple sources, Case 1 additionally identified opportunities to improve in store customer experiences through physical observations. After launching *Ship from Store*, Case 1 identified through physical observations the need to improve the experience for in-store customers. By physically observing what was happening in stores as a result of the new OCR service the retailer identified the impact that the process has on the service provided to in store customer as well as the time and cost it takes to transact each order (call back, make the transaction, prepare for delivery and eventually pickup). Information that the retailer claims it could not have identified from looking purely at data; *“Cause no data is going to say that, that phone call happened at such and such a time and when that happened there weren’t any sales going through the tilt. We physically have to see it”* (Case 1, Head of Retail). Furthermore, analysing the Ship from Store use rate also enabled the retailer to identify gaps in the customer journey. By analysing attempted purchases and what was actually being dispatched enabled the retailer to better understand its customer needs and to develop the ship from store service further. Identifying how to improve the customer experience, Case 1 also developed a single view of customers by integrating various data sources, such as; Google analytics, sales data from the stock system and third-party systems. Through seamless account registration, the retailer collects information about its customers online and instore purchase behaviour, such as what customer shop, where they shop and how often. The single data view enables the retailer to segment customers based on overall purchase and engagement behaviour and provide customers with more personalised experience. The retailer e.g. adapted its marketing strategy by creating specific target segments based on customers holistic purchase behaviour from identifying single-category customer vs. a multi-category customer (i.e. single vs. multi gender purchases) and channel use (online, instore or omni). This led to the retailer identifying an opportunity to change the way it thinks about its marketing activities, from only thinking about individuals to focusing also on couples, as the data showed that they are more valuable to the retailer. Developing a single customer view started as a manual process, but in the second phase Case 1 had plans to automate the

process and make it more interactive; *“We have one view of them [the customer], we are now making the understanding of them automated and interactive”* (Case 1, Head of IT). Having a single customer view is part of the retailers’ customer relationship management (CRM) project which is defined as separate project from the OCR project. However, the retailer is in the process of making sure that they are integrated so that they seamlessly feed into each other. Integrating the CRM program across online and instore for example, enabled the retailer to identify that customers were using both online and instore channels simultaneously.

Case 1 focused on identifying where it needs to keep up with industry standards. Monitoring the industry enables Case 1 to identify current trends and new standards in the retail industry; *“You are looking at what everybody else is doing so it is a reality that the industry is changing”* (Case 1, Head of Retail). Case 1 attended retail industry summits and conferences to sense where it is currently positioned and what it needs to do in order to keep up with industry standards, such as developing Click and Collect and delivery slot services; *“And from the industry you go alright everyone is expecting easy Click and Collect, maybe delivery slots to be different so you look at the little things so at least you know you can make sure that at least you are offering the same standard as everybody”* (Case 1, Omni channel Facilitator). Attending these events creates a sense of where the focus is and in what direction the industry is moving. Another source used by Case 1 to keep up with OCR evolution and to identify new OCR opportunities is learnings from its suppliers and vendors, such as new technology developments like RFID tags that enables real time inventory information and heatmapping the store to see how customers are moving within the store. OCR solutions like that are very advanced in the mind of the Case 1 and this is one of the reasons that it does not consider itself as a leading in OCR. From what retail suppliers are heavily promoting also gives Case 1 clues about what the industry demand is and whether it is knowledgeable about new industry developments and available solutions; *“Your suppliers and vendors become a great source of information because they get to see a lot more”* (Case 1, Omni channel Facilitator).

Case 1 is owned by a foreign parent company that owns other retail brands, including a UK sister company from which it had OCR learnings from such as learnings about their seamless inventory integration; *“Because brand Y [sister company] obviously were using OneStock and were using the same company for other things so it was just like ok lets see if this is something else that we can explore”* (Case 1, Retail Operations Manager). Case 1 also had an employee

from the parent company for a few months who had gained learnings from the UK sister company and came temporarily to work with Case 1 as an Omni channel project facilitator. The OCR project had started but needed someone facilitating it. Originally the facilitator was sent from the parent company to understand the sister company's processes and systems but ended up spending most of the time understanding their OCR proposition as they were much more mature than in the parent company's local market; "So that was a really interesting learning for me was to focus on that. To understand what Omni channel really looks like. And to pick up any learnings from Case 1 and from brand Y [sister company]. And through that I think I have just become knowledgeable and relative to where Cas 1 is with their journey with Omni channel, there were some things I could share with what the sister company was doing" (Omni channel facilitator).

To utilise inventory as much as possible, Case 1 realised that it had to integrate the online and offline inventory, which would result in improved customer experiences as e.g. in-store customers would be able to buy products sold out in store from online stock, referred to as *Order from store*. By monitoring its own OCR performance Case 1 sensed the need to make existing OCR processes more efficient. For example, after launching *Ship from Store* Case 1 identified that the process needed to be; more cost effective (payroll and time of store staff), managed from in store customer point of view to make sure that the focus of in store staff is not too heavily on fulfilling online orders which impacts the service to in store customers, and enabled the retailer to identify the efficiency of the whole process; such as issues with filling in forms, time accuracy of delivery drivers order pick up, what happens if drivers do not shop up and by working closely with the customer service team dealing with parcels that do not arrive. Seamlessly integrating online and offline inventory enabled the retailers to identify friction in the customer journey. Case 1 for example, has further optimized the in-store stock range by identifying how much stock is being fulfilled by the store vs. needs to be fulfilled from online through its *Order from store* OCR services and by analysing *Ship from store* sales, Case 1 was able to identify the effect stock integration has on individual channels and realized that it needed to protect customers who prefer to shop in store by making sure that there is stock available for the in store customer. This led to the retailer testing various ways of integrating the stock to optimize the stock availability for each channel. Case 1 collects and analyses stock reports and Google Analytics data and collaborates with merchandising to assign right stock levels to individual channels. Additionally, Case 1 directs its customers, it

manages what they are able to buy in each individual channel and emphasises the importance of understanding the role individual channels play for different customer segments; i.e. online customers, instore customers and omni channel customers; *“We will pull stock reports and data from google analytics and things like that, so that we can work collaborately with merchandising to get the right stock levels for the website, that’s part of the growth”* (Case 1, Head of E-commerce and Customer Service). Furthermore, by analysing OCR sales data and turnover (sales fulfilled from store), the retailer identified that OCR is profitable and that there is an opportunity to develop it further.

Case 1 also identified the need to change from new employees and best practice. For example, a new Head of E-commerce and Customer Service had experience of best practice user experience and data led decision making which she brought in when she was hired to Case 1; *“Yes so when I first joined we didn’t do any of this at all. We had Google analytics as a sort of basic and I brought in data based analysis. Prior to that point it was very much a, yeah I like that so lets go with that. So I brought in that data analysis to support our decision making, it was a new thing”* (Case 1, Head of E-commerce and Customer Service). This enabled Case 1 to identify the opportunity for adopting data led decision making as opposed to decisions based primarily on opinion and feelings, as had been in the past, such as using Google Analytics to analyse customers online journey and working with a Multi berry testing partner to analyse the performance from changing e.g. a button from red to blue, showing half of customers red and half of them blue, and then making decision about the colour based on the best performance. A new Retail Operations Manager also had prior experience and knowledge that enabled the retailer to identify opportunities to improve its seamless inventory integration: *“When I was building it I just knew that it would be a problem. My question was how are the stores meant to know, if it is one of three or [number of orders/deliveries], how do they know. So that is when we looked at the system and we improved it straight away”* (Case 1, Retail Operations Manager).

At Case 1 the customer is a key priority and there is focus on protecting the in-store customer. Case 1 started the OCR journey by *defining the OCR opportunity* so that everyone in the business would have the same understanding; *“Well initially it was like what are we doing, what is Omni. Because if we are not all on the same page, you know you say Omni but everyone is thinking something different. For some people Omni is just having a website but that is not the case. So some of the discussion in the beginning was that”* (Case 1, Omni channel



Facilitator). Case 1 refers to OCR as a way to maximise each channel, to protect individual channels and direct the customer. A collaborative understanding of what OCR means for Case 1 and in relation to industry leaders has enabled it to understand which retail changes it needs to respond to and which are not as pressing. Responding to customer needs and expectations does not mean that the retailer starts to grant customers with all their wishes. Contrastingly, the retailer evaluates how it can direct the customer and meet their needs in a profitable way for the business. The OCR opportunities identified are evaluated in relation to the overall strategic focus. In the beginning there was a clear desire to grasp OCR opportunities that could be implemented quickly and as cost effectively as possible. OCR was defined as a specific project and a forum was established for the OCR project with a cross functional team of Managers from IT, Web, Merchandise, Retail, Finance and the Omni channel facilitator.

Overall, Case 1 positioned itself in the beginning stages of OCR transformation, not looking to lead the industry but to remain competitive by focusing on keeping up with the competition, the industry and customer expectations; *“We are not looking to lead the retail industry in Omni but we are definitely going to keep on top of what is out there and then evolve within that”* (Case 1, Head of Retail).

#### 6.1.1.2 Seizing

Case 1 considers OCR as part of everyone’s job and close collaboration across functions. Case 1 created a specific OCR team to focus on individual OCR projects, to agree on which OCR opportunities to pursue and related things such as what happens when new OCR projects are implemented, what needs to change, what are the updates etc. The team is cross functional and includes members from IT, E-commerce, Merchandise, Retail and Finance; *“We have a team of people who are all working on this (Omni channel) project. Who are IT, Web, Merchandise, Retail and Finance”* (Head of IT). Case 1 however, soon realized that the OCR project needed someone to facilitate it, especially in the beginning when it was being set up and it became facilitated in by an employee from the parent company. The facilitator joined Case 1 from the parent company on a 12 month contract, not as an OCR project manager to begin with but to understand Case 1’s sister company’s retailing systems and processes but ended up spending a lot of time understanding their OCR as it was far more mature then from where the parent company is located. Then the OCR project was led from a technical perspective by the Head of IT and from a commercial perspective by the OCR facilitator (the parent company

employee). The OCR project is part of an IT steering committee's discussions and decision making but run separately, but contrastingly to the IT steering committee the OCR project team is very dynamic. The members of the team have changed from the beginning based on their relevance and expertise to each project and the retailer's current OCR priorities, focus and phase; *"I was quite heavily involved in the first stage... I am not as involved in the project now, you know. It's being led from a technical perspective by [Head of IT], from a commercial perspective by [Omni channel facilitator]"* (Case 1, Head of E-commerce and Customer Service). Changes to the team are made to make the process quicker and more agile. The OCR team meets regularly to have focused discussions about OCR, weekly if there is e.g. a new service being prepared and launched to once a month if an OCR project is up and running.

Before deciding how to respond to the identified OCR opportunities, Case 1 evaluated existing retailing resources and capabilities in relation to the identified resources and capabilities required for OCR, such as evaluating how and if it could use its existing systems and system providers to implement OCR; *"If that is a strategic focus, to look after [the customer], you would then say where are my CRM systems to support that"* (Case 1, Omni channel facilitator). Before deciding on which OCR opportunities to pursue, the retailer evaluated the opportunity by listing each OCR project down and then prepared a business case for each project to prioritise and to allocate resources; *"We list the projects as they are coming up and we prioritise those and allocate resources based on a business case"* (Case 1, Head of IT). KPIs are a key element of the business case which helps to prioritize each project and to identify the next steps of which opportunities and/or threats to respond to. The KPI objectives, such as turnover, expenses, conversion, customer satisfaction, changing customer behaviour, growing the customer database etc. vary depending on each project. In order to prioritize Case 1 also receives quotes for different options from its system providers: *"We painted 4 or 5 different options and we have sent it out to our systems supplier saying if we want to do this how much would it cost and if we want to do that how much would it cost so that we can put that into the analysis. And then we will make a decision based on what they come back with"* (Case 1, Omni channel facilitator).

Cases 1 focuses on choosing opportunities that meet their customer needs and claimed that the customer is always at the center of its decision making; *"She [the customer] is always going to be in any of our decision making, the customer is always going to be why we are doing*

*something*” (Case 1, Retail Operations Manager). The customer is also one of the parent company’s four key strategic pillars which are; customer, leadership, profit and growth, and includes yearly strategic objectives. Case 1 also changed its decision making from being mainly based on employee feelings and opinions to data led decision making, which was a cultural change for the retailer; *“In all honesty it is more of a cultural change. So instead of going on opinion sort of what we think might be best for the brand it is more looking at data led decision making rather than the technology itself. A little bit of a culture shift”* (Case 1, Head of E-commerce and Customer service). An example of data led decision making is before Case 1 launched its light version of OCR, the belief was that the next step would be to fully integrate all available stock but by analysing the data obtained from the OCR light implementation the retailer decided that full stock integration was not the right decision but instead it needed to optimize stock in each channel. Employee experiences also played a role in the decision making, such as best practices learned from previous jobs but decisions are backed up by analysing available data before deciding on changes.

Case 1 strives for a unified understanding of its’ data, *‘single version of the truth’*, that is a single customer view as well as single business view, as opposed to making decisions based on siloed channel data, such as ecommerce data separately from store data; *“those are the things that [Case 1] is looking at saying how do you have one version of the truth of your business. Otherwise your ecomm will say this is what happened, others will say this is what happened, ops will say this is what happened and actually there is one customer who might have just been jumping across different channels. So how do you get one view and how do you keep that single view of your business and of your customer”* (Case 1, Omni channel facilitator). Having that single version of the truth has been a challenge for the retailer as the CRM system was not a part of the OCR project but Case 1 was working on the integration of the two. Case 1 also makes decisions by trending the data collected to make sure that what has been observed is a genuine problem that needs improving as well as creating different scenarios of what it wants to do and how much each scenario will cost. Based on that Case 1 made decisions, despite finding it difficult to quantify the turnover and expenses for each scenario. Such as sending several different scenarios to its systems supplier and based on their feedback on how much it will cost the retailer will make a decision. Case 1 additionally, fostered open-minded interpretation of the opportunities and/or threats it had identified. The retailer discussed and evaluated new ideas cross divisionally and interpreted new ideas from various employee

and divisional views. Despite new ideas being supported by data they can have different meanings, impact and results based on the context and the view they are evaluated from. Hence the interpretation is ambiguous as the opportunity can be interpreted in more than one way and the outcome can be uncertain. Case 1 decision making is also impacted by what the competition is offering to customers, hence being forced to offer services to match the competition in order to meet customer expectations.

Case 1 fosters collaborative discussions when deciding upon new OCR opportunities; *“we ultimately between us discussed the algorithms of what the new system would be so that it was right for the business, right for E-Comm and for the stores”* (Case 1, Retail Operations Manager). Regular OCR meetings are held to discuss progress and decide next steps, such as group discussions about already implemented OCR opportunities which the retailer had identified were not working as expected. The frequency and length of meetings changed from when the project started. In the beginning the meetings were longer but became shorter and less frequent. The meetings were scheduled in but cancelled if not considered necessary. Case 1 bonus structure is an example where it had identified the need to change, that is from its traditional siloed channel bonus structure to an integrated cross channel bonus structure and was having ongoing discussions about how to change it; *“We are having now on going discussions around things like bonus structures. The way a store is typically bonused is based on the money in the tilt at the end of the day. But surely when you go into an Omni channel world, that is no longer relevant because somebody may have paid for something online but collected it from a store”* (Case 1, Head of IT). Another example are discussions around changes to the *Ship from Store* service the retailer had started offering but had identified that needed changing. The retailer also worked closely with its sister company to evaluate the system that they were using to decide if it would be useful for the retailer to use that systems provider.

Case 1 fostered an experimental mindset where failure and starting over is accepted. Testing and experimenting are used to make decisions about changes to improve the customer experience. Case 1 continuously tests different options for both smaller and larger changes, such as pilot testing new OCR services and by testing multiple options for adjusting current services and customer experiences; *“We have now launched a new updated version*

*of Omni which we launched in September 2018 as a trial and then rolled out quickly to all stores” (Case 1, Head of Retail).*

### 6.1.1.3 Transforming

Resistance to change had to be overcome at Case 1 for the transformation to OCR; “...*the human challenges; to get people to agree and engage with what we are doing. There has been resistance from, initially there was resistance from stores, they saw Omni channel as a way of the web increasing its dominance. There was a certain resistance from the web because they felt that their sales would be given to stores” (Case 1, Head of IT). Case 1 communicated the purpose of the change to give employees context for their role in the overall impact of the transformation that they could relate to, making sure that everyone has a collaborative understanding of what OCR transformation means, entails and delivers; “It is communication and context. I think if people have context as to where it all fits in and how it helps deliver the top line and understand why it is being done. So I keep referring back to store staff but I think they are the ones that are impacted the most. If they understand that seamless service is important for the consumer that it is not about them protecting that piece because it is not actually going to achieve the actual goal of the company, then they have got context” (Case 1, Omni channel Facilitator).*

Case 1 needed to appeal to staff, both online and instore, about the benefits of adopting OCR, both for the individual and the organisation as a whole. To manage resistance between online and offline staff and to incentivise store staff to buy into the new OCR services, included redesigning its sales and incentive metrics by changing the bonus metrics from siloed channel metrics to integrated bonus metrics. Changing the bonus structure required changes to store targets as they could no longer be only measured on previous siloed channel targets; “*The way a store is typically bonused is based on the money in the tilt at the end of the day. But surely when you go into an Omni channel world, that is no longer relevant because somebody may have paid for something online but collected it from a store” (Case 1, Head of IT). OCR operations such as Click and Collect, Ship from store and Order from store all needed to be incorporated into in-store employee KPIs and hence impact the individual store and store employees incentives. Changing the incentive strategy and sales reporting prevented channel conflicts from store staff when the new services were launched by making the change and the*

extra workload appealing to them by positively impacting on in store sales and hence employee bonuses. Case 1 defines OCR sales as anything that is fulfilled for the web by store stock, i.e. click and collect and ship from store.

To implement new OCR services, Case 1 developed training manuals internally and did training workshops for store employees. An important aspect of the training was not only to teach how to provide the new services, how to use the new systems and what needed improving but as importantly giving employees context so that they can relate to how they play an important role in the process; *“So that is done at the very start of the process which is we are implementing the iPads we do training sessions so there will be a training manual which will talk you through, one, how to use it and troubleshooting, who to contact if it goes down. But also, then there are softer skills of how you would introduce it in a sale, what are the benefits to the customer how do you go about interacting with that customer at that time”* (Case 1, Head of Retail). From a technical perspective, operating ‘*Order from store*’ was relatively simple to implement as iPads are easy to use, but it did require sales training prior to launching the service to teach in store employees new softer selling skills. A training manual was used to teach the staff new selling skills and how to use it, troubleshooting, who to contact if it doesn’t work etc. ‘*Ship from store*’ was a whole new process for in store employees, which entailed packing and preparing products for shipping. The new process was taught by assigning an area manager as a sponsor, who was responsible for the training and as well as a dedicated specialist in each area (store managers). Preparing for integrated inventory implementation required training the store staff on the need for to improving stock accuracy. Through workshops and digital training manuals the retailer educated in store employees about the importance of stock accuracy and how it would impact their targets and bonuses; *“When we rolled it [new OCR services] out there was a training guide, a live site they go on and practice with their teams so they didn’t have to feel oh my goodness this is a bit daunting. Like they could practice, go through the training with the store teams and then they would go live”* (Case 1, Head of Operations).

As previously noted, Case 1 considers OCR to be part of everyone’s job description so adopting OCR did entail hiring a dedicated OCR manager, Head of OCR or any major restructuring of the organisation, instead it entailed *adopting dynamic team collaboration* across functions; *“You cannot say Omni channel belongs to that person because Omni channel touches every single department ... you don’t go “oh I’ve got to go and buy an Omni channel*

*person”, you know, Omni channel is part of every ones job description”* (Case 1, Omni channel facilitator). However, an employee from the parent company became dedicated to the project and operated as an OCR facilitator for almost a year.

The OCR transformation at Case 1 was a step by step implementation of new services which started by developing short-term solutions, referred to as *‘Omni light’* in order to change quickly and cost effectively and to learn from the implementation before developing and investing in more permanent solutions; *“What we put in last year is what we call Omni light, so it is a light touch approach to it”* (Case 1, Head of IT). The new OCR services that Case 1 developed in phase one were; (1) Click and Collect (2) Order from store, (3) Ship from store and a (4) Single Customer View; a 360-degree view, which enables the retailer to categorise how customers move through the purchase journey and to direct its marketing; *“So we can now do collect from store, we can do ship from store, we can do order from store...all those three things work, I don’t think they are necessarily massively integrated, they are not complete, if that makes sense”* (Case 1, Head of IT). In phase one, the new services were not fully integrated whereas in the second phase the retailer launched a fully integrated stock system called *‘OneStock’*; a more permanent seamless inventory integration which enabled Case 1 to make in store stock available to online customers; *“Since we last spoke we have now launched a new updated version of Omni which we launched in September 18 as a trial and then rolled out quickly to all stores. We are calling this OneStock where all store stock is visible when shopping online”* (Head of Retail). Implementing OneStock enabled the retailer to further seamlessly integrate its existing *‘Click and Collect’* and *‘Ship from store’* OCR services. The focus was then to develop current OCR services further by developing permanent integrations enabling the customer to finish a transaction online, a capability that retailer currently did not have at the time.

New operational initiatives to provide customers with a seamless experience entailed integrating channel operations by developing seamless research stage operations, seamless purchase stage operations and seamless fulfilment stage operations which included new OCR services such as *Click and Collect, Order from Store, Ship from Store and Integrated deliveries.*

Click and Collect was the first Omni channel service implemented by Case 1. Case 1 launched its first version of Click and Collect in 2014 when the retailer’s website was re-platformed. It

was considered an ‘Omni light’ as orders were being fulfilled from the warehouse, i.e. dispatched from the warehouse to a specific store that the customer has chosen; “*Click and collect is an option for them so it is open to them, they can either decide to do it or not so that is one of the delivery methods. They click on Click and Collect, they have chosen that that is what they want to do. The click and collect part is till tough what I would call Omni light. Because it is click and collect that it is being fulfilled from the warehouse, it is being dispatched to a store and they are saying I want to pick it up in that store. It is not a click and collect as far as I know that stock is available in that store and I am going to come in and purchase it from that store and buy it from that store. So that hasn’t been developed yet* (Case 1, Head of Retail). In the first version customers could not see the stock available in each store. In order for that to happen better stock accuracy was required in order to know what is available in each store which requires store staff to scan the right product in the right size and the right colour so that the stock is accurate. To launch the first version of Click and Collect Case 1 used a specific third-party solution. The implementation also required the retailer to make changes to the in store physical space, such as making sure there was place for parcels to sit and to teach the stores a whole new customer service process (preparation phase), hence using existing stores as fulfilment locations. The service further developed during the second phase of implementation. The retailer changed system providers and now the retailer has developed the service so that customers are able to see the stock availability in each store; i.e. specific product, in a specific colour and size; “*So the store stock is basically being fed up to the website, as well as the DC stock [warehouse stock], so it is all there and available to be brought up [Click and Collect]”* (Case 1, Retail Operations Manager). The retailer can show it online to the customer and offer a collection from that specific store within 20 minutes. Case 1 further developed its Click and Collect services in 2018 to enable customers to pick up parcels from a third party – delivery box provider.

The second OCR service launched was *Order from store* which enabled Case 1 to sell products to in store customers, that have sold out in store (or have not been made available) but are in stock and available online. Hence, it is an in-store sale that is fulfilled from online, using the online stock (seamless purchase stage integration). Customers can choose whether they want the order delivered or to collect from a store (seamless delivery integration). The service further improves the customer experience as customers no longer have to wait for store staff to go and check stock in stock rooms, as they can check information via digital devices and e.g. at the



cash desk, and customers further do not have to find the product again themselves online and finish the purchase. *Order from store* was the second OCR service launched by Case 1, for which it provided every store with iPads by the cash desk; “*Where a customer comes in, we don’t have the size, we check it, see if it is available and just order it then and there for the customer. Every store has an iPad at the till*” (Case 1, Head of Retail). The first phase of *Order from Store* did not enable customers to make payment at the cash desk, the transaction had to go through the online store just as if a customer was at home ordering from online. That capability was to be developed at a later stage. While the iPads were fairly straight forward to implement, Case 1 needed a new system to operate it with its standard systems. The success of the iPad sales were very much related to store staff capabilities whereas the challenges were more in relation to processing orders, Wi-Fi going down or being slow which means it could take for ever for the sale to go through and customers not wanting to give card payment information in an open environment or simply not wanting to shop that way.

To seamlessly integrate the purchase and fulfilment stage Case 1 then developed *Ship from Store* which enables online customers to check in store availability and to purchase products that are not available online from a store and have them fulfilled from that store (seamless purchase and fulfilment stage integration). *Ship from Store* was the third OCR service launched by Case 1. The developmental process started in 2015 and launched in 2016 and has been very successful for the retailer, accounting for nearly 10% of in store sales, resulted in lower returns vs. pure online sale returns and positive customer feedback. Case 1 implemented *Ship from Store* to enable customers to research online and to fulfil from store; “*So from an Omni perspective, we do ship from store, which means if the order cannot be fulfilled from the web it can be fulfilled via store so the store will get a message. Let’s say a customer is looking for this piece of stock, you have that piece of stock, therefore we look to have it delivered from the store*” (Case 1, Head of Retail). But Case 1 had to develop new capabilities to be able to show customers the stock available in stores. The capability was developed with a solution provider, instead of developing a seamless transactional solution the retailer together with a solution provider developed a bespoke, short term Omni light marketplace solution that entailed a manual process of calling the customer back to fulfil an order. The sale originates online (research stage) but is fulfilled from the store by using store stock, then it is either delivered to customers or they can choose to collect in a store (seamless purchase stage and delivery stage integration). The service developed further in a second phase to a fully integrated ‘OneStock’

system which enables Case 1 to make the instore stock available to sell to online customers. Ship from Store is still operated as a marketplace and store employees can go in a grab a sale but the implementation of 'OneStock' has transformed the process from being manual to automated. In the first phase of Ship from Store, in store employees had to ring the courier service and manually fill out the forms, whereas now the system automatically generates a dispatch note. The change has improved the efficiency of the process, saving both time and cost. The system additionally enables the retailer to set rules for how the stock is used for fulfilment. In the first phase the retailer developed it so that the warehouse would fulfil the whole order if possible, if not the whole order would go to the marketplace to be pick up by a store. The retailer quickly learned that that process was not optimal as it was taking stock away from walk in customers. So the stock fulfilment was changed, orders are still always fulfilled by the warehouse if the stock is available there, but if the warehouse can only fulfil the order partially, then the warehouse ships what it can and the remaining items goes to the marketplace to be fulfilled by a store. This enables Case 1 to protect the store stock for walk store customers. It was also developed so that each individual store is only available to see orders for items that they have stock in store for, hence not every single order. In addition to new systems and adapting internal processes, offering ship from store has required in store employees to adapt their skills, as they no longer operate as pure instore sales assistants, now they have to process orders from online as well.

Cases 1 has also further developed its integrated fulfilment services to provide customers with *Integrated deliveries*. Which means that instead of multiple products being sent to customers from various locations and in multiple packages, they are consolidated into as few packages as possible. Case 1 has developed its fulfilment capabilities so that each customer gets a maximum number of parcels for one order and is made aware of how many parcels it will receive from one basket. A stock buffer for each product was also developed so that a customer isn't promised a product that has sold out and a stock priority feature so that a store knows if they are the last one to have the product ordered in store. Case 1 developed these tailormade changes with its systems provider which in turn provides the systems provider with learnings it can share with other retailers.

Case 1 developed a single customer view by making sure that the CRM systems are integrated across both online and instore so that they feed into each other to provide a single view of the

customer. Providing customers with the opportunity to register online (to become a member) enabled Case 1 to build a holistic picture of its customers such as what, where and how often they shop and to provide them with relevant and personalised sales- and marketing communication; *“I would say customer relationship management. Having a single view of the customer so you can then really talk to her, would link to things like personalization being able to talk to that consumer in a relevant way, being able to understand where she shops and then see her holistic journey so that, you know she might be a very valuable customer but if you are only looking at ecomm you might be missing where she is shopping elsewhere”* (Case 1, Omni channel facilitator). Developing a single customer data set which provides a 360-degree view of customers, enables Case 1 to segment customers based on actual purchase behaviour throughout the whole purchase journey to provide them with a personalised experience through relevant marketing, as opposed ‘one size fits all’ marketing. Case 1 for example segments customers based on purchase behaviour and engagement which then reflects the customer experience online and in store, such as cart abandonment email reminders and offers; *“So we collect data on all the touch points. So online, in-store, we then have an integrated marketing strategy that communicates that. So we have got that bit, now we in the process of moving that forward so for example we categorise our customers into 6 different categories based around the frequency that they shop or engage with us so that is a process that we do manually, the next phase will automate that process. So the more you shop with us you will automatically move up to another category which will automatically be reflected in your [the customer’s] experience online or instore”* (Case 1, Head of IT). Developing a single customer view was a phased step by step process for Case 1. Case 1 started with a manual process of segmenting customers based on data collected on all touch points (online and instore) from various data sources, both internal and external, such as; Google analytics, sales data from the stock system and third party and engagement behaviour and through ‘Click and Collect’, ‘Order from store’ and ‘Ship from store’ OCR sales. In the second phase the retailer implemented a new CRM system and created a new position, a CRM insights analyst, and hired a new employee for it, but the CRM project was still run as a separate project to OCR. The CRM insights analyst is responsible for analysing customer buying habits and share the findings within the organization to provide personalized content. The change enables the retailer to analyse customers buying habits and buying needs holistically, given that the customer has consented to it. The retailer shares this customer knowledge so that it is useful across the whole organization.

Included in the transformation was developing a seamless inventory integration capability with a solution provider. Instead of developing a seamless transactional solution the retailer together with a solution provider developed a bespoke, short term Omni light marketplace solution, which wasn't fully automated but delivered a seamless service to customers, i.e. Ship from store. The *Ship from store* service developed further in a second phase to a fully integrated system which enables Case 1 to make in-store stock available to sell to online customers. The service is still operated as a marketplace where the individual store can go in a grab a sale but the implementation has transformed the fulfilment process from manual to automated. In the first phase of *Ship from store*, in store employees had to ring the courier service and manually fill out the forms, whereas now the system automatically generates a dispatch note. The change has improved the efficiency of the process, saving both time and cost. Case 1 continuously tailored the new solution to its needs by developing these changes with the systems provider, which provides the systems provider with learnings about retailer's needs that it can share with others; *"We just developed it with them. They can use the learnings that they get from us. Then other retailers can benefit because it makes sense for everybody to learn"* (Case 1, Retail Operations Manager). The system enables each retailer to set rules for how the stock is used for fulfilment. In the first phase the retailer developed it so that the warehouse would fulfil the whole order if possible, if not the whole order would go to the marketplace to be pick up by a store. Case 1 quickly learned that the process was not optimal as it was taking stock away from walk in customers. So the stock fulfilment was changed, orders are still always fulfilled by the warehouse if the stock is available there, but if the warehouse can only fulfil the order partially, then the warehouse ships what it can and the remaining items goes to the marketplace to be fulfilled by a store. This enables Case 1 to protect the store stock for walk store customers. It was also developed so that each individual store is only available to see orders for items that they have stock in store for, not every order. Case 1 also further developed the stock fulfilment so that; each customer gets a maximum number of parcels for one order and is made aware of how many parcels it will receive from one basket, a stock buffer for each product so that a customer isn't promised a product that has sold out and a stock priority feature so that a store knows if they are the last one to have the product ordered in store. Case 1 additionally changed the initial reporting view in the system to enable the customer service team to have a holistic, more user-friendly view of its Ship from store and Click and Collect services to be able to proactively respond and prevent disappointing the customer. The retailer developed the new reporting view with the systems provider and tested it prior to launching.

Case 1 responds quickly to identified needs to change; “*So that is when we looked at the system and we improved it straight away*” (Case 1, Retail Operations Manager). Starting with a light approach to OCR enabled Case 1 to stay agile in relation to future changes and developments of OCR; “*Omni channel is constantly changing. So every single time the benchmark of what is Omni channel in a week’s time is different to what it was a month ago*” (Case 1, Omni channel facilitator). Starting with developing and implementing light touch OCR provided Case 1 with valuable learnings to develop more appropriate and permanent OCR solutions. By evaluating the light touch implementation of its OCR solutions and services, the retailer identified that a permanent inventory integration solution for its Ship from store OCR operation would be the appropriate next step. From an efficiency perspective Case 1 identified the profitability of *Ship from Store* could be improved which included analysing time and payroll cost of store staff as well as incorporating lost sales in store because an employee is not servicing an in-store customer. From a customer perspective Case 1 identified that not all customers wanted to be contacted in that way and from a process perspective it identified that the initial *Ship from Store* solution implemented needed to be streamlined and that the service impacted the inventory recall process. Prior to the service the retailer recalled stock from stores in order to fulfil online orders, which it stopped when Ship from Store was launched. The retailer learned from the first launch that online conversion rates dropped with not as many orders being fulfilled online, but overall the retailer was converting just as many customers as before. These learnings lead to products being recalled from stores again. After launching ‘OneStock’ Case 1 was in the process of evaluating how the processes could be further improved so it does not disappoint the customer and provides a consistently good customer experience such as on promotional days like Black Friday when the volume of orders goes higher than on a day to day basis.

#### 6.1.1.4 Summary

Table 6.1 provides a summary of the activities, processes and microfoundations identified for each cluster of sensing, seizing and transforming in Case 1. The table shows the development of the NVivo analysis from holistic coding (Saldana, 2015) using a priori themes deducted from the DC theory to NVivo codes, sub-codes and parent-codes as outlined in chapter 5.3.2 Thematic template analysis (examples from the NVivo software in Appendix 9.4).

Table 6.1. Summary of Case 1 results

1. A priori themes: DCs clusters	2. NVivo codes: OCR Activities	3. Sub-codes: OCR Processes	4. Parent codes: OCR Micro-foundations	
Sensing OCR	<ul style="list-style-type: none"> <li>- A competition conscious culture</li> <li>- Open discussions about competitors</li> <li>- Ad hoc internal benchmarking of direct competitors OCR propositions</li> <li>- Systematic benchmarking of direct retailers at regular intervals conducted by specialist advisors for the parent company</li> </ul>	Monitoring competitors OCR capabilities	Identify	
	<ul style="list-style-type: none"> <li>- Collect, analyse and distribute customer feedback</li> <li>- Online feedback survey</li> <li>- Instore customer feedback to employees</li> <li>- Focus groups</li> <li>- Customer service team responding to calls and emails</li> <li>- Physical observations</li> </ul>	Monitoring customers purchase expectations and behaviour		
	<ul style="list-style-type: none"> <li>- Attending industry events</li> <li>- Learning from suppliers and vendors</li> <li>- Listening to word of mouth</li> <li>- Networking other retailers</li> </ul>	Monitoring retail industry trends and developments		
	<ul style="list-style-type: none"> <li>- Learnings from parent company</li> <li>- Learnings from sister company</li> <li>- Networking with retailers</li> </ul>	Learning from retail partners		
	<ul style="list-style-type: none"> <li>- Cost and time calculations</li> <li>- Evaluate in store processes</li> <li>- Collaborate with customer services</li> <li>- Evaluate delivery accuracy</li> <li>- Analyse OCR sales</li> <li>- Stock reports</li> <li>- Google analytics</li> <li>- Collaborate with merchandising</li> </ul>	Monitoring OCR performance		
	<ul style="list-style-type: none"> <li>- New employees with new skills</li> <li>- Employee feedback</li> <li>- Encourage employees to share new ideas</li> </ul>	Learning from employees		
	<ul style="list-style-type: none"> <li>- Customer centricity</li> <li>- Define OCR as a specific project</li> <li>- Operate an OCR forum by creating a cross functional team</li> </ul>	Defining the OCR opportunity		Interpret
	<ul style="list-style-type: none"> <li>- Continuously monitoring the competition</li> <li>- Competition awareness mindset</li> <li>- Part of every employees' job</li> </ul>	OCR marketplace positioning		
Seizing OCR	<ul style="list-style-type: none"> <li>- Dynamic, cross functional OCR project team</li> <li>- Collaborative evaluation, development and selection</li> <li>- Regular OCR team meetings</li> <li>- Regular OCR updates and gradual improvements</li> </ul>	Cross-functional collaboration	Develop	
	<ul style="list-style-type: none"> <li>- Evaluate existing systems providers</li> <li>- OCR Project Business Case</li> <li>- OCR Project resource allocation</li> <li>- OCR project KPIs</li> </ul>	OCR project prioritization		

	<ul style="list-style-type: none"> <li>- Knowledge of existing customer needs</li> <li>- One of four strategic pillars</li> <li>- Yearly strategic objectives</li> <li>- Improve inventory efficiency</li> </ul>	Customer-centric decision making	Select	
	<ul style="list-style-type: none"> <li>- Single source (unified) data analysis</li> <li>- Employee experiences and best practices knowledge</li> <li>- Data trending</li> <li>- Scenario building</li> <li>- Competition benchmarking</li> </ul>	Data-informed decision making		
	<ul style="list-style-type: none"> <li>- Collaborative, formal and informal team discussions</li> <li>- Regular Cross functional OCR team meetings</li> <li>- Collaborate with sister company</li> </ul>	Collaborative decision making		
	<ul style="list-style-type: none"> <li>- Pilot testing</li> <li>- AB testing</li> </ul>	Testing and experimenting		
OCR Transformation	<ul style="list-style-type: none"> <li>- Reconfigure the incentives and bonus system from channel silos to an integrated system</li> <li>- Change store performance targets, from silos to integration - Integrated KPIs</li> <li>- Integrated sales reporting</li> </ul>	Redesigning sales and incentive metrics	Prepare	
	<ul style="list-style-type: none"> <li>- Internal employee training</li> <li>- Develop training manuals</li> <li>- Internal training sessions</li> <li>- Training soft selling skills</li> <li>- Training sponsors</li> <li>- Area specialists</li> <li>- Workshops</li> <li>- Digital training manuals</li> </ul>	Developing OCR skills		
	<ul style="list-style-type: none"> <li>- Cross functional OCR teams</li> <li>- OCR part of existing job descriptions</li> </ul>	Adopting dynamic team collaboration		
	<ul style="list-style-type: none"> <li>- Communicate OCR purpose to employees</li> <li>- Give employees role context</li> <li>- Collaborative understanding</li> </ul>	Culture redesign	Implement	
	<ul style="list-style-type: none"> <li>- Gradual, step by step implementation</li> <li>- Omni light implementation</li> </ul>	Gradual implementation		
	<ul style="list-style-type: none"> <li>- Click and Collect instore and 3rd party</li> <li>- Order from store via iPad</li> <li>- Ship from store</li> <li>- Seamless inventory integration</li> </ul>	Creating integrated channel operations		
	<ul style="list-style-type: none"> <li>- Single customer view</li> <li>- Integrated CRM</li> <li>- Customer registration/account</li> <li>- Customer purchase behaviour segmentation</li> <li>- Integrated marketing strategy</li> <li>- Gradual implementation</li> <li>- Customer data integration; own instore data and own and third party online data</li> </ul>	Improving personalised marketing abilities		
	<ul style="list-style-type: none"> <li>- Phase 1: Bespoke Omni light marketplace solution</li> <li>- Phase 2: New system</li> </ul>	Bespoke systems development		
	<ul style="list-style-type: none"> <li>- Agile mindset</li> <li>- Agile implementation</li> </ul>	Adopting agile principles		Evolve

### 6.1.2 Case 2

Case 2 is a European premium apparel brand that sells directly to consumers and through wholesale on a global scale. Case 2 considers itself as ahead of direct competitors in OCR but not leading the retailing industry. Prior to adopting OCR Case 2 possessed the capability of MCR but outsourced its e-commerce operations. Case 2 realized that in order to remain competitive, grow market share, increase customer loyalty and customer understanding a transition towards OCR was necessary. As a first step before adopting OCR Case 2 insourced its e-commerce operations in order to have full control of the online business, a project which finished early 2016. The OCR project however started in 2015 and the first OCR services were launched in August 2016 which include; (1) Click and Collect, (2) Order from store, (3) In-store returns, (4) Online appointment scheduling and (5) a 360-degree, single view of its customers. Case 2 was therefore considered feasible for studying how retailers transform to OCR.

Access to Case 2 was initiated at an Omni channel conference in London in February 2017. The researcher approached Head of Retail Business Development and presented the research aims which resulted in Case 2 agreeing to participate in the research. The first interview was conducted with the Head of Retail Business Development via phone in March 2017 who then initiated introduction with a couple of other employees but only the Order manager E-commerce Operations and Projects Digital Retail agreed to be interviewed. Both interviewees had actively participated in the OCR transformation process and were asked to answer the questions outlined in the interview guide (Appendix 9.2). The Head of Retail Business Development shared internal confidential data in February 2019 which included Omni channel project presentations and Omni channel meeting minutes. In addition to the interviews and the internal data, secondary data in the form of annual reports, press releases, news articles, website, stores and industry reports were collected and analysed.

Case 2 was analysed to further explore and expand the constructs identified from Case 1 (Eisenhardt, 1989). The coding template developed from Case 1 was used as a starting point for the analysis of Case 2 which allowed for the coding template to be further advanced and



for new codes to merge inductively from the data, ‘bottom up’ (Symon and Cassell, 2012, Crabtree and Miller, 1999).

#### 6.1.2.1 Sensing

Identifying the need to adopt OCR came from various sources. In order to remain competitive in the marketplace, Case 2 identified gaps in existing OCR capabilities compared to similar retailers and partners so they could offer at least the same level of seamless customer experiences as their competitors; *“We looked at what are our competitors offering and where we needed to catch up to what our competitors are offering”* (Case 2, Head of Retail Business Development). Case 2 also envisioned how key partners and retail platforms would evolve in the future, such as Amazon and Zalando, and how that might impact Case 2’s existing business model such as developing tailored solutions to meet key partners future needs and standard solutions for smaller local and online partners.

Case 2 conducts a structured and data driven competition analysis, to identify how to keep up with and outperform the competition. However, Case 2 was not trying to identify new and innovative OCR opportunities, but to exploit existing OCR opportunities, i.e. already known in the market, such as personalisation, better than the competition; *“Personalization offers a chance to outperform competition”* (Case 2, Internal confidential presentation). Case 2 also conducts benchmarking exercises at regular intervals and performs ‘best in class’ comparisons for specific OCR projects. For example, when developing a loyalty program, the retailer benchmarked it against ‘best in class’ loyalty schemes to identify and decide features of its loyalty program; *“Loyalty concept benchmarking „best in class“ finalized”* (Case 2, Internal confidential document). Case 2 additionally, uses a Net promoter score (NPS) to compare its customers experiences to competitors and to track changes over time. By using surveys to ask customer an industry standardised question; *“On a scale of 0-10, how likely are you to recommend the brand/product/ service to a friend or a colleague?”* the retailer calculates a score to compare the percentage of loyal customers (promoters), satisfied customers (neutrals) and unsatisfied customers (detractors).

Case 2 closely monitors customer needs and expectations and operates a dedicated customer service team that deals with customer enquiries: *“It really came from customer feedback, store feedback of what customers are looking for compared with what is immediately available”*

(Case 2, Head of Retail Business Development). In addition to collecting and analysing online surveys, in-store customer feedback and customer service feedback, Case 2 also deploys mystery shoppers (i.e. specially trained test buyers) to identify customer satisfaction and the need for targeted training of store employees, collects feedback via webchat, monitors what customers are saying about the retailer on social media and monitors customer satisfaction using the Net Promoter Score. A central strategy department is responsible for creating detailed reports about customer satisfaction and update the managing board; *“Customer satisfaction is measured and analysed at [Case 2] in, among other places, customer service, by sales staff in stores and by the central strategy department”* (Case 2, Annual Report 2018). Analysing actual customer behaviour enables the retailer to identify opportunities for personalised communication and new services to meet customer expectations. Case 1 developed a single view of its customers to holistically monitor and identify their purchase behaviour; *“A customer who is registered with us can view their own account online, can see their own transactions but also our team can look them up and see their transactions like if they are coming in for a personal shopping appointment and we see their online and their instore combined. And therefore, starting to build up a picture of the fact that our customers do use both channels and therefore it makes sense for us to be able to offer them with that”* (Case 2, Head of Retail Business Development). Case 2 uses a third-party systems provider to understand and predict their customers behaviour which enables them to engage better with their customers across all channels. In addition to analysing customer feedback and purchase behaviour the retailer also reads industry reports to monitor trends and changes in consumer behaviour.

Case 2 sensed how it needs to improve by following recent market trends; *“We always try to follow the market trends”* (Case 2, Junior Order Manager e-commerce). At Case 2, innovation is one of the key values, it plays a key role in its success and is clearly articulated in the retailer’s mission statement. At the start of the OCR transformation, Case 2 attended conferences and seminars and read papers to identify OCR opportunities and where it initially wanted the focus to be; *“And as part of pulling together the workshops and the knowledge and starting to scope out what we wanted we went to conferences, did seminars and read papers so it was a mixture of everything”* (Case 2, Head of Retail Business Development). The retailer for example identified from monitoring retail trends the need to insource its e-commerce business in order to improve the customer experience.

The sensing period also Case 2's OCR involved sharing knowledge between other geographical markets it operates in, where more experienced Omni-channel markets would share their knowledge of how OCR could be done. These markets shared their knowledge of OCR and how it could be operated, such as performance and actual customer experience of using OCR: *"So that is one of the reasons when [Case 2] started thinking about Omni channel services they were looking at the [Country X] and [Country Y] as markets that needed to contribute and share their understanding of how it could be done"* (Case 2, Head of Retail Business Development). These local markets were more advanced and had a deeper understanding of OCR than in the market where the head office is located. A cross-functional project team was created who met regularly in dedicated OCR workshops to identify the opportunities available for the retailer, ranging from a so called 'dream world' scenario to a realistic starting point.

From internal sources, Case 2 identified that high returns rates from online shopping would be an issue but providing personalized services to customers would enable it to lower the returns rate and improve conversion rates (i.e. transactions); *"Because they [the customer] will know how to make the right choice for them then there will be lower returns rates and better conversion rates"* (Case 2, Head of Retail Business Development). From identifying that footfall in stores (customer visits to stores) was declining, Case 2 saw an opportunity to offer *Click and Collect* as a way to increase the footfall again, both short term and long term.

As previously noted, innovation is one of Case 2's five corporate values and employees are encouraged to share innovative ideas. The retailer takes these ideas seriously and implements the best ideas; *"The employees play a crucial role in the achievement of the Company's goals. Accordingly, human resources management at [Case 2] seeks to create an environment that ensures that all employees can make the best possible contribution"* (Case 2, Annual Report, 2015)

Case 2 had a clear strategic focus of being customer centric and developed OCR strategic guidelines, defining a common OCR Vision to 2020 and creating OCR strategy broken down into yearly targets. The overall objective for the OCR program was to *"create a seamless unique shopping and brand experience across all channels"* (Case 2, Internal confidential

presentation). In 2015, OCR became one of the four key pillars of the retailer's growth strategy which focused on driving its own retail, both online and in store. In 2016, being customer centric was at the center of the strategy, with a key focus of consistently aligning all activities in a customer-oriented manner; *"Ensure that every project is aligned to the same customer experience strategy. Design services and features according to different customer needs"* (Case 2, Internal confidential presentation). Being customer centric applied to all defined fields of action; digital, agile, sustainable and global. Driving the digital transformation, innovating the way it operated, refining the way it sold and refocusing the brand were specific activities of Case 2's customer centric strategy. The customer remained a central strategic focus in 2017. In 2018, the strategic focus advanced to focus specifically on personalization and speed to further increase the brand desirability among customers. The aim for personalization was to increase customer satisfaction sustainably through individualized customer engagement, personalized product range and unique shopping experiences. The aim for speed was to design agile business processes to enable fast and flexible reactions to customer needs and new market trends. Hence, the strategy was still focused on the customer. Case 2 continuously reviewed and refined its planned OCR in relation to its overall strategy. The vision was for example to launch localized E-commerce platforms in each market with OCR tied in from the start. Case 2 also realised the need to define specific OCR features such as the meaning of personalization and to define different approaches and services on a country level. Additionally, Case 2 envisioned how its retail partners would evolve in the market place, both big and smaller local partners, and how the retailer would need to respond, and as a results realised that it needed to define new standardised partnership models and interpret what it means for the retailer responses. Overall, the aim throughout has remained to design a compelling customer experience and to focus on projects and customer segments that would have the biggest impact and value potential for the business.

In 2016 Case 2 realized that the OCR project teams that had been set up to lead individual OCR projects were heading in different direction and that it needed to bring the customer back into focus, i.e. the teams needed to collaborate more. To bring the customer back into focus the retailer analysed the current state and defined an 'awesome' state of being a customer centric organization, defined targets and steps to reach these targets. The first step entailed (1) prioritizing: concentrate on OCR projects with the biggest impact by focusing on customer segments with the biggest value potentials and focusing on projects with highest value

contribution, and design for a compelling customer experience by ensuring that every project was aligned to the same customer experience strategy and designing services and features according to different customer needs. The second step was (2) alignment; to foster autonomy and end-to-end responsibility by restructuring the OCR program from departmental to product ownership and share responsibilities for the OCR customer, data, analytics and foundations. The third step was (3) way of working; to combine the best out of two worlds by using agile principles when meaningful, encourage experimental thinking and innovation and consider different project maturity levels. Improving the customer experience continued to be of focus, working toward the objective of providing a seamless customer experience.

