Chapter 14
A Tale of Two Cities: How High Streets Can Prevail in the Digital Age

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A Tale of Two Cities

"It was the best of times, it was the worst of times"

Charles Dickens begins his 1859 novel "A Tale of Two Cities" by painting the contrasting scenes of Paris and London during the French Revolution. Fast forward about 250 years, research and practice have proclaimed the digital revolution and rung in the digital age (Brynjolffson & McAfee, 2014), but while the digital age might feel like the best of times for some city centers and their high streets, others feel left behind. We tell a tale set in the not so distant future of two cities and their high streets that could not be more different.

The Dark Side of e-Commerce

Its a cloudy February morning in Burnsley when Mr. Johnson prepares to have friends to his home to watch today's football derby. While having a coffee, he considers what has to be done and writes a to-do list. He checks how much beer and snacks are on

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hand and gets ready to go to the supermarket to stock up, but when he turns on the television in his living room, he notices that the TV is not responding to the remote control—and even the buttons on the television itself have no effect. After disconnecting and reconnecting the television, he is convinced that it is actually broken. He does not hesitate much before deciding to get a new one to save the evening. He talks himself into believing this was long due anyway and walks to the car.

He decides to pay a visit to the electronics store on Main Street, where he bought his television set some years ago. He pulls up nearby and searches the car's cup holder for some quarters to feed the parking meter. When he gets closer to the store, he notices that its neon sign and the store itself are dark. On the shop's door, he sees a notice that the store has been closed permanently. He peeks through the window and sees a torn banner that reads "We match any price!" He wonders where the shop owner, Mr. Wong Jr., might be working now. He had taken over the shop from his father only a couple of years before.

He turns away from the store and sees a well-known electronics retail store across the street and does not think twice before crossing the street and going in. Inside, a store associate greets him and asks if he needs help. Mr. Johnson states his urgent need for a new television. The associate raises his eyebrows as he apparently did not expect to be required. He reluctantly guides Mr. Johnson to the bank of televisions sets on display, and asks for his preferences and budget. When Mr. Johnson replies that he would like a television that is very bright and possibly anti-reflective because direct sunlight comes into his living room, the store associate hesitates before saying that he will have to check his computer for that. When he comes back a few minutes after, he shrugs and says that he could not find any information about anti-reflective televisions.

Meanwhile, Mr. Johnson has had a look around and has come to the conclusion that none of the televisions are right for him. He takes out his smartphone, browses to a popular e-commerce retailer, and looks at the best-selling televisions with the best average customer ratings. The top-selling product looks promising, as it has a matte display which he knows works well in direct sunlight. He shows the television to the store associate and asks whether they have it. The associate takes a note, goes to his computer again, and comes back a few minutes later with a printed offer. He hands the offer to Mr. Johnson, who gasps when he sees that the price is almost 200 GBP higher than advertised online and that it is not in stock but can be delivered in a week (or possibly longer). As Mr. Johnson does not want to cancel the derby party with his friends, he asks whether there is an option for same-day delivery at a higher price. The store associate smirks and shakes his head.

Mr. Johnson decides to try his luck elsewhere. On his way back to the car, he reads the shop signs along the street and notices that many of the shops he visited only a few years ago have vanished, their storefronts abandoned or replaced by faceless franchises, betting offices, and the like.

Back in his car, he uses his smartphone to search for electronics stores in Burnsley, but his search brings up only the store he has just left. He admits defeat and calls his friend to ask whether he would be willing to host the derby party at his place instead.

Back at home, he buys the television he wants online (at a 200 GBP savings) and renounces the high street.

In this future, traditional high street retail has lost. Pressed by e-commerce, local small businesses could do little more than engage in a price war. A downward spiral in prices resulted, and the effort was pointless because of the higher operating cost of brick-and-mortar stores compared to those of online players. Eventually, long-established retail businesses like Mr. Wong Jr.'s store closed down, and even the remaining chain stores struggle to meet customers' expectations.

The High Street Strikes Back

The sun rises above the hectic scramble of the Beckinsdale farmers' market on a Friday morning. Ms. Crawford finishes setting up her flower stand and awaits the first customers. She logs into Beckinsdale's city app—the Beckinsdale Companion—on her tablet, marks the stand's current location, and sets today's opening hours. She uses her tablet to take a picture of today's special offer, exotic pink lilies, and posts it to the local social network.