#### 6.1.2.2 Seizing

Operating a cross-functional team was an important element of the decision making process at Case 2: *“The formation of cross-functional teams and the delegation of clearly defined responsibilities will accelerate decision-making processes”* (Case 2, Annual Report 2018). Case 2 set up a dynamic cross functional project team to work collaboratively on the OCR transformation with members of the team changing during the implementation process; *“We had a whole project team working on this project [Omni channel]”* (Case 2, Junior Order Manager E-commerce). Key departments are however still represented in the team which includes retail operations, digital retail, CRM, marketing, IT and logistics. At the start of the transformation process, workshops were held once a month for a year to scope out the identified opportunity, from realistic to an ideal situation. Case 2 had clearly defined ownership and OCR project structure and an OCR project management chart was developed with clearly defined roles and responsibilities. The OCR program was led by a Steering Committee who was responsible for the overall OCR program and the roles included OCR Program Owners, OCR Program Manager, OCR project leads, each responsible for leading a specific OCR project such as OCR services, CRM and insourcing B2C. The team also included Senior counsellors and Senior IT members. In the beginning the ownership of the OCR Program was departmental but was later changed to product ownership as each OCR project was working on siloed goals and heading in different directions due to lack of project dependency knowledge and inefficient project team collaboration. As a response, OCR sponsors were defined and made responsible for the OCR long-term vision and strategic guidelines. The target state was for project teams to run autonomously, to take responsibility for their work from end-to-end, to follow the same goal and to collaborate closely with other teams to develop OCR in the right way. Case 2

defined three clear steps to get to that target stage; (1) set pre-requisites in terms of project goals, priorities and customer journeys, (2) align program structure and priorities and (3) change the mode of working towards agility and speed. An agile project approach was defined as being “lean & mean” by building a strong foundation and gradually improve daily business step by step.

Case 2 held workshops to discuss and prioritize identified OCR opportunities. The Head of Retail Development explains the complexity and importance of prioritizing new OCR projects; *“Trying to work out how to prioritise what happens next is almost the hardest part of all because it is a combination of what do we think the customer would benefit from or what the customer would most enjoy and what level of resources it’s going to take to work out, from a systems perspective how to make that happen and to build it as a possible option”* (Case 2, Head of Retail Business Development). Detailed project plans for each of the OCR projects it wanted to pursue were prepared which included goals and the process of how the OCR project should work. That was then assessed by the IT team which assessed what it would take from a technological perspective to make it work and based on that assessment prioritized what would be possible to implement step by step; i.e. what was realistic to achieve in the first step and what would need to come later. Resources were allocated for each OCR project and by month. OCR project managers are responsible for regularly estimating what resources are available versus what resources are required to continue. Clear timelines are set for the overall OCR program and each project and the business case is updated as the project moves along. The Business case entails evaluation of key success factors for different scenarios, such as the impact of implementing at different times. An example of this process is *Order from store*. Offering order from store was important to the retailer to be able to offer the whole product range it has online in stores as well, as it would enable in store customers to purchase products that are not available in the store but are available online. A business case was formulated for *Order from store* which the IT team assessed and prioritized for step by step implementation. Prioritization of specific OCR projects is also decided upon based on interdependencies between the projects. Critical paths and milestones for each project were decided, updated and presented in OCS program meetings. Case 2 is flexible and agile when it comes to changing previous decisions and changes in direction were decided based on changed status of individual projects. These changes were also based on financial requirements.

Case 2 OCR decisions were based on what the customer would benefit mostly from, but also based on how the retailer is positioned in relation to competitor propositions to customers and what would be most profitable long-term for the business; *“It’s that balance of what should we be investing our time and energy in trying to make possible versus what would the customer get the greatest advantage from and feel the most benefit from”* (Case 2, Head of Retail Business Development). As an example, the retailer decided to develop two new OCR services at the same time; *‘Click and Collect’* and *‘Order from store’*, which would improve the customer experience and be a big gain for the retailer. Hence a combination of meeting the customer needs whilst at the same time meeting business goals; *“We looked at what do our customers feel like would be the greatest benefit for them, what are our competitors offering and where we needed to catch up to what our competitors are offering and what do we think will help to drive the KPIs that we want to drive as a business for our long-term profit store future”* (Case 2, Head of Retail Business Development).

Case 2 uses a combination of data analysis, pre-determined criteria calculations and educated assumptions to make decisions. Case 2 estimates both internal and external factors and based on those estimates makes decision on implementation of specific OCR projects and features; *“The internal estimation has been already added. External effort estimation is still missing and will be added by [employee x] ASAP. For long term it makes sense to implement CR15. CR15 will be sent out to the Process Owners (for final approval) as soon as external effort estimation has been added”* (Case 2, Internal confidential document). For example, the suggestion from Google Analytics of the impact of personalization on online sales impacted the decision to improve its OCR personalization. Another example is the estimation of the evolution of online partner growth which informed and impacted the need to respond by tailoring connections between Case 2 and key partners as well as the estimates of pros, cons and impact used for deciding the next steps for OCR. Case 2 also aimed for building one view of its customers across all channels in order to know what, where and how often each customer shops. Case 2 prepares different scenarios and key success factors to select and make decisions. One of the key decision-making factors within the scenarios is risk assessment which is analysed as best-case scenario, medium case scenario and worst-case scenario. In Case 2 the selection of specific OCR projects is also based on individual project risks assessment and mitigation. Risk and mitigation probability of occurrence and impact on the respective project was evaluated and categorized on a scale from high to low and presented in a heat map. The colour red for example

represents high probability of occurrence and high project impact whereas green represent low probability of occurrence and low project impact. This includes matters such as legal approval and tax services. Additionally, Case 2 fostered autonomy and agility. For example, after identifying the need to bring the customer back into focus of the OCR implementation the retailer defined several steps which autonomy and agility played a key role. Fostering autonomy and end-to-end responsibility was done by restructuring the overall OCR program from departmental to product ownership and share responsibilities along the Omni channel customer, data & analytics and Omni channel foundations. Case 2 used agile principles when meaningful to foster a new way of working to reach the desired goal of customer focus. Like in Case 1, the decision making is also impacted by what the competition is offering to customers; where and how it needs to catch up with the competition.

The OCR decision making Case 2 was collaborative and systematic. The OCR cross functional team, with representatives from key departments were involved in the decision making about what change are needed, what the retailer will benefit mostly from as well as next steps. Then the decisions go to a steering board of key directors who can influence the decision making; *“We are still working in that same cross functional team. A number of the people within the team have changed over the period of time, cause it has been going on for such a long time now so there are different people involved but still all of the same departments are represented and are still involved in the decision making about what do we need, what do we think we will benefit from and what happens next. And ultimately the decisions go to a steering board of key directors who have opinions themselves of what they think will make the biggest difference to our profitability or customers view of the brand, therefore where do they want the energy to go as well”* (Case 2, Head of Retail Business Development). In the beginning of seizing the OCR opportunity, workshops were held to collaboratively evaluate and discuss OCR opportunities, ideas, scope, priorities and future vision and to ensure consistency of the overall program. Case 2 held an OCR strategy workshop in 2015 to develop strategic guidelines and align the OCR project structure. The first objective of the workshop was to: define a common OCR Vision 2020, refine the existing strategy according to the 2020 Vision and translate the strategy into yearly targets. The second objective was to give insight into status and focus of projects within the OCR program (scope, targets, timings), their fit into strategic guidelines and their interdependencies as well as the required changes to align projects with the strategic guidelines. Clear OCR timeline was drafted for the overall program.



Alignment meetings were held to improve the OCR execution phase and to stay aligned with seasonal concepts and ongoing brand strategy. A steering committee met every quarter (or on demand) for OCR program updates on overall program overview and project activities, OCR sponsors meet every 2 weeks in business owner meetings to establish strategic guidelines, elaborate on long-term OC vision, give advice to product owners and make decisions and OCR Project Leads met every 2 weeks in exchange meetings for regular status tracking and reporting, visualization of risks and dependencies, discuss and collect questions and ideas, develop recommendations for decision-making in project meetings. Meeting minutes are documented and for the OCR project lead meetings they include information about participants, date, location, time, topic, objective, minute taker, topics, task responsible and deadlines. This structure enables Case 2 to make decisions collaboratively as it involves many layers of the organization, both inside teams and with other departments and project managers, board of directors and operations managers. Case 2 also fosters quick and agile decision making by streamlining structures and processes which provides employees with more freedom to make decisions.

Additionally, Case 2 deployed structured testing and experimenting for OCR decision making. Before going live with new OCR projects Case 2 tested them, using both qualitative and quantitative methods. Detailed reporting for each test was prepared and shared in OCR program steering board meetings. Pilot tests were used to validate data and results prior to full scale roll outs of OCR projects; *“We first trialled click and collect in some of our stores in [country x], [country y] and [country z]”* (Case 2, Head of Retail Business Development).

### 6.1.2.3 Transforming

Case 2 had developed its online retailing capabilities by outsourcing the E-commerce website operations to an agency for over a decade. The agency operated as a franchise through Case 2’s wholesale business and therefore had no control and no ownership over how its E-commerce business was operated. To be able to offer OCR services in its own retail business (DTC) Case 2 had identified that insourcing of its online operations was necessary as it would set the foundations for all further development steps; *“Our online business builds on a solid foundation. Thanks to the insourcing of key elements of the value chain in previous years, we directly control the online front end as well as the back end. We are convinced that owning the*

*interface with consumers will be an important competitive advantage over peers. This advantage we will only become magnified as we build up more and more online retailing expertise in house*" (Case 2, CEO online interview). This required digitally transforming the business model to integrate the firm's operational systems together, i.e. building the E-commerce operations into the firm's own stock system, sales system and warehouse, which enabled the firm to control and manage its stock and integrate its sales channels (online and offline). The transformation started in 2014 and required new knowledge for operating E-commerce in-house. Case 2 went from having a small digital retail team which operated to support the agency to a digital retail merchandising team which became part of the merchandising team and a digital marketing team who became part of the main marketing team. After insourcing the E-commerce operations, each market Case 2 operates in gained some ownership and control of how their website is running and performing.

The OCR transformation required distinct training which was developed and executed internally; *"We had training, we had workshops so that everybody is knowing what is happening but most important is to train of course everybody all over again, and again and again"* (Case 2, Head of Retail Business Development). The training included both internal and external customer service training, brand training, product training, process training and ticket system training. Special focus was on improving the services with investment in training in order to upgrade and further improve customers purchase experience in Case 2 own retail. Case 2 specifically highlighted the importance of OCR training coming from top management in order to get the support from Managing Directors, Retail Directors and Area Managers in each subsidiary, as they need to agree to get the staff out of stores to do the training and to prioritize OCR training. A detailed OCR training plan was created and prioritized over other trainings already planned. Additionally, Case 2 emphasised the importance of continuous training of employees. Case 2 also hired new employees with new skills when insourcing the online business operations. The transformation, which started in 2014, required insourcing knowledge of running an e-commerce business in house. Hence, the retailer needed to build up its own logistical teams and also went from having a small Digital Retail Team which operated to support the agency to a Digital Retail Merchandising Team which became part of the Merchandising Team and a Digital Marketing Team who became part of the main marketing team.

To manage resistance between online and offline staff and to incentives store staff to buy into the new OCR services Case 2 changed the bonus metrics from siloed channel metrics to integrated bonus metrics. Changing the bonus structure required changes to store targets as they could no longer be only measured on previous siloed channel targets. Case 2 integrated *Order from store* sales into stores sales by making payment possible through the store till, hence the transaction is not via the website but through the store cash desk. Despite being an online order (using online stock, as opposed to store stock) the sale then counts towards the respective store's overall sales, not as an e-commerce sale. Case 2 defines OCR sales as the number of customers who use *Click and Collect* and *Order from Store* OCR services; *"We measure our Omni channel sales, we measure the number of customers who use Click and Collect services, the number of customers who use Order from Store and we look at our conversion rate both online and in store"* (Case 2, Head of Retail Business Development). Case 2 however still measures online and in store conversion rates (transactions) in silos, i.e. they are still evaluated separately as customers behave very differently in each channel and hence the channels have very different and specific KPIs.

Transforming to OCR did not entail changing the organisational structure, however preparing for the transformation, Case 2 set up a dedicated OCR project team with representatives from key functions that needed to be involved which included digital retail, retail operations, CRM, marketing, IT and logistic and still operates in that cross functional team; *"We pulled together a project team which included retail operations people from [City X] and [City Y], as well as from [Country X] retail and we had workshops pretty much once a month throughout the year which included people from digital retail and retail operations and CRM and marketing and IT and logistics, kind of everyone who would need to be involved. So, a cross-functional project team"* (Case 2, Head of Retail Business Development).

An important aspect of the transformation was communicating the OCR goals, vision and timelines to employees, making sure that everyone had the same understanding of its importance and meaning; *"Have everybody aligned to the new processes for the in store for example they need to understand that even if they use the Omni channel services, they have to profit out of this.... we need to get awareness that it is a win, win situation for everyone"* (Case 2, Junior Order Manager E-commerce). Case 2 highlighted the need for the corporate culture

to embrace change, encourage innovation and forgive mistakes. Innovation is encouraged across all departments and functions through agile and efficient implementation.

The OCR implementation was a gradual roll out of new OCR services to individual markets following a comprehensive plan as the retailer created an end-to-end OCR implementation roadmap; *“And it is still relatively new for us and from the summer it will be an improved version, but it is a step in the right direction”* (Case 2, Head of Retail Business Development).. The first phase focused insourcing the E-commerce operations and launching a new internally operated online business. Phase two, focused on offering consumers a seamless brand and shopping experience across all channels and phase three entailed building a digital flagship store and integrating online with offline and phase four focused on OCR implementation.

*Click and Collect* was the first Omni channel service implemented by Case 2 which seamlessly integrated the purchase and fulfilment stage of the customer journey. Case 2 started Click and Collect as a trial before it was launched but decided to launch both Click and Collect and Order from Store at the same time to get commitment and buy in from store staff through the benefits they would get from the new services; *“It’s relatively simple to offer Click and Collect. But from the store teams’ point of view they don’t tend to feel like they have gained anything other than gained the opportunity to fetch parcels and let the customers walk out the door with them. And that is why for us we wanted to offer Order from Store at the same time as click and collect”* (Case 2, Head of Retail Business Development).

*Order from store* was the second OCR service launched by Case 2 which was launched to seamlessly integrate the purchase experience which enabled Case 2 to sell online products to in store customers, i.e. products that have sold out in store (or have not been made available) but are in stock and available online. Hence, it is an in-store sale that is fulfilled from online, using the online stock (seamless purchase stage integration). Customers can then choose whether they want the order delivered or to collect from a store (seamless delivery integration). The service further improved the customer experience as customers no longer have to wait for store staff to go and check stock in stock rooms, as they can check information via digital devices and e.g. at the cash desk, and customers further do not have to find the product again themselves online and finish the purchase. To operate Order from store, Case 2 provided every store with iPads by the cash desk; *“At the end of September, we started offering order from*

store. So that in-store they have an application to access the online store to help a customer place an order online for what they don't have in store" (Case 2, Head of Retail Business Development). To be able to take Order from store payment instore, Case 2 implemented a customized solution that uses its online store check-out. The reason being customer security around details and to know which employee assisted the customer with the sale. Case 2 further developed its Order from Store services from solely iPad operated to large touch screens referred to as 'experience tables' and 'shoppable kiosks' which enables customers to order products conveniently by themselves from online, whilst in the store; "We have iPads and it is sales associate led so the sales consultant will effectively share the iPad with the customer, discuss what they are looking for, find the product, help them through to the point where the customer is ready to enter their payment details and then push it through. And from this summer onwards we will be able to start taking payments at the cash desk as another option so not just on the iPad, also possible at the cash desk for a customer who is buying things in store from the online store" (Case 2, Head of Retail Business Development).

To seamlessly integrate the purchase and fulfilment stage Case 2 also developed *Ship from Store* which enables online customers to check in store availability and to purchase products that are not available online from a store and have them fulfilled from that store (seamless purchase and fulfilment stage integration). Case 2 developed the capability by enabling customers to check if an online product is available in a particular store of their choice. Further improving the fulfilment experience for customers, Case 2 implemented *Convenient Returns* also referred to *Return and Replace*. The service enables customers to return and exchange both online and in store orders in any of Case 2 stores, to receive store credit or have them refunded. Case 3 also offers returns via multiple channels; in store, sister company, mail, 3<sup>rd</sup> party delivery services, home collection and 3<sup>rd</sup> party locations; "We offer convenient returns, we offer that you can return the item you order online back to the store also" (Case 2, Junior Order Manager E-commerce).

Improving personalised marketing abilities was adopted by Case 2. Overall, personalisation at Case 2 has two aspects; (1) service personalisation which provides customers with relevant content based on actual purchase behaviour and interests and (2) product personalisation which includes for example 'Made to Measure' and the customer's name stitched on the product; "Personalization is very important, but we have to see this from two different angles. One is

*what [CBO] explained, the personalization of services. The other one is personalization of the product”* (Case 2, Internal confidential document). Part of the service personalisation developed at Case 2 included online appointment scheduling which enables customers to make a personal appointment in stores. The process operates in a way that the customer chooses items on the E-commerce site which are then sent to a store of their choice which they can visit to try the products on and get personalised service from in store staff. In Case 2, providing a seamless customer experience also meant developing consistency such as consistent price, communication and marketing campaigns across all channels and markets. Improving personalised marketing abilities included developing a single customer view which was a phased step by step process. This required, Case 2 to change its legacy CRM system to merge online, instore and third-party data (Google, Facebook etc) for analysing the behaviour and intentions of various customer segments and develop highly segmented campaigns; *“We do not do individualised marketing but we have segments for customers which then get different campaigns sometimes. From time to time that not everybody is getting the same information that customers might not be interested in”* (Case 2, Junior Order Manager E-commerce). The new CRM system operates as one database for all customer data. Case 2 focused in phase one on getting a basic idea of different customer group reactions and behaviours, which provided them with useful information and challenged previous ideas they had, such as about their customer acquisition, which enabled them to shift focus in their acquisition campaigns from capturing most clients to capturing higher-quality clients. The second phased involved behaviour customer segment trends which for example enabled the retailer to shift from one size fits all offers to offering incentives only to customers who are less likely to buy. Other new strategies provided by the new CRM platform that were implemented quickly included cart abandonment, more targeted email campaigns and back in stock notifications.

To implement new OCR services, Case 2 developed bespoke systems and solutions that could be integrated into their own infrastructure and designed to their particular needs and explains how ‘ready-made’ systems do not work for large retailers due to the complexity of existing legacy systems but are eventually more appropriate for smaller retailers; *“It has to be bespoke to integrate into what we are doing. And we also had quite strong views about how we wanted it to work which then needed to be designed to fit our way rather than something that someone else just designed”* (Case 2, Head of Retail Business Development).

Adopting OCR is a continuously evolving process at Case 2: *“It [OCR] is a gradually evolving process that is still in progress now”* (Case 2, Head of Retail Business Development). To continuously evolve, Case 2 deployed light touch implementation, especially for larger OCR projects, and fosters an agile mindset and agile working principles; *“We have to be more agile and have more agile working mechanisms than we had before. We try to stay open minded because of the fast-moving customer experience”* (Case 2, Junior Order Manager E-commerce). Case 2 has been able to quicken decision making processes and promote an entrepreneurial mindset through creation of the cross-functional teams and by delegating clearly defined responsibilities. Case 2 has for example used the ‘Scrum method’ to develop new services more quickly, which required agile project management to continuously collect feedback and incorporate it into the process.

#### 6.1.2.4 Summary

Table 6.2 provides a summary of the sensing, seizing and transforming activities, processes and microfoundations identified for each cluster of sensing, seizing and transforming in Case 2. The table shows the development of the NVivo analysis from holistic coding (Saldana, 2015) using a priori themes deducted from the DC theory to NVivo codes, sub-codes and parent-codes identified in Case 1. The new sub-code identified in Case 2 is highlighted in **bold and (new)** (examples from the NVivo software in Appendix 9.5).

Table 6.2. Summary of Case 2 results

1. A priori themes: DCs clusters	2. NVivo codes: OCR Activities	3. Sub-codes: OCR Processes	4. Parent-codes: OCR Micro-foundations
Sensing	<ul style="list-style-type: none"> <li>– Systematic benchmarking of direct competitors OCR propositions at regular intervals</li> <li>– Future evolution assessment</li> <li>– Project specific, ‘Best in class’ benchmarking</li> <li>– Customer experience benchmarking</li> </ul>	Monitoring competitors OCR capabilities	Identify
	<ul style="list-style-type: none"> <li>– Collect, analyse and distribute customer feedback</li> <li>– Online feedback survey</li> <li>– Instore customer feedback to employees</li> <li>– Customer service team responding to enquiries</li> </ul>	Monitoring customers purchase expectations and behaviour	

	<ul style="list-style-type: none"> <li>- Single customer view – single data source</li> <li>- Social media monitoring</li> <li>- Industry reports</li> <li>- Mystery shoppers</li> <li>- NPS</li> </ul>		
	<ul style="list-style-type: none"> <li>- Attending industry events</li> <li>- Monitoring retail trends</li> <li>- Networking other retailers</li> <li>- Read industry papers</li> </ul>	Monitoring retail industry trends and developments	
	<ul style="list-style-type: none"> <li>- Networking with retailers</li> <li>- Knowledge sharing between markets</li> </ul>	Learning from retail partners	
	<ul style="list-style-type: none"> <li>- Analyse early indicators</li> <li>- Analyse store sales on a weekly basis</li> <li>- Monitor fulfilment: e.g. unpicked orders</li> <li>- Detailed assessment of sales development in each season</li> <li>- Monitor in store footfall</li> </ul>	Monitoring OCR performance	
	<ul style="list-style-type: none"> <li>- New employees with new skills</li> <li>- Enable employees to share innovative ideas</li> </ul>	Learning from employees	
	<ul style="list-style-type: none"> <li>- Customer centricity</li> <li>- Define OCR as a specific program</li> <li>- Define OCR deliverables</li> <li>- Develop an OCR strategy</li> <li>- Revision in relation to the OCR strategy</li> <li>- Define OCR features for each market</li> <li>- Define new standardised partnership models</li> </ul>	Defining the OCR opportunity	Interpret
	<ul style="list-style-type: none"> <li>- Structured competition analysis</li> <li>- Customers OCR experiences at competitors</li> </ul>	OCR marketplace positioning	
Seizing	<ul style="list-style-type: none"> <li>- Dynamic, cross functional OCR project teams</li> <li>- Defined OCR program structure</li> <li>- Defined OCR project ownership, roles and responsibilities</li> <li>- Collaborative evaluation, development and selection</li> <li>- Regular OCR team workshops and meetings</li> <li>- Regular OCR updates and gradual improvements</li> <li>- Agile project approach</li> </ul>	Cross-functional collaboration	Develop
	<ul style="list-style-type: none"> <li>- OCR workshops</li> <li>- IT team assessment</li> <li>- OCR project Business Case</li> <li>- OCR project KPIs</li> <li>- OCR project resource allocation</li> </ul>	OCR project prioritization	



	<ul style="list-style-type: none"> <li>– OCR project regular resource evaluation</li> <li>– Project interdependencies</li> </ul>		
	<ul style="list-style-type: none"> <li>– Knowledge of existing customer needs</li> <li>– Competition matching</li> <li>– Long-term business profits</li> <li>– Overall business KPIs</li> </ul>	Customer-centric decision making	Select
	<ul style="list-style-type: none"> <li>– Single source (unified) data analysis</li> <li>– Pre-determined criteria calculations</li> <li>– Educated assumptions</li> <li>– Pros, cons and impact</li> <li>– Scenario building</li> <li>– Risk assessment</li> <li>– Heat mapping</li> <li>– Cross channel sales potential evaluation</li> <li>– Competition benchmarking</li> </ul>	Data-informed decision making	
	<ul style="list-style-type: none"> <li>– Clearly defined OCR decision making protocol</li> <li>– Regular OCR Cross functional team meetings</li> <li>– Define a long-term OCR Vision</li> <li>– Refine existing OCR strategy according to the Vision</li> <li>– Translate the OCR strategy into yearly targets</li> </ul>	Collaborative decision making	
	<ul style="list-style-type: none"> <li>– Pilot testing: qualitative and quantitative</li> <li>– Detail testing reports</li> <li>– Sharing of results to Steering board</li> </ul>	Testing and experimenting	
Transforming	<ul style="list-style-type: none"> <li>– Digital business model transformation</li> <li>– Insourcing e-commerce operations</li> <li>– Integrate e-commerce operations with the retailer’s own stock system, sales system and warehouse</li> </ul>	<b>Digital business model adoption (new)</b>	Prepare
	<ul style="list-style-type: none"> <li>– Reconfigure the incentives and bonus system from channel silos to an integrated system</li> <li>– Change store performance targets, from silos to integration</li> <li>– Integrated KPIs</li> <li>– Integrated sales reporting</li> <li>– ‘Order from store’ payments at cash desk</li> </ul>	Redesigning sales and incentive metrics	
	<ul style="list-style-type: none"> <li>– Internal employee training</li> <li>– Top management focus and support</li> <li>– Workshops</li> <li>– Detail training plans</li> <li>– Hiring new skills</li> </ul>	Developing OCR skills	

	<ul style="list-style-type: none"> <li>– Repeat trainings</li> </ul>		
	<ul style="list-style-type: none"> <li>– Cross functional OCR teams</li> <li>– OCR part of existing job descriptions</li> </ul>	Adopting dynamic team collaboration	
	<ul style="list-style-type: none"> <li>– Communicate OCR vision and goals to employees</li> <li>– Encourage innovation</li> <li>– Forgive mistakes</li> <li>– Agile and efficient implementation</li> </ul>	Culture redesign	
	<ul style="list-style-type: none"> <li>– Gradual, step by step implementation</li> <li>– Omni light implementation</li> <li>– Detailed implementation roadmap</li> </ul>	Gradual implementation	Implement
	<ul style="list-style-type: none"> <li>– Click and collect instore</li> <li>– Order from store via iPad</li> <li>– Online appointment scheduling</li> <li>– Tailored content</li> </ul>	Creating integrated channel operations	
	<ul style="list-style-type: none"> <li>– Single customer view</li> <li>– Integrated CRM</li> <li>– Online appointment scheduling</li> <li>– Customer registration/account</li> <li>– Customer purchase behaviour segmentation</li> <li>– Gradual implementation</li> <li>– Customer data integration; own instore data and own and third party online data</li> <li>– Consistency across markets</li> </ul>	Improving personalised marketing abilities	
	<ul style="list-style-type: none"> <li>– Bespoke systems</li> </ul>	Bespoke systems development	
	<ul style="list-style-type: none"> <li>– Agile mindset</li> <li>– Agile working principles</li> <li>– Agile implementation</li> <li>– Agile decision making</li> </ul>	Adopting agile principles	Evolve

### 6.1.3 Case 3

Case 3 is an international department retailer that sells products in various categories from multiple brands and was believed to enable further exploration and expansion of the framework (Eisenhardt, 1989) as it is known to be one of the leaders in OCR. In 2015 the OCR propositions plans evolved further to customer driven OCR customer propositions plans. The department store offers all the key OCR own retail services such as Click and Collect, Integrated inventory, Order from store, Single customer view and Integrated deliveries and has further started to integrate its OCR services with its sister retail brand.

Access to Case 3 was initially gained through a third party in 2017. The researcher managed to get in contact with the Senior Merchandiser and presented the research aims which resulted in Case 3 agreeing to participate in the research. The first interview was conducted with the Senior Menswear Merchandiser face to face in London, in March 2017. The second interviewee, The UX Manager, was approached and interviewed by the researcher at an Omni channel Exec Conference in Portugal, in March 2019 and the third interviewee, prior Head of Direct to Customer Operations was approached at The Omni Channel Summit in London, February 2018 and later interviewed via phone. All of the interviewees were knowledgeable about and had in some way participated in the OCR transformation process and were asked to answer the questions outlined in the interview guide (Appendix 9.2). In addition to the interviews, secondary data in the form of conference presentation slides, annual reports, press releases, news articles, website, stores and industry reports were collected and analysed.

Case 3 was analysed to further explore and expand the constructs identified from Case 1 and 2. The coding template developed from Case 1 and 2 was used as a starting point for the analysis of Case 3 which allowed for the coding template to be further advanced and for new codes to merge inductively from the data, ‘bottom up’ (Symon and Cassell, 2012, Crabtree and Miller, 1999).

#### 6.1.3.1 Sensing

Through regular monitoring and reporting Case 3 monitors what key competitors can and cannot do in terms of providing seamless customer experiences and how it can differentiate from those propositions to provide experiences that its competitors cannot; *“So, for us it [OCR] was all about growth keeping up with our competitors and obviously being ahead of our competitors to deliver that growth”* (Case 3, Senior Menswear Merchandiser). Case 3 for example used benchmarking to compare its fulfilment operations to competitors to identify how it could transform its customers fulfilment experiences; *“I benchmarked against retailers who fulfilled in the same format”* (Case 3, former Head of Direct to Customer Operations). Another example is one of the specific customer initiatives within the retailer’s overarching strategy, called customer priorities which focuses on doing things differently to the competition; *“So an initiative within strategy was formed and this initiative was called customer priorities”* (Case 3, UX Manager). Case 3 also analyses what the competition is doing in each city and how the retailer can then play a different role within that city, as opposed to

copy competitors existing propositions. Such as, when the retailer identified that key competitors were using discounts to drive sales growth, instead of following the same path the retailer differentiated by offering competitor price-matching to its customers. Monitoring the competition also includes identifying OCR capabilities of similar retailers in other geographical markets to identify new opportunities for the local market.

Case 3 has a dedicated customer service team that deals with customer enquiries and additionally operates a dedicated customer insights teams to monitor customer needs and expectations; *“So we’ve got this big group of people that all deal with insight [customer data]”* (Case 3, UX Manager). Case 3 uses customer feedback to identify where and how the retailer needs to improve the experience such as when changing the fulfilment process. It entailed gaining a detailed understanding of how often customers were calling customer services and why they were calling and then analysing that information to identify what needed to be addressed; *“You put those calls together and understand what the customers are saying and why, straight away that can indicate the priority you are after. So pretty simply, listen to your customers”* (Case 3, former Head of Direct to Customer Operations). In addition to online surveys, in-store customer feedback and customer services, the retailer has a dedicated cross-functional team to analyse customer insights. A new department was created because of the amount of customer data that was available and being collected across multiple touchpoints, such as traffic, conversion, pay per click (PPC) and search engine optimisation (SEO). The new department specifically deals with cross functional data to create useful insights for the retailer and specific project teams. Employees were moved from other departments to the new department, such as the user experience researchers who belonged to the products team and the online analytics team were transferred to the new team. The retailer also worked with a consulting company to identify strategic opportunities to improve the customer experience. One of those opportunities was to improve customers gifting experiences. When new customer initiatives have been identified and developed by specific project teams, they are then taken to customers for feedback, such as when developing the gifting proposition, customers input was collected to make decisions about which activities to include and how to move forward.

To identify growth opportunities, Case 3 visits markets in different parts of the world to see what these markets are doing, for example how the role of the store is developing. The retailer’s online team also constantly monitors what the market is doing to identify opportunities; *“We’ve*

*got people who travel around the world looking at what our competitors in different parts of the world are doing. ...What's the role of the [x] store in the future. And a lot of the data is telling us that it is about experience it's about attracting the customer in. Not just for the product but for other things”* (Case 3, Senior Menswear Merchandiser).

Case 3 focuses not only on identifying opportunities to remain competitive but also identifying new ways to meet customer expectations and new retail innovations to move the retail sector forward. Case 3 operates an innovation lab in partnership with a technology entrepreneurs, start-ups and graduates; *“[Case 3] runs one of the largest retail innovation programmes in the UK. JLAB enables start-ups and established businesses to pitch and then trial their innovative products and services with the [Case 3]”* (Case 3, website). The ambition with the partnership is to identify opportunities to change the future of retail; *“The innovation focus we are looking for needs to help provide our customers with the most coherent, cross-channel shopping experience possible”* (Case 3, Retail Director, retail news interview). In addition to innovation labs Case 3 makes future marketplace predictions and has a dedicated futurologist role for predicting retail industry changes and developments.

From internal sources, Case 3 closely monitors existing OCR performance. By analysing channel profitability Case 3 identified that online is less profitable than customers going to a shop and buying a product when factoring in the whole customer journey, such as delivery and specifically returns as returned products need to be put back into the supply chain in order to sell them; *“We know for a fact the costs involved in administering an online operation is more expensive than if we sell it from our store directly to a customer”* (Case 3, Senior Menswear Merchandiser). Case 3 has for example identified that it makes a loss from a product that sells online for 30 pounds or less. Hence it has identified that managing all the channels individually is important, that online is not the solution for everything and the importance of driving growth in physical store. Case 3 also optimizes the in-store stock range by analysing what customers are buying online that they cannot find in store; *“What's our online business telling us that can then affect this in-store business. So, what are customers buying online that they can't find store. How do we change the products within the store to match that profile”* (Case 3, Senior Menswear Merchandiser).

Identifying how to improve the customer journey also entailed learning from new employees. Case 3 for example, hired a new Head of Direct to Customer Operations to transform the customer fulfilment experience, to share his knowledge of how it could be done to make the journey one that the retailer could be proud of; *“I was asked to come in and transform the customer experience. Quite clearly you can't transform anything if you don't know what it is. You have to find out what it is”* (Case 3, former Head of Direct to Customer Operations).

At Case 3 OCR is clearly defined as *“to reinvent the shopping experience, offering our customers new and exciting ways to shop in store and have a seamless online journey”* (Annual Report, 2019) also explained by the Senior Menswear Manager; *“The essence is a seamless experience for our customer base so that every point they touch us they get the best in class service”*. Case 3 refers to OCR as ‘Bricks and Clicks’, i.e. every customer should have the same brand experience both online and in store. That requires knowledge of the entire customer journey, having it mapped out and understanding every touchpoint, so the customer knows exactly where to go at any moment in time. Eliminating friction but introducing elements that are tailored to and can benefit the customer, as well as the business. Case 3 defines customer experience (CX) and user experience (UX) as interchangeable, i.e. finding the best proposition to move forward with and weaving the customer in the right way through that journey.

Case 3 positions itself as a leader in OCR and focuses on differentiating itself from the competition; *“Recognised for omni-channel leadership”* (Case 3, Press release). Case 3 strategic aim is to be a leader in OCR in its main geographical market; i.e. to be ahead of the competition to deliver the business growth objectives; *“So for us it was all about growth keeping up with our competitors and obviously being ahead of our competitors to deliver that growth”* (Case 3, Senior Menswear Merchandiser). It has high focus on technology innovation and retail innovation to move the retail sector forward and to develop strategic advantage focusing on its customer needs. The retailer for example, monitors leading retailers, like Amazon and Pure Plays (pure online retailers) to identify what they can and cannot do so it can differentiate clearly from that competition to lead in OCR.

### 6.1.3.2 Seizing

Case 3 stressed the importance of operating dynamic project teams in order to stay agile; *“Mobilise a cross disciplinary team to solve problems” (Case 3, UX Manager)*. Development workshops were initially held in 2016 which included managers from retail, distribution and head office. Today quarterly planning meetings are held and teams that are no longer relevant are eliminated and new teams created for new projects. Case 3 for example had clearly defined roles and responsibilities for customer initiatives that had been identified by the top management and Case 3 highlights the importance of having a dedicated person making day to day project decisions and lead the vision. Hence a project owner and project manager are appointed and work together in a cross functional team. These are not new roles but part of their existing jobs. The project owner is responsible for making the product/service and the project manager is responsible for the product/service being delivered at a certain time to the customer. As an example, Case 3 set up a specific customer initiative teams to work on a gifting proposition. A cross functional team got together to work on the vision for the service and the steps to deliver that vision. The team included a mix of employees from different functions and various levels, such as managers, directors and other employees. The purpose of a cross functional team was to get commitment from key functions and to agree on a vision statement for the service whereas previously there was lack of cross functional understanding and ownership *“no one knew the whole area or who owned what”*. A stakeholder map was created to list everyone that needed to be involved in the process and what their purpose was: it included the project team, collaborators that represented the customer, influencer, provider and governance. The stakeholder map was created to assist and sponsor the new service.

To prioritize OCR initiatives, Case 3’s top management created a five-year roadmap with an external consulting agency where specific ‘customer needs states’ were identified and shared with employees as a strategic focus. One of the projects that emerged from that was gifting. When developing the gifting initiative 62 hypothesis were developed by the cross functional project team which then became 25 problem statements. These problem statements were then prioritized based on the retailer’s overall strategic criteria, namely employees, leadership and revenue impact; *“Cause now you have these problem statements; you want to prioritise them against a certain step of strategic criteria” (Case 3, UX Manager)*. Next the problem statements (i.e. features) were taken to the consumer, who is asked about which of these features would meet its needs best. Based on that information the retailer finally decides how

it will implement the specific project. Project interdependencies also impact Case 3 change programs.

Data is used to inform its decision making, in combination with experience and gut feeling; *“Data, yes, but your gut feeling, we are in fashion. Gut. Feel. Taste. Personal taste but with the customer in mind, we don't buy what we wear, we buy what is a right for our customer supported by what the data is telling us. But it's not just data that drives our decision”* (Case 3, Senior Menswear Merchandiser). Case 2 also fosters team decision making and triangulation of data to inform the decision making. For example, improving customers experience using user experience (UX) design. Ideas are triangulated for the selection of new features and services by getting feedback from both staff and customers e.g. to understand if the change is an improvement to the existing experience. For example, after designing a new customer experience for a gifting services project, the next step was asking customers about their preferences. Based on the customer survey feedback a decision was made about which specific gifting services, out of 25 ideas, would be implemented and ended up being online gift wrapping, popular and new gifts and customer gift wrapping station; *“So, we had a gift wrap service that was hidden away behind customer service. So, in one of the stores we just brought it to the front. And we had the research go in and say what you will think of this? How does it work? How do you think it works? They talk to the staff and they talk to the customers to try and triangulate. Does this work for you? Does this meet your needs?”* (Case 3, UX Manager).

Case 3 uses online customer purchase data to decide where to open new stores and where it needs to change the product assortments and deploys risk assessment analysis and identifies key risks that are actively managed and monitored as a priority and also uses a heat map to evaluate the impact of identified risks. The heat map is used to visually help with analysis and decision making. These risks evolve over time, in 2016 for example, the number one risk identified was ‘The Competition’, in 2018-2019 the number one risk is the ‘Competitive Customer Proposition’. Case 3 has clearly defined actions in place to deal with these risks, such as developing its online offering and building greater customer insights. Case 3 supports its decision making by benchmarking with the competition and puts great emphasis on differentiating from the competition, as opposed to replicating competitors OCR propositions.



Case 3 operates a business model that fosters democracy and delegative decision making in the whole business; *“And the decision is always a team dynamic”* (Case 3, UX Manager). When developing new OCR opportunities, collaborative decision making is deployed by members of a cross functional team that is created for each specific project. Hence, the team decides how to develop the new opportunity as opposed to being told what to do and how to do it. The team is responsible for designing the new service as well as distinct service propositions. This gives all key divisions an understanding of what part they play in the overarching strategy and how they can deliver on it which also fosters commitment from different functions from the start of each project.

Testing, learning and experimental mindset is fostered at Case 3; *“And then trying new things, piloting new and interesting things and seeing how customer reacts to that”* (Case 3, UX Manager). New services are trialled before launching, not just Case 3’s own new ideas but also from firms participating in their innovation program. One example is the trialling of a new instore virtual reality experience for customers. The retailer had identified the opportunity from customer feedback and developed the solution with an external company. Other examples are a combined loyalty card between Case 3 and its sister company which was piloted among 200.000 shared customers and a new gifting project was also tested to collect feedback from employees and customers to select the final proposition prior to launching.

#### 6.1.3.3 Transforming

Case 3 had been operating its own e-commerce site internally for over a decade, which it originally developed by attaining an existing online business. The retailer bought a small online business which had the platforms and the expertise that the retailer needed to start to develop its E-commerce capabilities. This enabled the retailer to enter the online market at a low risk; *“We took over an online business about 15 years ago, an existing online platform....We had no online presence at all at that point. So, somebody somewhere had the great foresight to buy an existing business. That became our initial platform to the Web and selling online. It was an online operation let's say which we purchased. It was very small. But it had the infrastructure it had the expertise”* (Case 3, Senior Menswear Merchandiser). With the advent of the mobile channel, the retailer however initially outsourced the mobile channel operations to a third-party

supplier. But in order to seamlessly integrate its E-commerce channel and the mobile channel, the retailer insourced its mobile operations to have full control.

Implementing new OCR services involved trainings to help store staff to sell cross divisionally as well as training them to offer new services. The training was internal and each new service product team was responsible for the training of staff; *“Following a training programme this summer the mobile phones will be rolled out to the 8,000 shop floor [in store staff] in 20 [Case 3] shops across the [Country X] (Case 3, Press release). The implementation also required managing resistance to change, which included changing the traditional bonus system by integrating the sales KPIs to specifically encourage store staff to use and offer the OCR services to its customers; “There was tension I guess between the stores and online at some point in our past. Where our store staff almost resented online because it was it was taking their business. So, they were seeing their sales decline and seeing a massive spike in online sales. So, over the last couple of years the business has actually brought those numbers together. So, stores can actually attribute sales in their catchment area whether they're on the website or through their store as one number. So that our store staff, both selling either through our website or through their own store. It's one number not two competing ideals. That really has encouraged stores to sell” (Case 3, Senior Menswear Merchandiser).*

Case 3 considers OCR to be part of everyone’s job as opposed to a dedicated role or department, however over time three new director roles were created to manage already existing departments, one of those new roles was Director of Customer. A new department was also created to deal with customer data, but employees of that division were been moved from other divisions, hence did not entail entirely new roles; *“It's probably more of an adaptation. Yeah I'd say and maybe a slight repurposing. But nothing no overvote, no axe wielders have come in and said this department is gone and we are shaping this into this and smashing you guys together. None of that. Yet although saying that maybe when the new MD turned up, she did create three directors among those directors was the Director of customer. OK so he has a remit for a lot of people now, but those departments haven't changed yet, within that he has just been made the head on the top” (Case 3, UX Manager).*

Eliminating silos and traditional ways of working was an important aspect of the transformation; *“That is probably the biggest cultural change challenge...to kill the old way,*

*in their old ways of doing things” (Case 3, UX manager), also highlighted by the Senior Menswear Merchandiser “To encourage our employees no matter what channel they work in, to see how important sales and profit were. And to encourage our employees to use all channels to sell and thus have been successful. That’s definitely been a cultural change, particularly in our stores around the online business and we very much don’t look at them in separate silos anymore. It’s one business”.* For Case 3, managing the change is identified as one of the key strategic risks. This is addressed and actions defined in relation to potential consequences, controls already in place, progress in the year to follow and further actions. As an example, the former head of Direct to Customer Operations started by ensuring that his employees were in the right place in terms of their experience, and that they had a clear understanding of the need to change, the company vision as well as making it clear what they needed to do as part of that journey, what their role was, before implementing it. Having a mutual understanding was also emphasised by the user experience (UX) manager, who took the example of a gift-wrapping station. A service blueprint map was created and communicate to make sure that everyone had the same understanding, such as the store planners, the store designers, the buyers and the merchandisers.

Case 3 gradually implements new OCR services such as when extending the *Click and Collect* services through its sister company, it started only in selected store locations and then later expanded the services across all of its store locations. Another example is the gifting project which was launched in stores before it was offered online; *“We rolled out to certain stores that get it and tested it and then rolled out to the rest”* (Case 3, UX Manager).

In 2008 the first OCR services were launched by seamlessly integrating the online and offline channels enabling customers to look up online product information and stock availability via in store digital screens; *“[Case 3] first started to bring its online business into its shops in 2008 when it installed screens so that customers could look up product information and check online availability”*(Case 3, Press release). That service later evolved to enable customers to both research products and purchase from the online channel whilst in the store, referred to as *Order from Store*. Order from Store was operated by developing an iPhone app for store staff specially designed to enable them to access detailed product information, check warehouse stock availability, customer reviews, emailing the information to customers and place orders; *“iPhone loaded with a dedicated ‘App’ designed to enable them [store employees] to quickly*

*help customers with information about products, check stock availability, and place orders. This development will put an end to customers waiting for [store employees] to go to stock rooms to see whether a product is in stock, or check information at tills as they will be able to help on the spot” (Case 3, Press release).* The app was designed and built in-house in collaboration with store staff and tested prior to launching to meet the retailer’s distinct needs; *“The app was designed and built by [Case 3’s] in-house online team” (Case 3, Press release).* The app launch also included training for store staff.

Case 3 was one of the first retailers to launch *Click and Collect* in its key market and has since then invested heavily in new operations to further develop its seamless fulfilment operations. The retailer has expanded its Click and Collect services (50% of online orders) to offer fulfilment via its sister company’s stores, fulfilment via third party retailers as well as providing third party retailers access to its Click and Collect distribution network. The retailers started offering Click and Collect via its sister company’s stores in 2016 which has resulted in 70% of online orders being collected via its sister company. The implementation started in selected locations but is now operated in every store and location. The service has further evolved and now includes customer self-service check-in iPads in about 40% of its sister company’s stores; *“We’ve spent 250 million on a whole new operation in the last couple of years which is probably the best operation in the world right now. And that is all to support online fulfilment, store fulfilment as efficiently and as quickly as possible” (Case 3, Senior Menswear Merchandiser).*

Case 3 has also further developed its integrated fulfilment services to provide customers with *Integrated deliveries*. So instead of multiple products being sent to customers from various locations and in multiple packages, they are consolidated into as few packages as possible; *“Today buy something on our website you can buy a dress you can buy a kettle you can buy a cuddly toy you can buy whatever that’s a single item and it will be consolidated into a few packages is possible. Because everything is on one site and it’s all linked. So the dress will come from here the book will come from here and it comes together into one location and gets dispatched” (Case 3, UX Manager).*

Through its membership program Case 3 enables customers to store online orders and in store receipts which enables analysing and personalizing the communication to customers. This has

required developing data analytical skills in order to move from customer segmentation to personalization; enabling tailored products and services to individual customers; *“It is anticipated that enhanced data analytics will support a level of personalisation that is much more refined than it is today, turning on its head the notion of customer segmentation. This could allow services and products to be tailored to individual customers particularly at the higher end of the market. We are developing our understanding of the customer of the future through improved insight We are developing our understanding of the customer of the future through improved insight”* (Case 3, Annual report 2016). Private shopping services have also been launched to provide personalized customer experiences.

Case 3 embraces an agile mindset to respond to the dynamism of the industry and changes in customers purchase behaviour and claims that the business model enables the retailer to be both agile and flexible and to adapt quickly to customer changes; *“What is also needed is the embracing of an agile mindset in order to deal with the pace of change today. We see design as a fundamental element in business. What customers want changes so much that you need to be agile”* (Case 3, UX Manager). Case 3 for example evaluates the profitability of customers and channels, i.e. the cost of selling online vs. in store, from what it realised that in store customers are more valuable than online customers and has therefore started refocusing on growing the physical store.

#### 6.1.3.4 Summary

Table 6.3 provides a summary of the sensing, seizing and transforming activities, processes and microfoundations identified for each cluster of sensing, seizing and transforming in Case 3. The table shows the development of the NVivo analysis from holistic coding (Saldana, 2015) using a priori themes deducted from the DC theory to NVivo codes, sub-codes and parent-codes identified in Case 1 and 2. The new sub-code identified in Case 3 and the sub-code that is not identified are highlighted in **bold** (examples from the NVivo software in Appendix 9.6).

Table 6.3. Summary of Case 3 results

1. A priori themes: DCs clusters	2. NVivo codes: OCR Activities	3. Sub-codes: OCR Processes	4. Parent-code OCR Micro-foundations	
Sensing	<ul style="list-style-type: none"> <li>– Strategic risk</li> <li>– Project specific benchmarking</li> <li>– Systematic monitoring of similar retailers in different markets</li> </ul>	Monitoring competitors OCR capabilities	Identify	
	<ul style="list-style-type: none"> <li>– Collect, analyse and distribute customer feedback</li> <li>– Online feedback survey</li> <li>– Customer service team responding to enquiries</li> <li>– Cross functional customer insights team</li> <li>– Single customer view – single data source</li> <li>– External consultants</li> </ul>	Monitoring customers purchase expectations and behaviour		
	<ul style="list-style-type: none"> <li>– Attending industry events</li> <li>– Monitor industry and market trends</li> <li>– Visits markets in different parts of the world</li> <li>– Constant monitoring by the online team</li> </ul>	Monitoring retail industry trends and developments		
		<b>Learning from retail partners (NOT identified)</b>		
	<ul style="list-style-type: none"> <li>– Calculate siloed channel profitability</li> <li>– Calculate cost of fulfilment: delivery and returns</li> </ul>	Monitoring OCR performance		
	<ul style="list-style-type: none"> <li>– New employees with new skills</li> </ul>	Learning from employees		
	<ul style="list-style-type: none"> <li>– Innovation lab</li> <li>– Future predictions</li> </ul>	<b>Marketplace transformation scoping (NEW)</b>		
	<ul style="list-style-type: none"> <li>– Customer centricity</li> <li>– Knowledge of the entire customer journey</li> <li>– Mapping of the entire customer journey and touchpoints</li> <li>– Eliminate friction</li> <li>– Introduce tailored elements</li> <li>– Operate dynamic cross functional project teams</li> <li>– Integrate previously siloed channels</li> </ul>	Defining the OCR opportunity		Interpret
	<ul style="list-style-type: none"> <li>– Technology focus</li> <li>– Retail innovation focus</li> </ul>	OCR marketplace positioning		
	Seizing	<ul style="list-style-type: none"> <li>– Development workshops</li> <li>– Cross functional project teams</li> <li>– Stakeholder mapping</li> <li>– Defined project roles and responsibilities</li> </ul>		
<ul style="list-style-type: none"> <li>– Long-term customer initiative roadmap</li> </ul>		OCR project prioritization		

	<ul style="list-style-type: none"> <li>– OCR project hypothesis</li> <li>– OCR project problem statements</li> <li>– Strategic criteria prioritization</li> <li>– Project interdependencies</li> </ul>		
	<ul style="list-style-type: none"> <li>– Knowledge of existing customer needs</li> <li>– UX design</li> <li>– Idea triangulation</li> <li>– Customer feedback</li> </ul>	Customer-centric decision making	Select
	<ul style="list-style-type: none"> <li>– Single source (unified) data analysis</li> <li>– Risk analysis</li> <li>– Employee experiences and opinions</li> <li>– Heat mapping</li> <li>– Competition benchmarking</li> </ul>	Data-informed decision making	
	<ul style="list-style-type: none"> <li>– Democratic business model</li> <li>– Dynamic cross functional OCR project teams</li> <li>– Project workshops</li> <li>– Service design</li> <li>– Service proposition</li> </ul>	Collaborative decision making	
	<ul style="list-style-type: none"> <li>– Pilot testing</li> </ul>	Testing and experimenting	
	<ul style="list-style-type: none"> <li>– Insourcing the mobile channel operations</li> <li>– Single responsive design</li> <li>– Website rebranding</li> </ul>	Digital business model adoption	
Transforming	<ul style="list-style-type: none"> <li>– Integrated sales reporting</li> <li>– Integrated KPIs</li> </ul>	Redesigning sales and incentive metrics	
	<ul style="list-style-type: none"> <li>– Internal employee training</li> <li>– Cross divisional selling skills</li> <li>– Skills to offer new services</li> <li>– Product team training responsibility</li> </ul>	Developing OCR skills	
	<ul style="list-style-type: none"> <li>– Cross functional OCR teams</li> <li>– OCR part of existing job descriptions</li> <li>– Managing the change identified as a strategic risk</li> <li>– Clearly defined actions</li> </ul>	Adopting dynamic team collaboration	
	<ul style="list-style-type: none"> <li>– Managing the change identified as a strategic risk</li> <li>– Clearly defined actions</li> </ul>	Culture redesign	
	<ul style="list-style-type: none"> <li>– Gradual, step by step implementation</li> <li>– Sister company fulfilment integration</li> </ul>	Gradual implementation	
	<ul style="list-style-type: none"> <li>– Digital screens instore</li> <li>– Click and Collect instore, 3rd party, sister company</li> <li>– Order from store via bespoke iPhone App</li> <li>– Access to Click and Collect network for retail partners</li> </ul>	Creating integrated channel operations	
	<ul style="list-style-type: none"> <li>– Single customer view</li> </ul>	Improving personalised	Implement

	- Customer registration/account	marketing abilities	
	- Bespoke app	Bespoke systems development	
	- Agile mindset	Adopting agile principles	Evolve
	- Agile business model		

#### 6.1.4 Case 4

Case 4 is a leading, global lifestyle brand that was chosen to further enrich the understanding of OCR transformation among leading retail brands. Case 4 sells directly to customers (DTC) and through retail partners (wholesale). In addition to developing DTC OCR services, Case 4 has started to develop OCR in collaboration with key DTC retail partners. This co-developing key retail partner seamless capabilities and developing seamless integrations between Case 4 and key retail partners, this includes (1) *Integrated Inventory*, (2) *Drop Shipping*, (3) *Order from store* and (4) *Shared Single Customer View*.

Access to Case 4 was gained through the researchers personal employee relationship in 2017. After signing legal documents the researcher got access to and interviewed The Senior Director Integrated Marketplace Development, The EMEA market development Director E-comm and B&M, The EMEA Marketplace Development Director and The Brand Director via phone between May and August, 2017. All of the interviewees had actively participated in OCR transformation and were asked to answer the questions outlined in the interview guide (Appendix 9.2). In addition to the interviews, internal confidentiality data was provided and secondary data in the form of news articles, website, stores and industry reports were collected and analysed.

The coding template developed from Case 1, 2 and 3 was used as a starting point for the analysis of Case 4 which allowed for the coding template to be further advanced and for new codes to merge inductively from the data, ‘bottom up’ (Symon and Cassell, 2012, Crabtree and Miller, 1999).

##### 6.1.4.1 Sensing

Case 4 uses multiple sources to identify changes in the highly dynamic retail environment; “*Multiple sources, there is not just one source*” (Case 4, Business Development Manager). Case 4 identified that the whole retail segment it competes in was falling behind in providing



seamless customer experiences, despite elevated customer expectations. Case 4 found that customer expectations were for example being elevated by vertical competitors (i.e. competitors only selling directly to customers, without the use of wholesalers such as H&M) who were starting to design, produce and sell products that fulfil the same customer needs as Case 4 produces and sells and were already providing customers seamless purchase journey experiences; *“Just because they don't sell the same products as us, the more they raise their capabilities, the more that raises the expectations of our consumer”* (Case 4, Marketplace Development Director).

To identify OCR leaders and laggards, to highlight areas of improvement and to position Case 4 as an industry leader Case 4 conducts regular marketplace assessments benchmarking. The marketplace assessment has changed, from being individually conducted by key account managers, using for example a so called ‘Traffic light assessment’, to be managed by a dedicated team using structured assessment criteria and a quantitative questionnaire. Changes have also been made to the assessment criteria due to changes in consumer behaviours, from being digitally focused to focusing on a seamless Omni channel customer journey capabilities. Today, the benchmarking assessment is twofold. Firstly, benchmarking key retail partners against existing OCR capabilities and secondly, the results are then used to benchmark against leading retailers in the market to identify opportunities for improvement; *“The foundation of our work is built through using the marketplace assessment. This objectively scores key [Case 4] partners and best in class retailers across 10 CX topic areas, allowing us to gain a clear view on how well each partner serves the [Case 4] consumer”* (Case 4, Internal confidential document). Each retail partner is scored across multiple criteria, representing key customer experience areas across the whole customer journey (pre-purchase, purchase and post-purchase). The quantitative assessment analyses each retail partner’s OCR capabilities on each step of the customer journey, both online, instore and integrated. The findings give a score for each of the key OCR criteria, for example; search capabilities, integrated inventory capabilities, purchase and fulfilment capabilities, customer service capabilities and personalisation capabilities. Hence, providing a holistic comparison of the retailers OCR capabilities across the whole customer journey. This approach enables Case 4 to objectively assesses how well each retailer partner serves the consumer as well as compare the results between competitors and partners. This led to the opportunity to co-develop their OCR capabilities to meet changing customer behaviour; *“I realized that there was a need with some of our bigger partners. Some*

*of our European accounts and focus on developing their capabilities and then you would see it scale down into territories”* (Case 4, Marketplace Development Director).

Listening to customer expectations is one of the key sources for identifying the need to change; *“The customer told us”* (Case 4, Seamless Business Development Director). Case 4 has a customer service team that deals with customer enquiries and operates a dedicated customer insights teams. Case 4, also has a cross functional team that collects and analyses consumer information and shares a direction on what needs to be improved. Consumer information includes both qualitative and quantitative research as well as benchmarking to monitor customer needs and expectations at retail partners; i.e. what the shared retail partner customers value and expect to identify where the customer experience needs improving; *“This kind of consumer information was being captured by cross-functional teams, know certain teams focused on these kinds of things. And they just came back to us and they said that you know we should invest in this direction”* (Case 4, Seamless Business Development Director). Case 4 has developed a single customer view to enable holistically monitoring and identifying customers’ purchase behaviour, which previously was analysed individually for each channel (i.e. siloed analysis) now involves seamlessly integrating all available data sources (i.e. a single data set) to have a 360-degree view of the customer; *“Pre-purchase, purchase, delivery or pick up, to post purchase service should all be integrated with a single view of the customer”* (Case 4, Senior Director of Integrated Marketplace Development).

Case 4 closely monitors industry trends and new retail developments through numerous sources of information, such as by building networks, reading retail news, from partners, agencies and networking with influential people as well as monitoring different industries to identify new and innovative opportunities.; *“Retail news, you know, retail kind of community, industry events, partners, people who got a point of view, agencies. I think the one thing is that you know partnerships become really, really important, collaborations and you know building up networks of people who were able to bring fresh ideas that's really important to keep this going at speed”* (Case 4, Senior Director of Integrated Marketplace Development).

Case 4 also seeks to identify new retailing innovations; *“There have been unprecedented amounts of experimenting to create the future of retail”* (Case 4, Internal confidential document). This includes cross-industry benchmarking, from pure plays to start ups, to identify

new future opportunities that have the potential to disrupt customer experiences and operating an innovation lab and monitoring the transformation in different leading industries, such as telecom and banking; *“Industries which are leading Omni channel are not in retail, it is telecom and banking”* (Case 4, Seamless Business Development Director). The innovation lab is operated in partnership with world leading start-ups and agencies to become a leader in the industry. The innovation lab works collaboratively with other teams to ensure that projects are aligned and learnings shared. One of the key drivers for innovation has been to achieve growth objectives and safeguard a sustainable industry by taking leadership in developing new retail experiences for consumers in partnership with its retail partners. Hence, taking the lead in forcing the industry in a new direction, from modern retailing to seamless retailing experiences; *“We recognized that to achieve our growth objectives and also build a sustainable industry we needed to take ownership and show some leadership around driving the development of retail experiences for consumers”* (Case 4, Senior Director of Integrated Marketplace Development). In addition to innovation labs Case 4 uses predictive analytics for example to identify consumer demands before the sales has taken place. This is achieved by using and integrating multiple data sets. Hence the retailer does not simply rely on historical data like in the past but uses predictive analytics to predict consumer behaviour. Additionally, Case 4 highlights reading about new retail developments and changes to be able to predict the impact it may have on the whole industry; *“Another is around working on projects to help us be a bit more predictive and use predictive analytics. And what's going to sell well, to try and get more sophisticated data using different data sets. So rather than in the past we're looking at historic information to you know details we should be looking at information big data to predict what's going to sell so that we can we can make more of it serve that demand before we even see the sales* (Case 4, Senior Director of Integrated Marketplace Development).

Case 4 defines OCR to; *“Deliver inspiring, frictionless, consumer centric shopping experiences”* (Case 4, Internal confidential presentation). In addition to developing existing OCR capabilities, Case 4 identified an opportunity to develop OCR in partnership with key retail partners to deliver seamless retail experiences for their shared consumers; *“We want to implement strategies and partnerships with our top retailers to deliver fantastic seamless retail experiences for consumers”* (Case 4, Senior Director of Integrated Marketplace Development). Specifically, developing consistent and integrated shopping experiences throughout the whole customer journey; pre purchase, purchase, delivery and post purchase services. The whole

journey should be integrated with a single view of the customer. Because of changes in consumers behaviours, Case 4 changed to a consumer-first strategy from a traditional marketplace transformation strategy. The strategy has shifted towards retail transformation partnerships with key retail partners by collaboratively creating strategies and plans and mutual investment to accelerate change in the industry. This included a dedicated team and a process to negotiate with the retail partners.

The OCR goal at Case 4 is to transform and grow the industry; “[Case 4] has always been to expand the pie rather than take a share of the pie already exist” (Case 4, Seamless Business Development Director). Case 4 identified that the industry sector it operates in was not innovating quickly enough whilst the market was rapidly changing. Which it interpreted as an opportunity not only for them but for the whole industry sector; i.e. to lead and elevate the retail industry and the market so that it would continue to grow and be sustainable. Case 4 identified that it needed to develop focused plans and incentives with key retail partners and convince them to invest in new digital capabilities, to accelerate innovation and change existing retail operations; “We felt that was important for us to take the lead on that because if we continue to operate in a modern way, were in the past you know dropping in brick and mortar shop and shops into various spaces that would not be disruptive enough to move the industry or the market forward” (Case 4, Senior Director of Integrated Marketplace Development).

#### 6.1.4.2 Seizing

Case 4 fosters cross collaborative teamwork, both internally and with its key retail partners; “The other thing that we did was move towards integrated account teams and what that is essentially is put to putting in place cross-functional teams on our top accounts” (Case 4, Senior director of integrated marketplace development). Dedicated account managers lead the work with key retail partners. The account managers role is to partner with the retailer and become an extension of their team but is supported by a cross functional team which includes employees from sales, operations, merchandising and everyone who is needed to drive that business forward with the retailer partner. Cross-functional teamwork has enabled Case 4 to work collaborately; “To come together in a more coherent cross-functional effort to move the business on” (Case 4, Senior director of integrated marketplace development).

To encourage its key partners to mutually invest in the OCR opportunity identified, Case 4 creates focused plans with incentives for develop their OCR capabilities. The incentives

include developing mutual profitability and KPIs for both Case 4 and the retail partner. The objective of this approach is to incentivize the retailer to commit but not to force them to take action. Specific projects are prioritized collaboratively with each retail partner and takes into consideration the respective retail partner's strategy and strategic priorities; *"We decided that we would we needed to put in place focused plans and incentives with all of our partners to get them to invest in digital capabilities and accelerate innovation and the way that they were operating our business"* (Case 4, Senior director of integrated marketplace development).

The customer is at the center of Case 4 decision making, which focuses on selecting new innovative opportunities that will elevate the customer experience. Case 4 deploys a consumer first approach for improving customer experiences and highlights the importance of basing that on actual customer feedback as opposed to employee assumptions. Case 4 also puts great emphasis on identifying opportunities based on predictions about future customer needs, needs that customers do not already know they have, and select opportunities based on where the retailer wants take consumers on their journey and marrying that with business benefits; *"You need to be very connected to the consumer, you need to understand where they are where they are and also make some bets as to where they're going"* (Case 4, Marketplace Development Director). In addition to customer data, Case 4 also uses, sales data and competition data for decision making. One example is the marketplace assessment benchmarking; *"Opportunities to remove friction. Based on the assessment results, we recommend"* (Case 4, Internal confidential presentation). Based on the scores, Case 4 decides which opportunities it recommends to its retail partners for improving their customer's seamless experiences. Case 4 then works collaboratively with its key retail partners on prioritizing opportunities and then it is up to that respective retailer to decide what it decides to do. As an example, Case 4 had identified that content creation for a key retail partner was very poor for their shared customer and it was mutually decided to change and improve that experience for the customer; *"Because if there's something that we've seen opportunity and they see the same thing as a strategic focus then that is an agreed objective that we can then build into work"* (Case 4, Marketplace Development Director).

Before rolling out new ideas, Case 4 tests and experiments vigorously. This includes changing the customer experience in a partner pilot store and doing AB testing or hypothesis of the performance in comparison with stores that remained the same; *"Small scale tests, pilot stuff"*

*and then very quickly scale it”* (Case 4, Brand Director). This has required a new mentality of accepting failure, test, learn and continuously improve.

#### 6.1.4.3 Transforming

Implementing OCR required Case 4 to upskill existing employees with inhouse training; *“There's a big element of training that we worked on in terms of rolling out training programs and a whole range of other stuff similar to that”* (Case 4, Marketplace Development Director). An external agency was used to identify the training needed, through benchmarking, surveys and interviews. A training program was then developed which included ‘lunch and learn’ sessions, online training and inspirational sessions throughout the year. Case 4 also educates key retail partners by showing them examples of actual transformation results. In addition to training, Case 4 started to hire people with new skills and expertise, such as digital skills and various retailing skills, to drive the change and to build new capabilities to be able to consult their retail partners with regards to OCR operations.

To motivate retail partners to mutually invest in OCR opportunities, Case 4 developed tailored incentives; *“We decided that we would we needed to put in place focused plans and incentives with all of our partners to get them to invest in digital capabilities and accelerate innovation and the way that they were operating our business”* (Case 4, Senior director of integrated marketplace development). This included changing the trade terms and making the OCR project part of the terms, hence the retail partner does not get the incentivised terms unless it implements the changes. This further enables Case 4 to work with retail partners that need to transform but haven’t got a dedicated budget to invest in the changes.

Case 4 had to convince its retail partners about changing their traditional way of investing, from mainly focusing on opening new stores to mutually investing in seamless customer experiences. Hence, it required a new investment mindset. Case 4 also stressed the emphasis of communicating the opportunity in the organisation and to retail partners to get everyone aligned; *“The first one was to you know to get everybody aligned around a common view of where the market was going to go. So, there's a lot of communication involved in that, we had to get everyone aligned”* (Case 4, Senior director of integrated marketplace development).

Case 4 highlights the importance of gradually changing and has a clearly defined tiered development approach. Whereas traditionally the transformation would be developing and then changing when fully ready, because of the dynamics of the industry and swift changes that approach is no longer considered sufficient and instead requires gradual and continuous implementations; *“You can’t nowadays wait for the big moment to launch your new experiences. You have to work on marginal gains and continuously improving. We talked about going from 1.0 to 2.0 [in the past]. If you want to go from 1.0 to 2.0 the quickest way to get there is to go to 1.1 to 1.2 to 1.3 to 1.4 to 2.0. Whereas in the past we have got 1.0 and then take a long, long time to develop 2.0 and then launch 2.0. We can’t do that. You have to now accept that technology, competition, expectation, behaviour everything is moving so fast. And you need to keep up and the best way to do that is to make yourself agile”* (Case 4, Brand Director). For instance, the integration of Case 4 stock with retail partners was only launched with one partner to begin with and then rolled out to other key retail partners.

Implementing OCR to create a seamless customer journey experience can according to Case 4 be done in many ways; *“You can make it seamless in many ways. You can make it seamless across the touch points, you can make it seamless across the businesses. Ultimately to serve the consumer and sell more stuff”* (Case 4, Brand Director). In addition to co-developing key retail partner seamless capabilities, Case 4 is also developing seamless integrations between Case 4 and the retail partner; *“We have worked a lot on seamless with the retailer. We’re now working on, how do we become seamless between the brand and the retailer”* (Case 4, Seamless Business Development Director). This includes developing seamless *Inventory Integration* between the brand and the retailer. Hence breaking down the silos between the DTC business and the wholesale business by enabling integrated inventory access for the retail partner to Case 4 stock. Case 4 adopted a *Drop Shipping Fulfillment Model*, which was not new to the market but new to the industry segment they operate in. So, instead of shipping the product to the retailer who then ships the product to the consumer, Case 4 now ships the product directly to the consumer on behalf of the retailer, i.e. in the retailers’ name, and then they share the benefits. The shared inventory is operated with the use of third-party integrator which sits in the middle between Case 4 and the retail partner to manage the data feeds between them. The change has also required changes to the traditional inventory management, such as ownership and governance, making sure that the change does not result in market

marginalization and that all the inventory is made available for every single retailer. Hence it has required a new set of rules such as when it is offered to a retailer, which retailers it is made available and what inventory is offered, where and how much. Furthermore, for the consumer experience to be consistent between the two it has required standardization of product information and product images, financial flows and customer promises such as speedy delivery. Case 4 has further started developing *Order from store* services with its key retail partners to prevent the loss of a sale in store, when the product is available online or in the warehouse; *“What we start to do is we work with the retailers on things like having the ability to access the online assortment in stores”* (Case 4, Brand Director). Case 4 partnered with a software service integrator to enable shared inventory between the brand and partner retailers. The integration required Case 4 to adjust its systems to the software solution and standardize data feeds. Hence, it was not as easy as purely ‘plug and play’ to launch *Order from store*; *“They are in the middle like a hub. We put the wiring and the piping in place to them they put the wiring and piping in place to the retailer”* (Case 4, Senior director of integrated marketplace development)

Case 4 stresses the need for developing a single view of the customer; *“Pre purchase, purchase, delivery or pick up, to post purchase service should all be integrated with a single view of the customer”* (Case 4, Senior director of integrated marketplace development). Case 4 has started to develop a shared single customer view with its retail partners, which requires Case 4 to share data with its key retail partners. Hence, enabling a holistic view and personalize marketing and sales activities for their shared customers; *“It is with our lead partners, cause obviously we have shared consumers...if they were to actually overlay my [Case 4].com behaviour and it says that I bought seven times the amount of the [Case 4] product seven times more than that actually true, more of a holistic view of the consumer. So that is a way you can optimize your investment by data sharing and trying to build a bigger picture of that consumer”* (Case 4, Marketplace development director).

In today’s dynamic retailing environment, Case 4 also highlights the importance of an agile supply chain, getting products to market quicker than before and to be able to respond quickly to customer demands of e.g. popular products. Through wholesale and retail partner platform integration, Case 4’s key retail partners can offer customers with more product variety without having to buy additional inventory, stock it in their warehouses and in stores. This requires a



new agile mentality towards the supply chain which e.g. enables improving speed to market, gradually evolving and to adopt a mentality that allows failure and learning from failure, as opposed to waiting for the next big thing; “*You have to adopt a new mentality which is a couple of industry buzz words, but you have to fail fast and you have to test and learn*” (Case 4, Marketplace Development Director).

#### 6.1.4.4 Summary

Table 6.4 provides a summary of the sensing, seizing and transforming activities, processes and microfoundations identified for each cluster of sensing, seizing and transforming in Case 4. The table shows the development of the NVivo analysis from holistic coding (Saldana, 2015) using a priori themes deducted from the DC theory to NVivo codes, sub-codes and parent-codes identified in Case 1, 2 and 3. The sub-codes that are not identified are highlighted in **bold** (examples from the NVivo software in Appendix 9.7).

Table 6.4. Summary of Case 4 results

1. A priori themes: DCs clusters	2. NVivo codes: OCR Activities	3. Sub-codes: OCR Processes	4. Parent codes: OCR Micro-foundations
Sensing	<ul style="list-style-type: none"> <li>– Internal systematic marketplace assessments scoring at regular intervals</li> <li>– Benchmarking against new and innovative OCR capabilities</li> </ul>	Monitoring competitors OCR capabilities	Identify
	<ul style="list-style-type: none"> <li>– Cross functional customer insights team</li> <li>– Qualitative customer research</li> <li>– Quantitative customer research</li> <li>– Single partner customer view – single data source</li> </ul>	Monitoring customers purchase expectations and behaviour	
	<ul style="list-style-type: none"> <li>– Attending industry events</li> <li>– Building networks</li> <li>– Reading retail news,</li> <li>– Partners hips and collaborations</li> <li>– People who go at a point of view</li> <li>– Agencies</li> </ul>	Monitoring retail industry trends and developments	
	<ul style="list-style-type: none"> <li>– Co-develop seamless capabilities with key retail partners</li> </ul>	Learning from retail partners	
	<ul style="list-style-type: none"> <li>– Close collaboration with key partners</li> <li>– Monitoring key partner sales</li> </ul>	Monitoring OCR performance	
	–	<b>Learning from employees (NOT identified)</b>	
	<ul style="list-style-type: none"> <li>– Different industry monitoring</li> <li>– Innovation lab</li> </ul>	Marketplace transformation scoping	

	<ul style="list-style-type: none"> <li>– Future predictions</li> </ul>		
	<ul style="list-style-type: none"> <li>– Customer centricity</li> <li>– Develop tailored OCR strategies in partnership with key retailers</li> </ul>	Defining the OCR opportunity	Interpret
	<ul style="list-style-type: none"> <li>– Developing good examples of OCR</li> <li>– Take ownership of consumers retail experiences</li> <li>– Show leadership in elevating consumers retail experiences</li> <li>– Develop OCR plans with key partners</li> <li>– Develop OCR incentives with key partners</li> </ul>	OCR marketplace positioning	
Seizing	<ul style="list-style-type: none"> <li>– Cross functional teams</li> <li>– Work collaboratively with key partner teams</li> </ul>	Cross-functional collaboration	Develop
	<ul style="list-style-type: none"> <li>– OCR project plans</li> <li>– OCR incentives</li> <li>– Collaborative prioritizing</li> <li>– Prioritizing based on the retail partner’s strategy and strategic priorities</li> </ul>	OCR project prioritization	
	<ul style="list-style-type: none"> <li>– Knowledge of existing customer needs</li> <li>– Predict future customer needs</li> </ul>	Customer-centric decision making	Select
	<ul style="list-style-type: none"> <li>– Multiple data sources</li> <li>– Single source (unified) data analysis</li> <li>– Marketplace assessment benchmarking</li> </ul>	Data-informed decision making	
	<ul style="list-style-type: none"> <li>– Collaborative decision making with key retail partners</li> </ul>	Collaborative decision making	
	<ul style="list-style-type: none"> <li>– Pilot testing</li> <li>– Hypothesis</li> <li>– AB testing</li> </ul>	Testing and experimenting	
	Transforming	<ul style="list-style-type: none"> <li>–</li> </ul>	<b>Digital business model adoption (NOT identified)</b>
<ul style="list-style-type: none"> <li>– Tailored incentives and trade terms</li> </ul>		Redesigning sales and incentive metrics	
<ul style="list-style-type: none"> <li>– Internal employee training</li> <li>– Retail partner education</li> <li>– External agency to identify training needs</li> <li>– Internal training program development</li> </ul>		Developing OCR skills	
<ul style="list-style-type: none"> <li>– Cross functional OCR teams</li> <li>– Work collaboratively with key partner teams</li> </ul>		Adopting dynamic team collaboration	Implement
<ul style="list-style-type: none"> <li>– Convince retail partners about new ways of investing</li> </ul>		Culture redesign	
<ul style="list-style-type: none"> <li>– Clearly defined tiered development approach</li> <li>– Focus and collaboration with key retail partners</li> <li>– Light touch service for B2B smaller retail partners</li> </ul>		Gradual implementation	
<ul style="list-style-type: none"> <li>– Inventory sharing with key retail partners</li> </ul>		Creating integrated channel	

	- Drop shipping model - Shared benefits	operations	
	- Shared Single customer view	Improving personalised marketing abilities	
	- Software service integrator	Bespoke systems development	
	- Agile mindset - Agile supply chain	Adopting agile principles	Evolve

## 6.2 Cross-Case Analysis

Having presented the sensing, seizing and transforming processes for each of the four primary cases, the cross-case analysis presents patterns, similarities and differences between the cases (Eisenhardt, 1989). The analysis focuses on the development of retailing microfoundations within sensing, seizing and transforming in the cases and supported by the results from the system expert case and cross-industry case to support and deepen the knowledge from the four primary cases, not to identify new activities, processes or microfoundations.

Following the research design outlined in chapter 5, the primary focus of coding the data was to identify patterns in processes and microfoundations between the four primary cases. All of the cases have successfully adopted OCR but differ with respect to the maturity and focus of OCR implementation. Cases 1 and 2 were in the beginning stages of OCR transformation and focused mainly on remaining competitive whereas Cases 3 and 4 were more mature in their OCR transformation and in addition to remaining competitive they focused more on leading the retailing industry.

Overall, this study found twenty-five sensing, seizing and transforming processes within seven distinct microfoundational clusters; *Identify* and *Interpret* for Sensing, *Develop* and *Select* for Seizing and finally *Prepare*, *Implement* and *Evolve* for Transforming (Table 6.5). The structure of the cross-case results are additionally summarised in Appendix 9.8.

Table 6.5. Summary of Cross-Case results

OCR Processes	OCR Micro-foundational clusters	OCR DC cluster
Monitoring competitors OCR capabilities	Identify	Sensing OCR
Monitoring customers purchase expectations and behaviour		
Monitoring retail industry trends and developments		
Learning from retail partners		
Monitoring OCR performance		
Learning from employees		
Marketplace transformation scoping		
Defining the OCR opportunity	Interpret	Seizing OCR
OCR marketplace positioning	Develop	
Cross-functional collaboration		
OCR project prioritization	Select	
Customer-centric decision making		
Data-informed decision making		
Collaborative decision making		
Testing and experimenting	Prepare	OCR Transformation
Digital business model adoption		
Redesigning sales and incentive metrics		
Developing OCR skills		
Adopting dynamic team collaboration		
Culture redesign	Implement	
Gradual implementation		
Creating integrated channel operations		
Improving personalised marketing abilities		
Bespoke systems development		
Adopting agile principles	Evolve	

### 6.2.1 Sensing the need for OCR

Sensing refers to the firm’s capability to sense the need for reconfiguring and transforming the resource base (Teece and Pisano, 1994) and to shape identified opportunities and threats (Teece, 2007). This study found that the cases developed learning processes in two microfoundational clusters (table 6.5). Each microfoundational cluster will now be discussed in turn, starting with the processes found to identify OCR opportunities, followed the processes found to interpret the OCR opportunities. Tables are presented for each distinct sensing process to illustrate the similarities and differences between the cases.

#### 6.2.1.1 Identify microfoundation

All of the cases closely monitor changes in the highly dynamic retail environment. Overall, we find seven distinct process to identify changes; (1) *Monitoring competitors OCR capabilities,*

(2) *Monitoring customer purchase expectations and behaviour*, (3) *Monitoring retail industry trends and developments*, (4) *Learning from retail partners*, (5) *Monitoring OCR performance*, (6) *Learning from employees* and (7) *Marketplace transformation scoping* (table 6.5). Each learning process will now be discussed in turn.

#### *Monitoring competitors OCR capabilities*

All of the cases closely monitor competitors OCR capabilities to identify opportunities and the need to change and/or improve existing retailing capabilities. The competitors' propositions, such as product information-, purchase-, delivery-, returns-, inventory- and loyalty propositions are monitored to evaluate how the competition is delivering a seamless customer journey; from awareness to research, through to purchase, fulfilment and loyalty. Monitoring competitors OCR capabilities includes monitoring direct competitors, indirect competitors as well as retail partners. All of the cases closely monitor where and how they need to catch up with competitors OCR capabilities by fostering a competition conscious culture. In order to remain competitive in the marketplace, Case 1 and 2 focus mainly on identifying gaps in their existing OCR capabilities compared to similar retailers and partners so they can offer at least the same level of seamless customer experiences as their competitors, whereas Case 3 and 4 closely monitors competitors OCR capabilities to lead and transform the industry.

Three types of benchmarking activities are identified for monitoring the competition; (1) competitor OCR proposition benchmarking, (2) customer experience benchmarking and (3) retail partner experience benchmarking. Competitor benchmarking is conducted to monitor competitors existing OCR propositions and to monitor changes to competitors OCR capabilities, Customer experience benchmarking is conducted to compare customer satisfaction against the competition whereas Retail partner experience benchmarking is conducted to assess retail partner OCR capabilities and the need for improvement of shared customer experiences.

Monitoring competitors OCR capabilities is also identified in the supporting cases. The system experts highlight OCR as the main differentiation for retailers such as by having an integrated inventory functionality, which e.g. enables the store employee to immediately check if a specific item is available in a certain store. Due to increased competition from online retailers

one system provider has e.g. built a solution that supports fashion retailers to provide better service in store.

*“For the retailer, this omni channel functionality, connecting the channels is a key differentiator vs. their competitors” (Retail time inventory systems provider).*

The outdoor industry interviewee in the Cross-industry case discusses how the pressure to adopt OCR came both from within the sector as well as from other retail sectors and argues that customer expectations are influenced by every business that they engage with, no matter the industry. Hence the need to monitor competitors more broadly than just direct competition and setting the benchmark against the best in the industry. The outdoor retailer benchmarks the competition on multiple criteria, such as performance and fulfilment to evaluate if it wants to become equal, better than or will not respond, which is evaluated in line with the retailer’s brand proposition. Similar to case 3 the retailer differentiates not on lowest price but instead on the customer experience and service. The automobile brand uses a scoring board to compare each stage of the customer journey to the market to identify opportunities. Similar to Case 1 the benchmarking activity is on an ad hoc basis. As with Case 2, the Travel industry retailer uses Net Promoter Score to benchmark customer experiences to the competition. Both the outdoor retailer and the grocery retailer mention using Case 3 from this research as a benchmark of a more advanced OCR retailer and the grocery retailer discusses how it aspires to be where Case 3 is in terms of OCR.

*“We look at [Case 3] very much as a comparative who are very much more advanced than we are. That is where we would want to be, that is where we would place ourselves in the market” (Grocery industry interviewee).*

Our results provide clear empirical evidence for monitoring competitors OCR capabilities as a distinct sensing process to identify the need and/or opportunity to change to OCR which we define as *knowledge of competitors OCR capabilities on each step of the customer journey to identify the need to change in order to keep up with, differentiate from and be ahead of the competition*. Our results additionally clearly suggest that different activities are being deployed by the cases that mainly focus on remaining competitive in the marketplace which includes

monitoring and benchmarking against direct and indirect competitors and predicting competitors' future evolution. While the cases that are seeking to lead and transform the industry additionally take a broader look by identifying new innovations that have the potential to disrupt customer journey experiences for example by deploying cross industry, cross market and retail partner experience benchmarking (summarized in table 6.6).

Table 6.6. Monitoring competitors OCR capability

Case 1	Case 2	Case 3	Case 4
<ul style="list-style-type: none"> <li>- A competition conscious culture</li> <li>- Open discussions about competitors</li> <li>- Ad hoc internal benchmarking of direct competitors OCR propositions</li> <li>- Systematic benchmarking of direct retailers at regular intervals conducted by specialist advisors for the parent company</li> <li>- Equalise compared to best in class</li> <li>- Knowledge of existing OCR propositions of similar retailers and partners</li> </ul>	<ul style="list-style-type: none"> <li>- Systematic benchmarking of direct competitors OCR propositions at regular intervals</li> <li>- Future evolution assessment</li> <li>- Project specific, 'Best in class' benchmarking</li> <li>- Customer experience benchmarking</li> <li>- Equalise compared to best in class</li> <li>- Knowledge of existing OCR propositions of similar retailers and partners</li> <li>- Knowledge of existing future retail partner needs</li> </ul>	<ul style="list-style-type: none"> <li>- Strategic risk</li> <li>- Project specific benchmarking</li> <li>- Systematic monitoring of similar retailers in different markets</li> <li>- Differentiate from key competitors</li> <li>- Lead in OCR</li> <li>- Knowledge of existing OCR propositions of key competitors and market leaders</li> <li>- Knowledge of disruptive opportunities</li> </ul>	<ul style="list-style-type: none"> <li>- Internal systematic marketplace assessments scoring at regular intervals</li> <li>- Benchmarking against new and innovative OCR capabilities</li> <li>- Equalise compared to best in class</li> <li>- Lead the industry sector</li> <li>- Knowledge of existing OCR propositions of best in class retailers and market leaders in key customer experience areas</li> <li>- Knowledge of disruptive opportunities</li> <li>- Knowledge of vertical competition</li> <li>- Knowledge of leaders and laggards across key topic areas</li> </ul>

*Monitoring customer expectations and purchase behaviour*

All of the cases highlight the importance of listening to the customer's voice (VOC) which includes collecting customer data to analyse their needs, expectations and purchase behaviour, as opposed to simply making assumptions. The cases collect and analyse both external customer information, such as industry reports, as well as their own internal customer data, such as customer feedback.

Customer feedback is a key source for monitoring customer needs and expectations. The feedback is collected across multiple channels and touchpoints such as online, in store,

customer service, email and through social media to continuously monitor actual customer experiences and to identify changes in their needs and expectations. All of the retailers have a dedicated customer service team that deals with customer enquiries and Case 3 and 4 additionally operate dedicated customer insights teams. Monitoring customer needs and expectations also includes collecting and analysing actual customers purchase behaviour which requires seamlessly integrating online and offline customer behaviour history. This analytical procedure has involved developing a single view of customers by integrating multiple data sources. It further required changing the mindset from a siloed channel mindset to a single customer mindset in order to understand how a customer interacts with the cases across channel on the whole purchase journey.

Monitoring customer needs and expectations is also identified in the supporting cases. The advertising provider discusses how OCR services such as *Click and Collect* were a novelty at the start of OCR emerging but has now become a standard customer expectation. The integrated inventory systems provider argues that customers expect more advanced OCR services from large retailers than they do from smaller, more niche retailers, such as real time inventory services. The customer service provider operates a customer experience lab with a dedicated customer interaction team to proactively collect and analyse customers experiences in each of the sectors it operates, both globally and on an area level (e.g. Europe and US). The team conducts customer surveys to collect true reflections of how a brand is actually performing, and like Case 2 it analyses for example the NPS of that brand but highlights the importance of trending the customer data, like Case 1. 150.000 online surveys are for example conducted with consumers about brands to try to understand how they are currently interacting with customers and what their expectations are.

*“In the past the retailer was driving the consumer, because the retailer was pushing this is what is available please come and buy it. But this has changed with mobile, internet and smartphone and tablets now it is 180 degrees the consumer is pushing the retailer, this is what I am expecting, either you serve me, if you don’t serve me I will go to the competitor”*  
(Integrated inventory systems provider)



The grocery retailer discusses the benefit of how outspoken its customers are through the customer careline. The store feedback is also processed through to the customer careline by collecting customer feedback from all the stores. The retailer also collects feedback from social media but mentions how difficult it is to distinguish what is simply one person's issue compared to a bigger issue. Customer issues are collectively analysed and distributed if mentioned repeatedly. As the customer careline collects and analyses customer feedback in silos the grocery retailer was in the process of setting up a specific analytics team to deal with customer data from a single source, looking at the same customer base and how to compare, like Cases 3 and 4.

As mentioned above, all of the primary cases have developed a single customer view to enable holistically monitoring and identifying customers' purchase behaviour, which previously was analysed individually for each channel (i.e. siloed analysis) now involves seamlessly integrating all available data sources (i.e. a single data set) to have a 360-degree view of the customer. Addressed also by the cross-industry case, the outdoor retailer specifically explains using an external systems provider to holistically analyse customer feedback and create a scorecard instead of having multiple lists of customer comments. This approach has made the process faster and created clearer outputs for decision making. To get a single view of its customers engagement, the retailer's parent company changed system providers to one that integrated better with existing systems. Having a single customer view, the retailer for example identified that customers who purchase in store and online spend four and a half times more than an average customer which then impacted further development of OCR capabilities. The automobile retailer conducts both qualitative and quantitative customer studies and highlights the importance of translating the customer feedback into business KPIs to get buy in from the organisation, i.e. what improving the customer experience delivers for the business objectives. Such as communicating how improving customer loyalty will increase overall sales. Selling only through retailers, not direct to consumers, requires an understanding of what customers are expecting from the brand and what they are expecting from the retailer. The brand has implemented a real time barometer at every step of the customer journey to collect feedback from real customer prospects when they are at the stage of interaction, using a short questionnaire asking what they were looking for. It enables the brand to analyse customer satisfaction score and effort score. Customers are also invited to participate in a panel which the brand uses to test new ideas.

*“We could track customers who would spend in store and online and they would spend four and a half times more than an average customer. We could then say if we increase that cohort of really loyal customers like that. That would drive X amount of additional revenue” (Outdoor industry interviewee).*

The shopping center interviewee discusses how it was assumed when launching an online shopping center that it would get a lot of traffic to the domain from customers looking for opening hours and location. That however did not happen but the center instead realized that it was growing a new customer audience due to strong organic reach on Google search. Based on that customer behaviour learning, the center started developing new retail concepts. One of the concepts is a social content brand, targeted at 18-24 year old generation Z customers (GenZ), to build a community with them. The concept is mainly being launched to learn about GenZ purchase behaviour in order to make the shopping centers relevant to them and for the retailers in the centers. Similarly, the travel industry interviewee explains how it identified an opportunity to integrate the purchase step into its service app from learning about its customer experiences from using the travel service app and highlights the need to understand customers at an individual level as opposed to a segment level.

*“The first step is identifying the customer and getting the data, understanding it at one to one learning, not of a segment but as a customer” (Travel industry interviewee).*

In addition to collecting and analysing customer feedback from multiple sources, Case 1 additionally identified opportunities to improve in store customer experiences through physical observations. This activity was not specifically addressed in the other Cases (2,3,4).

It is evident that monitoring customer expectations and purchase behaviour is a distinct sensing process required to identify the need and/or opportunity to change to OCR which we define as *knowledge of customer needs, expectations and purchase behaviour across the whole customer journey: before, during and after purchase, to identify opportunities and the need to change*. Similarities and differences in the activities identified are summarized in table 6.7.

Table 6.7. Monitoring customer expectations and purchase behaviour

Case 1	Case 2	Case 3	Case 4
– Collect, analyse and distribute customer feedback	– Collect, analyse and distribute customer feedback	– Collect, analyse and distribute customer feedback	– Cross functional customer insights team
– Online feedback survey	– Online feedback survey	– Online feedback survey	– Qualitative customer research
– Instore customer feedback to employees	– Instore customer feedback to employees	– Customer service team responding to enquiries	– Quantitative customer research
– Focus groups	– Customer service team responding to enquiries	– Cross functional customer insights team	– Single partner customer view – single data source
– Customer service team responding to calls and emails	– Single customer view – single data source	– Single customer view – single data source	– Respond to customer feedback and changes in customer needs and expectations
– Single customer view – CRM integration	– Social media monitoring	– External consultants	– Monitor trends in consumer behaviour
– Physical observations	– Industry reports	– Respond to customer feedback and changes in customer needs and expectations	– Anticipate customer expectations
– Respond to customer feedback and changes in customer needs and expectations	– Mystery shoppers	– Monitor trends in consumer behaviour	– Knowledge of existing customer needs and expectations
– Knowledge of existing customer and expectations	– NPS	– Anticipate customer expectations	– Knowledge of existing customers purchase behaviour
– Knowledge of existing customers purchase behaviour	– Respond to customer feedback and changes in customer needs and expectations	– Knowledge of existing customer needs and expectations	– Knowledge of customer purchase behaviour trends
	– Monitor trends in consumer behaviour	– Knowledge of existing customer needs and expectations	
	– Knowledge of existing customer needs and expectations	– Knowledge of existing customers purchase behaviour	
	– Knowledge of existing customers purchase behaviour	– Knowledge of existing customer purchase behaviour	
	– Knowledge of customer purchase behaviour trends	– Knowledge of customer purchase behaviour trends	

*Monitoring retail industry trends and developments & Marketplace transformation scoping*

All of the cases closely monitor industry trends and new retail developments through multiple sources of information, such as attending industry events, learning from suppliers and vendors and visiting distant markets. Case 1 focuses mainly on identifying where it needs to keep up with industry standards by monitoring what is being adopted in the marketplace and Case 2 focuses on identifying how it needs to improve to follow recent market trends. Case 3 monitors the retail industry to identify growth opportunities, which includes monitoring other markets to identify the future role of the store and to identify new ways to meet new customer expectations and Case 4 focuses on identifying new retailing innovations and customer experiences. Both Case 3 and Case 4 also make assumptions about the retail industry’s evolution.

All of the cases attend retail industry events and learn from suppliers and vendors to keep up with industry and retail trends. According to the Retail analyst, technology vendors are mainly driving the retail industry changes, not the consumers. At industry conferences for example, the technologists, the vendors, the commentators and analysts set the scene for the key message delivered. For example, one year everyone was talking about OCR, the next year the key message was about re-thinking retail, re-imagining retail, re-inventing retail, the importance of the stores and digitally enabling the stores. However, no one really knows what is going to happen. The automobile retailer buys industry reports and worked with external consultants to identify the need to change, specifically to make the customer journey easier.

*“Retailers need to present themselves, no matter what way, whether online or instore, or on a mobile or laptop, they have got to present themselves in a consistent manner. And they need to organise themselves to reflect the way that we now go about our shopping” (Retail Analyst).*

The system providers in the System expert case work closely with their retail clients, by building relationships and partnering with them to develop further, such as by informing and advising them about opportunities for change and by responding to what retailers want and need. The real time inventory system provider for example analyses the data collected in the system to advise their clients on the need for training, selling opportunities and system changes. Initially, the system provider worked with a consulting company to understand what solutions retailers were requesting and then a prototype was built and sold it to one fashion retailer. When that proved to be successful it then became a product which was introduced and sold to more fashion retailers. The product came mainly from understanding retail trends, working with consultants and build a solution against the trends. To continuously understand these trends the company runs an external advisory board with experts from the retail industry whom they meet with every three months. The solution company presents their long-term product solution road map, the experts’ feedback what they are hearing from retailers and then the solution company aligns with these trends. The product owners in the company also constantly read reports from research organisation to understand retail trends, such as Gartner, Forbes and Forrester, to try to feed that back into the product development.

*“This is the business trend in retail, this is the solution we are putting*

*against this trend to fix that problem and that concept we are taking then to our customers, not prospects, but our real customers, and say we think the industry will go there, there and there. And we are thinking about building such a product, would you agree that it would help your future problems, so we try to get feedback from them*” (Real time inventory systems provider).

The Advertising provider explains how it informs retailers for example about the importance of making mobile the primary channel and the need to provide customers with a mobile first experience. It also educates retailers about the impact digital advertising has on offline sales, i.e. the integrated impact. The provider produces content in the form of online reports and case studies to proactively inform about the retail industry and highlights the need for retailers to be proactive in gaining knowledge about the industry.

*“It was consumer trends, but not in terms of what is colour is next season, but what are the services that consumers are expecting to get the best in-store experience, so it is all around customer journey”* (Real time inventory systems provider).

The Customer service provider creates business improvement plans where it constantly looks at ways of how to improve the customer journey. Having a large client base has enabled it to proactively identify trends and future developments. It operates a customer experience lab which focuses on analysing market insights. This entails rating services and inquiries and score them to understand what is happening within the industry and globally, as well as benchmarking between countries.

*“We tend to find that what is going to hit the US 3 years in advance so the likelihood that it is going to come to us [UK]. This is what happened with you know pay on your mobile phone that was going on in the US years before, now in America you will hear the lady talking about you can go into Walmart and you literally just scan the product and go out that will hit the UK probably in about 18 months. So we already know that it is coming out”* (Customer service provider).

Industry experts often have to convince retailers of the importance of responding to industry changes in a timely manner. The advertising provider highlights getting retailers to acknowledge the impact a single channel has on the whole customer journey, such as the impact digital advertising has on offline sales, as opposed to purely online sales. To convince retailers, the provider shows retailers how the market is changing, shows examples from other retailers and uses the retailer's own data. Such as by tracking the number of customers who click on an advertisement and buy online or walk into a store. Hence sizing the opportunity for the retailer by seamlessly analysing their internal data for them to show holistic OCR results.

*“So that is the kind of conversation that we have, you [retailers] need to understand how this omni channel world works for your business. And you cannot say no it is not relevant” (Advertising Provider).*

Case 3 and 4 both focus on identifying retail innovations to move the retail sector forward by operating innovation labs. In addition to innovation labs both Case 3 and 4 make future marketplace predictions. Case 3 has a dedicated role for predicting retail industry changes and developments, a futurologist, and Case 4 explains reading about new retail developments and trends to be able to predict the impact it may have on the whole industry.

Our results provide clear empirical evidence for monitoring retail industry trends and developments as a distinct sensing process to identify the need and/or opportunity to change to OCR which we define as *knowledge of industry trends and new developments to identify existing opportunities*. Our results additionally clearly suggest that different activities are being deployed by the cases that mainly focus on remaining competitive in the marketplace which includes attending industry events, learning from suppliers and vendors, listening to word of mouth and reading industry papers. While the cases seeking to lead and transform the industry additionally monitor OCR developments in different markets and across industries, operate innovation labs and predict future evolution. We define this process of marketplace transformation scoping as *knowledge of industry trends and new developments to identify future and disruptive opportunities*. Similarities and differences between the cases are summarized in table 6.8.

Table 6.8. Monitoring retail industry trends and development

Case 1	Case 2	Case 3	Case 4
Attending industry events	– Attending industry events	– Attending industry events	– Attending industry events
– Learning from suppliers and vendors	– Monitoring retail trends	– Monitor industry and market trends	– Building networks
– Listening to word of mouth	– Networking other retailers	– Visits markets in different parts of the world	– Reading retail news,
– Networking other retailers	– Read industry papers	– Constant monitoring by the online team	– Partners hips and collaborations
– Keep up with retail industry standards	– Follow market trends	– Innovation lab	– People who go at a point of view
Knowledge of existing OCR standards being adopted in the market	– Knowledge of existing OCR trends being adopted in the market	– Future predictions	– Agencies
	– Knowledge of innovation	– Lead the marketplace	– Different industry monitoring
		– Knowledge of growth opportunities	– Innovation lab
		– Knowledge of opportunities from other markets	– Future predictions
		– Knowledge of the future role of the store	– Lead the industry
		– Knowledge of new ways to meet ever changing customer expectations	– Knowledge of new and innovative retailing and customer experiences
		– Assumptions about industry evolution	– Assumptions about industry evolution

### *Learning from retail partners*

Case 1, 2 and 4 all learn from and share knowledge with other retailers which includes retailers owned by the parent company, retail partners and retailers in the market. This process was not specifically identified in Case 3. Case 1 learned from its internal retail partners, such as the parent company and sister company, as well as other retailers in the market. Case 2 also learned from its retailer partners as well as other geographical markets it operates in. Case 4 works closely with its retail partners to identify new opportunities to change.

In the cross industry case, the Shopping center explains how working with its online retailers, that do not have a physical presence in the mall, has enabled monitoring of the industry whereas in the past, solely working with retailers in the mall, it was difficult to identify. Today the mall has a real time dashboard to monitor retail trends, e.g. identifying new and upcoming brands before others. The travel retailer explains how the opportunity to launch a mobile app was

identified by the CEO on a visit to a train company in China which had all of its sales on mobile; 70% on mobile app and 30% on mobile web.

*“We work with Amazon, we work with Asos, we work with Boohoo, Misguided and over the years what we have been able to do is literally to take the temperature of retail” (Shopping mall interviewee).*

The above results provide clear empirical evidence for learning from retail partners as a distinct sensing process to identify the need and/or opportunity to change to OCR which we define as *learning from and sharing learnings of OCR with retail partners both internally and externally*. Our results additionally clearly suggest that different activities are being deployed by the cases that mainly focus on remaining competitive in the marketplace which includes networking with other retailers, internally and externally, and learn from their experiences. While the case seeking to lead and transform the additionally identify opportunities to co-develop opportunities with key retail partners (summarized in table 6.9).

Table 6.9. Learning from retail partners

Case 1	Case 2	Case 3	Case 4
<ul style="list-style-type: none"> <li>– Learnings from parent company</li> <li>– Learnings from sister company</li> <li>– Networking with retailers</li> <li>– Learning from other retailers’ experiences</li> <li>– Knowledge of retail partner OCR experience</li> </ul>	<ul style="list-style-type: none"> <li>– Geographical markets</li> <li>– Networking with retailers</li> <li>– Learning from other retailers’ experiences</li> <li>– Knowledge of retail partner OCR experience</li> </ul>	<ul style="list-style-type: none"> <li>– Not identified</li> </ul>	<ul style="list-style-type: none"> <li>– Co-develop seamless capabilities with key retail partners</li> <li>– Share learnings with key retail partners</li> <li>– Knowledge of retail partner OCR experience</li> </ul>

### *Monitoring OCR performance*

All of the cases closely monitor existing OCR retailing performance to identify the need to change existing processes and operations, such as operational efficiencies and inventory management. By monitoring OCR performance Case 1 for example sensed the need to make existing OCR processes more efficient. By analysing channel profitability Case 3 identified that managing all the channels individually is important, that online is not the solution for everything and the importance of driving growth in the physical store. Case 2 also identified from OCR performance monitoring that providing personalized services to customers would enable lowering the returns rate and improve conversion rates (i.e. transactions) and identified



an opportunity to offer *Click and Collect* as a way to increase the footfall in stores, both short term and long term.