At the same time, Mr. Davis, a consultant from Beckinsdale's suburbs, plans his day. Since he has a new project coming up next week, he adds a new suit and a tie to his digital shopping list. He uses the Beckinsdale Companion to see if his favorite tailor is open today. While that shop is closed, he gets a recommendation for another boutique that carries the brand of suit he is looking for. He sees that his good friend, Ms. Paul, has marked the store as a favorite, so he sends her an instant message and asks about her experience with the boutique. Encouraged by Ms. Paul's positive response, he drives to the boutique with his toddler son in tow. As he reaches the city center, his phone directs Mr. Davis to a parking spot nearby. Because Mr. Davis registered his car with the Beckinsdale Companion, parking fees are automatically deducted from his account.

While Mr. Davis and his son are walking to the boutique, he receives an alert that the store has an unusually high number of customers right now, so his smartphone suggests making an appointment for a personal consultation in an hour, which Mr. Davis confirms. With free time to spend, Mr. Davis sits down with his son and opens the local social network to see what others in the area are doing. He browses through various posts, including Ms. Crawford's offer for lilies, and then sees that Ms. Paul has just checked into a coffee shop around the corner. He comments on her activity and decides to meet her. Because he knows his toddler gets bored in the coffee shop, he drops the boy at a high street childcare service the boy enjoys for a small fee. Remembering the lilies, he decides to bring Ms. Paul some flowers and locates Ms. Crawford's stand in the Companion. Guided by his phone, which interacts with Bluetooth beacons spread across the city, he navigates to the stand and buys the flowers. Then he drops in at the coffee shop and gives a pleasantly surprised Ms. Paul the lilies. As Mr. Davis pays for his coffee on his smartwatch, the barista

offers him a complimentary cookie because this was his fifth visit to the coffee shop this month.

The hour having passed, an associate at the boutique greets Mr. Davis by name and directs him to a rack of suits. The associate needs Mr. Davis' exact measurements, but since the Beckinsdale Companion includes a data marketplace for retailers, he finds Mr. Davis' measurements, which another tailor took recently. Judging by Mr. Davis' shopping history, the associate gladly pays a small data-access fee, which will be paid to the tailor who provided the measurements. Mr. Davis authorizes the request for his suit measurements with a tap on his smartwatch.

After choosing his suit, Mr. Davis requests custom tailoring, so the associate asks whether he wants to wait for it in the store or use the local evening delivery service. Just then, Mr. Davis receives a push message from the child care center that his boy wants to be picked up, so Mr. Davis decides on the delivery option. Quickly, the associate suggests adding a matching shirt and tie from a partnering outfitter to the delivery. Unsure of the offer, Mr. Davis declines but asks the associate to send him the product details. The associate uses his tablet to finish the order, and Mr. Davis confirms the purchase with another tap on his smartwatch. He then heads to the childcare service and picks up his son. On their way back to the car, Mr. Davis receives an offer for free parking if he spends ten pounds or more at a nearby toy store. Pleased by this serendipity, he buys a small stuffed animal, and his parking fee is automatically reversed. At home, Mr. Davis opens the boutique associate's recommendations for the shirt and tie, and since they come with no additional shipping cost and free return, Mr. Davis places the order.

In the evening, Ms. Crawford closes her flower stand and checks to see how many people have seen her lily post and digitally engaged with her business. Shortly after, a courier delivers the consolidated business outfit to Mr. Davis home. Happy with the quality of the tailoring and the great recommendation for the shirt and tie, he posts a picture and a review of the boutique to the Beckinsdale Companion.

Although Mr. Davis' shopping trip is set in the future, the technologies that enabled him to streamline his day exist today. Our example shows how integrated services on the retailer and high street levels can facilitate hybrid digital and physical customer experiences. However, for the Beckinsdale scenario to become reality, high streets must first escape the inevitable downward spiral that we have described—perhaps exaggerated a bit—in the Burnsley case.

A Downwards Spiral in High Street Retail?

Ongoing digitization has had a significant impact on the traditional structures of high street retail as e-commerce and m-commerce's market share grows. While offline retail revenue grew slightly in Germany from EUR 427.6 billion in 2007 to EUR 486.5 billion in 2016 (HDE, 2017), e-commerce revenue increased almost five-fold, from EUR 10.9 billion in 2007 to 52.74 billion in 2016 (Furchheim et al., 2018). Although e-commerce accounted for only 13.2% of the business-to-consumer (B2C) retail

market in 2017, the double-digit growth rates are projected to continue (Furchheim et al., 2018), challenging high street retail and especially small and medium-sized enterprise (SME) retail. As seen on Burnsley's high street, this trend manifests in abandoned commercial spaces that render the corresponding high street less attractive, leading to more businesses' failing. The market cannot compensate for such vacancies, and the high street gradually empties out (BBSR, 2017).

The retail market currently responds with omnichannel and "bricks-and-clicks" approaches (Brynjolfsson et al., 2013; Herhausen et al., 2015), where customers can switch seamlessly between channels and benefit from both the digital and the physical world. Nevertheless, most of such projects are executed by large retail chains that exclude the SME retailers that usually make up the majority of high street tenants. Large chain stores that branches at every other city center do not contribute to the attractiveness and individuality of a high street and may not be able to stop the high-street erosion process, even if they use omnichannel approaches. Instead, digitization must take place on the high street as a whole, where the high street's overall well-being influences its tenants and vice versa.

A suffering high street can be a critical issue for the whole city on multiple levels. The most obvious and direct consequences of a spiraling high street are economic, as fewer retail shops lead to dwindling sales, decreasing tax incomes, and lost jobs. An eroding high street also affects the social environment as the city becomes less attractive, which damages both the city's housing market and its tourism industry. To counter this development, the city must raise its high street's economic and physical attractiveness. Countermeasures include financial support for the retailers and construction projects to improve the city center's physical attractiveness. However, the extent to which an individual city's retailer suffers depends on factors like the city's population and its surrounding countryside (BBSR, 2017). While prime locations in attractive, large cities are expected to suffer minimally from the effects of the ongoing structural change in the retail industry, smaller cities—especially those that are near larger cities—are not expected to fare as well (BBSR, 2017).

In the past, SME retailers had limited competition and could use personalized services and individual assistance to justify a price premium. However, today spatial distance is bridged by e-commerce, and smart devices and ubiquitous Internet connectivity have made customers "informed, networked, empowered and active" (Prahalad and Ramaswamy, 2004, p. 5) with in-depth product information, price comparisons, and digital services literally at their fingertips. Without being constrained by opening hours or distance, customers can engage with online retailers 24/7 and receive personalized advice and recommendations from retailers, social shopping communities, and their own social groups. Thus, e-commerce and m-commerce have altered the long-lasting power relationships between customers and retailers (Hagberg et al., 2016) as customers increasingly engage in "research shopping" or "showrooming," visiting brick-and-mortar stores to look at products but buying online (Gensler et al., 2017). With ubiquitous access to shopping opportunities, the formerly sequential customer decision process is now a continuous, dynamic decision-making process, where customers continuously re-evaluate their decisions during and between every phase of the their journey (Faulds et al., 2018). Customers are empowered

by using their mobile devices in stores to compare prices, research, and buy, freeing them from the retailer's influence (Parise et al., 2016). Most strikingly, a recent Forester survey revealed that only 29% of customers perceive store associates as knowledgeable (Murray, 2016), and a Motorola survey found that 61% of mobile shoppers believe their product knowledge exceeds that of store associates (Faulds et al., 2018).

Traditional high street retailers also suffer from spatial constraints in terms of both locality and shelf space, as their markets become increasingly diverse. In economic terms, this effect is typically discussed with reference to "the long tail" concept (Anderson, 2008), which describes the increasing availability of and demand for obscure or individualized products while each of the goods has only limited demand in a brick-and-mortar retailers' local market. To face the challenge, the retailer is required to stock a wide range of products for a limited local audience only, exposing it to high costs for stock keeping and low turnover. Therefore, online retailers that may cater to national or even global audiences have a strong competitive advantage, as their market for obscure or individualized products is much larger (Ahlers et al., 2018). Although it may seem pointless to consider the long tail with rarely sold products, for segments like books, rarely sold products are 30% of the market. Therefore, almost a third of brick-and-mortar retailers' potential profits are lost to the competition online.