Seamlessly integrating online and offline inventory enables the cases to identify friction in the customer journey. Case 1 for example, has further optimized the in-store stock range by identifying how much stock is being fulfilled by the store vs. needs to be fulfilled from online through its *Order from store* OCR services and Case 3 optimizes the in-store stock range by analysing what customers are buying online that they cannot find in store. Case 4 works closely with its retail partners to identify where changes are needed, such as being informed about overall sales decline at key partners.

Monitoring OCR performance is also discussed by the system expert case. The Real time inventory systems provider analyses retailers’ own data to identify the need to change; such as training for employees or features not working, which they share with the retailer. The grocery retailer from the cross-industry case also analyses sales performance to identify opportunities. Based on that analysis it can identify areas that need focusing on. From originally launching the online store, the shopping center identified that enabling customers to purchase directly on the site from multiple retailers in a single basket did not work, after trying various things the mall identified an opportunity to change to an affiliate model. But after Google launched Google Shopping the mall has identified the need to adapt.

*“So these are the insights now that we are getting from the in store environment” (Real time inventory systems provider).*

The results discussed in this section provide clear empirical evidence for monitoring OCR performance as a distinct sensing process to identify the need and/or opportunity to change which I define as *knowledge of existing OCR performance in own retail and at retail partners*. Similarities and differences in the activities identified are summarized in table 6.10.

Table 6.10. Monitoring OCR performance

Case 1	Case 2	Case 3	Case 4
– Cost and time calculations	– Analyse early indicators	– Calculate siloed channel profitability	– Close collaboration with key partners
– Evaluate in store processes	– Analyse store sales on a weekly basis		– Monitoring key partner sales

<ul style="list-style-type: none"> <li>- Collaborate with customer services</li> <li>- Evaluate delivery accuracy</li> <li>- Analyse OCR sales</li> <li>- Stock reports</li> <li>- Google analytics</li> <li>- Collaborate with merchandising</li> <li>- Existing OCR services and operations</li> <li>- Knowledge of existing OCR efficiency</li> <li>- In-store process management</li> <li>- Improved process efficiency</li> <li>- Stock optimization</li> <li>- Customer experience impact</li> <li>- Fulfilment operations</li> </ul>	<ul style="list-style-type: none"> <li>- Monitor fulfilment: e.g. unpicked orders</li> <li>- Detailed assessment of sales development in each season</li> <li>- Monitor in store footfall</li> <li>- Existing retailing services and operations</li> <li>- Cost of online returns</li> <li>- Increase footfall in store</li> <li>- Improve process efficiency</li> <li>-</li> </ul>	<ul style="list-style-type: none"> <li>- Calculate cost of fulfilment: delivery and returns</li> <li>- Existing OCR services and operations</li> <li>- Drive in store growth</li> <li>- Individual channel management</li> <li>- Channel profitability</li> </ul>	<ul style="list-style-type: none"> <li>- Key partners existing retailing services and operations</li> <li>- Improve sales</li> </ul>
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### *Learning from employees*

Learning from employee experiences and identifying new ideas from employees (VOE) is specifically discussed by Cases 1, 2 and 3. Through knowledge sharing from employees in different markets and employee feedback the cases have been able to identify new and innovative ideas and learn about best practices.

Case 1 has identified the need to change from new employees and best practice and Case 3 e.g. hired a new Head of Direct to Customer Operations to transform the customer fulfilment experience, to share his knowledge of how it could be done to make the journey one that the retailer could be proud of. At Case 2, innovation is one of the five corporate values and employees are encouraged to share innovative ideas about their daily routines.

This finding is also addressed by the System expert case. The Advertising provider discusses how ecommerce and IT teams need to share their expertise and knowledge, to inspire and to show the business available opportunities and get everyone on board with it. The Automobile industry interviewee shares that the Vice president of sales and marketing was convinced that a shift from product centricity to customer centricity was needed after identifying that the business was shrinking slowly every year and operating in a mature market the retailer identified the need to change.

*“Our VP sales and marketing. He was convinced that we should go towards customer centric and that we were too much product centric”*  
*(Automobile industry interviewee)*

The above findings provide clear empirical evidence for learning from employees and sharing ideas (VOE) as a distinct sensing process to identify the need and/or opportunity to change which I define as *listening to employees to learn from their OCR experiences and to identify new ideas*. Similarities and differences in the activities identified are summarized in table 6.11.

Table 6.11. Learning from employees

Case 1	Case 2	Case 3	Case 4
<ul style="list-style-type: none"> <li>– New employees with new skills</li> <li>– Employee feedback</li> <li>– Encourage employees to share new ideas</li> <li>– Listen to employees and learn from their experiences</li> <li>– Identification of new OCR innovative ideas</li> </ul>	<ul style="list-style-type: none"> <li>– New employees with new skills</li> <li>– Enable employees to share innovative ideas</li> <li>– Knowledge sharing between markets</li> <li>– Omni channel retailing opportunities</li> <li>– Ideas to improve daily routines</li> <li>– Identification of new OCR innovative ideas</li> </ul>	<ul style="list-style-type: none"> <li>– New employees with new skills</li> <li>– Transform the customer experience</li> <li>– Identification of new OCR innovative ideas</li> </ul>	<ul style="list-style-type: none"> <li>– Not specifically identified</li> </ul>

#### 6.2.1.2 Interpret microfoundations

In addition to identifying the need to adopt OCR, all of the cases have developed processes to interpret the identified OCR opportunities, specifically; (1) *Defining the OCR opportunity* and (2) *Marketplace positioning*. Each interpretation process will now be explained in turn.

##### *Defining the OCR Opportunity*

In the start of OCR transformation, all of the cases clearly defined the OCR opportunity and changed the focus from being mainly brand- and product centric to become customer centric by focusing on providing a seamless customer experience. Hence, the customers seamless experience became a key strategic priority, i.e. develop capabilities to meet customer needs across the whole purchase journey.

Case 1 refers to OCR as a way to maximise each channel, to protect individual channels and direct the customer. Case 1 started the OCR journey by defining the meaning of the OCR opportunity to ensure a collaborative understanding of what OCR means specifically for Case 1 and in relation to industry leaders and OCR was defined as a specific project and a forum was established for the OCR project with a cross functional team. Case 2 also had a clear strategic focus of being customer centric but deployed a more structured approach which entailed developing OCR strategic guidelines, defining a common OCR Vision to 2020 and creating OCR strategy which was broken down into yearly targets. The overall objective for the OCR program was to “*create a seamless unique shopping and brand experience across all channels*”. For Case 3 the OCR aim is to “*reinvent the shopping experience, offering our customers new and exciting ways to shop in store and have a seamless online journey*” (Annual Report, 2019). Case 3 refers to OCR as ‘Bricks and Clicks’, i.e. every customer should have the same brand experience both online and in store. That requires knowledge of the entire customer journey, having it mapped out and understanding every touchpoint, so the customer knows exactly where to go at any moment in time. Case 4 has furthermore interpreted the opportunity to develop OCR in partnership with key retail partners to deliver seamless retail experiences for their shared consumers.

The real time inventory systems provider advises retailers to define OCR not as a trend but as a business model. The automobile retailer’s OCR vision is to become customer centric and to break down departmental silos to work together on a mutual objective to improve customer conquest and loyalty. The retailer identified the need to differentiate from the competition on the customer experience, not just the brand which traditionally had been the focus, building loyalty and trust through consistency and transparency. The retailer defined three phases; (1) to deeply understand the customer and sharing the vision internally, (2) differentiate from the competition which included creating a scoring board that measures key customer expectations on each stage of the purchase journey and design thinking to develop new customer centric processes and (3) innovate, as opposed to focusing mainly on continuous improvement. The shopping center’s future vision is to transform into Shopping villages where customers will live, sleep, eat, work and play, focusing mainly on Gen Z customers (born between ca. 1995-2015) and meeting their expectations of convenience.

*“We have to put the customer journey as a key driver for the transformation and evolution” (Automobile industry interviewee)*

*“That whole element of figuring out Omni channel” (Grocery industry interviewee)*

These results provide clear empirical evidence for defining the OCR opportunity as a distinct sensing process deployed to interpret the identified opportunities which I define as *interpreting the OCR opportunity identified as a shift from product to customer centricity to provide seamless customer experiences*. Similarities and differences in the activities identified are summarized in table 6.12.

Table 6.12. Defining the OCR opportunity

Case 1	Case 2	Case 3	Case 4
– Customer centricity	– Customer centricity	– Customer centricity	– Customer centricity
– Define OCR as a specific project	– Define OCR as a specific program	– Knowledge of the entire customer journey	– Develop tailored OCR strategies in partnership with key retailers
– Operate an OCR forum by creating a cross functional team	– Define OCR deliverables	– Mapping of the entire customer journey and touchpoints	– Deliver seamless customer experiences
– CRM project defined separately from the OCR project	– Develop an OCR strategy	– Eliminate friction	– OCR strategy for key retail partners
– Deliver seamless customer experiences	– Revision in relation to the OCR strategy	– Introduce tailored elements	– Mutual understanding of the need for OCR
– Direct the customer	– Define OCR features for each market	– Operate dynamic cross functional project teams	– Customer centric strategy
– Maximise each channel	– Define new standardised partnership models	– Integrate previously siloed channels	
– Mutual understanding of the need for OCR	– Clearly defined organisational vision for OCR	– Deliver seamless customer experiences	
– Customer centric strategy	– Deliver seamless customer experiences	– Build OCR to drive own retail, online and offline	
	– OCR vision	– Seamless brand experience	
	– OCR strategy	– Defined customer initiatives/projects	
	– OCR objectives	– Mutual understanding of the need for OCR	
	– OCR roadmap	– Customer centric strategy	
	– Mutual understanding of the need for OCR		
	– Customer centric strategy		

### *OCR marketplace positioning*

In addition to defining the meaning of OCR, the retailers have also a clearly defined focus of where they position themselves in the market in relation to OCR. While Case 1 and 2 position themselves in the beginning stages of OCR transformation, Case 3 and 4 position themselves as leaders in OCR. Accordingly, Case 1 was not looking to lead the industry but to remain competitive by focusing on keeping up with the competition, Case 2 also aimed to remain competitive and to outperform the competition, Case 3 focuses on differentiating from the competition whereas Case 4 aims to transform the industry. OCR marketplace positioning activities are summarised in table 6.9.

While Case 1 continuously monitors the competition and compares its OCR customer experience with key competitors as discussed earlier, monitoring the competition is not a distinct role but considered to be part of everyone's job. Case 2 contrastingly conducts a more structured and data driven competition analysis, to identify how it can keep up with and outperform the competition by exploiting existing OCR opportunities. In contrast to Case 1 and 2, Case 3 strategic aims is to be a leader in OCR in its main geographical market by focusing on technology innovation and retail innovation to move the retail sector forward and to develop strategic advantage focusing on its customer needs, and is recognised as such by the industry. Case 4 takes a step further and aims to lead and elevate the retail industry by developing focused plans and incentives with key retail partners and convince them to invest in new digital capabilities, to accelerate innovation and change existing retail operations.

This finding is also address by the systems expert case. The retail analyst defines three maturity stages of OCR; leading retailers, laggards (slow to adopt) and in-between retailers. Like case 3 and 4, the automobile retailer's OCR focus is on innovation as opposed to simply improving existing processes to differentiate from the competition, i.e. to lead the sector, and the grocery retailer monitors what the competition is doing so identify where it needs to catch up as a starting point and then to identify opportunities to be a market leader.

*“It was more from this is what the others are doing, we need to go ahead of that, not just catching up. So, to this point it has been a case of catching up, but the next step is to be ahead of it” (Grocery Industry Interviewee).*

Our results provide clear empirical evidence for OCR marketplace positioning as a distinct sensing process to interpret the identified opportunities which we define as *positioning within the OCR opportunity as matching the competition or leading marketplace transformation*. Similarities and differences in the activities identified are summarized in table 6.13.

Table 6.13. OCR marketplace positioning activities

Case 1	Case 2	Case 3	Case 4
– Continuously monitoring the competition	– Structured competition analysis	– Technology focus	– Developing good examples of OCR
– Competition awareness mindset	– Customers OCR experiences at competitors	– Retail innovation focus	– Take ownership of consumers retail experiences
– Part of every employees’ job	– Remain competitive	– OCR leader	– Show leadership in elevating consumers retail experiences
– Remain competitive	– Outperform the competition	– Differentiate from the competition	– Develop OCR plans with key partners
– Match the competition	– Exploit existing OCR opportunities better than the competition	– Transform the local retail industry	– Develop OCR incentives with key partners
– Exploit existing OCR opportunities to match competitors		– Be ahead of the competition in OCR	– OCR leader
			– Industry growth and sustainability
			– Lead and elevate the retail industry

## 6.2.2 Seizing identified OCR opportunities

Seizing refers to the firm’s capability to respond to identified opportunities (Teece 2007, Helfat et al. 2010). This study found that firms pursuing OCR have developed decision making processes in two microfoundational clusters: *Develop* and *Select* (table 6.5). Each microfoundational cluster will now be discussed in turn, starting with the processes to develop identified OCR opportunities, followed by the processes to select OCR opportunities. Tables are presented for each distinct seizing process to illustrate the similarities and differences between the cases.

### 6.2.2.1 Develop microfoundations

Two decision making processes are identified in the cases for developing identified OCR opportunities; (1) *Cross-functional collaboration* and (2) *OCR project prioritization*. Each developing process will now be discussed in turn.

### *Cross-functional collaboration*

All of the cases created cross functional OCR teams to work collaboratively on designing, planning and preparing the opportunities identified. The cross functional teams have representatives from various functions within the firm and change along with the progress of the OCR program and individual OCR projects. Setting up dynamic cross functional project teams has enabled collaborative evaluation, - development and - selection of identified opportunities. The cross functional collaboration activities identified are summarized in table 6.10.

All of the cases set up Dynamic cross-functional project team. Case 1 considers OCR projects tasks as part of everyone's job; hence it was not a new dedicated role or a new department but entailed creating a specific OCR team which meets regularly to focus on individual OCR projects, to agree on which OCR opportunities to pursue and related things such as what happens when new OCR projects are implemented, what needs to change, what are the updates etc. Case 2 also set up a dynamic cross functional project team to work collaboratively on the OCR transformation but contrastingly to Case 1, Case 2 had clearly defined ownership and OCR project structure and an OCR project management chart was developed with clearly defined roles and responsibilities. Case 3 equally stressed the importance of operating dynamic project teams in order to stay agile and teams that are no longer relevant are eliminated and new teams created for new projects. Case 3 appoints project owners and project managers that work together in a cross functional team. These are not new roles but part of their existing jobs. Case 4 also fosters cross collaborative teamwork, both internally and with its key retail partners which is led by .dedicated account managers.

This finding is also addressed by the System expert case. The retail analyst points out that traditional retailers are organised in very siloed, hierarchical and vertical manner, such as supply chain, merchandising, IT, Finance, HR and Retail Operations. Whereas putting the customer at the centre, requires a more dynamic structure. Despite new roles popping up in the industry, such as Chief Customer Officer and Chief Digital Officer, retailers are struggling to understand who has ownership of the customer. Retailers need to move away from such hierarchical structure to a flatter structure as retailers no longer operate in silos and in vertical capabilities. The interviewee takes Case 3 as an example of a retailer who introduces innovation



by setting up separate teams that work closely with day to day business as usual functions but didn't set innovation up as part of the IT team, but instead a team that integrates closely with the IT team *"to try to introduce innovation and new ideas without bringing the whole organisation down"*.

*"Instead of being vertical and siloed my argument is that apart from the support functions, all the other need to, instead of vertical columns, I would draw a circle and they would all be part of that and interact with each other in a far more dynamic manner"* (Retail Analyst).

This finding is further addressed by the cross-industry case. The outdoor retailer discusses how the traditional retail structure of siloed teams; a marketing team, a CRM team which often is part of the marketing team and an E-commerce team which often includes digital marketing, requires changing towards a closer collaboration in order to provide personalised OCR experiences. One of the changes made for example, was to bring the senior leadership team and managers together for regular meetings to discuss business issues and the customer and discover operational improvements to move forward to improve the customer experience. The Automobile retailer also discusses the goal of breaking down silos between e.g. network, marketing, communication and digital. The retailer set up a new team of four people to work on the transformation, specifically the customer journey and customer studies. The grocery retailer acquired a more advanced OCR retailer for the transformation. The two teams were integrated, and existing teams were also combined to break down the silos; from multiple small teams to fewer and larger teams.

*"There needs to be so much change over the next two to three years in terms of the way businesses have been structured"* (Outdoor retail interviewee).

These results provide clear empirical evidence for cross-functional collaboration as a distinct seizing process to develop the identified OCR opportunity which we define as *a dynamic project team that works collaboratively on developing identified OCR*. Similarities and differences in the activities identified are summarized in table 6.14.

Table 6.14. Cross functional collaboration

Case 1	Case 2	Case 3	Case 4
<ul style="list-style-type: none"> <li>- Dynamic, cross functional OCR project team</li> <li>- Collaborative evaluation, development and selection</li> <li>- Regular OCR team meetings</li> <li>- Regular OCR updates and gradual improvements</li> <li>- Prepare the opportunity</li> <li>- Collaboration between key functions</li> <li>- Breaking down silos</li> <li>- Agility and speed</li> </ul>	<ul style="list-style-type: none"> <li>- Dynamic, cross functional OCR project teams</li> <li>- Defined OCR program structure</li> <li>- Defined OCR project ownership, roles and responsibilities</li> <li>- Collaborative evaluation, development and selection</li> <li>- Regular OCR team workshops and meetings</li> <li>- Regular OCR updates and gradual improvements</li> <li>- Agile project approach</li> <li>- Prepare the opportunity</li> <li>- Collaboration between key functions</li> <li>- Teams running autonomously</li> <li>- Breaking down silos</li> <li>- Agility and speed</li> </ul>	<ul style="list-style-type: none"> <li>- Development workshops</li> <li>- Cross functional project teams</li> <li>- Stakeholder mapping</li> <li>- Defined project roles and responsibilities</li> <li>- Collaboration between key functions</li> <li>- Commitment for all functions</li> <li>- Agree on project vision statements</li> <li>- Breaking down silos</li> <li>- Agility and speed</li> </ul>	<ul style="list-style-type: none"> <li>- Cross functional teams</li> <li>- Work collaboratively with key partner teams</li> <li>- Collaboration with key retail partners</li> <li>- Collaboration between key functions</li> <li>- Breaking down silos</li> <li>- Business evolution</li> </ul>

### *OCR project prioritization*

All of the cases align OCR projects with the overall business strategy and prioritize individual projects based on a business case, project plans and roadmaps with clearly defined KPIs. Reaching a balance between responding to customer expectations and business goals and outcomes is highlighted by the cases.

All of the cases conduct resource base evaluation and project business case preparation. Before deciding on which OCR opportunities to pursue, Case 1 and 2 prepare a business case for each OCR project to prioritise and to allocate resources and sets KPIs to prioritize each project and to identify the next steps of which opportunities and/or threats to respond to. Case 2 held workshops to prioritize identified OCR opportunities, prepared detailed project plans for each of the OCR projects it wanted to pursue which was then assessed by the IT team and based on that assessment prioritized what would be possible to implement step by step. At Case 3's the top management created a five-year roadmap and a strategic focus to prioritize projects. Case

4 however, creates focused plans with key partners to mutually invest in the OCR opportunity identified to develop their OCR capabilities, which will mutually benefit their shared customers. Case 4 incentivizes the retailer to commit but does not force them to take action.

The Real time inventory systems provider also discusses evaluating existing retailing capabilities and to create an OCR strategy. The strategy should include the evaluation, e.g. evaluating existing website capabilities, inventory capabilities, store capabilities and employee capabilities. As an example, OCR completely changes the role of store associates and it may change the look and feel of the store, such as when setting up direct check out into fitting rooms which results in the traditional check disappearing. Retailers that are failing OCR are the ones who approach it as yet another IT project. Specifically, because it influences so many functions of the company. Successful retailers are in fact investing in new positions like Omni channel transformation or Head of Digital who have the capabilities to take the retailer on a transformational journey.

*“You need to really build a strategy against this Omni channel” (Real time inventory systems provider interviewee).*

These findings are also supported by the cross-industry case. The Outdoor retailer discusses how the OCR transformation required prioritizing in terms of technology changes needed, people changes needed and structural changes needed. The automobile interviewee highlights the need to marry the customer opportunities to business objectives to get buy in from management and car dealerships to prioritize the OCR projects, such as by showing how increased customer loyalty can increase sales. The travel retailer prioritized launching a service app before integrating the app across the whole customer journey and to include e.g. purchase capabilities and customer account features. The retailer evaluated the business value of starting at a channel level greater than starting with an OCR experience, i.e. get the fundamental customer experience right in the respective channel before integrating the experience across the channels and the customer journey.

*“All things that were prioritized then in terms of what technology changes we need to make, what people changes do we need to make what structural*

*changes do we need to make in the business to enable us to do that”*  
*(Outdoor retailer interviewee)*

*“What is important for us is really the prioritization” (Automobile retailer interviewee).*

Our results provide clear evidence for OCR project prioritization as a distinct seizing process to develop identified OCR opportunities which we define as *evaluation of existing resources and capabilities and business case development to prioritize identified OCR opportunities*. Similarities and differences in the activities identified are summarized in table 6.15.

Table 6.15. OCR project prioritization

Case 1	Case 2	Case 3	Case 4
- Evaluate existing systems providers	- OCR workshops	- Long-term customer initiative roadmap	- OCR project plans
- OCR Project Business Case	- IT team assessment	- OCR project hypothesis	- OCR incentives
- OCR Project resource allocation	- OCR project Business Case	- OCR project problem statements	- Collaborative prioritizing
- OCR project KPIs	- OCR project KPIs	- OCR project problem statements	- Prioritizing based on the retail partner’s strategy and strategic priorities
- Evaluate and Prioritize OCR opportunities	- OCR project resource allocation	- Strategic criteria prioritization	- Prioritize opportunities
- Balance between customer needs and business needs	- OCR project regular resource evaluation	- Project interdependencies	- Balance between the business’s needs and retail partner needs
	- Project interdependencies	- Prioritize opportunities	
	- Prioritize opportunities	- Balance between customer needs and business needs	
	- Balance between customer needs and business needs		

### 6.2.2.2 Select microfoundations

Four decision-making processes are identified in the cases for selecting which OCR opportunities to pursue; (1) *Customer-centric decision making*, (2) *Data-informed decision making*, (3) *Collaborative decision making* and (4) *Testing and experimenting*. Each decision-making process will now be discussed in turn.

#### *Customer-centric decision making*

All of the cases highlight the importance of having the customer at the heart of the decision making and new OCR projects selected to improve the customer experience. Cases 1 and 2

focus on choosing opportunities that meet existing customer needs whereas cases 3 and 4 focus on choosing new innovative ways to elevate customer experiences.

At Case 1 the customer is one of the parent company's four key strategic pillars and keeping the customer happy is one of Case 3 key strategic priorities; to continuously invest in activities that improve customer experiences and loyalty, is clearly stated in Case 3's 2016 Annual report. Case 4 additionally puts great emphasis on identifying opportunities based on predictions about future customer needs, needs that customers do not already know they have, and select opportunities based on where the retailer wants take consumers on their journey and marrying that with business benefits.

This is also found in the system expert case and the cross-industry case. The Real time inventory provider discusses how retailers are forced to meet customer needs in order to stay competitive whereas in the past it was the retailer that was driving the consumer. At the automobile retailer for example a decision was made to change from product centricity to customer centricity and how the brand shouldn't be differentiated purely on the product but also on customer experience and showing the impact improved customer experience has on the business KPIs. One of the outdoor retailer's strategic pillars is improving the customer experience and one of the values was putting customers at the heart of decision making. Putting the customer at the heart required deciding how the retailer would live the values on a daily basis to make sure that the retailer delivers on that value, which did require a mindset change among the leadership team. The shopping center's vision was to merge the physical and the digital channels to create personalised shopping experiences for customers and the travel retailer's primary objective was to improve the customer experience across the whole customer journey, to service customers better, and then how that could be used to increase sales.

*"It's looking at everything through a customer lens" (Outdoor retailer interviewee).*

Our results provide clear evidence for customer-centric decision making as a distinct seizing process to select identified OCR opportunities which we define as *putting the customer experience across the whole purchase journey at the heart of decision-making protocols*. Similarities and differences in the activities identified are summarized in table 6.16.

Table 6.16. Customer-centric decision making

Case 1	Case 2	Case 3	Case 4
– Knowledge of existing customer needs	– Knowledge of existing customer needs	– Knowledge of existing customer needs	– Knowledge of existing customer needs
– One of four strategic pillars	– Competition matching of customer propositions	– UX design	– Predict future customer needs
– Yearly strategic objectives	– Combination of customer needs,	– Customer feedback	– Proactive customer centric selection that creates new experiences and long-term business profits
– Customer centric selection that improves stock efficiency and drives growth	– Competition matching and long-term business profits	– Customer centric selection that also meet business needs	– New innovative ways to improve the customer experience
– Meet customer needs	– Meet customer needs	– New innovative ways to improve the customer experience	– Meet customer needs

*Data-informed decision making*

All of the cases use data to inform the selection of new OCR opportunities and the process includes a combination of customer data, employee knowledge and experience. It is an educated guess as data is collected and used to make informed decisions about what needs improving, when and how. Single-source analytical processes enables one version of the truth, as opposed to traditional siloed channel analytical processes.

Case 1 and 2 make decisions that are a combination of data analysis, pre-determined criteria calculations and educated assumptions and the decision making is also impacted by what the competition is offering to customers; where and how it needs to catch up with the competition. Similarly, Case 3 uses data to inform its decision making and triangulates data to inform the final decision making, such as for the selection of new services by getting feedback from both staff and customers. Like Case 2, Case 3 also deploys risk assessment analysis and identifies key risks that are actively managed and monitored as a priority and also uses a heat map to evaluate the impact of identified risks. Case 3 also supports its decision making by benchmarking with the competition. Case 4 also uses data based on multiple criteria to inform the decision making, such as consumer data, sales data, competition data and marketplace assessment.

According to the single customer view systems provider in the system expert case, retailers need to combine real time customer data with historical data to provide truly personalised customer experiences. The outdoor retailer explains how a number of strategic meetings were held to forecast what it needed to do and how that would improve delivering an improved

customer experience, always through a customer lens as discussed in the previous section. A scorecard with customer feedback is for example used to inform the decision making. The Automobile retailer uses global industry studies about customer behaviour and expectations to inform its decision making. For example, the retailer identified that 85% of customers claim that buying a car is hard work, hence the retailer decided to focus on making that customer experience easier, which was in line with its brand promise.

*“The first step to that is understanding where the customer is right at this second. The second step is understanding where the customer has been and done historically” (Single Customer view systems provider interviewee)*

Our results provide clear empirical evidence for data-informed decision making as a distinct seizing process to select which OCR opportunities to respond to, when and how which we define as *the use of data to inform the selection of new OCR opportunities*. Similarities and differences in the activities identified are summarized in table 6.17.

Table 6.17. Data-informed decision making

Case 1	Case 2	Case 3	Case 4
– Single source (unified) data analysis	– Single source (unified) data analysis	– Single source (unified) data analysis	– Multiple data sources
– Employee experiences and best practices knowledge	– Pre-determined criteria calculations	– Risk analysis	– Single source (unified) data analysis
– Data trending	– Educated assumptions	– Employee experiences and opinions	– Marketplace assessment benchmarking
– Scenario building	– Pros, cons and impact	– Heat mapping	– Triangulated information
– Competition benchmarking	– Scenario building	– Competition benchmarking	
– Triangulated information	– Risk assessment	– Heat mapping	
– Collaborative interpretation	– Heat mapping	– Competition benchmarking	
– Ambiguous interpretation	– Cross channel sales potential evaluation	– Triangulated information	
	– Competition benchmarking		
	– Triangulated information		
	– Autonomy		
	– Agility		
	– End-to-end responsibility		

### *Collaborative decision making*

All of the cases make decision collaboratively. New OCR opportunities are evaluated by a cross functional dynamic team which motivates commitment from key departments involved in the new process.

Case 1 fosters collaborative, formal and informal discussions when deciding upon new OCR opportunities and regular Omni channel meetings are held to discuss progress and decide next steps. Case 2 deploys a more systematized approach and involves many layers of the organization, both inside teams and with other departments and project managers, board of directors and operations managers. Case 3 operates a business model that fosters democracy and delegative decision making in the whole business but when developing new OCR opportunities, collaborative decision making is deployed by members of a cross functional team that is created for each specific project. Case 4 furthermore, works collaboratively with its key retail partners on prioritizing opportunities.

These findings are also discussed by the Systems provider and Cross industry case. One of the governance processes put in place by the Automobile retailer was specific team meetings, which includes members from each region and Head of each department to discuss the evolution of different projects. Design thinking workshops are also used to decide where the retailer wants to go.

*“You need to have a certain amount of collaboration between the digital, cause most of the clients we have, you have E-commerce team and you have a store team and they are very separate but the whole thing about this means that the teams have to collaborate to a certain extent to understand the impact it is having” (Advertising provider).*

Our results provide clear evidence for collaborative decision-making as a distinct seizing process to select identified OCR opportunities which we define as *collaborative cross-functional selection of identified OCR opportunities*. Similarities and differences in the activities identified are summarized in table 6.18.

Table 6.18. Collaborative decision making

Case 1	Case 2	Case 3	Case 4
– Collaborative, formal and informal team discussions	– Clearly defined OCR decision making protocol	– Democratic business model	– Collaborative decision making with key retail partners
– Regular Cross functional OCR team meetings	– Regular OCR Cross functional team meetings	– Dynamic cross functional OCR project teams	– OCR project prioritizing, progress and next steps
– Collaborate with sister company		– Project workshops	
		– Service design	



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<ul style="list-style-type: none"> <li>– OCR project prioritizing, progress and next steps</li> </ul>	<ul style="list-style-type: none"> <li>– Define a long-term OCR Vision</li> <li>– Refine existing OCR strategy according to the Vision</li> <li>– Translate the OCR strategy into yearly targets</li> <li>– OCR project prioritizing, progress and next steps</li> </ul>	<ul style="list-style-type: none"> <li>– Service proposition</li> <li>– OCR project prioritizing, progress and next steps</li> </ul>
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### *Testing and experimenting*

All of the cases experiment and test new ideas before deciding to fully launch and roll them out to all stores and markets. Case 1 fosters an experimental mindset where failure and starting over is accepted and continuously tests different options for both smaller and larger changes, such as pilot testing new OCR services and by testing multiple options for adjusting current services and customer experiences. A more structured approach is deployed by Case 2 which entails detailed reporting which is then shared in OCR program steering board meetings. Pilot tests were used to validate data and results prior to full scale roll outs of OCR projects. Case 3 also fosters a testing, learning and experimental mindset and trials new OCR services before launching and Case 4 tests and experiments vigorously before rolling out new ideas which did require a new mentality of accepting failure, test, learn and continuously improve.

These findings are supported by the cross-industry case. As found in Case 2 and 3, the Retail Analyst discusses the need for a mentality that accepts failure and that retailers should not be afraid to try OCR solutions already available. The real time inventory systems provider explains specifically how the installation of its system at new retailers starts with a couple of pilot stores that are operated with the new systems for e.g. two months in order to learn from the performance in relation to KPIs such as uplift in revenue, uplift in gross margin and employee time saved. Which provides evidence for the business case by demonstrating the return on investment against the KIPs set for the project and then the roll out is no longer a decision about whether to implement but how many stores the retailer decides to implement it in.

*“But in the beginning, it always starts with a kind of pilot and evaluation of a business case” (Real time inventory systems provider).*

*“What we recommend, lets to a trial or a test and see what happens, for 3 months normally” (Advertising provider).*

These findings are also supported by the cross-industry case. The shopping center for example vigorously uses trials for new innovations. One example is trialling a physical showrooming store for three months in one of the shopping centers. Leading pure online retailers are to be offered a new ‘plug and play’ showrooming business model and the store will have central changing rooms, central alterations bar, central POS system and central Click and Collect desk, i.e. a one stop destination for customers. The travel retailer interviewee launched a customer service app prototype as a trial to see how customers would respond. The positive customer feedback and successful launch provided the retailer with continued commitment from the business, both financially and directionally. Hence the app was further developed and changed from being solely a service app to enable customer to make a purchase via the app which the retailer refers to as a light touch integration as it involves the customer moving out of the app onto a website.

*“Let’s test it and see what happens and the customer feedback was incredible. Really, really good response. And we had first mover advantage and it took off from there” (Travel retailer interviewee).*

These results provide clear empirical evidence for testing and experimenting as a distinct seizing process for selecting identified OCR opportunities which we define as *fostering an experimental mindset and trial and error culture for testing new ideas to select identified OCR opportunities*. Similarities and differences in the activities identified are summarized in table 6.19.

Table 6.19. Testing and experimenting

Case 1	Case 2	Case 3	Case 4
– Pilot testing	– Pilot testing:	– Pilot testing	– Pilot testing
– AB testing	qualitative and	– Experimental	– Hypothesis
– Experimental mindset	quantitative	mindset	– AB testing
– Failure acceptance	– Detail testing reports	– Test and learn	– Experimental mindset
– Test and learn	– Sharing of results to Steering board		– Test and learn
	– Experimental mindset		
	– Data validation		
	– Test and learn		

### 6.2.3 Transforming to OCR

Transforming refers to the firm's ability to implement actions (Helfat et al, 2009) to maintain evolutionary fitness by recombining or reconfiguring the firm's resource base (Teece, 2007). This study found that retailers adopting OCR have developed transforming processes in three microfoundational clusters: *Prepare*, *Implement* and *Evolve* (table 6.5). Each microfoundational cluster will now be discussed in turn, starting with processes to prepare for OCR implementation, followed by processes to implement OCR and finally processes to continuously evolve within OCR. Tables are presented for each distinct transforming process to illustrate the similarities and differences between the cases.

#### 6.2.3.1 Prepare microfoundations

Five processes are identified in the cases to prepare for OCR implementation: (1) *Digital business model adoption*, (2) *Redesigning sales and incentive metrics*, (3) *Develop OCR skills*, (4) *Adopting dynamic team collaboration* and (5) *Culture redesign*.

##### *Digital business model adoption*

Cases 2 and 3 discuss how they needed to enhance their digital retailing capabilities by insourcing digital operations. Case 1 and 3 had been operating its own e-commerce site internally for over a decade, whereas Case 2 had been outsourcing its e-commerce capabilities to an external company. Case 2 started its OCR transformational journey by insourcing the online business operations which required digitally transforming the business model to be able to offer OCR services in its own retail business. Despite operating its own E-commerce site, Case 3 had outsourced its mobile channel but then insourced the operation in order to have full control that would enable seamless operations.

These findings are not specifically addressed by the Systems provider case. However, the shopping mall's journey from the Cross-industry case was similar to Case 3 as the E-commerce transformation started by purchasing an existing online retail business which operated as a content site and integrated different retailers into one basket and one checkout. This was the shopping mall's first step into the digital world, the founder and owner of the business came

with the purchase and took over as Managing Director of the Shopping mall’s digital division. Since then the online operations have evolved and e.g. changed from a traditional e-commerce BM to an Affiliate BM. The Automobile retailer identified that selling directly to consumers (DTC) is the evolution brands need to grasp but discusses the challenge of operating its own E-commerce as to how to involve the car dealerships; i.e. how that business model should look like. What the retailer has done as a first step is to link a customer to a specific dealer who then gets paid for the transaction.

*“The main in subject we have with them [dealership] is the E-commerce because how we will go through that B2C. What will be their phase and their business on the B2C” (Automobile industry interviewee).*

Our results provide clear empirical evidence for Digital business model adoption as a distinct transforming process to prepare for OCR implementation which we define as *enhancing internal digital capabilities to prepare for OCR implementation*. Similarities and differences in the activities identified are summarized in table 6.20.

Table 6.20. Digital business model adoption

<b>Case 1</b>	<b>Case 2</b>	<b>Case 3</b>	<b>Case 4</b>
– Not identified	<ul style="list-style-type: none"> <li>– Digital business model transformation</li> <li>– Insourcing e-commerce operations</li> <li>– Integrate e-commerce operations with the retailer’s own stock system, sales system and warehouse</li> <li>– Insourcing digital retailing operations</li> <li>– Full control and ownership of e-commerce operations</li> <li>– Internal e-commerce operation capabilities</li> <li>– Integrated inventory capabilities</li> </ul>	<ul style="list-style-type: none"> <li>– Insourcing the mobile channel operations</li> <li>– Single responsive design</li> <li>– Website rebranding</li> <li>– Insourcing digital retailing operations</li> <li>– Internal mobile channel operation capabilities</li> </ul>	– Not identified

### *Developing OCR skills*

All of the cases needed to develop new OCR skills which included training and/or hiring new employees with the required skills. All of the cases developed and executed OCR training

internally. Case 2 specifically highlights the importance of OCR training coming from top management in order to get the management support and emphasises the importance of continuous training of employees. Case 2 also hired new employees with new skills when insourcing the online business operations. Case 4 did internal training as well but used an external agency to identify the training needed, through benchmarking, surveys and interviews. Like Case2, Case 4 started to hire people with new skills and expertise, such as digital skills and various retailing skills, to drive the change and to build new capabilities to be able to consult their retail partners on OCR.

These findings are also supported by the cross-industry case. From an operational perspective in store, the real time systems provider discusses how in the past, the store employee's role was to fill shelves with products, administrative work and servicing the customers, whereas today they need to have the digital skills to service the customer. The retail analyst discusses how retailers need data scientists and data analysts that are able to process and analyse data and turn it into actionable insights for the retail business. All the data is available, but the next step is to be able to access it and to analyse it, which requires new skills. The customer service provider discusses how specialised skills are needed to service customers via all the different channels available. Servicing customers via the voice channel (phone) requires a different skillset than servicing customers via social media or web chat and discusses how that has been a learning curve, as in the beginning the same employees were used to service all the communication channels whereas today employees are trained with relevant skills to be able to service different channels as well as managing multiple channels.

*“All the data is there, it is available, the next step is to be able to access it. You need the means to farm it, to access it and then you need people with the skills to be able to process that and analyse that into something that is productive and useable for the business” (Retail Analyst).*

From the cross-industry case the grocery retailer discusses how training of new OCR services and systems has mainly been incremental and gradual and requires continuous improvements as discussed by Case 2. The travel retailer discusses how the staff needed to be trained in new ways of selling, from mainly being a conversation to using new technology as part of that conversation, which is in line with the selling skills discussed in the primary cases.

*“You need to train the staff, at the moment our retail staff it is all about the conversation. They are absolutely brilliant at understanding what the customer wants, all of a sudden, they have to do that with the aid of technology. There is a training element to that” (Travel retailer interviewee).*

Our results provide clear empirical evidence for developing OCR skills as a distinct process to prepare for OCR implementation which we define as *developing OCR skills through continuous internal training and recruiting of new employees to prepare for OCR implementation*. Similarities and differences in the activities identified are summarized in table 6.21.

Table 6.21. Developing OCR skills

Case 1	Case 2	Case 3	Case 4
– Internal employee training	– Internal employee training	– Internal employee training	– Internal employee training
– Develop training manuals	– Top management focus and support	– Cross divisional selling skills	– Retail partner education
– Internal training sessions	– Workshops	– Skills to offer new services	– External agency to identify training needs
– Training soft selling skills	– Detail training plans	– Product team training responsibility	– Internal training program development
– Training sponsors	– Hiring new skills	– Developing new OCR skills	– Developing new OCR skills
– Area specialists	– Repeat trainings	– New employee mindset, selling and fulfilment skills	– New employee mindset, selling and fulfilment skills
– Workshops	– Developing new OCR skills	–	– New retail partner mindset, selling and fulfilment skills
– Digital training manuals	– New employee mindset, selling and fulfilment skills		
– Developing new OCR skills			
– New employee mindset, selling and fulfilment skills			

#### *Redesigning sales and incentives metrics*

Implementing OCR required changing the incentive and sales metrics at all of the Cases to manage resistance between in-store and e-commerce employees and to encourage store staff to use any channel available to sell and service the customer. The metrics changed from being siloed to integrated, which required integrating OCR sales to both online and in store sales KPIs. The redesigning sales and incentive metrics activities identified are summarized in table 6.18.

Case 1 & 2 changed the bonus metrics from siloed channel metrics to integrated bonus metrics to manage resistance between online and offline staff and to incentivise store staff to buy into the new OCR services. Changing the bonus structure required changes to store targets as they could no longer be only measured on previous siloed channel targets. OCR operations such as *Click and Collect*, *Ship from store* and *Order from store* all needed to be incorporated into in-store employee KPIs and hence impact the individual store and store employees incentives. Changing the incentive strategy and sales reporting prevented channel conflicts from store staff when the new services were launched by making the change and the extra workload appealing to them by positively impacting on in store sales and hence employee bonuses. Case 3 had traditionally operated a different bonus system to Case 1 and 2, however the retailer also needed to integrate the sales KPIs to specifically encourage store staff to use and offer the OCR services to its customers whereas Case 4 developed tailored incentives to motivate retail partners to mutually invest in OCR opportunities by changing the trade terms and make the OCR project part of the terms.

In the Systems provider case, the advertising provider discusses how digital team invest money in digital advertising which drives store sales for which they are not compensated as their targets are purely E-commerce. The store teams argue that the store sales are not impacted by the E-commerce team, but solely impacted by the store team and window displays for example. This needs to be addressed by changing the siloed incentives and sales structure. The interviewee addresses that this is a bigger challenge for large retailers as E-commerce and stores are traditionally operated as separate businesses. Some of the key metrics that retailers use is return on investment (ROI) and return on advertising spend (ROAS), which are measured in silos but need to be measured across e-commerce and in store. To do that, retailers need to include the store sales into the metrics.

*“What retailers need to do is to find ways of overcoming that, some kind of shared targets” (Advertising provider).*

These findings are also discussed by the cross-industry case. The outdoor retailer for example discusses how it had to incentivise store managers to share store stock with online in order to fulfil an online order. Traditionally, when using store stock to fulfil online orders, the store did

not get the sales attributed to them which was changed so that it did count towards the stores sales which resulted in more incentivised store employees for picking online orders.

*“So how can we make it worthwhile for the store team to prioritize fulfilment of web orders” (Outdoor interviewee).*

Our results provide clear empirical evidence for redesigning sales and incentive structures as a distinct transforming process to prepare for OCR implementation which we define as *developing integrated sales and - bonus systems to break down siloed operations*. Similarities and differences in the activities identified are summarized in table 6.22.

Table 6.22. Redesigning sales and incentive metrics

Case 1	Case 2	Case 3	Case 4
<ul style="list-style-type: none"> <li>– Reconfigure the incentives and bonus system from channel silos to an integrated system</li> <li>– Change store performance targets, from silos to integrated sales reporting</li> <li>– Manage internal resistance to change</li> <li>– Incentivise in store employee buy-in to new OCR services</li> <li>– Integrated bonus system and OCR performance reports</li> </ul>	<ul style="list-style-type: none"> <li>– Reconfigure the incentives and bonus system from channel silos to an integrated system</li> <li>– Change store performance targets, from silos to integrated sales reporting</li> <li>– ‘Order from store’ payments at cash desk</li> <li>– Manage internal resistance to change</li> <li>– Incentivise in store employee buy-in to new OCR services</li> <li>– Integrated bonus system and OCR performance reports</li> </ul>	<ul style="list-style-type: none"> <li>– Integrated sales reporting</li> <li>– Integrated KPIs</li> <li>– Manage internal resistance to change</li> <li>– Incentivise in store employee buy-in to new OCR services</li> <li>– Integrated OCR performance reports</li> </ul>	<ul style="list-style-type: none"> <li>– Tailored incentives and trade terms</li> <li>– Motivate and incentivise change at key retail partners</li> <li>– Mutual Incentive system</li> </ul>

#### *Adopting dynamic team collaboration*

The transformation did not entail developing new specific OCR departments or roles. Instead, OCR required dynamic cross functional project teams that operate specifically for the transformation as discussed previously. Both Case 1 and 2 set up dedicated cross functional OCR teams with representatives from key functions. Case 3 also operates cross-functional project team to improve the customer experience and considers OCR to be part of everyone’s job as opposed to a dedicated role or department but did create three new director roles to manage already existing departments and a new department to deal with customer data.



Whereas Case 4 transformed from a wholesale account team to a seamless cross functional team.

These findings are also discussed by the system expert case. The real time inventory systems provider explains how implementing its solution includes several stakeholders as it requires participation from several of the retailer's functions. The implementation can also include partnering with external consultants that are working with the retailer, specifically in larger retailers. The advertising provider emphasises the importance of building relationships with people from various functions and the collaboration between E-commerce and store teams.

*“We are involving several parties; we need to speak to obviously the Head of Retail and the Head of Omni and Head of E-commerce or whatever you call them. At the end of the day it is an IT project so we need to speak to IT people and we are sometimes involved in supply chain operations” (Real time inventory systems provider)*

In the Cross-industry case the Automobile retailer discusses how it set up specific meetings to collaborate on the OCR implementation and deploys design thinking workshops to collaborate on new projects. To keep up the motivation the retailer celebrates success and gives out rewards. The Travel industry retailer discusses how the organisation needs to change from a traditional channel setup towards an integrated layer on top of all the channels with an overall view of OCR operations. Which requires all teams, such as the retail teams, the online teams, the app teams, call center teams and the booking management teams to come together as one customer experience. Contrastingly, the Shopping mall's digital business was initially set up as a separate department from the physical business. That was deliberately done to make sure that the digital business would be able to operate independently from the physical business, mainly due to the resistance of traditional shopping mall retailers to change. However, the shopping center has identified that its online and the offline operations need to become more integrated.

*“Luckily because of the way it was structured no one could do anything about it. If it had been structured differently, we wouldn't have been able to operate” (Shopping mall interviewee).*

Our results provide clear empirical evidence for Adopting dynamic team collaboration as a distinct process to prepare for OCR implementation which we define as *operating cross-functional and dynamic teams to prepare for OCR implementation*. Similarities and differences in the activities identified are summarized in table 6.23.

Table 6.23. Adopting dynamic team collaboration

Case 1	Case 2	Case 3	Case 4
– Cross functional OCR teams	– Cross functional OCR teams	– Cross functional OCR teams	– Cross functional OCR teams
– OCR part of existing job descriptions	– OCR part of existing job descriptions	– OCR part of existing job descriptions	– Work collaboratively with key partner teams
– Internal collaboration	– Internal collaboration	– Managing the change identified as a strategic risk	– Collaboration internally and with key retail partners
– Collaborative cross functional teamwork	– Collaborative cross functional teamwork	– Clearly defined actions	– Collaborative cross functional teamwork
		– Internal collaboration	
		– Collaborative cross functional teamwork	

### *Culture redesign*

All of the cases had to deal with human challenges, i.e. changing the retailer’s culture from traditional siloed mentality to a new seamless customer-centric mentality. The implementation required a mindset and a cultural change in order to prevent resistance to change and ensure buy-in of new OCR services. To get commitment from employees the cases highlight the importance of communicating the OCR initiative and individual projects with all employees to ensure understanding, importance, buy-in and alignment in the whole organisation. Explaining the role each employee plays in the transformation has been very important such as explaining new ways of working to store staff, how to use new systems and managing more resources.

Case 1 communicated the purpose of the change to give employees context for their role in the overall impact of the change. The same applies to Case 2 which communicated the OCR goals, vision and timelines to employees, making sure that everyone had the same understanding of its importance and meaning. Managing change is identified as one of the key strategic risks at Case 3 which is addressed and actions defined in relation to potential consequences, controls already in place, progress in the year to follow and further actions. Case 4 had to convince its retail partners which entailed changing their mindset about traditional ways of investing, from

mainly focusing on opening new stores to mutually investing in seamless customer experiences.

These findings are also discussed by the Cross-industry case. The advertising provider discusses how retailers need to adopt a new mindset in terms of understanding how OCR works for their business, specifically the impact digital advertising has on in store sales. The retail analyst discusses how traditional retailers are constrained by shareholders and investor whom they need to keep happy on a monthly or quarterly basis. Hence the younger start-ups with more entrepreneurial mentality are the ones embracing the changes and recruiting customers who in the past have been loyal to traditional retailers. The single customer view systems provider discusses how the mindset needs to change from one-to-many to a one-to-one mindset. Which means moving away from broadcasting the same message to a large audience to relevant and personalised messaging by analysing customer data to understand their needs and purchase behaviours. Hence, the key challenges are not technical but inertia and internal politics. Retailers need to acknowledge that the world is changing, and they need to change with it, otherwise they will not survive. Additionally, there are internal politics due to siloed structures; such as CRM employees, advertising employees, customer service employees and promotion employees, who all need to be onboard to new ways of working. To overcome employees' resistance to change the system provider explains to each silo why implementing the new system is important and how it will help them to do their job better. On top of that, internal brand champions are appointed who understand the need for a new more contemporary approach and are often incentivised to do so. These brand champions are senior executives such as Chief Information Officer, Chief Technology Officer, Chief Executive Officer and Consumer Marketing Insights who become responsible for driving the internal changes and get employees to integrate and comply to the changes. This is also addressed by the Customer Service Provider who discusses how traditional retailers are responding reactively to changes due to traditional ways of operating, such as operating a number of stores and leasing and owning buildings, whereas pure players (E-commerce only) are more proactive because they don't have all the legacy of traditional retailers, both systems and customers. They don't need to convert their customer base; their customers don't know any different. As identified in Case 4, the mindset change is also discussed in relation to investment. Traditional retailers need to change their mindset from traditional investments of e.g. opening new stores to improving the

customer experience. Such as investing in new mobile sales assistant devices to enable them to respond to customers' expectations of detailed product information in stores

*“There is a lot of change management involved” (Real time inventory systems provider interviewee)*

*“Retail has always been a lot about getting to the highest purchase and coming out with the loudest message. That has always been kind of a big thing. You know big events, big sales and all that. The new mindset is, there is nothing sadder than discounting to someone who is willing to pay full price so it is using data to figure out at an individual customer level or individual segment basis what lever should I deploy this person or these people to do the thing that I want” (Single Customer View Systems Provider interviewee).*

Changing the mentality is also addressed by the Cross-industry case. The outdoor retailer discusses how the change to share stock between online and offline mainly required a behavioural change and how the leadership team needs to embrace OCR and communicate the change downwards. As in Case 4, the Automobile retailer discusses the need to change the mindset of dealerships by showing and proving the bottom-line benefits and that OCR is a win, win transformation. The Shopping center discusses how the transformation has been a ‘painful journey’ as in the beginning the traditional shopping centers did not understand the need to change, specifically the need to have an online shopping center. And the grocery retailer explains how it changed its values to become agile and do things quickly and discusses how everyone needed to change their mentality for moving forward.

*“You have got the practical technological stuff on the other hand you've got the change the mindset. It's the change of mindset” (Outdoor retailer interviewee).*

Our results provide clear empirical evidence for Culture redesign as a distinct process to prepare for OCR implementation which I define as *changing the culture from a siloed mentality*

to a new seamless customer-centric mentality. Similarities and differences in the activities identified are summarized in table 6.24.

Table 6.24. Digital business model adoption

Case 1	Case 2	Case 3	Case 4
– Communicate OCR purpose to employees	– Communicate OCR vision and goals to employees	– Managing the change identified as a strategic risk	– Convince retail partners about new ways of investing
– Give employees role context	– Encourage innovation	– Clearly defined actions	– Encourage a new investment mindset at key retail partners
– Collaborative understanding	– Forgive mistakes	– Create a seamless mentality	– Change the corporate culture
– Create a seamless mentality	– Agile and efficient implementation	– Change the corporate culture	– Employee and retail partner alignment
– Employee alignment	– Create a seamless mentality	– Employee alignment	– New seamless mentality
– Change the corporate culture	– Change the corporate culture	– New seamless mentality	
– New seamless mentality	– Employee alignment		
	– New seamless mentality		

### 6.2.3.2 Implement microfoundations

Creating a seamless customer experience involves redesigning the steps before, during and after purchase and involved developing new retailing services, sales operations, marketing operations and redesigning physical stores to be able to offer OCR services and to improve customers instore experience. Case 1-3 have transformed the customer journey by enabling a seamless customer experience in the direct to customer (DTC) retail business. Case 3 has additionally started to integrate its OCR services with its sister company and Case 4 is transforming the customer experience by seamlessly integrating the wholesale business with its key DTC retail partners. Four processes are identified to implement OCR are; (1) *gradual implementation*, (2) *creating integrated channel operations*, (3) *improving personalised marketing abilities* and (4) *bespoke systems development* (table 6.5).

#### *Gradual implementation*

The implementation of OCR in all of the cases has been a gradual, step by step process and involved a phased roll out of new OCR services. The first step involved a ‘light touch’ approach to OCR as all of the cases emphasize the importance of starting the transformation as opposed to waiting until everything has been entirely figured out.

The OCR transformation at Case 1 was a step by step implementation of new services which started by developing short-term solutions, referred to as '*Omni light*' in order to change quickly and cost effectively and to learn from the implementation before developing and investing in more permanent solutions. The OCR implementation for Case 2 also involved gradually rolling out OCR services to individual markets following a comprehensive plan as Case 1 created an end-to-end OCR implementation roadmap. Case 3 also gradually implements new OCR services e.g. only rolling new OCR services to selected store locations which are later expanded across all of its store locations. Case 4 also highlights the importance of gradually and continuously changing as opposed to developing and then changing when fully ready.

Similar to Case 2 the Real time inventory systems provider, from the system expert case, discusses how it creates a roadmap with retailers which includes a three-step approach. The first step involves implementing real time stock view, the second step involves adding *Click and Collect* and *Click and Reserve* services and the third step involves adding the analytics to provide more insights for the retailer. The Single Customer View Service Provider can implement a basic solution in 30 days and a full solution in 90 days. This is also addressed by the Customer Service Provider who discusses how the implementation is a step by step process as for example seamlessly integrating the stock then enables retailers to offer *Click and Collect* and *Click and Reserve* and how that further enables retailers to re-target customers who abandon their online basket e.g. with reminders and discounts.

*“So they need to have the stock connected to what is available online. And once they have kind of got one part secure, they can expand on that” (Real time inventory systems provider interviewee).*

Gradual implementation of OCR is also discussed by the Cross-industry case. The Shopping mall for example explains how the transformation of a traditional physical shopping center to an online shopping center has been a process of gradually learning by doing. The first step was to create a single domain for all the shopping center locations, and the second step included an online transactional E-commerce site. When that failed as a business model the shopping center changed it to an affiliate business model where customers can click on a product on the website which then takes them to the retailer's website to transact. That business model proved

successful and the concept has continued to evolve with recent changes including dedicated shopping center location pages where customers can look online for products sold only in a respective shopping center location and new features to improve the customer experience online such as image search and computer vision.

*“We then pivoted from a transactional website to an affiliate website, where people clicked us and ended up in the basket of a retailer with their product. And our sales went up 10 times more. It was actually the opposite of what you would have thought would happen” (Shopping mall interviewee).*

The travel retailer discusses the importance of the first step to be identifying the customer which requires changing the online channel before changing the offline channel (physical outlets), as it is quicker, easier and has the most opportunity for the retailer. If a customer logs in online then the retailer can track the behaviour and authenticate the customer account, whereas offline requires a more operational capability of frontline staff.

*“There is Omni channel operations, there is Omni channel marketing, yeah there is all different flavours of it” (Single customer view systems provider interviewee)*

*“That is why I said there is step one and step two, because until you can identify that customer across what is a very, very complex environment, it is very difficult to provide a good Omni channel experience beyond the stuff you can do with branding and content” (Travel industry interviewee)*

Our results provide clear empirical evidence for gradual implementation as a distinct process to implement OCR which we define as *a step by step OCR implementation process to gradually improve the customer experience*. Similarities and differences in the activities identified are summarized in table 6.25.

Table 6.25. Gradual implementation

Case 1	Case 2	Case 3	Case 4
- Gradual, step by step implementation	- Gradual, step by step implementation	- Gradual, step by step implementation	- Clearly defined tiered development approach
- Omni light implementation	- Omni light implementation	- Sister company fulfilment integration	- Focus and collaboration with key retail partners
- Quick implementation	- Detailed implementation roadmap	- Learning by doing	- Light touch service for B2B smaller retail partners
- Learning by doing	- Learning by doing		- Quick implementation
			- Learning by doing

*Creating integrated channel operations*

All of the cases have developed new operations to provide customers with a seamless journey experience, which includes; (1) developing seamless research stage operations, (2) developing seamless purchase stage operations, (3) developing seamless fulfilment stage operations.

Developing seamless research stage operations by seamlessly integrating online and offline inventory enabled the cases to improve customers research step experience. Case 3 e.g. started the OCR transformation in 2008 by enabling customers to look up online product information and stock availability via in store digital screens, which further evolved to include transaction capabilities. Case 4 works has launched seamless inventory integration between the brand and the retailer, enabling integrated inventory access for the retail partner to Case 4 stock and adopted a drop shipping model, enabling Case 4 to ship products directly to the customer on behalf of the retailer.

From a marketing perspective, the Advertising provider enables integration of online research and instore stock availability which enables customers to look for products and get information about where that product is available and how far away the nearest store is. It requires the retailer to feed all their product stock information into the system by preparing an excel spreadsheet or by using feed management agencies, hence the process can be both manual and automated. The system provider can then inform the retailer about how many people that researched actually walked into a store, however the capability to see if the customer actually bought the product is being evaluated for development. That will require close collaboration with retailers who would have to share sales data with the systems provider. This feature is specifically useful for high consideration products, such as an expensive watch retailer or niche



furniture store. Another option is to use customers email addresses, provided in store in order to get digital receipts, to advertise to those specific group of customers. From a customer service perspective, the customer service provider offers a service to retailers where it can answer customer product queries on a web chat and by using GPS to direct that customer to the nearest store and inform the customer if there is a promotion in a store. Hence enhancing the experience for the customer using the contact centre to take the customer from research to purchase.

The shopping center focuses on improving the customer research stage using an affiliate model where customers can click on a product on the website which then takes them to the retailers' website to transact. As new technology emerges the shopping mall introduces new features such as using computer vision to improve the search experience which was developed using an online open source and also a specialist company to help with the development. The shopping mall does not integrate the stock information and argues that it is not of importance as the customer is directed to the retailer's website when clicking on a specific product, it is then up to that retailer to offer the experience.

*“What we are able to do now, through computer vision we are able to effectively look at the product and everything that the computer can see it can label. So, it doesn't have to be in the data feed. Then we can create features and attributes that somebody can select” (Shopping center interviewee).*

Seamlessly integrating the purchase stage experience involved launching *Order from store* which enables the cases to sell out of in-store stock products to in store customers. Hence, it is an in-store sale that is fulfilled from online, using the online stock (seamless purchase stage integration). Customers can then choose whether they want the order delivered or to collect from a store (seamless delivery integration). The service further improves the customer experience as customers no longer have to wait for store staff to go and check stock in stock rooms, as they can check information via digital devices and e.g. at the cash desk, and customers further do not have to find the product again themselves online and finish the purchase. *Order from store* was the second OCR service launched by Case 1 and 2, for which the cases provided every store with iPads by the cash desk. Case 3 however provided store staff with a specially designed iPhone app to operate *Order from store*. While Cases 1, 2 and 3 have

all launched *Order from Store* to seamlessly integrate its own retail business, Case 4 has further started developing the capability with its key retail partners to prevent the loss of a sale in store, when the product is available online or in the warehouse.

The Real time inventory systems provider enables real time stock visibility across all channels using RFID tags. It requires integration to existing enterprise resource planning systems to access product information and additionally often requires integration to existing IT systems, i.e. to build interfaces between the systems, and integration to point of sale systems. Hence not replacing existing systems but adding functionality into existing environment. The system provides retailers with real time information about each about where each single item is, e.g. in warehouse, in a particular store, in a back room, in a window, in a wholesaler store and also provides store employees, the store manager and the marketing manager with real time stock availability information which enables OCR services such as reservation on item level and dedicate date location. The first step is to make inventory information accurate and the second step is to add the OCR services to customers, such as click and reserve in a specific store of the customers' choice. Once a product is reserved online, the store gets a message on a smartphone or a tablet to reserve it. If the product isn't picked up in 24 hours, the reservation is cancelled and made available to in store customers again. The interviewee explains that the solution is suitable for large retailers with more than fifty stores and not needed for smaller retailers with e.g. four stores.

*“I think that most of them have an e-commerce site and unfortunately many of them think that ok I have a website where people can buy product so I have Omni channel. But that is incorrect, the consumer thinks from different point. The consumer say I want to go to the web site store to check online if an item is available before I go there. And that is the function that is missing” (Real time inventory system provider interviewee).*

From the Cross-industry case the Outdoor retailer discusses the need to find the right technology which will enable a single customer view and technology to provide single inventory view. The Grocery retailer developed seamless stock management capabilities by using the system from the retailer it acquired for developing OCR.

*“Find the right technology so you've got a single view of your customer and a single view of your stock” (Outdoor retail interviewee).*

Providing a seamless customer experience additionally required seamlessly integrating the purchase and fulfilment stage of the customer journey in order to improve the customer delivery experience. That included new OCR services such as *Click and Collect*, *Order from Store*, *Ship from Store*, *Integrated Deliveries* and *Integrated Returns*.

Click and Collect is an online sale which is fulfilled in store. It enables customers to finish the purchase transaction online but then choose to collect the order from a store (fulfilment), hence it is one of the delivery options available to customers. Case 3 was one of the first retailers in the UK market to launch Click and Collect and Click and Collect was also the first Omni channel service implemented by Case 1 and 2 whereas Case 3 has further expanded its Click and Collect services to offer fulfilment via its sister company's stores, third party retailers as well as providing third party retailers access to its Click and Collect distribution network.

To seamlessly integrate the purchase and fulfilment stage Case 1 and 2 also developed Ship from Store which enables online customers to check in store availability and to purchase products that are not available online from a store and have them fulfilled from that store (seamless purchase and fulfilment stage integration). Cases 1 and 3 have also further developed its fulfilment services to provide customers with Integrated deliveries. Which means that instead of multiple products being sent to customers from various locations and in multiple packages, they are consolidated into as few packages as possible. Case 2 has additionally implemented Convenient Returns which enables customers to return and exchange both online and in store orders in any of Case 2 stores, to receive store credit or have them refunded. Case 3 also offers returns via multiple channels; in store, sister company, mail, 3<sup>rd</sup> party delivery services, home collection and 3<sup>rd</sup> party locations.

Our results provide clear empirical evidence for Creating integrated channel operations as a distinct process to implement OCR which I define as *integrating retailing operations for each step of the purchase journey to provide customers with a seamless journey*. Similarities and differences in the activities identified are summarized in table 6.26.

Table 6.26. Creating integrated channel operations

Case 1	Case 2	Case 3	Case 4
- Click and Collect instore and 3rd party	- Click and collect instore	- Digital screens instore	- Inventory sharing with key retail partners
- Order from store via iPad	- Order from store via iPad	- Click and Collect instore, 3rd party, sister company	- Drop shipping model
- Ship from store	- Online appointment scheduling	- Order from store via bespoke iPhone App	- Shared benefits
- Seamless inventory integration (own retail)	- Tailored content	- Access to Click and Collect network for retail partners	- Seamless transformation of the customer journey/experience
- Seamless transformation of the customer journey/experience	- Seamless transformation of the customer journey/experience	- Seamless transformation of the customer journey/experience	- Seamless inventory (wholesale)
- Seamless purchase	- Seamless inventory (own retail)	- Seamless inventory (own retail)	- Seamless purchase
- Seamless fulfilment	- Seamless purchase	- Seamless purchase	- Seamless fulfilment
	- Seamless fulfilment	- Seamless fulfilment	

*Improving personalised marketing abilities*

Personalization is a key feature of OCR which entails moving from mass marketing to personalised and consistent customer experiences and enabled by developing a single view of customers. All of the cases have developed a single view of their customers to enable personalisation by collecting and integrating data from numerous channels and touch points.

For Case 1 and 2, developing a single customer view is part of a customer relationship management (CRM) project which is however a separate project from the OCR project. The activity entails making sure that the CRM systems are integrated across both online and instore so that they feed into each other to provide a single view of the customer. Providing customers with the opportunity to register online (to become a member) enables all of the cases to build a holistic picture of their customers such as what, where and how often they shop and to provide them with relevant and personalised sales- and marketing communication. Developing a single customer data set provides the cases with a 360-degree view of its customers. This enables the cases to segment customers based on actual purchase behaviour throughout the whole purchase journey to provide them with a personalised experience through relevant marketing, as opposed ‘one size fits all’ marketing. Developing a single customer view was a phased step by step process for both Case 1 and 2, which started with a manual process at Case 1 whereas Case 2 changed its legacy CRM system to develop a single customer view and now operates as one

database for all customer data. Case 3 is developing its moving from customer segmentation to personalization by focusing on its membership program. Case 4 has however developed a shared view of customer with key retail partners which requires Case 4 to share data with its key retail partners.

In the System expert case, the single customer view systems provider enables retailers to move from multiple siloed customer views to a single customer view by overlaying retailers' existing databases; online, offline, mobile and social. Each retailer database communicates directly with the cloud-based platform. Hence, it doesn't replace any databases instead it aggregates all of the datapoints and associates them with a single customer profile. A retailer can then view on a real time dashboard all of the activities of each of their customers, individually as well as collectively. Having a real time view of the customer enables retailers to set rules of engagement where whenever a customer does X the retailer responds Y. The first step entails identifying all the channels the customer can engage with the retailer on and then the system uses an application programming interface (API) to tie all those things together into a single database of individual customer record. The second step entails identifying the different ways the retailer engages with customers, e.g. email and mobile app, push notification, inbox within the app, mobile wallet, i.e. looking at all the different ways the retailer pushes out messages and activities to customers. Hence, the first is identifying how does the customer create data and the second is identifying what means the retailer has to respond to that data, which can include both a physical experience as well as a digital experience. Then the system provider goes through a series of rules with the client that to deepen the engagement and loyalty with each customer by determining after A comes B, after B comes C and in order to get the customer to do D the retailer gives an offer of buy one get one free to get the customer to the next best action. The key loyalty performance indicator (KPI) is number of transactions per month. The system does not require new employee skills as it is simply just more automation and an easier and faster way to do what they were already doing and saves the retailer from manually going through vast data and clean it, it all happens automatically. The advertising provider explains how another way of collecting customer data to build a single profile is by capturing customers email addresses which then means that they are added to the retailer's email list which they then can use to target the customer again by individual emails. It is not an individualized message as all email addresses are anonymized but the whole purpose is to make the message more relevant and useful for the customer.

*“Every retailer that I know is trying to create a great customer experience. If you ask them you should expect great personal experience and that is part of customer experience; personalisation” (Retail Analyst).*

The importance of having a single customer view is also highlighted by the cross-industry case. Understanding the physical audience digitally is discussed by the shopping center and how it will enable it to create integrated journeys on behalf of brands, e.g. by through an app that collects all shopping center transactions. The grocery retailer discusses how it has started to integrate the loyalty card across online and in store. The travel retailer discusses how it was working on how to integrate the communication campaign management with the mobile app data to have a single source of data for all markets.

*“And we were looking how we can integrate with them so we have a single source of output for all of the markets. Where we are able to say, whichever channel you are engaging with us, desktop, phone, app, we can then contact you and speak to you on that basis” (Travel Retailer interviewee).*

Our results provide clear empirical evidence for Improving personalised marketing abilities as a distinct process to implement OCR which we define as *integrating customer data across each channel and on each step of the purchase journey to provide customers with relevant and personalised experiences*. Similarities and differences in the activities identified are summarized in table 6.27.

Table 6.27. Improving personalised marketing abilities

Case 1	Case 2	Case 3	Case 4
- Single customer view	- Single customer view	- Single customer view	- Shared Single customer view
- Integrated CRM	- Integrated CRM	- Customer registration/account	- Personalisation and Consistency
- Customer registration/account	- Online appointment scheduling	- Personalisation and Consistency	- Tailored and relevant content to shared retail partner customers
- Customer purchase behaviour segmentation	- Customer registration/account	- Tailored and relevant content to own retail customers	
- Integrated marketing strategy	- Customer purchase behaviour segmentation	- Segmented and individualised marketing campaigns	
- Gradual implementation	- Gradual implementation	- Service personalisation	
- Customer data integration; own instore data and own and third party online data	- Customer data integration; own instore data and own	- Product personalisation	
- Personalisation and Consistency			

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<ul style="list-style-type: none"> <li>- Tailored and relevant content to own retail customers</li> <li>- Segmented marketing campaigns</li> </ul>	<ul style="list-style-type: none"> <li>and third party online data</li> <li>- Consistency across markets</li> <li>- Personalisation and Consistency</li> <li>- Tailored and relevant content to own retail customers</li> <li>- Segmented marketing campaigns</li> <li>- Service personalisation</li> <li>- Product personalisation</li> </ul>
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*Bespoke systems development*

The cases all developed bespoke systems or tailored existing systems to new systems to implement OCR. Case 1 e.g. developed the seamless inventory integration capability together with a solution provider, a bespoke, short term Omni light marketplace solution. The Ship from store service developed further in a second phase to a fully integrated system. Case 1 continuously tailored the new solution to its needs by developing these changes with the systems provider, which provides the systems provider with learnings about retailer’s needs that it can share with others. Case 2 also developed bespoke systems and solutions that could be integrated into their own infrastructure and designed to their particular needs and Case 3 developed a new bespoke app for in store employees. Likewise, Case 4 partnered with a software service integrator to enable shared inventory between the brand and partner retailers.

The Real time inventory systems provider, from the system expert case, discusses how it offers standard solutions but also develops tailored additions on retailer’s request. Often the retailer puts into the contract that the systems provider cannot offer the feature to other retailers and cannot take it to main competitors, specifically large retailers. Smaller retailers are told that what is developed for them will be offered in the standard solution for other retailers to use, which also means that the retailer reaps the benefits of new features developed by and for other smaller retailers. If they are not happy with that, then they will not receive new developments. Hence a give and take situation. The marketing system provider also develops tailored solutions when needed and if there is anything it cannot do it will integrate with whoever can.

The Shopping center discusses how it used an open source to develop its computer vision capabilities but using a solution provider to help develop and implement it to improve the

customer experience. The system provider was a start-up focusing on visual search (i.e. the customer can take a picture from the phone, upload to the E-commerce site and find a similar product) that the shopping mall implemented first and continued to develop the solution with them to create new opportunities with mutual benefits. The Grocery retailer acquired another more experiences OCR retailer to develop the required skills, knowledge and experience faster and cost effectively. The Travel retailer discusses how building a feed between systems in individual markets is needed as opposed to a direct link.

*“You don’t want a system talking directly to a system, you want an integration layer, so basically we want you to give us this information in this way and then we will consume this information in this way. So you create a layer in between that reduces that complexity” (Travel retailer interviewee).*

Our results provide clear empirical evidence for Bespoke systems development as a distinct process to implement OCR which we define as *tailoring new retailing systems with existing legacy systems to enable OCR implementation*. Similarities and differences in the activities identified are summarized in table 6.28.

Table 6.28. Bespoke systems development

<b>Case 1</b>	<b>Case 2</b>	<b>Case 3</b>	<b>Case 4</b>
-Phase 1: Bespoke Omni light marketplace solution	-Bespoke systems	-Bespoke app	-Software service integrator
-Phase 2: New system	-System integration	-System integration	-System integration
-System integration	-Seamless inventory integration	-Seamless inventory integration	-Seamless inventory integration with key retail partners
-Seamless inventory integration			
-Fulfilment automation			

### 6.2.3.3 Evolve microfoundations

The OCR transformation is not an isolated project with a clearly defined beginning and an end, contrastingly OCR adoption requires continuously evolving, changing and adapting to keep up with the dynamism of the industry and changes in customer expectations and purchase behaviour (table 6.5). An *Adopting agile principles* processes is identified to continuously evolve in OCR.



### *Adopting agile principles*

All of the cases foster agility to continuously evolve. Starting with a light approach to OCR enabled Case 1 and 2 to stay agile in relation to future changes and developments of OCR. Case 2 has adopted more agile working mechanisms than before and focuses on staying open minded to changes in customer experiences. Case 3 also embraces an agile mindset to respond to the dynamism of the industry and changes in customers purchase behaviour and claims that the business model enables the retailer to be both agile and flexible and to adapt quickly to customer changes. Case 4 also highlights the importance of an agile supply chain, and a new agile mentality towards the supply chain to gradually evolve and to adopt a mentality that allows failure and learning from failure, as opposed to waiting for the next big thing.

From the System expert case, the Customer service provider discusses how retailers with a large customer base and hundreds of products are not as agile as retailers who are entering the market. Traditional large retailers are driven by cost and maintaining market share, they don't want to lose new customers but also don't want to alienate existing customers by forcing them to adopt the changes. The Retail analyst argues that retailers need to constantly innovate and reinvent themselves to stay in business and stay competitive against new retail start-ups that are entering the market introducing new things like fashion subscription boxes and fashion renting. Being agile and flexible also applies to the systems that the retailers are using. The analyst discusses how British Home Store (BHS) and Austin Reed lost relevance in the marketplace. They had an aging customer base and new younger customers had no interest in the retailers as they didn't know what they stood for and the stores were old fashioned and needed refurbishing. The Single customer view systems provider discusses how their system was built to be open, flexible and adaptable to enable retailers to be agile.

*“You need innovation, Retail now is such a demanding environment. It is not enough just to keep the lights on and keep the business going, you have to be constantly almost reinventing yourself and innovating” (Retail analyst interviewee)*

Agility is also addressed by the Cross-industry case. The automobile retailer explains how, in order to be more agile, the cross functional team meets every other month to discuss the industry evolution and the evolution of specific projects and how it has clearly defined

governance for each OCR project. The shopping center discusses how a new service offered to customers by Google has impacted the center’s online traffic and how it needs to respond by continuing to evolve. The shopping center has responded by renegotiating online commission with its retail partners, by improving the customer online search experience by adding dedicated local online shopping center pages developing computer vision as well as using the center’s experience to sell to retailers, such as a new high technology concept store. The grocery retailer has changed the business values to incorporate agile working and do things quickly. One specific value for example changed from ‘Making things happen’ to ‘Making things happen at pace’ and argues that if retailer do not become agile, they are not competitive enough. The Travel retailer discusses how traditional retailers’ face more challenges to become OCR than younger more agile retailers.

*“We have to be more agile” (Automobile retailer interviewee)*

*“So the biggest one is becoming agile” (Grocery retailer interviewee)*

Our results provide clear empirical evidence for adopting agile principles as a distinct transforming process to continuously evolve in a highly dynamic retail environment. We define adopting agile principles as *fostering agility to enable continuous and quick responses to dynamic industry changes and customer expectations.*

Table 6.29. Adopting agile principles

Case 1	Case 2	Case 3	Case 4
- Agile mindset	- Agile mindset	- Agile mindset	- Agile mindset
- Agile implementation	- Agile working principles	- Agile business model	- Agile supply chain
- Continuously improve	- Agile implementation	- Continuously improve	- Continuously improve
	- Agile decision making		
	- Continuously improve		

### 6.3 Summary

The purpose of this chapter was to present the data analysis of our data. The overall research outcomes are summarized in table 6.30. The table consists of five columns which represent the key constructs of the research framework to provide classification of the specific processes and microfoundations identified, their aggregation into second-order DCs and further into

distinctive higher-order DCs for each cluster of sensing, seizing and transforming, discussed in detail in Chapter 7; Discussion of research findings.

- **DCs:** comprises of sensing, seizing and transforming to maintain evolutionary fitness.
- **Processes:** comprises of bundles of patterned, repeatable and systematic activities deployed to purposefully adapt to changes in a highly dynamic environment.
- **Microfoundations:** comprises of groups of processes for each cluster of sensing, seizing and transforming.
- **Second order DCs:** refers to the aggregation of each microfoundational cluster into a distinct type (nature) of second order sensing, seizing and transforming DC.
- **Higher order DCs:** refers to the aggregation of each second order DC into a distinct type (nature) of higher order sensing, seizing and transforming DC.

Table 6.30 Summary of research findings and theoretical advancement

Micro-foundations	OCR processes	Second-order retailing DCs	Higher-order retailing DCs	Dynamic Retailing DCs
Identify	Monitoring competitors OCR capabilities	Market oriented learning	Adaptive sensing	Retail Sensing
	Monitoring customers purchase expectations and behaviour			
	Monitoring retail industry trends and developments			
	Monitoring OCR performance	Firm oriented learning		
	Learning from retail partners			
	Learning from employees			
	Marketplace transformation scoping	Proactive market learning	Innovative sensing	
Interpret	Defining the OCR opportunity	Knowledge assimilation	Absorptive sensing	
	OCR Marketplace positioning			
Develop	Cross functional collaboration	Collaborative path creation	Collaborative seizing	
	OCR project prioritization			
Select	Customer-centric decision making	Explorative decision making ( <i>advancing Danneels, 2002</i> )	Responsive seizing	
	Data-informed decision making			
	Collaborative decision making			
	Testing and experimenting	Deploying real options ( <i>confirming Day and Schoemaker, 2016</i> )		
	Digital business model adoption			

Prepare	Redesigning sales and incentive metrics	Explorative capability renewal	Ambidextrous transforming	Retail Transforming
	Developing OCR skills			
	Adopting dynamic team collaboration	Exploitative capability renewal		
	Culture redesign			
Implement	Gradual implementation	Operational redesign	Integrative transforming	
	Creating integrated channel operations			
	Improving personalized marketing abilities			
	Bespoke systems development	Resource combination		
Evolve	Adopting agile principles	Agile knowledge management	Continuative transforming	

## DISCUSSION

### 7. Introduction

This chapter discusses the research findings from the case study results summarized in table 6.30 and how they advance existing knowledge about the three DCs clusters of sensing, seizing and transforming (chapter 3). To answer the research questions (section 3.6) this chapter presents the findings separately for each DC cluster: sensing (7.1), seizing (7.2) and transforming (7.3).

#### 7.1 Developing dynamic retail sensing capabilities

Sensing is the first cluster of DCs and refers to the firm's capability to sense the need for reconfiguring and transforming the resource base (Teece and Pisano, 1994) and to shape identified opportunities and threats (Teece, 2007). Prior to our study very limited knowledge exists about how retail firms sense the need to transform. The purpose of this section is to answer research question 1.1. How do retailers sense the need for OCR transformation? and 2.1. What type of second and higher order dynamic sensing capabilities do retailers develop when transforming to OCR? (summarised in table 6.30).

##### *Sensing processes*

We identify nine distinct processes to sense the need for changing existing retailing capabilities, namely; *monitoring competitors OCR capabilities, monitoring customers purchase expectations and behaviour, monitoring retail industry trends and developments, monitoring OCR performance, learning from retail partners, learning from employees, marketplace transformation scoping, defining the OCR opportunity and OCR marketplace*

*positioning*. These findings provide empirical evidence for distinct sensing processes (Teece, 2007) from both external and internal sources. While these findings are not surprising as prior literature has already identified numerous distinct processes for sensing change (e.g. Niehaves et al 2011, Ellonen et al 2011, Kindström et al. 2013, Day and Schoemaker 2016, Warner and Wager, 2019), from both internal and external knowledge sources (Niehaves et al. 2011, Kindström et al., 2013) the results offer some very interesting novel insights. Our study is the first to empirically identify separate sensing stages, in particular, how the identified sensing processes operate as two distinct microfoundational clusters of *Identifying* and *Interpreting*. This finding provides empirical evidence for separate sensing stages which have been proposed in existing literature (Kiesler and Sproull, 1982, Day 1994, Teece 2007) but have not been supported with empirical identification of the distinct processes for each stage.

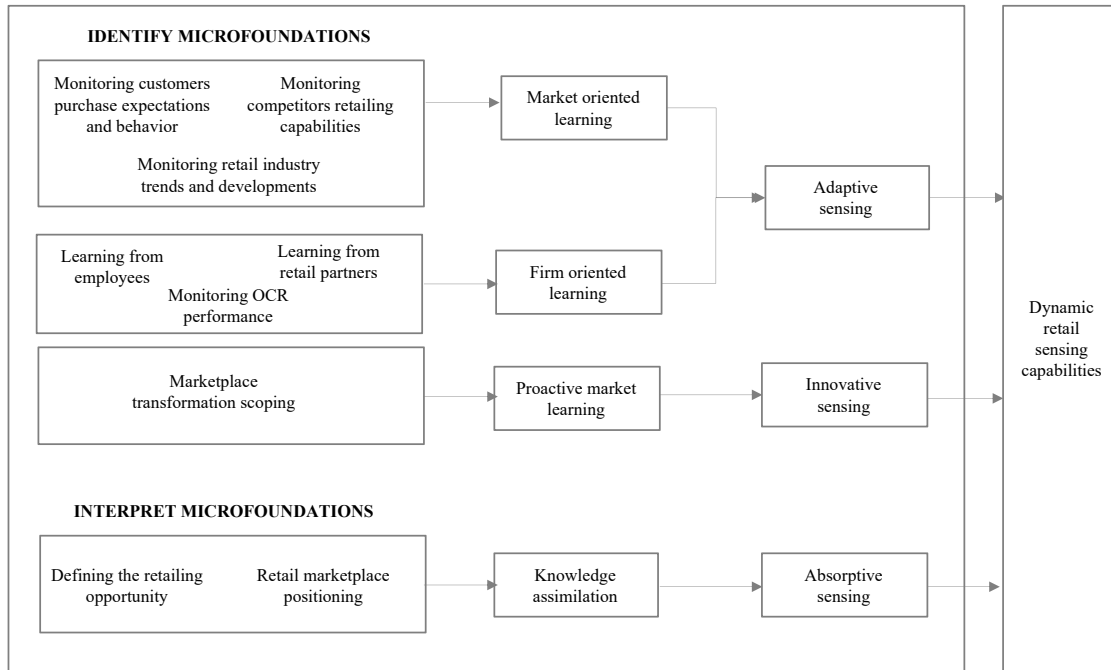
#### *Type of sensing DCs*

Four distinct second-order dynamic retail sensing capabilities are identified in our study, which aggregate from the identified sensing processes, namely; *Market-oriented learning*, *Firm-oriented learning*, *Proactive market learning* and *Knowledge assimilation*. We find that Market-oriented learning and Firm-oriented learning are deployed to identify changes inside an existing retail market and aggregate to a distinct higher-order *Adaptive sensing DC*, Proactive market learning is deployed to identify opportunities outside existing retail market and aggregates to a distinct higher-order *Innovative sensing DC* while Knowledge assimilation is deployed to interpret the new knowledge and aggregates to a distinct higher-order *Absorptive sensing DC*. Overall, our findings are the first to identify how retailers sense changes in a highly dynamic retail environment, the first to identify distinct types of higher-order sensing DCs and the first to identify the sequencing of sensing microfoundations and processes to second and higher-order DCs. We additionally offer empirical evidence to the importance of all three types of DCs, supporting; “*adaptive capability, absorptive capability and innovative capability are the most important component factors of dynamic capabilities*” (Wang and Ahmed, 2007 p. 39).

Emerging from the identified microfoundational clusters, related processes, second- and higher-order capabilities that constitute the backbone of the dynamic retail sensing cluster a new framework emerges; *The Dynamic Retail Sensing Framework* (figure 7.1). The processes

and distinct types of sensing DCs in each microfoundational cluster will now be discussed in turn.

Figure 7.1 The dynamic retail sensing framework



### 7.1.1 Identify microfoundational cluster and DCs

Novel findings of our study show that retail firms deploy distinct processes to identify change inside an existing market (7.1.1.1) and to identify opportunities outside an existing market (7.1.1.2). We furthermore find that these processes aggregate to distinct second-order and higher-order sensing DCs.

#### 7.1.1.1 Identify the need to change inside an existing market

We find both outside-in oriented and inside-out oriented learning processes to identify change inside an existing market to maintain evolutionary fitness. We find *monitoring customers purchase expectations and behaviour, monitoring competitors' OCR capabilities and monitoring retail industry trends and development* as distinct outside-in learning processes that aggregate to a second-order *Market-oriented learning DC*. We additionally find *monitoring OCR performance, learning from employees and learning from retail partners* as distinct inside-out learning processes that aggregate to a as second-order *Reactive market learning DC*. The two second-order DCs further aggregate to a higher-order *Adaptive sensing DC* (table 7.2).

These are novel findings in the retailing literature which to date has mainly found OCR to require collecting customer data and single customer view analysis to identify the need to adapt (Shankar et al., 2011, Rigby, 2011, Forrester, 2014).

Table 7.2 Identify learning processes, activities, second-order DCs and higher-order DC to maintain evolutionary fitness inside existing market

Processes and activities	Second-order Sensing DC	Higher-order Sensing DC
Monitoring competitors OCR capabilities <ul style="list-style-type: none"> <li>- Competition conscious culture</li> <li>- Competitor OCR proposition benchmarking</li> <li>- Customer experience benchmarking</li> </ul> Monitoring customers purchase expectations and behaviour <ul style="list-style-type: none"> <li>- Collect, analyse and distribute trends in customer behaviour</li> <li>- Collect, analyse and distribute customer feedback:</li> <li>- Collect feedback on every touchpoint</li> <li>- Analyse the feedback as a single source: single customer view</li> <li>- Distribute the feedback in a timely manner</li> </ul> Monitoring retail industry trends and developments <ul style="list-style-type: none"> <li>- Attend industry events</li> <li>- Learn from suppliers and vendors</li> <li>- Read industry papers</li> <li>- Listen to word of mouth</li> </ul>	Market oriented learning	Adaptive Sensing
Monitoring OCR performance <ul style="list-style-type: none"> <li>- Calculations OCR cost and time</li> <li>- Monitoring and evaluating in store OCR processes</li> <li>- Collaborate with customer services, merchandising</li> <li>- Evaluate delivery accuracy</li> <li>- Analyse OCR sales, stock, fulfilment, returns, footfall, channel profitability</li> </ul> Learning from retail partners <ul style="list-style-type: none"> <li>- Networking with retailers</li> <li>- Learn from parent company</li> <li>- Learn from sister company</li> <li>- Collaborate with retail partners</li> </ul> Learning from employees <ul style="list-style-type: none"> <li>- Employee feedback</li> <li>- Foster an experimental mindset and sharing of new ideas</li> <li>- Share knowledge between markets</li> <li>- Developing partnerships</li> </ul>	Firm-oriented learning	

### *Market oriented learning*

It has long been acknowledged that market orientation (MO) enables customer focus (Desphandé et al, 1993) and understanding of customer needs (Day, 1994) with the primary goal to satisfy the customer, which requires “*effective use of market data through generating,*

*interpreting and disseminating relevant data within the organisation*” (Homburg et al., 2017, p.395). The current analysis provides clear evidence that MO to sense changing customer needs is indeed pertinent to *identify* change in a highly dynamic and customer centric retail industry. This finding is supported by Teece (2007) who suggests identifying changing customer needs as a distinct sensing microfoundation and existing OCR literature that has found becoming customer centric, as opposed to channel centric, as one of the key requirements to successfully adopt OCR (Shankar et al., 2011, Rigby, 2011). Becoming customer centric requires retailers to identify customers current and future needs (Forrester, 2014), both expressed and latent (CXnetwork, 2019) by collecting and analysing data about customers purchase behaviours, - needs and - expectations (Guillot, 2015) on each step of the purchase journey (Rigby, 2011). This is confirmed by our findings which clearly identifies a shift from channel-, brand- and product orientation to customer orientation.

Our study shows that *monitoring customers purchase expectations and behaviour* requires identifying both expressed customer needs and latent customer needs across all channels and touchpoints and to be analysed as a single source (i.e. single customer view). Supporting the importance for retailers to recognise that not all customers have the same needs (Piotrowicz and Cuthbertson, 2014); similarly industry experts also advise retailers to listen to what the customer wants to express as well as analysing customer’s behavioural data (CXNetwork, 2019). Sensing customers’ expressed needs (e.g. through surveys and concept testing) has been identified as responsive market orientation (RMO) whereas sensing customers’ latent needs (e.g. through monitoring customer complaints, monitoring product returns and monitoring customer’s behaviour) has been identified as proactive market orientation (PMO) (Narver et al, 2004, Jaeger et al, 2016). Our findings offer empirical evidence for the development of both RMO and PMO to identify, understand and better meet customer needs (Day 1994, Day and Moorman 2016) and the importance of both types of capabilities (Narver et al 2004, Voola and O’Cass 2010). RMO entails activities such as qualitative and quantitative customer surveys and focus groups whereas PMO entails e.g. monitoring customers purchase behaviour, monitoring customer complaints, monitoring social media discussions and analysing industry reports about customer needs and expectations.

We find that *monitoring competitors’ OCR capabilities* includes activities such as competition conscious culture, competitor OCR proposition benchmarking and customer experience



benchmarking. Interestingly though, while prior research has claimed competitor analysis and benchmarking activities to be primarily used for innovation rather than imitation (Stopford and Baden-Fuller, 1994), our findings clearly suggest that benchmarking activities are deployed to catch up with the competition. Additionally, our study finds clear evidence that sensing requires *monitoring retail industry trends and developments* which entails activities such as attending industry events, learning from suppliers and vendors, reading industry papers and listening to word of mouth. While existing literature has found analytical processes around customer needs, competitor behaviour and industry developments required to develop MO capabilities (Kohli and Jaworski, 1990, Narver and Slater, 1990, Jaeger et al, 2016) novel findings of our study show that the three sensing processes together aggregate to a distinct second-order *Market oriented learning* DC to identify the need to maintain evolutionary fitness inside an existing market.

Drawing on existing knowledge and our research findings, we define Market-oriented learning as *outside-in, customer-oriented identification of new opportunities to improve the customer experience to maintain evolutionary fitness in a highly dynamic retail environment*.

#### *Firm-oriented learning*

In addition to the MO oriented learning processes, novel findings of our study are the distinct firm-oriented (i.e. inside-out) learning processes identified as; *monitoring OCR performance, learning from employees* and *learning from retail partners*. We find that the three inside-out sensing processes together aggregate to a distinct second-order *Firm-oriented learning* DC (table 7.2).

Our study finds that sensing requires *monitoring OCR performance* to identify opportunities to better meet customer expectations. Advancing distinct internal sensing sources already identified in prior studies, like internal sensing microfoundations (Kindström et al., 2013) and monitoring existing solutions in the own organization (Niehaves et al. 2011). Internal learning processes have additionally been found to include capturing employee ideas (Day 2004, Teece, 2007), enabling feedback from market facing units (O'Reilly and Tushman, 2008) and information distribution (Day 1994). This is confirmed in our study which provides clear evidence that indeed *learning from employees* is required for sensing; this can be achieved by listening to employee feedback, learning from employee experiences, encouraging employees

to share new ideas and sharing knowledge between markets and promoting a culture that supports learning from failure.

We furthermore find that sensing in a dynamic retail environment requires fostering an open-minded culture by *learning from retail partners* that includes identifying best practice, sharing own knowledge and learnings as well as collaborating with key retail partners. This finding supports knowledge sharing and further advances prior literature that has identified knowledge sharing as a requirement for developing distinct alliance capabilities (Helfat et al. 2009).

Drawing on existing knowledge and our research findings, we define Firm-oriented learning as *inside-out identification of existing market opportunities to improve the customer experience maintain evolutionary fitness inside an existing market in a highly dynamic retail environment.*

#### *Adaptive Sensing*

Our study is the first to identify distinct higher-order sensing DCs. We find that the second-order Market-oriented learning and Firm-oriented learning together aggregate to a distinct higher-order *Adaptive sensing* DC to maintain evolutionary fitness inside an existing market in a highly dynamic retail environment (table 7.2). We further advance adaptive marketing capabilities to enable firms to anticipate and respond to change from the outside-in which has been found to require vigilant market learning, adaptive market experimentation and open marketing (Day 2011).

While using existing knowledge known to the market for exploitation purposes has long been acknowledged (Levinthal and March 1993), only recently Adaptation has been identified as a specific DC defined as “*exploitation and deployment of extant knowledge that is new to the organisation*”(Dixon et al. 2014, p.198). Our findings corroborate and add to this new addition to the literature. They indeed show that exploitation of existing knowledge is specifically deployed for sensing opportunities to maintain evolutionary fitness by sensing the need to respond to existing market requirements and catching up with competitors. This finding furthermore provides empirical evidence and advance the notion that successful market followers deploy reactive DCs that is focused on exploitative knowledge acquisition to respond to known problems but also discover new opportunities to meet customer needs inside an existing market (Holsapple and Oh, 2014). Additionally, while prior studies have already suggested learning processes to reinforce knowledge either via passive or active scanning (Day

and Schoemaker, 2016), our findings further suggest that retail learning processes also entail reactive scanning that can identify change that has/or is already happening in the retail environment.

Drawing on existing knowledge and the current research findings, we define Adaptive Sensing as *market-oriented exploitation of new opportunities inside existing market to reactively maintain evolutionary fitness in a highly dynamic retail environment.*

### 7.1.1.2 Identify opportunities outside an existing market

In addition to distinct processes found in our study to identify opportunities inside an existing market, novel findings of our study is *Marketplace transformation scoping* as a distinct process to identify opportunities outside an existing market. We additionally find that the market disruptive oriented process aggregates to a second-order *Proactive market learning* DC and higher-order *Innovative Sensing DC* (table 7.3).

Table 7.3 Identify learning processes, activities, second-order DCs and higher-order DC to maintain evolutionary fitness outside an existing market

Processes and activities	Second-order sensing DCs	Higher-order sensing DCs
Marketplace transformation scoping - Innovation Partnerships - Innovation Collaborations - Innovation lab - Cross-industry industry monitoring - Future marketplace predictions	Proactive market learning	Innovative sensing

#### *Proactive market learning*

There is clear evidence in our study that identifying opportunities to lead and transform the marketplace requires *marketplace transformation scoping* which includes activities such as monitoring OCR developments in different markets and across industries, operating innovation labs, partnership with start-ups and predicting future evolution to explore new innovative opportunities unknown to the market. This finding provides empirical evidence for sensing to entail exploration of new opportunities to include external collaborators that are active in innovative activity (Teece, 2007) and supports the notion that exploration entails “*the pursuit of new knowledge, of things that might come to be known*” (Levinthal and March, 1993, p.198, Dixon et al. 2014).

Prior studies have made a distinction between inside-out oriented exploration to require DCs, outside-in oriented exploration to require AMCs (Day, 2011) and PMO exploration to enable continuous explorative processes (Jaeger et al. 2016). Our findings clearly show that the *marketplace transformation scoping* process is both explorative and proactive and enables retail firms to identify future opportunities that are unknown to the market and have the potential to lead and transform the retail industry. This finding provides empirical evidence to the claim made by Holsapple and Oh (2014) that successful market leaders deploy proactive DCs to identify opportunities outside an existing market that focuses on explorative knowledge acquisition to change an existing market with market features unknown to the firm. Additionally, our findings further advance prior studies which have suggested learning processes to entail either passive scanning to reinforce knowledge or active scanning by developing hypothesis for testing (Day and Schoemaker, 2016) by suggesting that retail learning processes entails proactive scanning to identify change that is unknown to the current retail environment.

Drawing on existing knowledge and our findings, we define Proactive market learning as *market-oriented exploration to identify new innovative opportunities to lead and transform the marketplace inside an existing market in a highly dynamic retail environment.*

#### *Innovative sensing*

While existing literature has recognised innovation (Helfat et al., 2009) and market disruptiveness (Easterby-Smith et al., 2009) as specific types of DCs, our study is the first to identify *Innovative sensing* as a distinct higher-order sensing DC. Advancing prior studies, such as Dixon et al. (2014) who empirically identify innovation as a higher-order DC for exploring new possibilities to gain competitive advantage, Menquc and Augh (2006) who find innovation together with MO to create a DC to produce superior competitive advantage and Jaeger et al., (2016) who claim that PMO serves “*as a foundation for radical innovations and new ways of doing business*” (p.776). While our study corroborates these prior assumptions that innovative learning processes are required to identify new opportunities in a highly dynamic retail environment, it further suggests that these processes can also be deployed to identify new opportunities that can in fact transform and lead the marketplace.

Drawing on existing knowledge and our findings, we define Innovative Sensing as *market-oriented exploration of new opportunities unknown to the existing market to proactively lead and transform in a highly dynamic retail environment.*

In addition to innovation as a distinct higher-order sensing DC, novel findings of our study furthermore suggest that aspiring market leaders need to develop both *Adaptive sensing* (7.2.1) and *Innovative sensing* DCs whereas market followers only need the former. Adaptive sensing is required to identify opportunities that enable catch-up of existing marketplace retailing capabilities to remain competitive whereas Innovative sensing is required to identify unique capabilities to transform the marketplace and lead the industry which may result in competitive advantage. Subsequently we challenge the view that both exploitation and exploration are required to maintain adaptiveness (Floyd and Lane, 2000) and on the contrary further reinforce that both followers and leader can succeed in highly dynamic environments, either by entering the new market created (i.e. follower) or by creating a new market (i.e leader) (Holsapple and Oh, 2014).

### 7.1.2 Interpretation microfoundational cluster and DCs

As mentioned, the current study finds clear evidence of a separate *Interpretation* microfoundational sensing cluster. While existing literature has suggested sensing to include interpretation of new knowledge (Kiesler and Sproull, 1982, Day 1994, Teece, 2007, Noblet et al 2011, Teece 2018) the distinct processes have not yet been identified. We however clearly find distinct interpretation processes as *defining the OCR opportunity* and *OCR marketplace positioning* which aggregate to a distinct second-order *Knowledge assimilation DC* and higher-order *Absorptive Sensing DC* (table 7.4).

Table 7.4 Interpret processes, activities second-order DCs and higher-order DC

Processes and activities	Second-order sensing DC	Higher-order sensing DC
Defining the OCR opportunity - Share the defined OCR opportunity for mutual understanding - Define OCR as a specific ongoing project - Focus on delivering seamless customer experiences	Knowledge Assimilation	Absorptive Sensing
OCR marketplace positioning - Positioning as either follower or a leader in the retail industry or sector. - Match competitors OCR capabilities		

- Differentiate from competitors OCR capabilities		
- Innovate to transform the industry		

*Knowledge assimilation*

*Knowledge assimilation* as a distinct second-order capability required to *interpret* new knowledge (table 7.4) is novel in the retailing literature and reinforces prior research which has found interpreting as a distinct type of organisational learning (Crossan et al. 1999). We further advance existing literature which has identified knowledge assimilation to require interpreting, understanding and formalizing new knowledge (Todorova and Durisin, 2007). We specifically find that knowledge assimilation entails interpretation and distribution of new knowledge within the organisation. This finding challenges the view that knowledge distribution is a distinct process for proactive knowledge activities and knowledge assimilation as a reactive process which entails storing new knowledge (Holsapple and Oh, 2014). Contrastingly, our findings suggest that distribution of new knowledge within the organisation is indeed required for both proactive (i.e. leader) and reactive (i.e. follower) market-oriented interpretation of new knowledge.

We find that *defining the OCR opportunity* process is required to explain the new knowledge identified for a mutual understanding in the organisation which entails activities such as communicating the idea, concept, the definition and the importance of OCR, while *OCR marketplace positioning* process primarily entails positioning the firm as either a follower or a leader in the marketplace. This finding further advances existing knowledge about the distinct strategic types in retail firms already identified as; the defender, the prospector, the analyser and the reactor (Moore, 2005) by suggesting the follower and the leader as two distinct strategic types in retail firms. Our findings clearly suggest that the two interpretation processes enable integrating the new knowledge within the firm. This finding further advances prior research which has found integrating to develop a mutual understanding (Crossan et al. 1999).