Another threat for high-street retail that is lurking in the digital realm is customer analytics. Many local retailers determine their marketing and procurement options based on gut feeling and coarse insights into customer segments or marketing theory (Murray, 2016). Although large retail chains collect and analyze customer data, they are retailer-specific data silos that do not benefit the high street as a whole. The online competition understands the benefits of analyzing the data generated on their own platforms and from third parties and have almost perfected their analytics instruments to the point at which they can precisely recommend products and services to individual customers. Therefore, while a SME retailer typically relies only on intuition, experience, and interaction to assess a potential customer's needs, large e-commerce players draw from their huge accumulations of data to recommend products based on similar customers' purchases and preferences.

It is clear that e-commerce and increasing customer empowerment and expectations impact high streets and that the digital age will lead to further transformation of brick-and-mortar retail. High streets that understand these issues are seeking remedies to strengthen their position in the customers' buying processes. The next chapter outlines how digitization impacts and may be able to improve high streets' competitive position.

Digitization on the High Street

What can we learn from our two tales? What are the key elements for high streets to prevail in the digital age? Digitization refers to the "integration of digital tech-

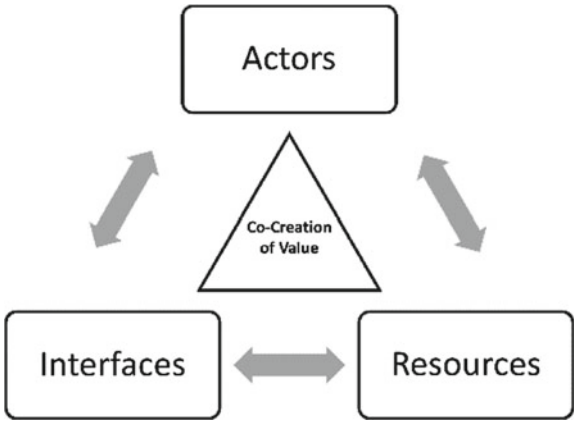

Fig. 14.1 Dimensions of digitization on the high street

nologies into everyday life" (Hagberg et al., 2016, p. 696), where analog activities are transformed digitally (e.g., a shift from parking meters to automatic billing of parking fees) and completely new activities emerge (e.g., mobile social networks). City centers and high streets are complex service ecosystems within which actors like customers, retailers, service providers, and local authorities interact and influence each other over time and space (Chandler & Lusch, 2015). Enabled and constrained by institutions and institutional arrangements, actors engage in the exchange of services in ever-changing constellations (Vargo & Lusch, 2016) to create "economic, financial, or social value or some combination of these" thereof (Chandler & Lusch, 2015, p. 6).

Digitization profoundly transforms the service setting, the channels, and the interfaces between actors, the roles and relationships between actors, the resources integrated into the service delivery process, and the creation of value (Hagberg et al., 2016; Vargo & Lusch, 2016). In the Beckinsdale example, the setting is not spatially bound to the actual high street but reaches into the personal spaces of the actors involved. Digital technology provides interfaces so actors can engage, free of temporal and spatial constraints. The Beckinsdale Companion and associated information systems, along with their interfaces, underlying processes, and governing mechanisms, are based on institutional arrangements between municipal entities, retailers, and service providers, so this digital platform facilitates the service ecosystem. We use the Beckinsdale example to discuss the transformative power of digitization for high streets using the lens of the Service-dominant logic (SDL) of marketing (Vargo & Lusch, 2016). Figure 14.1 depicts the dimensions we considered: service interfaces, resources used, actors and their roles and relationships, and the co-creation of value in service exchanges.