While Dixon et al. (2014) have suggested knowledge assimilation as one of the key requirements for the development of a second-order exploitation construct, our findings clearly suggest *Knowledge assimilation* as a distinct second-order sensing DC which aggregates from the identified interpretation processes to enable exploitation of new MO opportunities. Drawing on existing knowledge and our findings, we define Knowledge assimilation as

*market-oriented interpretation and distribution of new knowledge to respond to and to lead change in a highly dynamic retail environment.*

### *Absorptive Sensing*

Our study is the first to identify a distinct higher-order sensing DC to interpret new knowledge. Our study clearly suggests that knowledge assimilation enables developing absorptive capability, supporting prior studies that have found knowledge assimilation capabilities as a prerequisite for developing absorptive capability (Cohen and Levinthal 1990, Zahra and George 2002, Todorova and Durisin 2007). We specifically find that knowledge assimilation as a second-order sensing DC aggregates to a higher-order *Absorptive sensing* DC. While this finding is not surprising as a number of studies have conceptualized AC as a DC (Zahra and George, 2002, Narasimhan, 2006, Todorova and Durisin, 2007, Wang and Ahmed, 2007, Noblet et al., 2011) new findings of our study clearly suggest that Absorptive sensing is particularly required to interpret new knowledge in a highly dynamic retail environment.

It has additionally been identified that ACs are required to combine internal and external knowledge sources and relate them to the firm's resources and capabilities (Wang and Ahmed, 2007). Our results further advance this view as the findings suggest that defining the opportunity entails relating the new knowledge to the firm's existing resources and capabilities whereas marketplace positioning entails relating the new knowledge to the firm's competitive strategy. This finding further justifies that capability development requires examining the firm's strategy (Lichtenhaler and Lichtenhaler, 2009). Drawing on existing knowledge and our findings, we define Absorptive sensing as *market-oriented integration of new knowledge in relation to the firm's resource base and competitive strategy in a highly dynamic retail environment.*

## **7.2 Developing dynamic retail seizing capabilities**

Prior to our study, very little knowledge exists about how retailers respond to identified opportunities (Teece 2007), prepare a response to the opportunity (Helfat et al, 2010), realize the opportunities potential, exploit the opportunity (Kindström et al 2013), develop new ideas (Garud et al 2013) and decide which opportunities to respond to (Teece, 2016). The purpose of this section is to answer research question 1.2. How do retailers seize identified OCR

opportunities? and 2.2. What type of second and higher order Dynamic seizing capabilities do retailers develop when transforming to OCR? (summarized in table 6.30).

### *Seizing processes*

The key processes identified in our study with respect to seizing OCR opportunities are *cross-functional collaboration*, *OCR project prioritization*, *customer-centric decision making*, *data-informed decision making*, *collaborative decision making* and *testing and experimenting*. These are novel findings in the OCR literature. Our findings clarify how new opportunities are addressed (Teece, 2007) in a real life setting by identifying distinct seizing processes. While these findings are not surprising as prior literature has already identified numerous distinct processes for seizing change (e.g. Niehaves et al 2011, Ellonen et al 2011, Kindström et al. 2013, Day and Schoemaker 2016, Warner and Wager, 2019) our results offer some very interesting novel insights. In particular, our findings clearly suggest how these seizing processes operate as two distinct microfoundational clusters of *Developing* and *Selecting*. This finding provides empirical evidence for separate seizing stages which has been indicated in existing literature (Teece 2007, Helfat et al, 2010, Kindström et al 2013, Garud et al 2013) but has not been supported with identification of the distinct processes for each stage.

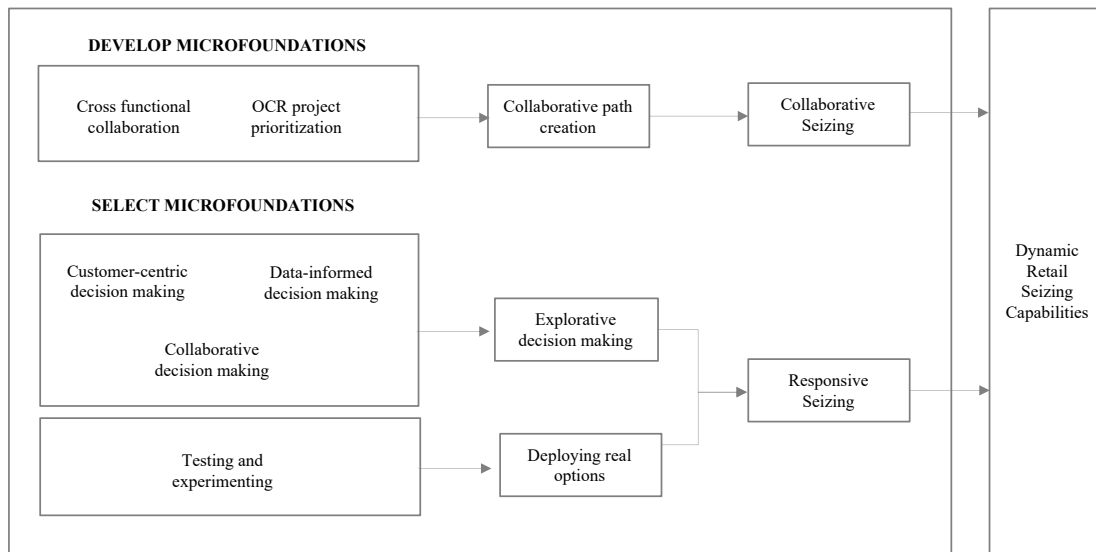
### *Type of seizing DCs*

The specific types of second-order dynamic seizing capabilities identified in our study, which aggregate from the distinct seizing processes, are *Collaborative path creation*, *Explorative decision making* and *Deploying real options*. We find that Collaborative path creation is deployed to develop new opportunities and aggregates to a distinct higher-order *Collaborative seizing* whereas Explorative decision making and Deploying real options are deployed to select which opportunities to pursue and aggregates to a distinct higher-order *Responsive seizing*. Overall, our findings are the first to identify how retailers seize identified opportunities in a highly dynamic retail environment and the first to identify the sequencing of seizing microfoundations and processes to second and higher-order DCs.

Emerging from the identified microfoundational clusters, related processes, second- and first order capabilities that constitute the backbone of the dynamic retail seizing cluster a new framework emerges; *The Dynamic Retail Seizing Framework* (figure 7.2). The processes and distinct types of seizing DCs in each microfoundational cluster will now be discussed in turn.



Figure 7.2 The Dynamic retail seizing framework



### 7.2.1 Developing microfoundational cluster and DCs

As mentioned above, our study finds clear evidence for *Developing* new knowledge as a distinct microfoundational seizing cluster. While existing literature has suggested seizing to entail preparing a response to an identified opportunity (Helfat et al, 2010), evaluating the opportunity (Danneels 2002) and realizing its potential (Kindström et al 2013) as important steps, not much knowledge exists about the distinct processes involved. We identify distinct within firm processes as; *Cross functional collaboration* and *OCR project prioritization*, supporting the development of new ideas as a separate step in the innovation process to include processes within firms (Garud et al., 2013). We additionally find that the two processes aggregate to a distinct second-order *Collaborative path creation* and higher-order *Collaborative Seizing DC* (table 7.5).

Table 7.5 Develop processes, activities, second-order DCs and higher-order DC

Processes and activities	Second-order seizing DC	Higher-order seizing DC
Cross functional collaboration - Break down internal silos by creating a dynamic cross functional OCR team with representatives from key functions - Regular team meetings - Clearly defined team roles and responsibilities. - Foster agile principles to ensure customer focus - Encourage new ways of working	Collaborative Path Creation	Collaborative Seizing
Project prioritization		

<ul style="list-style-type: none"> <li>- Compare existing resources and capabilities to OCR project resources and capabilities requirements</li> <li>- Prioritize individual projects based on a business case</li> <li>- Project plans and roadmaps with clearly defined KPIs.</li> <li>- Ensure a balance between customer needs and business benefits</li> </ul>		
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*Collaborative path creation*

*Collaborative path creation* enables collaborative development of opportunities within the firm (table 7.5). We support prior DCs studies which have identified cooperation as a requirement for developing collaboration capabilities which includes cross-functional teams, collaboration strategy meetings, collaboration workshops and executive steering committee (Allred et al., 2011) and as a baseline seizing capability by developing suitable business processes in a project team consisting of personnel from different departments (Niehaves et al. 2011). Our findings clearly suggest path dependency and project interdependency for developing identified opportunities, supporting path creation as a second-order capability construct (Dixon et al. 2014). Our findings show that OCR adoption is impacted by existing resources and capabilities (Helfat and Lieberman 2002, Teece and Pisano, 1994 and Teece et al 1997) as developing OCR capabilities requires developing new resources and capabilities or changing existing resources and capabilities, evaluation of existing retailing systems and evaluation of OCR system providers. Consequently we support Niehaves et al., (2011) who find new software requirement articulation, evaluation of suitable IT-solutions, creating recommendations for deciding on new IT and creation of a roadmap for IT introduction as distinct processes for seizing IT business change, which we argue to be evidence of path dependency. Additionally, we find that collaboration workshops such as design thinking workshops and customer journey mapping enables customer-centric development of identified opportunities. This finding supports prior literature which has identified cross-functional process development to enable the customer’s voice to be incorporated into the design process (Peng et al. 2013). While Peng et al. (2013) have identified cross-functional cooperation as a routine for developing innovation capabilities, we find cross-functional collaboration for developing *Collaborative path creation* to prepare identified retailing opportunities.

Activities such as breaking down silos between functions, clearly defined team roles and responsibilities, regular team meetings and encouraging new ways of working suggest a *cross functional collaboration* processes. Existing OCR literature has suggested that successful OCR

transformation requires abolishing siloed channel strategies, cross functional partnerships and cross functional buy in (Forrester, 2014, 2018). Our findings clearly suggest that cross functional collaboration to develop identified opportunities enables breaking down silos between departments, fosters cooperation to develop new processes (Peng et al, 2013), fosters elaboration of new ideas (Garud et al. 2013), prevents conflict between functions (Allred et al 2011), fosters team orientation and the ability to solve problems (Stopford and Baden-Fuller, 1994) across functions. Cross functional collaboration enables numerous functions within the firm to work collaboratively on evaluating, designing, planning and preparing the OCR opportunities identified which fosters project buy-in from all functions and enables retailers to address some of the challenges discussed in section 4.4.1 Cross-channel integration, such as channel conflicts (Forrester, 2014), resistance to change (Rigby, 2011), different manager motives (Picot-Coupey et al., 2016), fear of innovations (Shankar et al., 2011) and adapting the organisational mindset (von Briel, 2018). Our findings challenge prior studies that have found team orientation, capability to resolve dilemmas and clear definition of identified problems as obstacles for moving from sensing stage to renewal stage (Stopford and Baden-Fuller, 1994) as we clearly find that cross functional collaboration enables elimination of these obstacles when moving from sensing to seizing. A cross functional collaboration seizing process provides empirical evidence to Teece (2007) who suggests ‘building loyalty and commitment’ as a distinct seizing process. This finding additionally gives support to cross functional collaboration and elimination of functional identification to enable knowledge integration (Verona and Ravasi, 2003).

Creating individual OCR projects, aligning projects with the overall strategy, evaluation of existing resources and capabilities compared to identified OCR project resource and capability requirements, prioritizing projects based on a business case and developing project plans, project roadmaps with specific KPIs clearly suggests a *project prioritization* process. This is supported by prior OCR studies who explain developing a specific OCR strategy (Hansen and Sia, 2015), business case development, defining KPIs, aligning objectives and assigning accountability needed for OCR transformation (Forrester, 2018). Our findings advance existing DCs literature which has identified project selection, project funding and project implementation as microfoundations for developing a second-order path creation capability construct (Dixon et al. 2014). While prior studies have suggested that projects can operate as a way to overcome problems when developing new innovative ideas within firms (Garud et al.,

2013) our findings however clearly suggest that cross functional collaboration together with project prioritization operate as a way to overcome problems when developing new opportunities in a highly dynamic retail environment.

Drawing on existing knowledge and our findings, we define Collaborative path creation as *collaborative development of new paths to encourage cross-functional buy-in of identified opportunities in a highly dynamic environment.*

### *Collaborative seizing*

Our study is the first to identify a distinct higher-order seizing DC to develop new knowledge. We have highlighted that the key driver for OCR transformation is to improve the customer experience across the whole purchase journey. Academic literature has similarly identified improving customer satisfaction as a key driver for developing collaboration capabilities (Allred et al 2011). Aside from Allred et al. (2011) who find that collaboration as a distinct DC can mediate conflicts between individual functions in the firm and the supply chain, not much knowledge exists about dynamic collaboration capabilities. Our findings clearly suggest that collaboration indeed enables elimination of conflicts between functions within the firm as opposed to between firm and supplier as suggested by Allred et al. (2011). In addition to eliminating conflicts between functions within the firm our study shows that collaboration enables responding to identified opportunities (Teece 2007), preparing a response to the opportunity (Helfat et al, 2010), realizing the opportunities potential (Kindström et al 2013) and to develop new ideas (Garud et al 2013). We therefore theorize *Collaborative Seizing* as distinct higher-order seizing DCs which we define as *collaborative development of new innovations to seize identified opportunities in a highly dynamic retail environment.*

### 7.2.2 Selecting microfoundational cluster and DCs

In addition to preparing a response to an identified opportunity (Helfat et al, 2010), seizing also entails deciding which opportunities to respond to (Teece 2007, 2016) which requires capabilities such as explorative decision making (Danneels, 2002) and deploying real options (Day and Schoemaker, 2016). The current analysis provides clear empirical evidence for distinct decision-making processes (Teece, 2007, namely; *customer-centric decision making, data-informed decision making, collaborative decision making and testing and experimenting.* We find that these processes aggregate to distinct second order *Explorative decision making*

DC and *Deploying real options DC*. Additionally, our study is the first to identify a distinct higher-order *Responsive seizing DC* (table 7.6).

Table 7.6. Selection processes, activities, second-order DCs and higher-order DC

Processes and activities	Second-order seizing DC	Higher-order seizing DC
<p>Customer centric decision making</p> <ul style="list-style-type: none"> <li>- Selection of OCR projects that will improve the customer experience.</li> <li>- OCR strategy aligned with overall business goals and KPIs</li> </ul> <p>Data informed decision making</p> <ul style="list-style-type: none"> <li>- Employee experiences, personal feelings, taste and assumptions.</li> <li>- Single source data collection and analysis</li> <li>- Data trending, triangulation and scenario analysis</li> <li>- Catch up and differentiate from the competition</li> <li>- Benchmarking exercises</li> </ul> <p>Collaborative decision making</p> <ul style="list-style-type: none"> <li>- Cross functional project team meetings</li> <li>- Formal and informal team discussions</li> <li>- Customer centric design workshops</li> <li>- Define a long-term OCR vision</li> <li>- Refine existing OCR strategy according to the Vision</li> <li>- Translate the OCR strategy into yearly targets</li> </ul>	Explorative decision making	Responsive seizing
<p>Testing and experimenting</p> <ul style="list-style-type: none"> <li>- Foster an experimental mindset</li> <li>- Trial and error culture</li> </ul>	Deploying real options	

### *Explorative decision making*

It has long been acknowledged that firm's need to explore new opportunities while simultaneously exploiting existing capabilities (March, 1991, O'Reilly III and Tushman, 2008). Integrating and extending existing theory Danneels (2002) finds that selecting new innovation projects to pursue entails either exploitative decision making by making accurate projections or explorative decision making that entails evaluation of the firm's strategy and vision in relation to the opportunity. We find that *Explorative decision making* is indeed pertinent to select which opportunities to respond to in a highly dynamic retail environment (table 7.6). Novel findings of our study show that Explorative decision making operates as a distinct second-order DC to select new opportunities and enables retail firms to ask the right questions to select the right opportunities, as suggested by Danneels (2002).

Firstly, our study finds that the customer is at the center when deciding on new OCR opportunities. This is not surprising as existing OCR literature has identified that OCR decisions need to be based on customer behaviour data (Brynjolfsson et al., 2013), market

responsiveness to rely on “*the retailer’s ability (in relation to competitors) to respond to new and existing customer needs*” (Griffith et al. 2006, p.56) which we find requires a distinct *customer centric decision making* process. Collecting and analysing current customer needs, predicting future customer needs and the customer being a key strategic pillar gives evidence to explorative (Danneels 2002) and innovative (Peng et al 2013) customer centric (Jaeger et al 2016) decision making processes (Day, 2011). Our findings support that responding to customer needs is a continuous explorative process (Jaeger et al 2016) which e.g. entails continuously collecting customer feedback, to “*interact and change with customers*” (Kindström et al 2013, p.1067). This continuous *Customer centric decision making* process aimed at improving the customer experience further supports outside-in oriented selection of new opportunities (Day, 2011).

Secondly, we find that selecting OCR opportunities requires *Data informed decision making*. Supporting and advancing Danneels (2002) findings of explorative decision making, our findings show that data is used to inform the selection of new opportunities to improve the customer experience. It is an educated decision-making process as data is collected and used to make informed decisions about what needs improving, when and how and from numerous sources such as customer data, employee knowledge and experience. While there is much discussion about the use of big data in the retail industry, novel findings of our study show that data is used to inform decision making as opposed to predictive decision making which would precisely predict the best way to improve, which according to Danneels (2002) would require exploitative decision making.

Finally, our study finds collaboratively selecting new OCR opportunities to improve the customer experience which includes activities such as cross functional project team meetings, formal and informal team discussions, collaboratively defining a long-term OCR Vision, collaboratively refining existing OCR strategy according to the vision and translating the OCR strategy into yearly targets. Developing a specific OCR strategy (Hansen and Sia, 2015), cross functional partnerships and cross functional initiatives has been identified as a requirement for adopting OCR (Forrester, 2018), this is indeed supported in our study. We specifically find *collaborative decision-making* as a distinct process to select new opportunities. Our findings additionally further advance existing knowledge about the processes required for developing collaboration capabilities (Allred et al. 2011). The activities identified such as formal and

informal cross-functional OCR team discussions, customer experience (CX) service design workshops and collaborative decision making with key retail partners provides empirical evidence for customer centric and collaborative decision-making processes. This finding further supports and advances the outside-in orientation of MO organisations (Day, 2011). Our findings additionally show that collaborative decision making encourages commitment from functions that are impacted by the new opportunity which supports prior literature that has found team orientation as one of the key attributes for moving from sensing to process renewal (Stopford and Baden-Fuller 1994).

Drawing on existing knowledge and our findings, we define Explorative decision making as *explorative and customer-centric selection of new opportunities in a highly dynamic retail environment*.

#### *Deploying real options*

Prior studies have identified deploying real options as a sub-seizing DCs that requires exploration processes such as small R&D investments, joint ventures and start-ups in order to gain experience prior to larger commitments (Day and Schoemaker, 2016). Our study supports these findings and further advances by identifying a distinct exploration processes of *testing and experimenting*, which entails activities such as qualitative and quantitative pilot testing, A/B testing and detailed testing reports to inform the selection of new identified opportunities (table 7.6).

Our findings specifically show that testing and experimenting deployed to select opportunities and decide how to fully launch and roll them out to all stores and markets is a process of learning through experimenting. While this finding supports prior studies, which have identified learning through experimenting processes to identify alliances (Donada et al 2016) and DCs being about learning (Teece, 2016) to develop ‘situation specific knowledge’ (Eisenhardt and Martin, 2000) our findings distinctly suggest experimental learning to select new opportunities. As such, fostering a key attribute of moving from sensing to process renewal; i.e. the learning capability (Stopford and Baden-Fuller 1994) as an experimental learning process (Zollo and Winter, 2002) and further supporting Day (2011) who argues that experimental learning is required to respond to change.

Drawing on existing knowledge and our findings, we define Deploying real options as *experimental selection of new opportunities in a highly dynamic retail environment*.

### *Responsive seizing*

In addition to Collaborative seizing we identify *Responsive seizing* as a higher-order seizing DC (table 7.6). Responsive seizing is specifically developed and deployed to select new opportunities in a highly dynamic retail environment. This finding advances existing studies supporting market responsiveness as a distinct DC to quickly seize new market opportunities as a response to customers new and existing needs (Griffith et al. 2006). Novel findings of our study show that responsive seizing enables retail firms to select which opportunities to respond to and how to respond to each opportunity (Teece 2007, 2016) from the outside-in (Day, 2011), i.e. customer orientated selection of new opportunities.

Our findings further advance existing RMO and PMO studies (Narver et al 2004, Day 1994, Day and Moorman 2016, Jaeger et al., 2016) by distinctly identifying how the two impact the selection of new opportunities in highly dynamic environments. We specifically support the proactive and reactive nature of DCs (Holsapple and Oh, 2014). We find that firm's adopting a 'follower' orientation to OCR includes reactively selection of opportunities that are known to the market which primarily entails selecting opportunities to respond to customer existing, expressed and latent, needs. Whereas firm's adopting a 'leader' orientation includes proactive selection of opportunities that are new to the market which entails selecting opportunities to disrupt customer needs. Responsive seizing therefore consists of both reactive, proactive and disruptive orientation depending on the firm's positioning, i.e. to lead by transforming the marketplace or to follow by catching up with the marketplace. The reactive, proactive and disruptive orientation finding further advances existing knowledge about the strategic types already identified in the retail industry as; the defender (protective nature), the prospector (constantly redefining the market), the analyser (analytical and prudent adaptive nature) and the reactor (inconsistent in adapting to the market and hence unsuccessful) (Moore, 2005) and contradicts with a reactor orientation being inconsistent and unsuccessful by finding that reactive orientation focuses on select opportunities that are known to the market to respond to customer expressed and latent needs.



Drawing on existing knowledge and our findings, we define Responsive seizing as *market-oriented responsiveness to reactively and proactively seize identified opportunities in a highly dynamic retail environment*.

### **7.3 Developing dynamic retail transforming capabilities**

Transforming is the last cluster of the DC framework (Teece, 2007) and refers to the firm's ability to implement actions (Helfat et al, 2009) to maintain evolutionary fitness by recombining or reconfiguring the firm's resource base (Teece, 2007). The purpose of this section is to answer research question 1.3 How do retailers transform to OCR? and 2.3 What type of second and higher order Dynamic Transforming Capabilities do retailers develop when transforming to OCR? (summarized in table 6.30).

#### *Transforming processes*

The key processes identified in our study for successful OCR transformation are *digital business model adoption, redesigning sales and incentive metrics, developing OCR skills, adopting dynamic team collaboration, culture redesign, gradual implementation, creating integrated operations, improving integrated and personalised marketing abilities, bespoke systems development and adopting agile principles*. These processes provide empirical evidence for distinct resource base alignment processes (Teece, 2007). While this is not surprising as prior literature has already identified numerous transforming processes (e.g. Niehaves et al 2011, Ellonen et al 2011, Kindström et al. 2013, Day and Schoemaker 2016, Donada et al 2016, Warner and Wager, 2019) our study is the first to identify the distinct processes required for successful retailing transformation. Our results additionally offer some interesting and novel theoretical insights. While it has been acknowledged that transforming capabilities operate to enhance, combine, protect and reconfigure the organisation's intangible and tangible assets (Teece, 2007) and deployed to implement actions (Helfat et al, 2010, Thomas et al, 1993) a distinction between specific transforming phases and associated processes has not been identified. Our study, however, clearly suggests how the identified transforming processes operate in three distinct microfoundational transforming clusters to *Prepare, Implement and Evolve*.

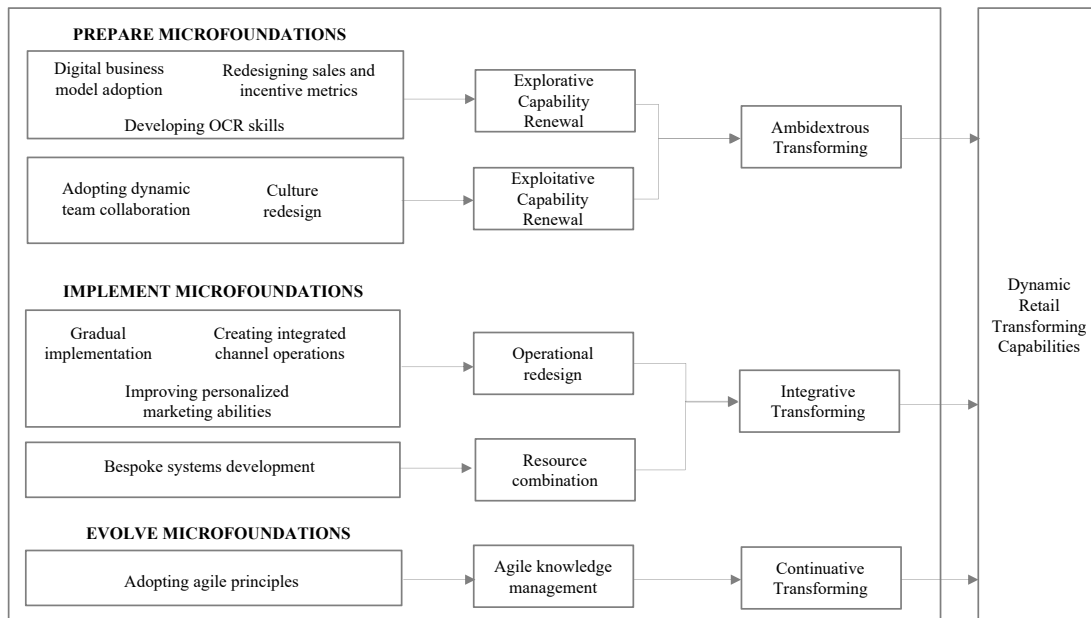
#### *Types of transforming DCs*

Five distinct types of second-order dynamic transforming capabilities are identified in our study, namely; *Explorative capability renewal, Exploitative capability renewal, Operational*

*redesign, Resource combination and Agile knowledge management.* Firstly, we find that Explorative capability renewal and Exploitative capability renewal are deployed to prepare for transformation and aggregate to a distinct higher-order *Ambidextrous transforming*. Secondly, we find that Operational redesign and Resource combination are deployed to implement changes and aggregate to a distinct higher-order *Integrative transforming* DC. Finally we find that Agile knowledge management is deployed to continuously evolve in a highly dynamic retail environment and aggregates to a distinct higher-order *Continuative transforming* DC. Overall, our study is the first to identify how retailers develop dynamic transforming capabilities to maintain evolutionary fitness in a highly dynamic environment and the first to holistically identify the sequencing of transforming microfoundations, processes to second and higher order DCs.

Emerging from the microfoundational clusters identified, related processes, second- and higher-order capabilities that constitute the backbone of the dynamic retail transforming cluster a new framework emerges; *The Dynamic Retail Transforming Framework* (figure 7.3). The processes and distinct types of seizing DCs in each microfoundational cluster will now be discussed in turn.

Figure 7.3 The Dynamic retail transforming framework



### 7.3.1 Preparing microfoundational cluster and DCs

It has long been acknowledged that the resource base of an organisation can be transformed by leveraging existing resources, creating new resources, accessing external resources and releasing resources (Eisenhardt and Martin, 2000). Leveraging existing resources has further been explained as pure resource exploitation that entails creating new linkages between existing and technological and customer abilities whereas creating new resources has been explained as pure resource exploration that entails drawing on existing abilities to create new technological and customer abilities (Danneels, 2002). Our study provides clear evidence for the development of both *Explorative capability renewal* and *Exploitative capability renewal* as distinct second-order DCs developed and deployed for successful OCR transformation. We additionally find that together the two aggregate to a distinct higher-order *Ambidextrous transforming DC* (table 7.8).

Table 7.8 Preparing processes, activities, second-order DCs and higher-order DC

Processes and activities	Second-order transforming DC	Higher-order transforming DC
Digital business model adoption <ul style="list-style-type: none"> <li>- Developing digital commerce capabilities</li> <li>- Insourcing digital operations</li> <li>- Integrating digital operations with existing systems</li> </ul>	Explorative capability renewal	Ambidextrous Transforming
Redesigning sales- and incentive metrics <ul style="list-style-type: none"> <li>- Reconfigure the incentives and bonus system from channel silos to an integrated system</li> <li>- Change store performance targets, from silos to integration</li> <li>- Integrated KPIs</li> <li>- Integrated sales reporting</li> <li>- Tailored incentives and trade terms</li> </ul>		
Developing OCR skills <ul style="list-style-type: none"> <li>- Internal employee training program</li> <li>- Develop training manuals</li> <li>- Internal training sessions</li> <li>- Training soft selling skills</li> <li>- Training sponsors and area specialists</li> <li>- Training workshops</li> <li>- Detail training plans</li> <li>- Hiring new skills</li> <li>- Repeated training</li> <li>- New cross divisional selling skills</li> <li>- Skills to offer new services</li> <li>- Product team training responsibility</li> <li>- Retail partner education</li> <li>- External agency to identify training needs</li> </ul>		
Adopting dynamic team collaboration <ul style="list-style-type: none"> <li>- Fostering dynamic cross-functional team collaborations</li> <li>- Cross functional OCR teams</li> <li>- OCR part of existing job descriptions</li> </ul>		

<ul style="list-style-type: none"> <li>- Managing the change identified as a strategic risk</li> <li>- Clearly defined actions</li> <li>- Work collaboratively with key partner teams</li> </ul>	Exploitative capability renewal	
Culture redesign <ul style="list-style-type: none"> <li>- Communicate OCR purpose to employees</li> <li>- Give employees role context</li> <li>- Collaborative understanding</li> <li>- Communicate OCR vision and goals to employees</li> <li>- Encourage innovation</li> <li>- Forgive mistakes</li> <li>- Agile and efficient implementation</li> <li>- Convince retail partners about new ways of investing</li> </ul>		

### *Explorative Capability Renewal*

The key processes identified in our study with respect to exploring are *digital business model adoption, redesigning sales and incentive metrics* and *developing OCR skills* which entails drawing on existing abilities to create new capabilities retailers. While exploration has been identified as second-order capability constructs (Dixon et al 2014), that entails drawing on existing abilities to create abilities (Danneels 2002), novel findings of our study suggest *Explorative Capability Renewal* as a distinct second-order DC to *prepare* for successful OCR implementation (table 7.8).

We find that *digital business model adoption* sets the foundation for all further OCR implementation steps. While this finding supports existing knowledge about business model (BM) transformation it also provides some very interesting novel insights. First, our study supports prior studies that have found; BM redesign to be part of resource base renewal (O'Reilly III and Tushman 2008), changing existing retailing formats to require redesigning existing BMs (Sorescu et al., 2011), OCR to significantly challenge the retailers BM (Verhoef et al. 2015), BM renewal as the first strategic renewal step in digital transformation (Warner and Wager 2019) and BM renewal as a separate final step in OCR adoption (Cao 2014). Novel findings of our study show that the BM renewal specifically requires *digital BM adoption* in the first step within transformation to *prepare* for successful OCR implementation. We specifically find digital BM adoption to be deployed where digital commerce capabilities need to be developed, i.e. do not exist prior to OCR implementation, whereas where digital commerce capabilities exist prior to OCR implementation, digital business model adoption is not required. Our findings therefore show that digital BM adoption enables retailers who lack internal digital commerce capabilities to reach the overarching strategic goal of adopting OCR. Second, while existing literature has claimed that transforming from product orientation to

ecosystem orientation entails periodic organisational renewal such as redesigning the BM (Schoemaker et al. 2018), novel findings of our study show that transforming from channel orientation to customer orientation entails reshaping the BM from a traditional inside-out, multi-channel oriented BM to an outside-in, seamless customer experience oriented BM. Third, we find that *digital BM adoption* is an explorative process which entails drawing on existing capabilities while creating new digital commerce resources and capabilities for OCR transformation. As such, our study supports and further advances Danneels (2002) who finds that drawing on existing abilities to create new technological and customer abilities to be pure resource exploration and “*a stepping-stone to build a new competence*” (p.1108).

There is clear evidence in our study that OCR implementation entails *redesigning sales- and incentive metrics* which includes activities such as designing new incentives and bonus structures, changing performance targets, integrating sales reporting and integrated KPIs. While this finding supports existing DCs studies that have found successful transformation to require adapting existing incentive structures (Teece 2007, Ellonen et al 2011, Kindström et al. 2013), and OCR studies that have found defining KPIs required to successfully adopt OCR (Forrester 2018), cross-channel integration to require restructuring incentive strategies (Fawcett et al., 2008, Gallino and Moreno, 2014) and developing new incentive structures for sales employees can mitigate store staff resistance to change e.g. by allocating Click and Collect revenues to the respective store (von Briel, 2018), novel findings of our study distinctly find redesigning sales- and incentive metrics as a distinct process vital to *prepare* for OCR implementation.

Additionally, we find *developing new OCR skills* as a distinct preparing process that entails employee training and hiring new employees. While this finding is not surprising as existing DC studies have e.g. found employee learning required to operate new systems and realization of training sessions for new systems as essential baseline DCs for IT transformation (Niehaves et al., 2011), external recruiting of digital natives and leveraging digital knowledge inside the firm for digital transformation (Warner and Wager, 2019), bringing in new skills for successful product and marketing transformation (Day and Schoemaker, 2016). Furthermore our findings support existing OCR studies which have found that adopting OCR requires developing new OCR skills (von Briel, 2018), hiring qualified employees (Rigby, 2011, Shankar et al., 2011) and instore employee training (Piotrowicz and Cuthbertson, 2014, Forrester, 2014) to prevent

barriers for adoption (Piotrowicz and Cuthbertson, 2014) and to address challenges such as channel conflicts (Forrester, 2014), resistance to change (Rigby, 2011), different manager motives (Picot-Coupey et al., 2016), managerial fear of technology innovations (Shankar et al., 2011) and store staff understanding of online processes such as when adopting tablets to enable Order from Store services (Wiener et al., 2018). Novel findings of our study specifically highlight the importance of continuous internal employee training when *preparing* for new OCR operations and services.

Drawing on existing knowledge and our findings, we define Explorative capability renewal as *leveraging existing capabilities while exploring new abilities to prepare for OCR implementation in a highly dynamic retail environment*.

#### *Exploitative capability renewal*

We find two distinct exploitation processes as *adopting dynamic team collaboration* and *culture redesign* that together operate as a distinct second-order *Exploitative capability renewal DC* additionally required to prepare for OCR transformation. Consequently, we support as a second order capability construct (Dixon et al 2014) that entails leveraging existing resources to create new linkages between existing abilities (Danneels 2002),

Our findings challenge the view of prior studies which have found that OCR transformation requires reconfiguring the organisational structure (Rigby, 2011, Hoogveld and Koster, 2016), contrastingly we support decentralization (Teece, 2007). Prior studies have acknowledged that organisational restructuring and redesign (Dutton and Duncan, 1987), organisational separation (Kindström et al., 2013, Donada et al., 2016, Day and Schomeaker, 2016, Warner and Wager, 2019), creating specific service roles on every level of the organisational structure (Kindström et al., 2013) and team-based structures (Day 1994, Warner and Wager, 2019) enables successful transformation. Designing team-based structures has been identified as one of the key activities of a distinct redesigning internal structures microfoundation enabling digital transformation, while cross functional teams operate as internal enablers of digital transformation (Warner and Wager 2019). On the contrary, our findings show that OCR transformation does not entail redesigning a new static organisational structure, organisational separation or redesigning internal structures. Novel findings of our study show that OCR responsibilities are considered as part of existing employee job descriptions and existing

divisions that entails leveraging existing abilities to adopt new *dynamic team collaboration*. This finding is supported by Stopford and Baden-Fuller (1994) who find lateral and vertical team-orientation as a key attribute of entrepreneurial organisations and supports and further advances prior studies which have found OCR to require cross functional collaboration (Hoogveld and Koster, 2016, von Briel, 2018).

Team-orientation has been identified as a common attribute of entrepreneurial organisations (Stopford and Baden-Fuller, 1994), teamwork to bridge formal boundaries and speed response to change (Rosenbloom, 2000), team adoption to foster a balance between centralization and decentralisation of control (O'Reilly and Tushman, 2008) and collaborative approach as the second strategic renewal step for digital transformation (Warner and Wager, 2019). The *dynamic team collaboration* process identified in our study supports these studies and further provides empirical evidence to cospecialization for successful transformation to entail internal combination of assets (Teece, 2007). Our study distinctly identifies that adopting dynamic team collaboration enables internal cospecialization to meet customer expectations for a seamless experience and the development of 'strategic fit' between organisational culture and operations. We clearly show that internal shaping is required for successful OCR transformation which supports internal shaping factors in capability reconfiguration (Donada et al 2016) as opposed to external shaping which has been proposed as a sub-transforming DC (Day and Schoemaker, 2016).

We find *culture redesign* key to prepare for successful OCR implementation, supporting strategic renewal to require entrepreneurial managers to share the strategic vision across the organisation (Teece, 2016) and renewing the organisational culture (Warner and Wager, 2019). Culture redesign entails utilizing new OCR knowledge to redesign the organisational culture from traditional siloed mentality to a new collaborative customer-centric mentality. While leveraging existing resources by creating new linkages between existing abilities has been suggested as pure resource exploitation (Day, 2002) and knowledge acquisition, internalisation and dissemination have been identified as microfoundations enabling exploitation (Dixon et al. 2014), our study finds that culture redesign operates to prevent resistance to change, promotes buy-in of new OCR services and organisational alignment and requires communicating the OCR initiative and individual OCR projects with all employees and explaining the role each

employee plays in the transformation such as explaining new ways of working to store staff, how to use new systems and managing more resources.

Drawing on existing literature and our findings, we define Exploitative Capability Renewal as *utilizing new knowledge to adapt and redesign existing abilities to prepare for successful OCR implementation in a highly dynamic retail environment.*

#### *Ambidextrous Transforming*

We theorize that the two second-order Explorative capability renewal and Exploitative capability renewal DCs aggregate to a distinct higher-order *Ambidextrous Transforming DC* required to prepare for implementation in a highly dynamic retail environment. Supporting the view that strategic renewal to maintain adaptiveness entails “*both exploiting existing competencies and exploring new*” (Floyd and Lane, 2000, p.155). While this findings is not surprising as existing literature has identified Ambidexterity as a distinct DC to simultaneously explore and exploit (O’Reilly and Tushman, 2008), novel findings of our study clearly suggest ambidextrous transforming distinctly required to *prepare* for OCR implementation.

As discussed in this section, our study provides clear empirical evidence for OCR transformation to entail leveraging existing resources as well as creating new resources, while accessing external resources and releasing resources is not identified. We specifically find preparing for OCR implementation to entail exploring a new BM whilst simultaneously exploiting the existing BM. While these findings are not surprising as prior studies have found ambidexterity to entail exploring new business models whilst exploiting the firm’s existing business simultaneously (O’Reilly and Tushman, 2011), novel findings of our study show that ambidexterity in a dynamic retail environment additionally entails simultaneously exploring new incentive structures while exploiting existing incentive structures, developing new OCR skills while simultaneously exploiting existing retailing skills, adopting dynamic team collaboration while simultaneously exploiting existing organisational structure and redesigning the culture by exploiting new knowledge. Teece (2007) has argued that reconfiguring the resource base is needed for long term success whereas exploring and exploiting can provide competitive advantage, our study however finds that exploring and exploiting are pertinent to prepare for long term success.



Drawing on existing knowledge and our findings, we define Ambidextrous transforming as *simultaneous exploration and exploitation of capability renewal to prepare for successful transformation in a highly dynamic retail environment.*

### 7.3.2 Implementing microfoundational cluster and DCs

The second microfoundational cluster identified in our study for OCR retailing transformation is *Implementation*. Existing literature has found that a firm’s ability to align the firm’s resource base (Teece, 2007) and implement actions (Helfat et al, 2010, Thomas et al, 1993) requires distinct capabilities such as strategic renewal (Floyd and Lane, 2000), organisational redesign, external shaping (Day and Schoemaker, 2016) deployment and path creation (Dixon et al 2014). Our study however provides clear evidence for *Operational redesign* and *Resource combination* as distinct second-order capabilities to implement OCR that further aggregate to a higher-order *Integrative transforming DC* (table 7.9).

Table 7.9 Implementing processes, activities, second-order DCs and higher-order DC

Processes and activities	Second-order transforming DC	Higher-order transforming DC
Gradual implementation <ul style="list-style-type: none"> <li>- Step by step implementation</li> <li>- Omni light implementation</li> <li>- Implementation roadmap</li> <li>- Shared fulfilment operations</li> <li>- Shared implementation</li> </ul> Creating integrated channel operations <ul style="list-style-type: none"> <li>- Integrated services</li> <li>- Integrated operations</li> <li>- Integrated inventory</li> </ul> Improving personalised marketing abilities <ul style="list-style-type: none"> <li>- Single Customer View</li> <li>- Integrated CRM</li> <li>- Integrated marketing</li> <li>- Purchase behaviour segmentation</li> <li>- Shared single customer view</li> </ul>	Operational redesign	Integrative Transforming
Bespoke systems development <ul style="list-style-type: none"> <li>- New systems tailored to existing legacy systems</li> <li>- Partners system integration via software service integrator</li> <li>- Leveraging existing resources and capabilities</li> <li>- Acquiring new resources and capabilities</li> </ul>	Resource combination	

#### *Operational redesign*

Successful transformation has been found to entail implementation of new integrated marketing and product development processes driven by customer needs (Rosenbloom, 2000)

and that a retailer's ability to change the process of how new stores have previously been created to be a second-order capability (Zollo and Winter, 2002). We find that to developing new retailing processes entails *gradual implementation, creating integrated channel operations and improving personalised marketing abilities*. Contradictory to existing studies which have found successful product and marketing transformation to require organisational redesign and external shaping as second-order transforming DCs (Day and Schoemaker, 2016) the processes identified in our study clearly suggest *Operational redesign* as a distinct second-order DC pertinent to OCR implementation.

We find clear evidence that *gradual implementation* is deployed to implement new OCR opportunities. This finding is consistent with previous DC research finding implementation of new IT applications with basic functionality (Niehaves et al. 2011) and OCR research which has identified a staged approach for OCR adoption (Picot-Coupey et al., 2016, Cao, 2014, Ashworth et al., 2006). Our study shows that the gradual implementation process includes step by step implementation, OCR light implementation, implementation roadmap, shared fulfilment operations and shared implementation. As such, our findings further reinforce Cao's (2014) identification of distinct implementation stages to include minimal integration, moderate integration (such as Click and Collect) and full integration of all channels providing customers with a seamless shopping environment. Our findings additionally suggest an additional step to entail shared integration between a brand and a retail partner.

Cross-channel integration has been identified as a key feature of OCR that requires redesigning online and offline channel operations to enable retailers to operate seamless services such as click and collect, integrated returns, order from store and ship from store. This finding is supported by existing studies claiming that OCR requires new processes (Piotrowich and Cuthbertson, 2014, Forrester, 2018). Our study is the first to identify *creating integrated channel operations* as a distinct process required to implement new OCR opportunities which I find includes integrated services, integrated operations and integrated inventory. This finding further reinforces integration as one of the key enablers and requirements for OCR implementation (Saghiri et al. 2017). While existing OCR literature has identified several operational challenges related to cross-channel integration such as channel management challenges, inventory management challenges and cross-channel fulfilment challenges (Verhoef et al., 2015, Rigby, 2011, Forrester 2014, Piotrowicz and Cuthbertson, 2014, Briel,

2018, Rosenbloom, 2007, Verhoef et al., 2015). We find that these challenges can be addressed by deploying the processes discussed in section 7.3.1 Preparing for implementation, this includes employee training, sharing the importance of OCR transformation and the role each employee plays in the process. Our research furthermore challenges Cao and Li (2018) who find that cross-channel integration is not impacted by competitors cross-channel integration as our study shows that monitoring competitors OCR capabilities (sensing) indeed impacts OCR transformation.

We find clear evidence for *improving personalised marketing abilities* as a distinct process to provide customers with a personalised experience, which is another key feature of OCR. The activities identified include developing a single customer view (eMarketer, 2017), integrated CRM, integrated marketing, purchase behaviour segmenting and shared single customer view. Our finding is supported by existing OCM literature which has found the final stage for transforming from MC marketing to OCM to entail a single data source of customers purchase history (Berman and Thelen, 2018) which we distinctly find to enable personalised marketing operations. While existing studies have found developing a single customer view required for developing shopper marketing capabilities (Shankar et al., 2011) and enable shopper segmenting (Stolze et al. 2016, Herhausen et al., 2019) we find that developing a single customer view is required for developing personalised OCM abilities. We find that developing personalised shopping experiences (Verhoef et al., 2015, Rigby, 2011, von Briel, 2018, Forrester, 2014, Forrester, 2018) requires integrating the CRM system across online and offline channels to have a single view of customer data on each channel and touchpoint which enables holistically understanding their needs and expectations. This is supported by von Briel (2018) who finds that providing personalised experiences requires real time integration of customer insights across all channels and touchpoints. Numerous online and offline customer data sources available for retailers have been identified (Fisher and Raman, 2018) and categorised as 1<sup>st</sup> party data; the retailer's own data about the customer across services and departments, 2<sup>nd</sup> party data; data shared between retail partners and 3<sup>rd</sup> party data; unstructured data from the marketplace (CXNetwork, 2019). Novel findings of our study suggest that retailers focused on remaining competitive (followers) primarily focus on integrating 1<sup>st</sup> party data whereas retailers aiming to lead and transform the marketplace (leaders) additionally aim to integrate 2<sup>nd</sup> and 3<sup>rd</sup> party data.

Drawing on existing knowledge and our findings, we define Operational Redesign *as gradual implementation of new OCR operations and marketing processes for successful implementation in a highly dynamic retail environment.*

#### *Resource combination*

Existing OCR literature has identified that successful implementation requires new technology (Forrester, 2014), new operational systems, new production systems (Hobkirk, 2015), new technology implementation aligned with the customer, retailer and product manufacturer (Piotrowicz and Cuthbertson, 2014) and cross-channel integration to be impacted by existing information-technology capabilities (Cao and Li, 2018). Our study advances this knowledge by clearly identifying *bespoke systems development* as a distinct process required for OCR which entails new OCR systems adjusted to existing ‘legacy’ systems. As such, OCR implementation requires leveraging existing resources as well as acquiring new resources (Eisenhardt and Martin 2000, Danneels 2002, 2010). Leveraging existing retailing resources also includes using existing physical stores to fulfil online orders (e.g. to operate Click and Collect) whereas acquiring new retailing resources includes linking new systems with existing legacy systems to enable e.g. seamless online and offline payments and inventory integration between online, offline and with retail partners. While existing literature has identified resource reconfiguration, - divestment and -integration as microfoundations for a second-order deployment construct (Dixon et al 2014), novel findings of our study suggest *resource combination* as a distinct second-order DC required to implement OCR. Our study draws on the notion that the ability to build new customer and technological competences is a second order competence (Danneels, 2002).

Drawing on existing knowledge and our findings, we define resource combination *as bespoke integration of new and existing systems for successful implementation in a highly dynamic retail environment.*

#### *Integrative Transforming*

We have established in this section that developing seamless customer experiences requires integration abilities (Saghiri et al., 2017), such as integrating available channels (Piotrowicz and Cuthbertson, 2014), integrating customer insights and integrating new and existing resources and capabilities to abolish siloed MC operations (Forrester, 2014). While Wilson and

Daniel (2007) have identified MC transformation in B2B retail firms to require integrative DCs which entails integration of processes and information technology, organisational structure as well as integration of metrics and rewards, our study clearly suggests that Operational redesign and Resource combination as second-order DCs aggregate to a distinct higher-order *Integrative transforming* DC. Integrative transforming enables retailers to change existing processes of servicing and engaging with customers by redesigning existing operations and combining the firm’s existing retailing resources with new retailing resources. This finding supports the notion that developing new retailing capabilities entails building on existing retailing capabilities (Prasarnphanich and Gillenson, 2003).

Drawing on existing knowledge and our findings, we define Integrative transforming as *integration of new and existing resources and capabilities to implement new opportunities in a highly dynamic retail environment.*

### 7.3.3 Evolve microfoundational cluster and transforming DCs

The final microfoundational cluster identified in our study to transform to OCR is *Evolving*, supporting transforming to require “*continuous alignment and realignment of specific tangible and intangible assets*” (Teece, 2007, p. 1340) and OCR adoption to require continuous improvement (Forrester, 2014), adaptation (von Briel, 2018) and adjustment to customer expectations (Rigby, 2011). We find that evolving requires *adopting agile principles* which aggregates to a second-order *Agile Knowledge management DC* and higher-order *Continuative transforming DC*.

Table 7.10 Evolve processes, activities, second-order DCs and higher-order DC

<b>Processes and activities</b>	<b>Second-order transforming DC</b>	<b>Higher-order transforming DC</b>
Adopting agile principles - Agile mindset - Agile implementation - Agile working principles - Agile decision making - Agile project management - Agile business model - Agile supply chain	Agile knowledge management	Continuative transforming

### *Agile knowledge management*

Fostering an agile mindset has been identified as a key feature of an organisation's transforming capability (Day and Schoemaker, 2016) and transformational agility as one of the organizational challenges related to OCR implementation (Rigby, 2011). Our study clearly identifies *adopting agile principles* as a distinct process to enable continuous evolution in a highly dynamic retail environment which requires fostering an agile mindset, agile working principles, agile business model and agile supply chain. This finding is supported by existing OCR studies that have found OCR adoption to require continuous improvement, agility, long-term commitment (Forrester, 2014), constantly revisiting the OCR strategy (Forrester, 2014), continuous adaptation (von Briel, 2018), continuous adjustment to customer expectations (Rigby, 2011) and continuously monitoring OCR performance (Forrester 2018). Our finding further advances existing research that has identified teamwork to enable agile transformation (Rosenbloom, 2000). Three types of agility have been proposed as customer agility, partnering agility and operational agility (Sambamurthy et al. 2003). Our study finds that fostering an agile mindset and agile working principles enables the development of customer agility, agile supply chain enables operational agility and agile business model enables partnering agility. Additionally, while prior studies have found knowledge management as a key feature of entrepreneurial firms (Stopford and Baden-Fuller, 1994) required to continuously learn, integrate and transfer knowledge (Teece, 2007) and to entail employee knowledge management (Warner and Wagner, 2019) and customer knowledge management (Ellonen et al., 2011), we find that developing knowledge management capabilities requires adopting agile principles and suggests *agile knowledge management* as a distinct second-order DC.

Drawing on existing knowledge and our findings, agile knowledge management is defined as *fostering organisational agility for flexible and quick responses in highly dynamic retail environment*.

### *Continuative transforming*

Our study clearly suggests that Agile knowledge renewal as second-order DCs aggregates to a distinct higher-order *Continuative transforming* DC required for continuous OCR transformation in a highly dynamic retail environment. Our finding support prior studies that have suggested that OCR success requires agile processes to continuously improve (Hoogveld and Koster, 2016). We indeed find that continuous improvement is required to adopt OCR. We

additionally support, continuous improvement as a distinct DC to enable agile improvements to improve firm performance “*a systematic effort to seek out and apply new ways of doing work, i.e. actively and repeatedly making process improvements*” (Anand et al., 2009, p.444). Novel findings of our study show that *Continuative transforming* operates as a distinct higher-order DC that enables retailers to continuously evolve in a highly dynamic environment.

Surprising findings of our study show that OCR adoption is not a single process of transforming the resource base with a defined beginning and an end which suggests *Eternal transformation*. This finding challenges the linear flow proposed by Teece (2007) who claims that sensing guides seizing which guides the transformation. Contrastingly, our findings support Dixon et al. (2014) who suggest “*virtuous circles of reinforcing dynamic capabilities*” (p. 200). We specifically find that a cyclical flow enables retail firms to simultaneously sense, seize and transform.

Drawing on existing knowledge and our findings, we define continuative transforming as *continuous and agile improvements to continuously evolve in a highly dynamic retail environment*.

While we have found that agility plays an important role in OCR transformation we do acknowledge that it is out of the framing of this research but future research can focus on getting a better understanding of agile retailing.

#### **7.4 Summary**

The purpose of this chapter was to present the research findings from the case study results (chapter 6) and how they advance existing knowledge about the three DCs clusters of sensing, seizing and transforming (chapter 3). We advance existing knowledge by identifying how organisational change processes connect with higher order DCs, how retailer firms develop and deploy sensing, seizing and transforming DCs and we confirm the relevance of DCs for evolutionary fitness in a highly dynamic retail environment. In doing so we make several valuable contributions to theory, practice and methodology. We have advanced existing knowledge of developing DCs to maintain evolutionary fitness in a highly dynamic retail environment but the major contribution of our study is *The dynamic retailing capabilities (DRC) framework* (figure 8.1). Subsequently, our research makes significant contributions to

the DCs theory and the retailing literature, practice and methodology, discussed in detail in Chapter 8; Conclusion.



## CONCLUSION

### 8. Introduction

This final chapter starts by reporting key findings of the current study for each of the research questions and the dynamic retailing capabilities (DRC) framework that emerges from the study is presented. Second, the research contribution and knowledge advancement to both the DCs theory and the retailing literature is discussed. Next the practical implications identified are discussed and finally, this chapter concludes by highlighting the key limitations of the current study and suggestions for future research.

#### 8.1 Research summary and theoretical framework

A new era of retailing has emerged which requires retailers to develop seamless retailing capabilities to remain competitive, referred to as Omni channel retailing (OCR). This study has investigated how retailers develop DCs to transform to OCR in a highly dynamic environment. Despite the dynamism of the retail environment, knowledge about DRCs development has been missing which was the practical motivation for this study. A thorough review of existing retailing literature generated the overarching research question; *how do retailers transform in a highly dynamic retail environment?*

The DCs theory was chosen as a theoretical lens as it aims to explain how firms can change existing resources and capabilities to improve evolutionary fitness in a highly dynamic environment (Eisenhardt and Martin, 2000, Teece 2007, Wang and Ahmed, 2007). Following a detailed non-linear review of existing conceptual and empirical literature the theoretical motivation was the lack of empirical studies about DCs with respect to sensing, seizing and transforming and specifically the lack of knowledge about distinct DRCs, processes and microfoundations. Although existing literature has identified several microfoundations for each cluster of sensing, seizing and transforming such as service innovation microfoundations (Kindstrom et al., 2013) and digital transformation microfoundations (Warner and Wager, 2019), the distinct microfoundations for retailing transformation have not yet been identified. Our research is the first to empirically investigate the sensing, seizing and transforming DC clusters in a retailing context and the first to identify the relevance of each DC cluster for successful transformation in a highly dynamic retail industry.

In addition to distinct sensing, seizing and transforming microfoundations, existing DCs literature has identified different types of DCs (e.g. Helfat et al, 2009, Vorhies and Morgan, 2005, Easterby-Smith et al 2009, Allred et al 2011, Teece, 2016) and a hierarchy of DCs (e.g. Winter 2003, Wang and Ahmed 2007, Zollo and Winter 2002, Teece 2007). These studies have however mainly been conceptual, aside from e.g. Dixon et al (2014) who identify the aggregation of distinct microfoundations into second-order DC construct and further into two distinct types of DCs in the oil industry. The authors however do not specifically identify the types of DCs for each cluster of sensing seizing and transforming. While Day and Schoemaker (2016) do identify two distinct types of sub-DCs for each cluster and suggest processes for their development the study focuses on successful transformation in the biofuel and pharmaceutical industry and does not empirically investigate the holistic sequencing in each cluster. Our study contributes to and advances existing knowledge by identifying how organisational change processes connect with higher order DCs, which leading DC scholars are calling for (Schoemaker, et al., 2018).

To develop the research framework, the DCs literature review focused on identifying what constitutes as DCs and how DCs can be developed. The DRCs framework that emerges from our qualitative case study research further advances Teece's (2007) DCs framework which consists of selected microfoundations for each cluster of sensing, seizing and transforming in two ways. First, we identify distinct microfoundational clusters and associated processes for sensing seizing and transforming and second, we identify the distinct types of second-order and higher-order DCs that aggregate from the processes and microfoundations. In doing so our study has three main contributions. First, our study provides empirical evidence for DCs in practice extends. Second, we extend existing literature on sensing, seizing and transforming DCs by empirically investigating its application and sequencing in the retail industry, confirming and advancing existing knowledge about the hierarchy of DCs. Third, the current study is the first to identify the specific microfoundations and distinct types of DCs that lay the foundation for successful transformation through sensing, seizing and transforming. Consequently we contribute to a research gap in existing retailing literature that to date has limited knowledge about the development of DCs for successful retail transformation.

### 8.1.1 Research questions and key findings

To answer the overarching research question of how retail firms transform to OCR in a highly dynamic environment, two primary research questions guided the investigation.

#### RQ.1. How do retail firms develop OCR capabilities?

- 1.1. How do retail firms sense the need for OCR transformation?
- 1.2. How do retail firms seize identified OCR opportunities?
- 1.3. How do retail firms transform to OCR?

#### RQ.2 What type of second and higher order DCs do retail firms need to develop OCR capabilities?

- 2.1. What type of second and higher order Dynamic Sensing Capabilities do retail firms develop when transforming to OCR?
- 2.2. What type of second and higher order Dynamic Seizing Capabilities do retail firms develop when transforming to OCR?
- 2.3. What type of second and higher order Dynamic Transforming Capabilities do retail firms develop when transforming to OCR?

#### 8.1.1.1 How do retail firms develop OCR capabilities?

We specifically identify twenty-five processes in seven distinct microfoundational clusters for adopting OCR. These are novel findings as prior to our research no knowledge exists about the distinct retail sensing, seizing and transforming processes. These are additionally novel findings in the DC literature by providing empirical evidence for separate stages within sensing, seizing and transforming.

#### How do retail firms sense the need for OCR transformation?

Our study is the first to identify distinct retailing processes to sense and shape opportunities and threats (Teece, 2007), to identify the need/opportunity for change (Helfat et al, 2010) and to scan for opportunities (Thomas et al, 1993). We specifically find that *sensing the need for OCR transformation* in a highly dynamic retail environment consists of two microfoundational clusters; (1) *Identify* and (2) *Interpret*, and nine distinct sensing processes. *Identify* change requires retail firms to develop and deploy six sensing processes to identify the need to change inside an existing market and one sensing processes to identify opportunities to lead and

transform the industry. *Interpret* requires two distinct processes providing empirical evidence and further advancing existing literature which has suggested sensing to include interpretation of new knowledge by identifying the distinct processes involved (Kiesler and Sproull, 1982, Day, 1994, Teece, 2007, Noblet et al., 2011, Teece, 2018).

*Identify change inside an existing market – outside in processes*

The retail firms collect data to analyse customer needs, expectations and purchase behaviour as opposed to simply making assumptions which includes internal customer data, such as customer feedback and purchase behaviour as well as external customer information, such as industry reports about consumer behaviour. We find *Monitoring customers purchase expectations and behaviour* as a distinct outside-in sensing process pertinent to *identify* change inside an existing highly dynamic market, strengthening identifying changing customer needs as a distinct sensing process (Day 1994, Teece 2007) and required for customer centric retailing transformation (Shankar et al., 2011, Rigby, 2011, Forrester, 2014, CXnetwork, 2019, Guillot, 2015). We offer further empirical evidence for both RMO and PMO to identify, understand and better meet customer needs (Day 1994, Day and Moorman 2016, CXnetwork, 2019) and the importance of both types of capabilities for sensing changing customer needs and expectations (Narver et al 2004, Voola and O’Cass 2010). Unexpectedly the current findings also show that *monitoring competitors OCR capabilities* and *monitoring retail industry trends and development* as critical outside-in sensing processes to maintain evolutionary fitness inside an existing market.

The retail firms closely *monitor competitors OCR capabilities* to identify the need to change and/or improve existing retailing capabilities which involves monitoring direct competitors, indirect competitors as well as retail partners. The competitors’ propositions, such as purchase, delivery, returns, inventory and loyalty propositions, are monitored to identify how the competition is delivering a seamless customer journey. We find that monitoring competitors OCR capabilities is primarily deployed to identify the need to catch up with the competition, competitor analysis and benchmarking activities deployed primarily to innovate (Stopford and Baden-Fuller, 1994). Finally, the retail firms closely follow industry trends and new retail developments through multiple sources of information. *Monitoring retail industry trends and development* enables the retail firms identify existing changes in the marketplace and to identify new future developments.

### *Identify change inside an existing market – inside out processes*

In addition to the outside-in oriented sensing processes identified, the retail firms additionally sense change from the inside-out. *Monitoring OCR performance, learning from employees and learning from retail partners* are three distinct inside-out sensing processes additionally required to *identify* change inside an existing highly dynamic market. *Monitoring OCR performance* as a distinct inside-out sensing process advances existing knowledge about internal sensing processes (Niehaves et al. 2011, Kindström et al., 2013). Retail firms also sense the need to change by *learning from employees*, such as from employee experiences, by identifying new ideas from employees, through knowledge sharing from employees in different markets and employee feedback. This enables retail firms to identify new and innovative ideas and learn about best practices. Finally, *learning from retail partners* enables retail firms to learn and share knowledge with other retailers which includes retailers owned by the parent company, retail partners and retailers in the market. This finding gives empirical support for knowledge sharing to develop DCs (Helfat et al., 2009).

### *Identify change outside an existing market - processes*

To lead and transform the industry in a highly dynamic retail environment, the current study specifically finds *marketplace transformation scoping* as an innovative learning processes distinctly required to *identify* new opportunities outside an existing market. We find that the process is both explorative and proactive. These are novel findings in the retailing literature. We provide empirical evidence to the notion that successful market leaders deploy proactive DCs to identify opportunities outside an existing market that focuses on explorative knowledge acquisition to change an existing market (Holsapple and Oh, 2014). Additionally, we further advance prior studies which have suggested learning processes to entail either passive scanning to reinforce knowledge or active scanning by developing hypothesis for testing (Day and Schoemaker, 2016) by suggesting proactive scanning to identify change that is unknown to the existing retail environment.

### *Interpret processes*

As highlighted, sensing also includes interpreting new knowledge (Teece, 2007) which we further enrich by identifying distinct processes involved as; *Defining the OCR opportunity and OCR marketplace positioning*.

The retail firms clearly define the OCR opportunities which involved changing the focus from being mainly brand-, product- and channel centric to become customer centric to provide a seamless customer experience. Consequently, the customer experience became a key strategic priority, i.e. to identify opportunities and develop capabilities to meet customer needs across the whole purchase journey. We find that *Defining the OCR opportunity* enables retail firms to explain the new knowledge identified for a mutual understanding in the organisation.

The retail firms also clearly define where they position themselves in the market in relation to OCR, either to remain competitive by focusing on keeping up with the competition or to lead and transform the industry which we find requires *OCR marketplace positioning*. Our findings show that the two interpretation processes enable integrating the new knowledge within the firm which advances prior knowledge about interpreting as a distinct type of organisational learning to explain insights and integrating to develop a mutual understanding (Crossan et al. 1999) by identifying interpretation as a microfoundational sensing cluster that consists of two distinct processes that operate to explain the new OCR opportunity for a mutual understanding.

#### *How do retailers seize identified OCR opportunities?*

There is clear evidence in our study for distinct seizing processes to respond to identified opportunities (Teece, 2007) to prepare a response to the opportunity (Helfat et al, 2010), to realize the opportunities potential, to exploit the opportunity (Kindström et al 2013), to develop new ideas (Garud et al 2013) and to decide which opportunities to respond to (Teece, 2016). We specifically find that seizing identified OCR opportunities in a highly dynamic retail environment consists of two distinct microfoundational clusters; (1) *Develop* and (2) *Select*. These are novel findings by providing empirical evidence for separate seizing stages which has been suggested in existing literature but not been supported with identification of the distinct processes for each stage (Teece 2007, Helfat et al, 2010, Kindström et al 2013, Garud et al 2013). We specifically find that *developing* new opportunities requires two seizing processes and *selecting* which opportunity to pursue requires four distinct seizing processes.

#### *Developing processes*

We specifically identify two distinct within firm development processes as; *Cross functional collaboration* and *OCR project prioritization* that enable collaborative development of new opportunities within the firm. Developing OCR opportunities focuses on improving the

customer experience, providing support to cross-functional process development to enable the customer's voice to be incorporated into the design process (Peng et al. 2013).

*Cross functional collaboration* requires creating dynamic cross functional OCR teams to work collaboratively on evaluating, developing and selecting new OCR opportunities. The cross functional teams have representatives from key functions within the firm but change during the transformation in accordance with the employee capabilities required at each stage. The study particularly discovers that collaboration enables breaking down silos between departments, fosters cooperation to develop new processes (Peng et al, 2013), fosters elaboration of new ideas (Garud et al. 2013), prevents conflict between functions (Allred et al 2011), fosters team orientation and the ability to solve problems (Stopford and Baden-Fuller, 1994) across functions and cross functional buy-in (Forrester, 2018). Subsequently, cross functional collaboration enables retail firms to address some of the key human challenges when moving from sensing to transforming.

*Project prioritization* to develop new OCR opportunities enables aligning new OCR projects with the overall business strategy and to prioritize individual OCR projects to reach a balance between responding to customer expectations and the business's goals and performance. We also find that cross functional collaboration together with project prioritization operate as a way to overcome problems when developing new opportunities in a highly dynamic retail environment.

#### *Selection processes*

In addition to developing new opportunities, the current study finds *Customer centric decision making*, *Data informed decision making*, *Collaborative decision making* and *Testing and experimenting* as distinct processes pertinent to *Select* which opportunities to respond to in a highly dynamic and customer centric retail industry, providing empirical evidence for seizing to entail deciding which opportunities to respond to (Teece 2007, 2016).

*Customer centric decision making* enables retailers to put the customer at the center when deciding which OCR opportunities to respond to and new OCR projects to be selected to improve the customer experience. This enables retail firms to meet customers expressed and latent needs and to elevate the customer experiences. *Data informed decision making* enables

retailers to use data to make informed and educated decisions about which opportunities to improve the customer experience to respond to, when to respond and how to respond as opposed to predictive decision making which would precisely predict the best way to improve. *Collaborative decision making* enables retailers to collaboratively select new OCR opportunities to improve the customer experience by collaboratively evaluating new OCR opportunities which furthermore motivates commitment from key departments involved in the new process. This finding is consistent to prior literature suggesting team orientation as one of the key attributes for moving from sensing to process renewal (Stopford and Baden-Fuller 1994). Finally, we show that retail firms *test and experiment* new ideas before deciding to fully launch and roll them out to all stores and markets supporting experimental learning as a prerequisite for change (Day, 2011).

#### *How do retailers transform to OCR?*

Our study provides clear evidence for distinct transforming processes towards an evolutionary fitness by recombining or reconfiguring the firm's resource base (Teece, 2007). We specifically find that transforming the resource base in a highly dynamic retail environment consists of three distinct microfoundational clusters, namely; (1) *Prepare*, (2) *Implement* and (3) *Evolve* and ten related processes.

#### *Preparing processes*

Five processes are necessitated to *prepare* for OCR implementation which entails leveraging existing resources and creating new resources, namely; *Digital business model adoption*, *Redesigning sales and incentive metrics*, *Developing OCR skills*, *Adopting dynamic team collaboration* and *Culture redesign*.

Enhancing seamless capabilities by insourcing digital operations, creating a seamless mentality and developing new OCR skills sets the foundation for OCR implementation and the overall *Digital business model adoption*. While Cao (2014) argues the development of a new business model to be the fifth and final step in OCR adoption, we find here that digital BM adoption is the first step to prepare for successful OCR transformation (Warner and Wager, 2019). In line to prior research, we show that changing existing retailing formats requires redesigning existing BMs (Sorescu et al., 2011) and part of resource base renewal process (O'Reilly III and Tushman 2008). We specifically find digital BM adoption to be deployed where digital



commerce capabilities are internally absent and need to be developed within the firm, which enables transforming from a channel-oriented BM to a seamless customer experience-oriented BM. Finally, we show that digital BM adoption entails drawing on existing capabilities while creating new digital commerce capabilities (Danneels, 2002).

Implementing OCR requires retail firms to change existing incentive and sales metrics to better manage resistance between in-store and e-commerce employees and to encourage store staff to use any channel to improve the customer experience. The metrics changed from channel siloed to integrated, which requires integrating OCR sales to both online and in store sales KPIs. We specifically find that *Redesigning sales- and incentive metrics* as an important step to prepare for implementation, in line with Ailawadi and Farris (2017) who find that the first step in managing OCR distribution is identifying the specific performance metrics for a retailer and supplier.

The retail firms also *Develop new OCR skills* through training and hiring new employees with required skills. Supporting that adopting OCR requires developing OCR skills (von Briel, 2018), instore employee training (Piotrowicz and Cuthbertson, 2014) and even hiring qualified employees (Shankar et al., 2011, Rigby, 2011). We specifically find continuous internal employee training as a requirement to prepare for new OCR operations and services.

The OCR transformation did not entail developing new specific OCR departments or roles, instead the adoption required developing dynamic cross functional project teams and new OCR project responsibilities added to existing job responsibilities which we specifically find as a distinct process of *Adopting dynamic team collaboration*. With this finding, we challenge the view that OCR transformation requires organisational restructuring (Rigby, 2011) as a step towards successful transformation (Kindström et al. 2013, Donada et al. 2016, Day and Schomeaker 2016, Warner and Wager 2019, Warner and Wager 2019). In contrast we show that OCR responsibilities are considered as part of existing employee job descriptions and existing divisions that entails leveraging existing abilities to adopt new OCR abilities.

Another interesting finding from our study was that the retail firms had to change from a traditional siloed mentality to a new seamless customer-centric mentality to prepare for implementation. The implementation required a mindset and a cultural change in order to

prevent resistance to change and ensure buy-in of new OCR services. Communicating the OCR initiative and individual projects with all employees ensured employee commitment, understanding of importance, buy-in and alignment in the whole organisation as well as explaining the role each employee plays in the overall transformation. While Hoogveld and Koster (2016) suggest reconfiguring the organisational structure, we contrastingly posit for a *Culture redesign* followed by a shared strategic vision across the organisation (Teece, 2016) and a renewed organisational culture (Warner and Wager, 2019).

### *Implementation processes*

The implementation of OCR has been a process of *Gradual implementation* which involved a ‘light touch’ approach to OCR to start the transformation as opposed to waiting until everything had been fully developed. Supporting a ‘trial and error’ approach as argued by Picot-Coupey et al. (2016). Yet while a staged approach is required for OCR adoption (Ashworth et al., 2006, Cao, 2014, Picot-Coupey et al., 2016), shared integration between a brand and a retail partner is also necessitated.

The key operational initiatives to provide customers with seamless journey experiences are enabled by *Creating integrated channel operations*, including seamless research stage operations, seamless purchase stage operations and seamless fulfilment stage operations. In specific we find that cross channel integration entails redesigning online and offline channel operations to enable retailers to operate seamless services such as click and collect, integrated returns, order from store and ship from store, (Piotrowicz and Cuthbertson, 2014).

Adopting OCR entailed moving from mass marketing to more personalised and consistent customer experiences which requires retail firms to develop a single customer view by collecting and integrating data from available channels and touch points. We find that *Improving personalised marketing abilities* requires integrating the CRM system across online and offline channels to collect and analyse customer data from a single source, as also indicated by Berman and Thelen (2018) who find a single data source of customers purchase history one of the key features of reaching a true OCM experience when transforming from MC marketing to OCM. We however additionally find that the retail firms that adopt a follower position to remain competitive primarily focus on integrating 1<sup>st</sup> party data whereas retail firms aiming to lead and transform the marketplace additionally aim to integrate 2<sup>nd</sup> and 3<sup>rd</sup> party data.

New bespoke systems and tailoring existing retailing systems to new systems enabled the retail firms to implement OCR. Acknowledging that successful implementation requires new technology (Forrester, 2014), new available technology systems (Hobkirk, 2015), new experienced OCR technology solution providers (Forrester 2018) and cross-channel integration to be impacted by existing information-technology capabilities (Cao and Li, 2018). We further find that *Bespoke systems development* entails leveraging existing resources as well as acquiring new ones (Danneels, 2002, 2010). Leveraging existing retailing resources includes using existing physical stores to fulfil online orders while acquiring new retailing resources includes linking new systems with existing legacy systems.

#### *Evolve processes*

The retail firms foster agility to continuously evolve and improve their OCR capabilities (Forrester, 2014, Hoogveld and Koster, 2016). We clearly find that *adopting agile principles* enables retail firms to continuously evolve in a highly dynamic retail environment, supporting “*continuous alignment and realignment of specific tangible and intangible assets*” (Teece, 2007, p.1340). Hence, we find that OCR transformation is not a single change process with a defined beginning and end but a continuous, dynamic process.

#### 8.1.1.2 What type of second and higher order DCs do retail firms need to develop OCR capabilities?

A hierarchy of DCs (Wang and Ahmed 2007, Teece 2007, Day 2011, Dixon et al. 2014, Shoemaker and Teece 2016) and retailing capabilities has been proposed in the literature (Zollo and Winter, 2002). Our study finds empirical evidence of both second-order retailing DCs and higher-order retailing DCs, which are novel findings in the retailing literature as prior to our research no knowledge exists about the hierarchy of DRCs in each cluster of sensing, seizing and transforming. We further offer novel empirical insights to advance discussions on second-order DC constructs (Day and Schoemaker, 2016). Answering a call for how organisational change processes connect with higher order sensing, seizing and transforming DCs (Schoemaker et al., 2018), we in fact provide for the first time, distinct higher-order DCs that aggregate from the identified second-order DCs. More specifically, we find that the second-order retailing DCs are capabilities that aggregate from the specific processes to reconfigure the firm’s resource base to successfully transform in a dynamic retail environment whereas the

higher-order retailing DCs that aggregate from the second-order DCs enable continuous evolutionary fitness. Overall, we identify twelve second-order retailing DCs and eight higher-order retailing DCs. Specifically, five second-order retail sensing DCs and three higher-order retail sensing DCs, three second-order retail seizing DCs and two higher-order retail seizing DCs and finally five second-order retail transforming DCs and three higher-order retail transforming DCs.

*What type of second and higher order dynamic sensing capabilities do retailers develop when transforming to OCR?*

To identify and interpret change in a highly dynamic retail environment the current study finds *Market-oriented learning*, *Firm-oriented learning*, *Proactive market learning* and *Knowledge assimilation* as distinct second-order DCs and *Adaptive Sensing* and *Innovative Sensing* as distinct higher-order DCs.

*Identify DCs*

We find that the three outside-in oriented sensing processes of monitoring customers purchase expectations and behaviour, monitoring competitors OCR capabilities and monitoring retail industry trends and development aggregate to a second-order *Market-oriented learning* DC. Market oriented learning is developed and deployed to identify the need to maintain evolutionary fitness inside an existing market, which we define as; *outside-in, customer-oriented identification of new opportunities to improve the customer experience to maintain evolutionary fitness in highly a dynamic environment*. Supporting analytical processes around customer needs, competitor behaviour and industry developments to develop MO capabilities, customer focus and understanding of customer needs (Kohli and Jaworski, 1990, Narver and Slater, 1990, Jaeger et al, 2016, Desphandé et al, 1993, Day, 1994).

*Firm-oriented learning* is identified as a distinct second-order DC that aggregates from the three inside-out oriented sensing processes of monitoring OCR performance, learning from retail partners and learning from employees. We define Firm-oriented learning as: *inside-out identification of existing market opportunities to improve the customer experience to maintain evolutionary fitness inside an existing market in a highly dynamic environment*. Supporting the notion that successful market followers respond to known problems by discovering new opportunities to meet customer needs inside an existing market (Holsapple and Oh, 2014).

Additionally, we find that Market-oriented learning and Firm-oriented learning are deployed to identify changes inside existing retail market and together aggregate to a distinct higher-order *Adaptive sensing* DC. We define Adaptive sensing as *market-oriented exploitation of new opportunities inside an existing market to reactively maintain evolutionary fitness in a highly dynamic environment*. Supporting adaptive marketing capabilities required to anticipate and respond to change (Day 2011). We specifically find that Adaptive sensing is needed to identify change from both the outside-in (i.e. customer-oriented) and from the inside-out (i.e. firm-oriented) to maintain evolutionary fitness inside an existing market in a highly dynamic retail environment by exploiting existing market knowledge.

Unexpectedly we find separate innovative learning processes required to identify new opportunities to transform and lead the marketplace. These are novel findings in the retailing literature. We specifically identify that the marketplace transformation scoping process developed aggregates to a distinct second order *Proactive market learning* DC. Proactive market learning enables retail firms to identify future opportunities that are unknown to the market and have the potential to transform customer experiences and the retail industry. Supporting PMO processes to innovate (Jaeger et al. 2016) and successful market leaders deployment of proactive DCs to identify opportunities to change the existing market (Holsapple and Oh, 2014). We define Proactive market learning as *market-oriented exploration to identify new innovative opportunities to lead and transform the marketplace inside an existing market in a highly dynamic environment*.

In addition to the higher-order Adaptive sensing identified, the current study finds that proactive market learning aggregates to another distinct higher-order *Innovative sensing* DC that enables identification of opportunities to lead and transform an existing market. Supporting innovation (Helfat et al., 2009) and market disruptiveness (Easterby-Smith et al., 2009) as distinct types of DCs, innovation as a higher-order DC to develop unique capabilities (Dixon et al., 2014) and innovation together with MO as a DC to produce superior competitive advantage (Menquc and Augh, 2006). We define Innovative sensing as *market-oriented exploration of new opportunities unknown to the existing market to proactively lead and transform a highly dynamic environment*.

Finally, we find that aspiring market leaders develop both Adaptive sensing and Innovative sensing capabilities whereas market followers only develop the former. Specifically, we find that Adaptive sensing is required to identify opportunities for catching-up with existing marketplace retailing capabilities to remain competitive whereas Innovative sensing requires identification of unique retailing capabilities to transform the marketplace and lead the industry to enable competitive advantage. Subsequently we challenge the view that both exploitation and exploration are required to maintain adaptiveness (Floyd and Lane, 2000) and on the contrary further reinforces that both followers and leader can succeed in highly dynamic environments, either by entering the new market created (i.e. follower) or by creating a new market (i.e leader) (Holsapple and Oh, 2014).

### *Interpret DCs*

To interpret new identified opportunities, our study identifies *Knowledge assimilation* as a distinct second-order DC that aggregates from the two processes of defining the OCR opportunity and OCR marketplace positioning. While this finding is novel in the retailing literature it further advances the notion that sensing includes interpreting new information (Teece, 2007). Our finding additionally reinforces interpreting as a distinct type of organisational learning (Crossan et al. 1999) and knowledge assimilation to entail interpreting, understanding and formalizing new knowledge (Todorova and Durisin, 2007). We specifically find that knowledge assimilation entails interpretation and distribution of new knowledge within the organisation, challenging knowledge distribution as a distinct process for proactive knowledge activities and knowledge assimilation as a reactive process which entails storing new knowledge (Holsapple and Oh, 2014). Contrastingly, the study finds that knowledge assimilation within the organisation enables both proactive (i.e. leader) and reactive (i.e. follower) market-oriented (i.e. customer centric) interpretation of new knowledge. We define Knowledge assimilation as *market- oriented interpretation and distribution of new knowledge to respond to and to lead change in a highly dynamic environment*.

We additionally find that Knowledge assimilation as a second-order DC aggregates to a higher-order *Absorptive sensing* DC which we define as *market-oriented integration of new knowledge in relation to the firm's resource base and competitive strategy in a highly dynamic environment*. We specifically find Absorptive sensing required to interpret new knowledge in a highly dynamic retail environment. These are novel findings in the retailing literature. Our

findings show that Absorptive sensing enables retailers to combine internal and external knowledge sources and relate them to the firm's resources and capabilities (Wang and Ahmed, 2007). Specifically we find that the process of defining the OCR opportunity enables relating the new knowledge to the firm's existing resources and capabilities whereas the marketplace positioning process enables relating the new knowledge to the firm's competitive strategy.

Finally, the current study supports the importance of all three types of capabilities, Adaptive, Innovative and Absorptive DC (Wang and Ahmed, 2007) specifically for sensing.

*What type of second and higher order dynamic seizing capabilities do retailers develop when transforming to OCR?*

To develop and select which opportunities to respond to in a highly dynamic and customer centric retail industry the current study finds *Collaborative path creation*, *Explorative decision making* and *Deploying real options* as distinct second-order DCs and *Collaborative seizing* and *Responsive seizing* as distinct higher-order DCs.

*Develop DCs*

The second-order *Collaborative path creation* identified aggregates from Cross functional collaboration and OCR project prioritisation, which we define as *collaborative development of new paths to encourage cross-functional buy-in of identified opportunities in a highly dynamic environment*. Supporting Dixon et al. (2014) who identify path creation as a second-order capability construct and Peng et al. (2013) who identify cross-functional cooperation as a routine for developing innovation capabilities. We clearly find that developing OCR capabilities is indeed path dependent and impacted by existing resources and capabilities (Helfat and Lieberman 2002, Teece and Pisano, 1994 and Teece et al 1997) as it requires developing new resources and capabilities or changing existing resources and capabilities such as evaluation of existing retailing systems and evaluation of OCR system providers.

We find that Collaborative path creation as a second-order seizing DC aggregates to a higher-order *Collaborative seizing* DC to develop new opportunities, supporting cooperation as a requirement for developing collaboration capabilities (Allred et al., 2011). We specifically find that Collaborative seizing enables retail firms to respond to identified opportunities (Teece 2007), prepare a response to the opportunity (Helfat et al, 2010), realize the opportunities potential (Kindström et al 2013) and to develop new ideas (Garud et al 2013) and elimination

of conflicts between functions within the firm. We define Collaborative seizing as *collaborative development of new innovations to seize identified opportunities in a highly dynamic environment*.

### *Selecting DCs*

To select new OCR opportunities, we specifically find *Explorative decision-making* and *Deploying real options* as distinct second-order seizing DCs. Strengthening deploying real options as a distinct sub-seizing DC (Day and Schoemaker, 2016) and explorative decision making deployed to select new opportunities (Danneels, 2002). Explorative decision-making aggregates from; customer-centric decision making, data informed decision making and collaborative decision making, and enables firms to explore new retailing opportunities while simultaneously exploiting existing retailing capabilities (March, 1991, O'Reilly III and Tushman, 2008). We define Explorative decision-making as *explorative and customer-centric selection of new opportunities in a highly dynamic environment* and Deploying real options as *experimental selection of new opportunities in a highly dynamic environment*.

The current study finds that Explorative decision making and Deploying real options aggregate to a distinct higher-order *Responsive seizing* DC to select new opportunities, supporting market responsiveness to quickly seize new market opportunities as a response to customers new and existing needs (Griffith et al., 2006). We specifically find that Responsive seizing enables customer oriented selection of new opportunities (Teece 2007, 2016, Day, 2011). We define Responsive seizing as *market-oriented responsiveness to reactively and proactively seize identified opportunities in a highly dynamic environment*. Responsive seizing consists of reactive, proactive and disruptive orientation depending on the firm's marketplace positioning, strengthening RMO and PMO (Narver et al 2004, Day 1994, Day and Moorman 2016, Jaeger et al., 2016) and the proactive and reactive nature of DCs (Holsapple and Oh, 2014). Retail firm's adopting a 'follower' position to OCR reactively select opportunities that are known to the market which primarily entails selecting opportunities to respond to customer expressed and latent need whereas firm's adopting a 'leader' position proactively select opportunities that are new to the market which entails selecting opportunities to elevate customer needs.



*What type of second and higher order dynamic transforming capabilities do retailers develop when transforming to OCR?*

Supporting distinct capabilities required (Floyd and Lane 2000, Day and Schoemaker, 2016, Dixon et al 2014) to align the firm's resource base (Teece, 2007) and implement actions (Helfat et al, 2010, Thomas et al, 1993) the current study clearly identifies distinct second and higher-order DCs to prepare, implement and evolve. We specifically identify five second-order DCs as *Explorative capability renewal*, *Exploitative capability renewal*, *Operational redesign*, *Resource combination* and *Agile knowledge management*, and three higher-order DCs as *Ambidextrous transforming*, *Integrative Transforming* and *Continuative Transforming*.

*Prepare DCs*

The *Explorative capability renewal* second-order transforming DC aggregates from Digital business model adoption, Redesigning sales and incentive metrics and Developing OCR and is distinctly developed and deployed to prepare for OCR transformation. We define Explorative capability renewal as *leveraging existing capabilities while exploring new abilities to prepare for OCR implementation in a highly dynamic retail environment*. Supporting exploration as second-order capability constructs (Dixon et al., 2014) and exploration to entail drawing on existing abilities to create new abilities (Danneels, 2002).

We find that *Exploitative capability renewal* is specifically developed and deployed to prepare for OCR transformation and aggregates from adopting dynamic team collaboration and culture redesign, supporting exploitation as second-order capability constructs (Dixon et al., 2014) and exploitation to entail creating new linkages between existing abilities (Danneels, 2002). We define Exploitative capability renewal as *utilizing new knowledge to adapt and redesign existing abilities to prepare for successful OCR implementation in a highly dynamic retail environment*.

Finally, we find that Exploitative capability renewal and Explorative capability renewal aggregate to a distinct higher-order *Ambidextrous transforming DC* to prepare for OCR implementation which we define as *simultaneous exploration and exploitation of capability renewal to prepare for successful transformation in highly dynamic retail environment*. Our study supports Ambidexterity as a distinct DC to simultaneously explore and exploit (O'Reilly

and Tushman, 2008). We however, specifically find that Ambidextrous transforming entails leveraging existing resources as well as creating new resources (Eisenhardt and Martin, 2000), particularly exploring a new BM whilst simultaneously exploiting existing BM (O'Reilly and Tushman, 2011), exploring new incentive structures while exploiting existing incentive structures, developing new OCR skills while simultaneously exploiting existing retailing skills, adopting dynamic team collaboration while simultaneously exploiting existing organisational structure and redesigning the culture by exploiting new knowledge.

### *Implement DCs*

Our research finds *Operational redesign* and *Resource combination* as distinct second-order DCs that aggregate to a higher-order *Integrative transforming* DC specifically developed and deployed to implement OCR. Further supporting the firm's ability to align the firm's resource base (Teece, 2007) and implement actions (Helfat et al, 2010, Thomas et al, 1993) to require distinct capabilities (Floyd and Lane, 2000, Day and Schoemaker, 2016, Dixon et al 2014). We specifically find *Operational redesign* pertinent to OCR implementation, supporting successful transformation to entail implementation of new integrated processes driven by customer needs (Rosenbloom, 2000) and the ability to change the process of traditional operations to be a second-order capability (Zollo and Winter, 2002). We define *Operational Redesign as gradual implementation of new OCR operations and marketing processes for successful implementation in highly dynamic retail environment.*

We additionally find OCR implementation to be impacted by existing retailing systems. *Resource combination* enables retail firms to adjust new OCR systems to existing 'legacy' systems supporting new technology implementation to require alignment with the retailer (Piotrowicz and Cuthbertson, 2014) and cross-channel integration to be impacted by existing information-technology capabilities (Cao and Li, 2018). *Resource combination* entails leveraging existing resources, such as using existing physical stores to fulfil online orders, as well as acquiring new resources such as linking new systems with existing legacy systems to enable e.g. seamless online and offline payments and inventory integration between online, offline and with retail partners (Eisenhardt and Martin, 2000, Danneels, 2002, 2010). We define *Resource combination as bespoke integration of new and existing systems for successful implementation in a highly dynamic retail environment.*

Our study identifies Integration as a distinct higher-order DC specifically developed and deployed to develop seamless customer experience capabilities and implement new OCR opportunities, advancing Integration as a distinct retailing DC (Wilson and Daniel, 2007) and supporting OCR systems development to require integration (Saghiri et al. (2017) and new processes (Forrester, 2018). *Integrative transforming* enables retail firms to change existing processes of servicing and engaging with customers by redesigning existing operations and combining the firm's existing retailing resources with new retailing resources, supporting the notion that developing new retailing capabilities entails building on existing retailing capabilities (Prasarnphanich and Gillenson, 2003). We define Integrative transforming as *integration of new and existing resources and capabilities to implement new opportunities in a highly dynamic retail environment*.

#### *Evolve DCs*

For retail firms to continuously improve and adapt requires a distinct second-order *Agile knowledge management DC* which aggregates from the adopting agile principles process. Supporting OCR adoption to require continuous improvement (Forrester, 2014), adaptation (von Briel, 2018) and adjustment to customer expectations (Rigby, 2011) and transforming to require “*continuous alignment and realignment of specific tangible and intangible assets*” (Teece, 2007, p.1340). Agile knowledge management enables retail firms to continuously learn, integrate and transfer knowledge (Teece, 2007), advancing existing knowledge about employee knowledge management (Warner and Wagner, 2019) and customer knowledge management (Ellonen et al., 2011). We define Agile knowledge management as *fostering organisational agility for flexible and quick responses in a highly dynamic retail environment*.

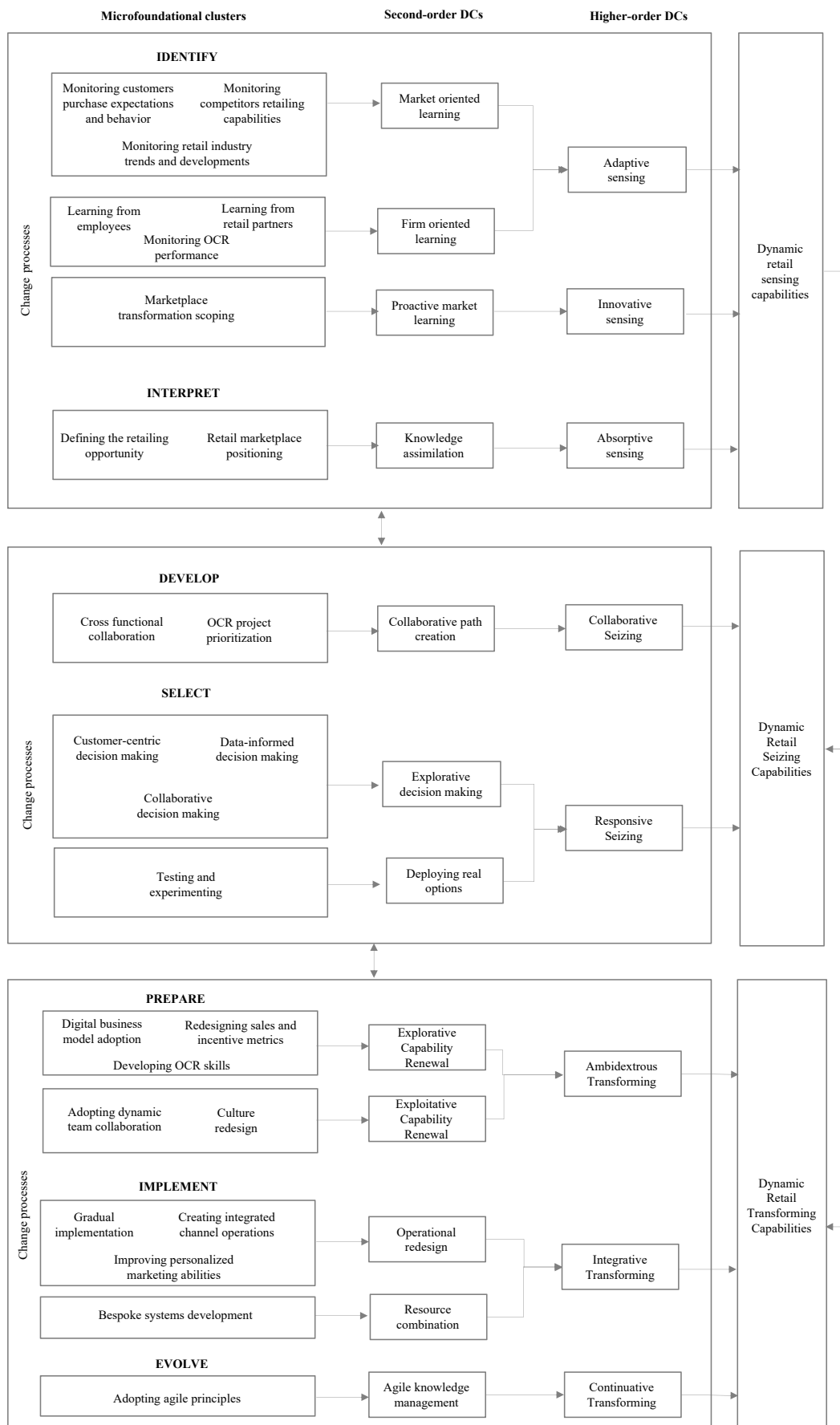
Finally, we find that Agile knowledge management aggregates to a distinct higher-order *Continuative Transforming DC* that enables continuous evolution of OCR capabilities, supporting agile processes to continuously improve required for OCR success (Hoogveld and Koster, 2016) and continuous improvement as a distinct DC to enable agile improvements “*a systematic effort to seek out and apply new ways of doing work, i.e. actively and repeatedly making process improvements*” (Anand et al., 2009, p.444). We define Continuative

Transforming as *continuous and agile improvements to evolve in a highly dynamic retail environment*.

## **8.2 Research contribution**

The current study makes several valuable contributions to theory, practice and methodology. We have advanced existing knowledge of developing sensing, seizing and transforming DCs to maintain evolutionary fitness by empirically identifying how the three clusters are developed to adapt in a highly dynamic retail environment. The major contribution of our study is *The dynamic retailing capabilities (DRC) framework* which is presented in figure 8.1. Subsequently, our research makes significant contributions to the DCs theory and the retailing literature, practice and methodology which are discussed in more detail below.

Figure 8.1 The dynamic retailing capabilities framework



### 8.2.1 DCs theory contribution

The current study makes significant contributions to the DCs theory. Our study is the first to empirically and inductively identify; (1) distinct microfoundational clusters for sensing, seizing and transforming and (2) related processes in each cluster, (3) specific types of sensing, seizing and transforming second-order DCs that aggregate to (4) distinct types of higher-order DCs and finally (5) a hierarchy of sensing, seizing and transforming DCs. Not only did our study meet the research objectives of identifying DCs development for retailing transformation, we have also for the first time applied the DCs framework in a retailing context, showing the applicability of DCs in a previously unexplored setting. We have provided empirical evidence of how retailers develop DCs to transform in a highly dynamic environment, which prior to our study has been missing. Additionally, while a hierarchy of retailing capabilities has been suggested in the literature (Zollo and Winter, 2002), very limited knowledge exists about distinct dynamic retailing capabilities (DRCs). The current study has contributed to this knowledge gaps in the literature by empirically identifying distinct DRCs for successful OCR transformation.

Investigating DCs for retailing transformation also resulted in new and surprising knowledge. We have for the first time advanced Teece's (2007) conceptual DCs framework that originally consists of selected microfoundations for sensing, seizing and transforming DCs to entail distinct microfoundational clusters, related processes, second-order DCs and higher-order DCs for sensing, seizing and transforming. In doing so we have also answered a call for more empirical investigation of how organisational adaption processes connect with higher order DCs (Schoemaker et. al., 2018).

Prior studies have identified numerous alternative processes and microfoundations for developing sensing, seizing and transforming capabilities, in different contexts such as for innovation-related capability transformation (Ellonen et al 2011), information technology enabled transformation (Niehaves et al 2011), service transformation (Kindström et al. 2013), marketing transformation, product transformation (Day and Schoemaker 2016) and digital transformation (Warner and Wager, 2019). However, very few studies have explained the aggregation of each of these sensing, seizing and transforming processes and microfoundations into distinct types of second-order and higher-order DCs.

### *(1) Microfoundational clusters*

Our study is the first to empirically identify distinct microfoundational clusters for sensing, seizing and transforming. This novel finding advances Teece's (2007) framework of selected microfoundations to develop sensing, seizing and transforming DCs. We specifically find that the firm's capability to sense and shape opportunities and threats (Teece, 2007, 2018) involves two microfoundational clusters to *Identify* and *Interpret*, supporting processes to identify the need/opportunity for change (Helfat et al., 2010) and to interpret new knowledge (Kiesler and Sproull, 1982, Day 1994, Teece, 2007, Noblet et al., 2011, Teece, 2018). To seize identified opportunities (Teece, 2007), we find involves two microfoundational clusters to *Develop* and *Select*, advancing seizing to entail preparing a response to the opportunity (Helfat et al., 2010), to realize the opportunities potential, (Kindström et al., 2013) and to decide which opportunities to respond to (Teece, 2016). Finally, our study shows that transforming the firm's capability to transform the resource base in order to implement the changes identified (Teece, 2007) contains three microfoundational clusters to *Prepare*, *Implement* and *Evolve*. We advance existing literature by providing empirical evidence for separate transforming stages which have been suggested but not been empirically supported with identification of the distinct processes for each stage (Teece, 2007, Helfat et al., 2010, Thomas et al., 1993).

### *(2) Processes in each microfoundational clusters*

While our study confirms distinct processes to sense, seize and transform (e.g. Teece, 2007, 2018, Ellonen et al., 2011, Niehaves et al. 2011, Kindström et al., 2013, Warner and Wager, 2019) we are the first to empirically identify distinct processes in each microfoundational cluster for sensing, seizing and transforming.

We identify seven distinct *sensing processes* that are developed and deployed to *identify* the need to change inside an existing market versus identifying opportunities to lead and transform the industry. Prior to our study very limited knowledge exists about the different processes required to respond to dynamic environments (Teece and Pisano, 1994, Eisenhardt and Martin, 2000, Helfat and Lieberman, 2002, Winter, 2003, Helfat and Peteraf, 2003, Teece, 2007, Wang and Ahmed, 2007, Ambrosini et al., 2009, Helfat et al., 2009, Easterby-Smith et al., 2009, Day 2011) versus creating change in the marketplace (Eisenhardt and Martin, 2000, Teece, 2018). While Day (2011) makes a distinction between systematic sensing as inside-out exploration of new opportunities and anticipating change as outside-in exploration of new opportunities, both

focus on responding to change as opposed to leading and elevating the industry. Additionally, we find two distinct processes to *interpret* new information (Kiesler and Sproull, 1982, Day, 1994, Crossan et al., 1999, Teece, 2007) that enable integrating the new knowledge within the firm, supporting interpreting as a distinct type of organisational learning to explain insights and integrating to develop a mutual understanding (Crossan et al., 1999). These are novel findings in the literature.

Novel findings of our study are additionally the distinct *seizing processes* to prepare a response to the opportunity (Helfat et al., 2010) and selecting which opportunities to respond to (Teece, 2007, 2016). We specifically identify two distinct within firm processes to *develop* identified opportunities, supporting within firm processes to develop new ideas (Garuud et al. 2013) and seizing to entail preparing a response to an identified opportunity (Helfat et al, 2010), evaluating the opportunity (Danneels, 2002) and realizing its potential (Kindström et al., 2013). Four distinct processes are identified to *select* which opportunity to respond, supporting outside-in oriented selection of new opportunities (Day, 2011) and explorative decision-making processes (Danneels, 2002). The explorative testing and experimenting process identified to select which opportunities to fully implement supports DCs to require learning (Teece, 2016) to develop ‘situation specific knowledge’ (Eisenhardt and Martin, 2000) and experimental learning to respond to change (Day, 2011).

We confirm distinct processes for transforming the resource base, further advancing distinct *transforming processes* to implement actions (Helfat et al., 2009) to maintain evolutionary fitness by recombining or reconfiguring the firm’s resource base (Teece, 2007). We find that to *prepare* for implementation entails the development of both explorative and exploitative capability renewal processes (Danneels, 2002). Our findings contrast with Day and Schoemaker (2016) who find organisational redesign as a sub-transforming DCs as we find clear evidence for operational redesign as pertinent to OCR *implementation*. Finally, we find that transforming entails distinct processes to continuously *evolve*, supporting “*continuous alignment and realignment of specific tangible and intangible assets*” (Teece, 2007, p.1340). These are novel findings in the literature.

Additionally, our findings confirm that DCs are indeed identifiable strategic- and operational processes that share commonalities between effective firms, i.e. ‘best practice’ (Eisenhardt and



Martin, 2000), that their deployment is firm and industry specific (Wang and Ahmed, 2007) and that experience and the competitive context can make the capability idiosyncratic in its detail (Peteraf et al., 2013).

#### *(3-4) Types of sensing, seizing and transforming DCs*

Our study is the first to inductively identify the specific types of sensing, seizing and transforming second-order DCs that aggregate to distinct types of higher-order DCs. Prior to our study not much knowledge exists about the distinct types of DCs in each cluster of sensing, seizing and transforming aside from the findings of Day and Schoemaker (2016) who identify two types of DCs for each cluster from existing knowledge which they deploy to the biofuel and pharmaceutical industry. We however find twelve distinct types of second-order sensing, seizing and transforming DCs. Our study therefore, empirically supports different types of DCs needed for each cluster (Helfat et al., 2009, Teece, 2016) and different types of DCs to serve different purposes in organisational change (Helfat et al., 2009). We indeed confirm that each cluster consists of distinct second-order DCs and more importantly our findings significantly advance Teece's (2007) conceptual DCs framework by identifying for the first time eight distinct types of higher-order DCs that aggregate from second-order DCs. In doing we explain the sequence of developing sensing, seizing and transforming DCs.

#### *(5) Hierarchy and sequencing in each DC cluster*

The current study is the first to empirically and inductively identify a hierarchy of sensing, seizing and transforming DCs by explaining the sequence of developing sensing, seizing and transforming DCs which consists of seven microfoundational clusters, twenty five processes, twelve second-order DCs and eight higher-order DCs. We therefore confirm a hierarchy of DCs (Wang and Ahmed, 2007, Teece, 2007, Day, 2011, Dixon et al., 2014, Shoemaker and Teece, 2016) and more importantly confirm and advance existing DCs literature that is starting to emerge about second-order capability constructs that aggregate to distinct types of DCs (Dixon et al., 2014) as well as sub-DCs for each cluster of sensing, seizing and transforming (Day and Schoemaker, 2016).

Finally, we confirm the firm's OCs as base-level capabilities, second-order micro-foundational DCs needed to change existing OCs and to develop new OCs, and second-order DCs to be guided by higher order sensing, seizing and transforming DCs (Teece, 2018). We find that

second-order DRCs aggregate from distinct processes to adapt to a dynamic retail environment whereas higher-order DRCs aggregate from second-order DCs to enable continuous evolutionary fitness.

### 8.2.2 Retailing literature contribution

Our study makes several valuable contributions to the retailing literature. By investigating the development of DCs for OCR transformation, we empirically confirm for the first time that adapting in a dynamic retail environment requires developing sensing, seizing and transforming DCs. Our study, has for the first time, applied Teece's (2007) DCs framework in a retailing context, empirically confirming the applicability of DCs in a new setting. In doing so, our study is the first to contribute to the knowledge of how retailers develop sensing, seizing and transforming DCs to adapt to a highly dynamic retail environment and the first to address the relevance of DCs for evolutionary fitness in a retailing context.

The proposed framework (figure 8.1) for developing DRCs provides useful insights and guidance for retail firms struggling to adopt to changes in the dynamic retail environment. Novel and surprising findings of our study additionally show how both followers and leaders can develop sensing, seizing and transforming DCs to maintain evolutionary fitness. Consequently, we furthermore advance the Omni-channel literature by providing the first framework for dynamic OCR transformation.

For sensing the need to change to OCR, we identify both inside-out and outside-in oriented processes. Existing Omni-channel literature has identified analysing customer needs, expectations and purchase behaviour required to adopt OCR (e.g. Shankar et al., 2011, Rigby, 2011, Guillot, 2015) which we advance by identifying two additional outside-in oriented processes for sensing as well as three distinct inside-out oriented sensing processes. We additionally find distinct processes to identify change inside an existing market to remain competitive and processes to identify change outside an existing market to lead and transform the industry. The distinct processes to interpret identified opportunities are also novel findings in the retailing literature.

With regards to seizing, we find distinct processes for retail firms to develop and select which opportunities to respond to. Our findings confirm existing literature that has identified successful OCR transformation to require collaboration (Peng et al., 2013) and cross-functional partnerships and buy-in (Forrester, 2014, 2018). Additionally, we further advance the study by Brynjolfsson et al. (2013) who find that OCR decisions need to be based on customer behaviour data by identifying three additional decision-making processes.

To transform the resource base our study finds distinct processes to prepare, implement and continuously evolve. We advance existing retailing literature that has identified OCR implementation to require BM adoption (Cao, 2014, Verhoef et al., 2015) by identifying digital BM adoption, restructuring incentive strategies and structures (Galliano and Moreno, 2014, von Briel, 2018), developing new OCR skills (Rigby, 2011, Shankar et al., 2011, von Briel, 2018), and employee training (Piotrowics and Cuthbertson, 2014) as a key processes to prepare for implementation. Our study challenges OCR adoption to entail organisational restructuring (Rigby 2011, Hoogveld and Koster 2016) but supports cross-functional collaboration and culture redesign to develop OCR (Hoogveld and Koster, 2016, von Briel, 2018).

Prior to our study, knowledge about distinct dynamic retailing capabilities (DRCs) has been limited. The current study has contributed to this knowledge gap in the literature by empirically and inductively identifying distinct DRCs for successful OCR transformation; specifically, twelve second-order DCs and eight higher-order DCs (figure 8.1).

The current study also makes valuable contributions to existing knowledge concerning a hierarchy of retailing capabilities (Zollo and Winter, 2002). While we confirm a hierarchy of retailing capabilities (Zollo and Winter, 2002) we further advance this knowledge by identifying both second-order and higher-order DRCs. We argue that OCs are existing retailing capabilities, second-order capabilities are abilities to change existing retailing capabilities and higher-order capabilities are abilities to maintain evolutionary fitness.

The current study additionally confirms gradual implementation of OCR (Picot-Coupey et al., 2016, Cao, 2014, Ashworth et al., 2006), integration as a key enabler (Saghiri et al., 2017), implementation to require new processes (Forrester, 2018), new technology and systems (Forrester, 2014, 2018, Hobkirk, 2015) which are impacted by existing capabilities (Cao and

Li, 2018). We also confirm that OCR requires continuous improvements (Forrester, 2014, 2018, Hoogveld and Koster, 2016, von Briel, 2018, Rigby, 2011). Surprising findings of our study show that OCR adoption requires *continuous transformation* which challenges Teece's (2007) linear flow of sensing guiding seizing which guides the transformation. Contrastingly, we support a cyclical flow (Dixon et al., 2014) that enables retail firms to simultaneously sense, seize and transform.

It's worth mentioning that while we propose a DRCs framework (figure 8.1), we do not claim that the microfoundational clusters, processes, second-order and higher-order DCs reported in this study provide a complete list of all possibilities for sensing, seizing and transforming in retailing. However, we have laid an important foundation for future research on the development and deployment of DCs and for retailers wishing to survive and prosper in a dynamic environment.

### 8.2.3 Methodology contribution

Our study has made several valuable contributions to the empirical literature. Prior to our investigation, very few studies have empirically examined the development of sensing, seizing and transforming DCs. As previously mentioned, prior studies have identified numerous alternative processes and microfoundations for developing sensing, seizing and transforming capabilities, in different contexts (Niehaves et al 2011, Kindström et al. 2013, Day and Schoemaker 2016, Warner and Wager, 2019), whereas our study has contributed for the first time to empirical explanation of the development of sensing, seizing and transforming processes in distinct microfoundational clusters and their aggregation into distinct types of second-order and higher-order DCs.

The current study has presented an inductive approach to the study of sensing, seizing and transforming DCs by empirically investigating their development in a real-life setting, which is limited in the literature. Consequently, we have answered a call for more empirical research on DCs, specifically how organisational adaption processes connect with higher order DCs (Schoemaker et. al., 2018).

Additionally, our study has for the first time, deployed multiple case studies and primary data to empirically and inductively investigate Teece's (2007) conceptual framework. Which subsequently has led to the advancement of the original framework (figure 8.1).

Finally, we have made a valuable contribution to the empirical literature by expanding existing DCs development literature into the retailing context.

### **8.3 Practical implications**

The current study has numerous practical implications in addition to the research contribution discussed in the above section. Our study will advance retail industry managers' understanding of the importance, relevance and development of DCs. The DRCs framework will enable retail industry managers' to develop their DRCs, using the DRCs framework that outlines the distinct processes and types of sensing, seizing and transforming DCs for OCR transformation.

Prior to our research, very limited knowledge exists about DCs development in retailing and a holistic framework outlining their development has been missing. The provided DRCs framework (figure 8.1) demonstrates for the first time, how retail industry managers can develop and deploy sensing, seizing and transforming DCs to continuously adapt in a highly dynamic environment. Consequently, the DRCs framework provides retail managers with invaluable insights into the specific processes required for sensing, seizing and transforming and can assist retail managers to better understand the key steps (i.e. microfoundational clusters) and the processes required to change existing retailing capabilities (i.e. OCs) to develop new OCR capabilities.

The distinct processes identified in our study for sensing, seizing and transforming will provide valuable guidance to retail managers, not only to recognise which processes the retail firm needs to develop but also to benchmark the retail firm's existing processes against the processes of the DRCs framework to identify gaps for improvement. The DRCs framework can as such, additionally operate as a tool to evaluate how prepared and well equipped the retail firm is to compete in a highly dynamic environment.

We additionally show how the DRCs framework will be valuable to both followers and leaders in retailing. Developing the DCs outlined in the DRCs framework provides valuable guidance

for retail firms that are in the beginning stages of OCR transformation, providing a step by step approach. The framework is additionally valuable to retail firms that have already begun OCR transformation but have not mapped the change processes required to maintain evolutionary fitness in the long run.

While we do not claim that the distinct processes and steps (i.e. microfoundations) identified in this study for OCR transformation provide a complete list of all possibilities we do argue that the findings lay important foundations for DRCs development, specifically for retail firms wishing to survive and prosper in a dynamic environment. Subsequently, we suggest that retail firms should develop and deploy all of the processes and steps (i.e. microfoundations) identified to build DRCs to survive and grow.

#### **8.4 Research limitations and future research**

The current study was developed to deliver trustworthy insights; however, we do acknowledge that our research has some limitations, specifically regarding the research design.

The literature review process in our study consisted of two phases. The first phase focused on identifying the key features, contributions and the evolution of the DCs theory, while the second phase focused on reviewing existing theory with respect to the development of each construct of sensing, seizing and transforming. As the review processes continued until all of the research data had been analysed, and no new discoveries emerged future research could deploy a systematic review of the literature in each cluster of sensing, seizing and transforming for a more transparent literature search and eventually to reduce the researcher's bias.

We acknowledge several limitations and future research relating to the research context. Firstly, although the research method entailed multiple, in-depth case studies to obtain robust (Yin, 1984, Eisenhardt and Graebner, 2007), accurate and generalizable findings (Eisenhardt and Graebner, 2007) the research data was only collected from large retail firms. Future studies could investigate if there is a difference between developing DRCs in SMEs versus large retail firms by comparing the findings. Second, as the primary cases used in our study consists of established retail firms, future research could explore the DRCs developed by digital native retail firms and online 'pure-play' retailers. Third, as the primary cases all operate in the apparel

industry and the focus of the investigation was to identify the development of OCR capabilities in the retail firms own business (DTC), future research could specifically compare the development and deployment of DRCs to different retail industries, such as grocery, travel, automobile, technology, as well as pure B2B retail firms. These future studies would to enhance our understanding of DRCs, specifically sensing, seizing and transforming in the retail industry.

The fourth research design limitation relates to the qualitative nature of this investigation. Due to the novelty of the phenomenon and lack of academic research, a qualitative research method was adopted for this study to gain deep insights into OCR transformation (Crouch and Pearce, 2013). To further generalize the OCR framework, future research could apply and validate the framework using quantitative methods.

Interesting findings of our study concerns the retail firms' orientation to respond to change. Future research could investigate in more depth the purpose and relationship between inside-out and outside-in processes to respond to change in highly dynamic markets (Day, 2011) and compare to the processes to proactively disrupting the marketplace.

Finally, as our surprising findings challenge Teece (2007) linear flow of sensing guiding seizing which guides the transformation but support a cyclical DCs development flow (Dixon et al., 2014), future research could specifically investigate the process flow of developing sensing, seizing and transforming DCs.

The proposed future research in this section would enhance our understanding of developing sensing, seizing and transforming DCs, specifically in the retail industry, and address generalization issues, between industries and firm size, of the presented study.

## APPENDIX

### 9. Appendix

#### 9.1 Ethics Approval

Research and Innovation Service  
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UNIVERSITY OF LEEDS

Edda Blumenstein  
Leeds University Business School  
University of Leeds  
Leeds, LS2 9JT

**ESSL, Environment and LUBS (AREA) Faculty Research Ethics Committee**  
**University of Leeds**

31 January 2017

Dear Edda

**Title of study:** Omni Channel Retail Strategy in SMEs: Resources and Capabilities for Successful Adoption  
**Ethics reference:** LTLUBS-157

I am pleased to inform you that the above research application has been reviewed by the ESSL, Environment and LUBS (AREA) Faculty Research Ethics Committee and I can confirm a favourable ethical opinion as of the date of this letter. The following documentation was considered:

Document	Version	Date
LTLUBS-157 LightTouchEthicsForm.doc	1	23/01/2017
LTLUBS-157 LightTouchEthicsForm(2).doc	2	26/01/2017

Please notify the committee if you intend to make any amendments to the information in your ethics application as submitted at date of this approval as all changes must receive ethical approval prior to implementation. The amendment form is available at <http://ris.leeds.ac.uk/EthicsAmendment>.

Please note: You are expected to keep a record of all your approved documentation, as well as documents such as sample consent forms, and other documents relating to the study. This should be kept in your study file, which should be readily available for audit purposes. You will be given a two week notice period if your project is to be audited. There is a checklist listing examples of documents to be kept which is available at <http://ris.leeds.ac.uk/EthicsAudits>.

We welcome feedback on your experience of the ethical review process and suggestions for improvement. Please email any comments to [ResearchEthics@leeds.ac.uk](mailto:ResearchEthics@leeds.ac.uk).

Yours sincerely

Victoria Butterworth  
Research Ethics Administrator, Research & Innovation Service  
On behalf of Dr Kahryn Hughes, Chair, [AREA Faculty Research Ethics Committee](#)

CC: Student's supervisor(s)



## 9.2 The Interview Guide

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### Opening

I want to start by thanking you for participating in my PhD research. My research focuses on investigating how retailers transform from single, multi or cross channel retailing to Omni channel retailing. It is an overall analysis of my interviews with different retailers, industry experts and Omni channel solution providers. Hence each participant will contribute to an overall understanding of the process of implementing Omni channel retailing.

The interview is very informal and conversational and there are no right or wrong answers, I am here to learn from your knowledge and experience. All the information you share with me is confidential and cannot be traced back to you or the firm.

Before we start, I would like your permission to record our conversation so that I do not have to write down everything you say and instead concentrate on our conversation, is that ok?

### Background questions

1. You are the (*position*) here at (*firm name*). Can you start by telling me how long you have been with (*firm name*) and your key responsibilities?
  - a) How do you define Omni channel?
  
2. Has (*firm name*) started implementing Omni channel retailing?
  - a) When did it begin?
  - b) Can you rate the current level of Omni Channel retailing, if 1 is still testing (very low) and 7 is complete implementation (very high)? Why?
  - c) What are your Omni channel responsibilities?

– Probing ideas: Can you tell me more about that? Can you explain that in more detail? What do you mean by that?

### Pre-Implementation Phase

3. Why has (*firm name*) implemented Omni channel retailing?
  - a) Can you explain these in more detail? (Fully understand each pressure mentioned)
  - b) Can you give me an example of these (each) pressures?
  - c) Can you priorities these pressures from 1-7, where 1 is very little influence on adopting Omni channel retailing and 7 is very high influence? Why?

– Probe as needed to fully understand the pressures/drivers for adopting OCR: Can you tell me more about that? Why is that important? What do you mean by that? What happened next? How did you deal with that?
  
4. Can you explain how (*the firm*) spotted the opportunities and/or threats for Omni channel retailing?

- a) How does (*the firm*) scan, search and explore across technologies and markets? Can you give me an example?
  - b) How does (*the firm*) invest in research? Can you give me an example?
  - c) How does (*the firm*) understand demand, evolution of industries and markets, and supplier and competitor responses? Can you give me an example?
  - d) How does (*the firm*) understand how technologies will evolve and how and when competitors, suppliers and customers will respond? Can you give me an example?
- Probe as needed to fully understand how the firm developed the capacity to identify (senses) the need or opportunity for change, i.e. how it monitors market changes: Can you tell me more about that? Can you explain that in more detail? What happened next? Why is that important? What do you mean by that? How did you deal with that? Can you explain why?

#### Preparation Phase

- 5. How has (*the firm*) prepared for Omni channel implementation, such as by developing new products, processes, or services?
    - a) How does (*the firm*) select technologies and product attributes? Can you give me an example?
    - b) How does (*the firm*) select where and when to invest? Can you give me an example?
    - c) How does (*the firm*) design and select a viable business model? Can you give me an example?
- Probe as needed to fully understand how the firm developed capabilities to prepare (seizes) a response to identified needs and/or opportunities; Can you tell me more about that? Can you explain that in more detail? Why is that important? What happened next? What do you mean by that? How did you deal with that? Can you explain why?

#### Implementation Phase

- 6. After identifying the need for Omni channel retailing and preparing for adoption, can you explain;
    - a) How (*the firm*) has adjusted its organisational structure? How? Can you give me an example?
    - b) If implementation has required specific employee and leadership skills? Why? How did the firm deal with that? Can you give me an example?
    - c) If implementation has involved business model redesign? Why? How did the firm deal with that? Can you give me an example?
    - d) If implementation has involved asset realignment? Why? How did the firm deal with that? Can you give me an example?
    - e) If implementation has involved revamping of routines? Why? How did the firm deal with that? Can you give me an example?
- Probe as needed to fully understand how the firm has altered its resource base; developed capabilities to implement actions (transform) to respond to identified needs and/or opportunities:

Can you tell me more about that? Can you explain that in more detail? Why is that important? What happened next? What do you mean by that? How did you deal with that? Can you explain why?

7. How will (*the firm*) continue to adapt/modify its Omni channel retailing to meet market changes?
  - a) What happens next? How?
  - b) Who is involved (what employees), both externally and internally?
    - Probe as needed to fully understand how the firm will continue to develop its Omni channel retailing capabilities to meet market changes, e.g. in technology, customer behaviour and customer expectations): Can you give me an example? Can you tell me more about that? Can you explain that in more detail? Why is that important? What do you mean by that? What happened next? How did you deal with that?
  
8. Can you think of any challenges or issues that (*the firm*) has faced whilst implementing Omni channel retailing?
  - a) How did (*the firm*) deal with that?
  - b) Can you give me an example?
    - Probe as needed to fully understand the key challenges of implementation: Can you tell me more about that? Can you explain that in more detail? Why is that important? What do you mean by that? What happened next?
  
9. Can you explain when a retailer has become truly Omni channel?
  - a) Basic entry level vs. – Can you give me an example?
  - b) Complete/full implementation – Can you give me a benchmark example?
    - Probe as needed to fully understand when OCR is considered to be successfully implemented: Can you tell me more about that? Can you explain that in more detail? What do you mean by that?

#### Performance Measures

10. How does (*the firm*) measure Omni channel retailing performance?
  - a) Can you give me an example?
  - b) Why is that important?
    - Probe as needed to fully understand the key Omni Channel performance indicators (KPIs) such as increased customer loyalty and satisfaction, technological leadership, improved economic performance such as cost savings and sales growth, operational efficiency and access to new markets and customers: Can you tell me more about that? Can you explain that in more detail? What do you mean by that?

### Wrap up

Thank you so much for taking the time to speak with me, you have been really helpful. If there is anything that needs further clarification, can I be in touch again? Do you think there is anyone else here at (*the firm*) that I might be able to interview? As a follow up, I will send you a report when I have collected and analysed all my data. Hopefully it will be of some use to you. If you have any questions or need any further information in the meantime do not hesitate to be in touch.

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## 9.3 NVivo coding development

### NVivo coding

The screenshot shows the NVivo 12 interface. On the left, a tree view shows the project structure under 'CODES' > 'Nodes' > '1. NVivo coding, Familiarizing myself with the data' > 'Thematic template analysis' > '1. Sensing - Pink'. The main pane on the right displays a list of code instances with columns for Name, Files, References, Created On, and Created By.

Name	Files	Refer...	Created On	Created...
▼ CAPABILITIES	5	519	22 Feb 2018 at 12:55	EB
Dynamic capabilities	5	495	22 Feb 2018 at 12:56	EB
Operational capabilities	5	24	22 Feb 2018 at 12:...	EB
stock	4	16	15 Mar 2018 at 14:12	EB
Channels	1	1	19 Mar 2018 at 13:23	EB
Resources	1	1	6 Mar 2018 at 14:35	EB
Processes	0	0	8 Mar 2018 at 14:39	EB
▼ DRIVERS	5	60	22 Feb 2018 at 12:19	EB
External drivers	5	34	7 Mar 2018 at 10:04	EB
Internal drivers	3	9	7 Mar 2018 at 10:04	EB
differentiation.	1	3	5 Mar 2018 at 14:38	EB
▼ RESOURCES	5	41	15 Mar 2018 at 14:22	EB
Systems	3	16	22 Feb 2018 at 12:17	EB
Tangible resources_ass...	3	9	15 Mar 2018 at 14:24	EB
Intangible resources_a...	3	8	15 Mar 2018 at 14:24	EB
ecomm	2	7	15 Mar 2018 at 14:24	EB
multi channel	1	1	15 Mar 2018 at 14:24	EB
Customer data	0	0	15 Mar 2018 at 14:24	EB
Employees	0	0	15 Mar 2018 at 14:24	EB
New channels	0	0	15 Mar 2018 at 14:24	EB
Technology	0	0	15 Mar 2018 at 14:24	EB
▼ OUTCOME PERFORMANCE	5	17	22 Feb 2018 at 12:30	EB
return on investment	4	9	22 Feb 2018 at 12:29	EB
conversion optimization	2	4	22 Feb 2018 at 12:02	EB
speed	1	1	22 Feb 2018 at 13:...	EB
Successful implementa...	1	1	15 Mar 2018 at 13:47	EB
▼ CHALLENGES	5	16	22 Feb 2018 at 13:...	EB
Human challenges	5	9	7 Mar 2018 at 11:27	EB
Management challenges	4	9	7 Mar 2018 at 11:31	EB
Technology challenges	2	4	7 Mar 2018 at 11:16	EB
Data analysis	2	3	7 Mar 2018 at 11:13	EB
Organisational challen...	1	2	7 Mar 2018 at 11:29	EB
▼ OMNI CHANNEL	3	7	22 Feb 2018 at 12:04	EB
OC definition	5	24	22 Feb 2018 at 12:11	EB
OC performance	4	22	22 Feb 2018 at 14:...	EB
Fulfilment	3	17	5 Mar 2018 at 10:33	EB
OC team	5	17	22 Feb 2018 at 12:...	EB
Omni light	5	16	22 Feb 2018 at 12:42	EB
OC strategy	2	14	5 Mar 2018 at 12:35	EB
OC features	3	8	22 Feb 2018 at 12:01	EB
OC follower	3	8	5 Mar 2018 at 11:33	EB

### A priori – Deductive coding

The screenshot shows the NVivo 12 interface with a detailed list of deductive codes. The tree view on the left shows 'CODES' > 'Nodes' > '1. NVivo coding, Familiarizing myself with the data' > 'Thematic template analysis' > '1. Sensing - Pink'. The main pane on the right displays a list of code instances with columns for Name, Files, References, Created On, and Created By.

Name	Files	Refer...	Created On	Created...
1.1 Sensing opportunities (codes that e...	1	18	27 Apr 2018 at 10:03	EB
1.1.2 New Data_Information	1	9	27 Apr 2018 at 10:05	EB
1.1.2.2 Customer purchase behavior	1	4	27 Apr 2018 at 10:38	EB
1.1.2.3 Physical observations	1	3	27 Apr 2018 at 10:59	EB
1.1.2.1 Customer feedback	1	1	27 Apr 2018 at 10:29	EB
1.1.8 Team work (working together e...	1	3	27 Apr 2018 at 10:34	EB
1.1.10 Channel Integration	1	1	27 Apr 2018 at 12:49	EB
1.1.4 New trends in the market	1	1	27 Apr 2018 at 10:05	EB
1.1.5 Technological advances (techno...	1	1	27 Apr 2018 at 10:05	EB
1.1.6 Business performance (new op...	1	1	27 Apr 2018 at 10:06	EB
1.1.7 Operational performance (new...	1	1	27 Apr 2018 at 10:06	EB
1.1.9 Customer needs	1	1	27 Apr 2018 at 10:42	EB
1.1.1 Changes in customer behaviour	0	0	27 Apr 2018 at 10:04	EB
1.1.1.1 New data (for sensing oppo...	0	0	27 Apr 2018 at 10:04	EB
1.1.1.2 New analytical methods	0	0	27 Apr 2018 at 10:04	EB
1.1.3 New analytical methods	0	0	27 Apr 2018 at 10:05	EB
1.1.3.1 New reports	0	0	27 Apr 2018 at 10:45	EB
1.3 Identify the need for change (codes...	1	15	27 Apr 2018 at 10:09	EB
1.3.2 Operational pressure (efficienc...	1	7	27 Apr 2018 at 10:14	EB
1.3.2.1 Efficiency (the need to be...	1	3	27 Apr 2018 at 10:26	EB
1.3.2.2 Processes (the need to cha...	1	3	27 Apr 2018 at 10:26	EB
1.3.2.3 Inventory integration	1	1	27 Apr 2018 at 11:11	EB
1.3.6 New data	1	2	27 Apr 2018 at 10:31	EB
1.1.2.1 Customer feedback	1	1	27 Apr 2018 at 10:31	EB
1.3.5.2 Customer needs	1	1	27 Apr 2018 at 10:54	EB
1.3.7 New analytical methods	1	2	27 Apr 2018 at 10:46	EB
1.3.6.1 New reports (new reporting...	1	1	27 Apr 2018 at 10:46	EB
1.3.8 Physical observations	1	2	27 Apr 2018 at 10:59	EB
1.3.7.1 Customer service	1	1	27 Apr 2018 at 11:01	EB
1.3.1 Economical pressure (the need...	1	1	27 Apr 2018 at 10:14	EB
1.3.9 Team work	1	1	27 Apr 2018 at 11:13	EB
1.3.3 Managerial pressure (new leade...	0	0	27 Apr 2018 at 10:15	EB
1.3.4 Industry pressure (new trends l...	0	0	27 Apr 2018 at 10:15	EB
1.3.5 Technological pressure (New te...	0	0	27 Apr 2018 at 10:16	EB
1.2 Sensing threats (codes that can ena...	1	3	27 Apr 2018 at 10:06	EB
1.2.2 Competitive pressure (new serv...	1	1	27 Apr 2018 at 10:12	EB
1.2.3 Industry pressure (new trends l...	1	1	27 Apr 2018 at 10:13	EB
1.2.5 Fulfilment	1	1	27 Apr 2018 at 11:03	EB
1.2.1 Customer pressure (increased cu...	0	0	27 Apr 2018 at 10:10	EB
1.2.1.1 New data (for sensing incre...	0	0	27 Apr 2018 at 10:10	EB
1.2.1.2 New analytical methods	0	0	27 Apr 2018 at 10:11	EB

## Inductive coding – Initial coding hierarchy (Case 1)

Name	Files	Referen...	Created On	Created...
1. Sensing: Nature of the capability	0	0	24 Jan 2019 at 10:39	EB
1.1 Identify opportunities and threats	0	0	24 Jan 2019 at 10:39	EB
1.1.1 Identify the need for change (codes that enable retailers to sens...	4	18	24 Jan 2019 at 10:39	EB
1.2.1 External Monitoring_ECOSYSTEMIC VISION - TYPE	0	0	24 Jan 2019 at 10:39	EB
1.3.1 Monitoring the competition (new services provided to cust...	3	11	24 Jan 2019 at 10:39	EB
How knowledge about the competition is acquired	2	5	24 Jan 2019 at 10:39	EB
1.3.2 Monitoring customer expectations	5	14	24 Jan 2019 at 10:39	EB
How knowledge about customer expectations is acquired	1	1	24 Jan 2019 at 10:39	EB
1.3.3 Monitoring the industry (trends and new standards)	3	8	24 Jan 2019 at 10:39	EB
How knowledge about the industry is acquired	0	0	24 Jan 2019 at 10:39	EB
1.2.2 Internal Monitoring_LOCAL VISION - TYPE	4	18	24 Jan 2019 at 10:39	EB
1.2.2.1 Monitoring operational performance (efficiency and proc...	4	18	24 Jan 2019 at 10:39	EB
1.2 Identify opportunities (codes that enable retailers to sense new...	6	73	24 Jan 2019 at 10:39	EB
External search (Peripheral vision) - TYPE	3	11	24 Jan 2019 at 10:39	EB
Learning from other retailers	2	3	24 Jan 2019 at 10:39	EB
1.1.3.2 New industry data	1	1	24 Jan 2019 at 10:39	EB
Learning from sister company	3	6	24 Jan 2019 at 10:39	EB
Learning from suppliers and vendors	2	2	24 Jan 2019 at 10:39	EB
1.1.3.1 New trends in the market	3	6	24 Jan 2019 at 10:39	EB
1.1.3.3 New technology	1	1	24 Jan 2019 at 10:39	EB
Internal search (Local vision) - TYPE	6	62	24 Jan 2019 at 10:39	EB
Analysing customers purchase behaviour (for sensing opportuni...	6	26	24 Jan 2019 at 10:39	EB
Learning from experience_learning by doing	5	6	24 Jan 2019 at 10:39	EB
Learning from new employee experience and prior knowledge	2	7	24 Jan 2019 at 10:39	EB
Reporting_Monitoring Performance	5	23	24 Jan 2019 at 10:39	EB
1.2 Interpreting identified opportunities	1	1	24 Jan 2019 at 10:39	EB
1.2.1 Conceptualise - TYPE	0	0	24 Jan 2019 at 10:39	EB
Cross divisional team	5	25	24 Jan 2019 at 10:39	EB
Drivers for Omni Channel Transformation	5	18	24 Jan 2019 at 10:39	EB
Omni channel definition and vision	5	23	24 Jan 2019 at 10:39	EB
Roles and Responsibilities	2	4	24 Jan 2019 at 10:39	EB
1.2.2 Market orientation - TYPE	0	0	24 Jan 2019 at 10:39	EB
Customer centric mindset	6	31	24 Jan 2019 at 10:39	EB
Internal Changes	5	26	24 Jan 2019 at 10:39	EB
Reporting on Omni Channel performance	5	25	24 Jan 2019 at 10:39	EB
1.2.3 Ambiguous mindset - TYPE	0	0	24 Jan 2019 at 10:39	EB
Cross divisional team	6	26	24 Jan 2019 at 10:39	EB
Data led decision making	2	5	24 Jan 2019 at 10:39	EB
Mindset and Culture	3	4	24 Jan 2019 at 10:39	EB
Overcoming Challenges	5	15	24 Jan 2019 at 10:39	EB
Reporting	2	5	24 Jan 2019 at 10:39	EB

## Coding hierarchy development

Name	Files	Referen...	Created On	Created...
2. SEIZING	4	21	22 Nov 2019 at 14:...	EB
1. Develop Activities	2	3	22 Nov 2019 at 14:...	EB
2. Project Prioritization	0	0	22 Nov 2019 at 14:...	EB
1. Cross Functional Collaboration	2	3	22 Nov 2019 at 14:...	EB
2. Selection Activities	4	18	22 Nov 2019 at 14:...	EB
1. Customer Centric Decision Making	1	1	22 Nov 2019 at 14:...	EB
3. Collaborative Decision Making	2	2	22 Nov 2019 at 14:...	EB
2. Data informed Decision Making	3	4	22 Nov 2019 at 14:...	EB
4. Testing and Experimenting	4	11	22 Nov 2019 at 14:...	EB
1. SENSING	6	56	22 Nov 2019 at 14:...	EB
2. INTERPRET	3	7	22 Nov 2019 at 14:...	EB
1. Defining the OCR Opportunity	2	2	22 Nov 2019 at 14:...	EB
2. OCR Marketplace Positioning	2	5	22 Nov 2019 at 14:...	EB
1. IDENTIFY	6	49	22 Nov 2019 at 14:...	EB
5. Monitoring OCR Performance	0	0	11 Dec 2019 at 14:10	EB
6. Learning from Employee Experiences and Enco...	0	0	22 Nov 2019 at 14:...	EB
1. Monitoring Competitors OCR capabilities	2	3	22 Nov 2019 at 14:...	EB
4. Learning from Retail Partners - COLLABORATE	3	12	22 Nov 2019 at 14:...	EB
2. Monitoring Customer Purchase Expectations an...	4	13	22 Nov 2019 at 14:...	EB
3. Monitoring Industry Trends and Developments	5	21	22 Nov 2019 at 14:...	EB
3. TRANSFORMING	6	130	22 Nov 2019 at 14:...	EB
1. PREPARING	6	28	22 Nov 2019 at 14:...	EB
1. Insourcing Digital Commerce Operations	0	0	22 Nov 2019 at 14:...	EB
2. Collaborative Team Structure	2	4	22 Nov 2019 at 14:...	EB
3. Integrating Incentives and Sales Reporting	2	6	22 Nov 2019 at 14:...	EB
5. Developing OCR skills	4	8	22 Nov 2019 at 14:...	EB
4. Adapting the Corporate Culture	5	10	22 Nov 2019 at 14:...	EB
2. IMPLEMENTING	6	86	22 Nov 2019 at 14:...	EB
COLLABORATIVE TRANSFORMATION	1	1	11 Dec 2019 at 16:28	EB
3. Bespoke Systems Development	3	10	22 Nov 2019 at 14:...	EB
1. Gradual Transformation	4	8	22 Nov 2019 at 14:...	EB
2. Transforming the Customer Journey Experience	6	67	22 Nov 2019 at 14:...	EB
1. OCR Operational transformation	4	33	13 Dec 2019 at 09:...	EB
3. Seamless Fulfillment Integration	0	0	22 Nov 2019 at 14:...	EB
2. Seamless Purchase Integration	1	2	22 Nov 2019 at 14:...	EB
1. Seamless Inventory Integration RESEARCH	3	31	11 Dec 2019 at 15:44	EB
2. OCR Marketing Transformation	5	34	13 Dec 2019 at 09:...	EB
4. Personalised and Consistent Customer Ex...	5	34	22 Nov 2019 at 14:...	EB
3. EVOLVE	6	16	22 Nov 2019 at 14:...	EB
1. Agile Transformation	6	16	22 Nov 2019 at 14:...	EB

## 9.4 Case 1. NVivo coding evidence

Name	Files	Referen...
▼ 1. Sensing. Primary data	6	82
▼ 1. IDENTIFY opportunities and threats	6	80
▶ 1. Monitoring competitors OCR capabilities	3	11
▶ 2. Monitoring customers purchase expectations and be...	6	36
▶ 3 Monitoring retail industry trends and developments	3	7
▼ 4 Learning from retail partners	3	8
● Learning from parent and sister company	3	5
● Networking with retail partners	3	3
▶ 5. Monitoring OCR Performance	5	12
● Learning from employees	2	6
▼ 2. INTERPRET identified opportunities	2	2
▶ Defining the OCR opportunity	6	24
▶ OCR marketplace positioning	6	30
▼ 2. Sensing. Secondary Data	8	12
▶ 1. IDENTIFY	7	11
▶ 2. INTERPRET	1	1

Name	Files	Referen...
▼ 1. Seizing. Primary data	11	76
▼ 1. DEVELOP	2	2
▼ Cross-functional collaboration	0	0
▶ Collaborative Evaluation	5	17
▶ Dynamic Omni channel Project Team	6	28
● OCR team meetings and updates	4	8
▶ OCR project prioritization	5	13
▼ 2. SELECT	11	74
▶ Collaborative decision making	3	8
● Customer centric decision making	5	26
▶ Data informed decision making	6	25
▶ Testing and experimenting	5	15
▼ 2. Seizing. Secondary Data	5	8
▶ DEVELOP	1	2
▶ SELECT	4	6

Name	Files	Referen...
▼ 1. Transforming. Primary data	6	205
▼ 1. PREPARATION Activities	6	86
▶ 1. Redesigning sales and incentive metrics	6	67
▶ 2. Developing OCR skills	3	3
● 3. Adopting dynamic team collaboration	5	14
● 4. Culture redesign	2	2
▼ 2. IMPLEMENTATION Activities	6	106
▶ 1. Gradual implementation	6	12
▼ 2. Creating integrated channel operations	6	76
▶ 1. CLICK AND COLLECT	4	10
▶ 2. ORDER FROM STORE_iPads in store connected to...	3	15
▶ 3. SHIP FROM STORE_view store stock online and ma...	6	49
▶ 4. Seamless inventory integration. ONE STOCK	1	2
▼ 3. Improving personalised marketing abilities	4	11
▶ 1. Single Data Source	3	8
▶ 4. Bespoke systems development	2	5
▶ 3. EVOLVE Activities	5	13
▼ 2. Transforming. Secondary data	0	0
▶ 1. Preparation Activities	2	2
▶ 2. Implementation Activities	3	4
▶ 3. Evolve Activities	3	10

## 9.5 Case 2. NVivo coding evidence

Name	Files	Referen...
1. Sensing. Primary data	0	0
1. IDENTIFY	6	40
1. Monitoring competitors OCR capabilities	4	9
2. Monitoring customers purchase expectations and be...	3	9
3. Monitoring retail industry trends and developments	4	10
4. Learning retail partners	1	2
Knowledge sharing between markets	1	1
Networking with retailers	1	1
5. Monitoring OCR performance	1	1
6. Learning from employees	1	2
REACTIVE Sensing	3	6
2. INTERPRET	9	30
Defining the OCR opportunity	8	12
OCR marketplace positioning	4	18
2. Sensing. Secondary Data	19	117
1. IDENTIFY	19	108
1.2 Local Vision_Current situation review	17	28
External	9	80
Learning from other retailers	1	1
Learning from sister company	0	0
learning from suppliers and vendors	0	0
Monitoring customer needs, expectations and purcha...	9	48
Monitoring industry trends	3	22
Monitoring the competition	4	5
2. INTERPRET	3	9

Name	Files	Referen...
1. Seizing . Primary data	12	95
1. DEVELOP	5	7
2. SELECT	12	88
1. Collaborative decision making	7	10
Collaborative discussions	4	5
COLLABORATIVE DECISION MAKING	2	4
2. Customer centric decision making	0	0
2. Customer centricty & Business Impact	6	29
3. Single data view	6	8
3. Data informed decision making	8	48
1. Data analytics and experience	7	24
2. Combined Customer and Business Impact	1	2
4. Scenario analysis	5	17
5. Competitor matching	1	1
8. Key Success Factors	3	4
4. Testing and experimenting	8	29
Pilot testing new services	8	29
Secondary Data	3	4
1. DEVELOP	0	0
2. SELECT	3	4
1. Data analytics and experience	2	4
4. Data trending and scenario analysis	1	7
5. Competitor matching	0	0
6. Testing and learning from real options	0	0
7. Collaborative discussions	1	1
8. Project dependencies & Risk assessment	2	32

Name	Files	Referen...
1. Transforming. Primary data	11	229
1. PREPARING	9	53
1. Digital Business Model Transformation	0	0
Insourcing of Ecomm B2C	3	4
Insourcing the eCommerce operation	3	15
Investment	1	1
New business model	1	3
NEW ROLES_NEW KNOWLEDGE	3	6
New Warehouse (resources)	1	1
Project breakdown into sub projects	1	2
SPECIALISED DIGITAL RETAIL TEAM	1	3
System Integration	1	1
2. Redesigning sales and incentive metrics	5	14
3. Developing OCR skills	9	17
4. Adopting dynamic team collaboration	2	3
5. Culture redesign	5	11
2. IMPLEMENTING	11	136
1. Gradual implementation	11	82
2. Creating integrated channel operations	6	37
Full implementation (Phase 1)	1	4
Omni channel Service 1	6	13
Click and Collect	6	10
Convenient Returns	2	3
Omni channel service 2	6	10
Order from store	6	10
Online Appointment Scheduling	1	3
Ship to store (STS)	2	5
3. Improving personalised marketing abilities	3	8
4. Bespoke systems development	3	7
3. EVOLVE	9	40
2. Transforming. Secondary data	15	94
1. Preparation Activities	13	59
2. Implementation Activities	3	4
3. Evaluation Activities	9	31



## 9.6 Case 3. NVivo coding evidence

Name	Files	Referen...
▼ 1. SENSING	3	58
▼ 1. IDENTIFY	3	38
1. Monitoring competitors OCR capabilities	2	8
▼ 2. Monitoring customer purchase expectations and beh...	3	15
2. Analysing customers purchase behavior	2	5
3. Monitoring retail industry trends and developments	2	5
▼ 4. Learning from retail partners	0	0
5. Learning from suppliers and vendors	0	0
5. Monitoring OCR performances	1	8
6. Learning from employees	1	2
7. Marketplace transformation scoping	0	0
▶ 2. INTERPRET	3	20
▼ 2. SEIZING	0	0
▶ 1. DEVELOP	3	24
▶ 2. SELECT	3	26
▼ 3. TRANSFORMING	3	50
▶ 1. PREPARING	3	26
▶ 2. IMPLEMENTING	3	12
▶ 3. EVOLVE	1	12
▼ Secondary data	0	0
▼ 1. Sensing	0	0
▼ 1. IDENTIFY	8	33
▼ 1.1 External Identification Activities	7	27
1. Monitoring the competition	2	2
2. Monitoring changes in consumer behavior	4	10
3. Monitoring industry and market developments	6	13
4. Learning from other retailers, brands and markets	0	0
5. Learning from suppliers and vendors	0	0
7. Marketplace transformation scoping	2	2
▶ 1.2 Internal Identification Activities	3	6
▶ 2. INTERPRET	6	7
▼ 2. Seizing	1	1
▶ 1. Develop	12	69
▶ 2. Select	9	19
▼ 3. Transforming	17	40
▶ 1. PREPARING	4	5
▶ 2. IMPLEMENTING	11	25
▶ 3. EVOLVE	2	2

## 9.7 Case 4. NVivo coding evidence

Name	Files	Referen...
▼ 1. SENSING	6	96
▼ 1. IDENTIFY	6	71
▼ 1.1 External Identification Activities	6	69
1. Monitoring the competition	6	22
▶ 2. Monitoring changes in consumer behavior	4	16
▶ 3. Monitoring industry and market developments	4	18
1. 4. Learning from other retailers, brands and markets	3	10
▶ 5. Marketplace transformation scoping	3	3
▼ 1.2 Internal Identification Activities	1	1
1. Monitoring performances	1	1
3. Learning from employee experiences and partners	0	0
▼ 2. INTERPRET	5	25
▼ 1. Definition and Customer Centric Vision	3	14
3. Customer Focus	2	5
2. Internal Communication	4	4
4. Marketplace Positioning	3	7
▼ 2. SEIZING	6	49
▼ 1. DEVELOP	6	26
▶ 1. Cross Functional Design Collaboration	4	6
2. Customer Focused Strategy	4	8
3. Project Prioritization	4	12
▼ 2. SELECTION	6	23
1. Customer Centric Selection	2	3
2. Data informed mindset	2	3
3. Competitor Matching	0	0
4. Testing and Experimenting	4	8
6. TRANSFORM THE INDUSTRY	3	9
▼ 3. TRANSFORMING	0	0
▼ 1. PREPARING	5	55
1. Insourcing E-commerce operations	0	0
2. Project Facilitation and Cross Functional Collaboration	5	27
3. Incentive Reconfiguration	2	2
4. Sales reporting reconfiguration	1	2
5. Employee training In-House	2	5
6. Changing the Corporate Culture. From silos to cross f...	3	12
7. Hire new people with new skills	3	7
▼ 2. IMPLEMENTING	7	69
1. Gradual Transformation	4	9
▼ 2. Customer Journey Transformation	7	56
▶ 1. Seamless Inventory Integration	4	11
▶ 2. Seamless Purchase Integration	1	2
▶ 3. Seamless Fulfilment Integration	1	2
▶ 4. Personalized and Consistent Customer Experience	6	37
3. Bespoke solutions	1	3
▼ 3. EVOLVE	6	19
2. Agile Mindset	3	4
▶ 3. CONTINUOUSLY EVOLVE	4	15

## 9.8 Total Cross-Case Results

Activities	Processes	Micro-foundations	DC cluster
<ul style="list-style-type: none"> <li>– Competition conscious culture</li> <li>– Competitor OCR proposition Benchmarking</li> <li>– Customer experience benchmarking</li> <li>– Retail partner experience benchmarking</li> </ul>	Monitoring competitors OCR capabilities	Identify	Sensing OCR
<ul style="list-style-type: none"> <li>– Collect, analyse and distribute trends in customer behaviour in the organisation in a timely manner</li> <li>– Collect, analyse and distribute customer feedback in the organisation in a timely manner</li> <li>– Collect feedback on every touchpoint</li> <li>– Analyse the feedback as a single source (single customer view)</li> </ul>	Monitoring customers purchase expectations and behaviour		
<ul style="list-style-type: none"> <li>– Attend industry events</li> <li>– Learn from suppliers and vendors</li> <li>– Read industry papers</li> <li>– Listen to word of mouth</li> <li>– Visit distant markets</li> <li>– Operate innovation labs</li> <li>– Future evolution predictions</li> </ul>	Monitoring retail industry trends and developments		
<ul style="list-style-type: none"> <li>– Networking with retailers</li> <li>– Learn from parent company</li> <li>– Learn from sister company</li> <li>– Collaborate with retail partners</li> </ul>	Learning from retail partners		
<ul style="list-style-type: none"> <li>– Analyse OCR process efficiencies</li> <li>– Analyse OCR sales</li> <li>– Analyse inventory utilization</li> <li>– Analyse channel profitability</li> <li>– Analyse retail partner sales</li> </ul>	Monitoring OCR performance		
<ul style="list-style-type: none"> <li>– Employee feedback</li> <li>– Foster an innovative mindset and sharing of new ideas</li> <li>– Share knowledge between markets</li> <li>– Developing partnerships</li> </ul>	Learning from employees		
<ul style="list-style-type: none"> <li>– Share the defined OCR opportunity for mutual understanding</li> <li>– Define OCR as a specific ongoing project</li> <li>– Focus on delivering seamless customer experiences</li> </ul>	Defining the OCR opportunity		
<ul style="list-style-type: none"> <li>– Positioning as either follower or a leader in the retail industry or sector.</li> <li>– Match competitors OCR capabilities</li> <li>– Differentiate from competitors OCR capabilities</li> <li>– Innovate to transform the industry</li> </ul>	OCR marketplace positioning		
<ul style="list-style-type: none"> <li>– Break down retail silos by creating a dynamic cross functional OCR team</li> </ul>	Cross-functional collaboration		

<ul style="list-style-type: none"> <li>with representatives from key functions</li> <li>– Clearly defined roles and responsibilities.</li> <li>Foster agile principles to ensure customer focus</li> <li>– Encourage new ways of working</li> </ul>		Develop	Seizing OCR
<ul style="list-style-type: none"> <li>– Compare existing resources and capabilities to OCR resources and capabilities requirements</li> <li>– Ensure a balance between customer needs and business benefits</li> <li>– OCR projects</li> <li>– OCR workshops</li> </ul>	OCR project prioritization		
<ul style="list-style-type: none"> <li>– Selection of OCR projects that will improve the customer experience.</li> <li>– Marry the customer benefits with business KPIs</li> </ul>	Customer-centric decision making	Select	
<ul style="list-style-type: none"> <li>– Employee experiences, personal feelings, taste and assumptions. Single source data collection and analysis</li> <li>– Data trending, triangulation and scenario analysis</li> <li>Catch up and differentiate from the competition</li> <li>– Benchmarking exercises</li> </ul>	Data-informed decision making		
<ul style="list-style-type: none"> <li>– Cross functional project team meetings</li> <li>– Formal and informal team discussions</li> <li>– Customer centric design workshops</li> </ul>	Collaborative decision making		
<ul style="list-style-type: none"> <li>– Foster an experimental mindset</li> <li>– Trial and error culture</li> </ul>	Testing and experimenting		
<ul style="list-style-type: none"> <li>– Insourcing E-commerce Operations</li> <li>– Integrating E-commerce Operations with existing systems</li> <li>– Insourcing the Mobile Channel Operations</li> </ul>	Digital business model adoption	Prepare	OCR Transformation
<ul style="list-style-type: none"> <li>– Reconfiguring incentives and bonus systems</li> <li>– Change performance targets</li> <li>– Integrated sales reporting</li> <li>– Integrated KPIs</li> </ul>	Redesigning sales and incentive metrics		
<ul style="list-style-type: none"> <li>– Internal employee training, manuals, sponsors, workshops, program, repeated, responsibility</li> <li>– Top management focus and support</li> <li>– Hiring employees with new skills</li> <li>– Retail partner training</li> </ul>	Developing OCR skills		
<ul style="list-style-type: none"> <li>– Cross functional teams</li> <li>– Work collaboratively with key retail partner teams</li> <li>– OCR implementation part of existing job descriptions – updated job descriptions</li> </ul>	Adopting dynamic team collaboration		
<ul style="list-style-type: none"> <li>– Communication of OCR purpose and context to employees for a mutual understanding</li> </ul>	Culture redesign		

<ul style="list-style-type: none"> <li>- Communication of OCR vision and goals to employees</li> <li>- Innovative mindset</li> <li>- Communicate OCR opportunities to retail partners and convince them of new ways of investing</li> </ul>			
<ul style="list-style-type: none"> <li>- Step by step implementation</li> <li>- Omni light implementation</li> <li>- Implementation roadmap</li> <li>- Shared fulfilment operations</li> <li>- Shared implementation</li> </ul>	Gradual implementation	Implement	
<ul style="list-style-type: none"> <li>- Integrated services</li> <li>- Integrated operations</li> <li>- Integrated inventory</li> </ul>	Creating integrated channel operations		
<ul style="list-style-type: none"> <li>- Single customer view</li> <li>- Integrated CRM</li> <li>- Integrated marketing</li> <li>- Purchase behaviour segmentation</li> <li>- Shared single customer view</li> </ul>	Improving personalised marketing abilities		
<ul style="list-style-type: none"> <li>- Light OCR solution</li> <li>- New systems tailored to existing systems</li> <li>- Partners system integration via software service integrator</li> </ul>	Bespoke systems development		
<ul style="list-style-type: none"> <li>- Agile mindset</li> <li>- Agile working principles</li> <li>- Agile business model</li> <li>- Agile supply chain</li> <li>- Light touch OCR</li> <li>- SCRUM</li> </ul>	Adopting agile principles	Evolve	

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