Interfaces

High street retailers traditionally deliver services in person-to-person interactions, but today they can also draw from a plethora of digital technologies to integrate the physical and digital worlds and provide new channels and forms of interaction (Willems et al., 2017). The ubiquitous mobile smart devices that are connected to the Internet have become central interfaces between actors (Bradlow et al., 2017; Faulds et al., 2018), and the notion of an actor also comprises technology itself (Hagberg et al., 2016). Glushko (2010) differentiates among seven contexts in which information-intensive service may occur, all of which can be found in the Beckinsdale example. High street retail is largely an information-intensive service, where "the information actions are responsible for the greatest proportion of value created by the service system" (Glushko, 2010, p. 21). For example, Ms. Crawford uses the Beckinsdale Companion in a self-service interaction to provide information on her flower stand, which then creates value for Mr. Davis, who uses the information in another self-service interaction to navigate to her stand. Transparent to the user, Mr. Davis' smartphone interacted with Bluetooth beacons in a back-end-intense machine-to-machine interaction. Although Glushko (2010) differentiates between location-based and context-aware service contexts, we maintain that most, if not all, digital services in the high street use actors' locations and other properties as context. In Beckinsdale, the main actors are constantly providing information to the underlying information system, either through proactive input, as Ms. Crawford did, or via sensor- and vision-based technologies.

Digitization in high street retail can, to some extent, be boiled down to the introduction of additional digital and physical touchpoints to the service system that allows actors to interact and co-create experiences (Brynjolfsson et al., 2013). With these touchpoints, retailers can influence and interact with their customers at every stage of the customers' journey. While Faulds et al. (2018) limited their unit of analysis to dyadic customer-retailer interactions, we widen the view to include third-party and municipal service providers. For example, the Beckinsdale Companion provides an interface between municipal parking services, retailers, and customers. Allowing customers to buy a toy in exchange for parking fees is one outcome of this additional touchpoint, which influenced Mr. Davis' customer journey and created value for everyone. The whole scenario depends on back-end analytical services, such as the service that allowed the toy store to send the promotion to Mr. Davis. In our example, there is also a local social network of high street actors that links customers with their reference groups and to other customers in their vicinity (Betzing et al., 2018).

Digital technologies also empower store associates in technology-enhanced person-to-person interactions (Glushko, 2010). The salesperson in the boutique was equipped with a tablet that provided information about the customer and created better value propositions by personalizing the service. Mr. Davis' use of his smartwatch to confirm the salesperson's requests also shows that these new channels and interfaces in the high street service system are bi-directional. These mobile touchpoints blur the boundaries between the public space and the customer's private space (Shankar

et al., 2010), while multiple direct touchpoints to the retailer support its ability to satisfy the customer's information demands using the channel of his or her choice.

Resources

Traditional value creation in high street retail is based on selling products and services (Grönroos & Voima, 2013). The SDL shifts the focus from value-in-exchange to the co-creation of value in reciprocal interactions between actors (Vargo & Lusch, 2016). Vargo and Lusch (2008) defined service as "the application of specialized competences (operant resources–knowledge and skills), through deeds, processes, and performances for the benefit of another entity or the entity itself" (p. 26). This theoretical lens is reflected in many retailers' changing self-conceptions away from simply being sellers of goods to being problem-solvers and providers of experiences (Lemon & Verhoef, 2016). Consequently, operant resources become "the fundamental source of strategic benefit" (Vargo & Lusch, 2016, p. 8). On the digitized high street, data is the central operant resource.

In the Beckinsdale scenario, various actors make their data public, and the city itself pursues a "smart city" approach, where a municipal digital infrastructure gathers various information from the physical world. Increasing numbers of cities give open access to their cities' data, which can be used to provide smart digital services. In Beckinsdale, sensors and cameras measure the occupancy of parking spots and pedestrian flows on the high street, so these technologies can supersede traditional methods of customer behavior analytics, such as surveys and user shadowing in high streets. After Mr. Davis consented to having his data collected and shared, his smartphone tracks his movements in stores and around the high street to deliver location-based services. His information yields value on both the retailer and the high-street levels, as retailers can gain insights into their customer bases, personalize their services, and provide targeted advertisements. Think of the coffee shop that rewards Mr. Davis for re-visiting the store, and more advanced analytics even allowed the toy shop to infer Mr. Davis' needs from his trajectory, i.e., he parked with subject to public charges and later visited the child care services. On the high street level, pedestrian flows, hot and cold spots, and store migration can be analyzed to support marketing cooperatives and local authorities in their strategic and operational decision-making. Aggregated customer data even allows for (geo-)recommender systems that are similar to those customers already accustomed to in e-commerce. For example, based on his previous store visits, Mr. Davis got a recommendation for a boutique that he had not visited before.

High street retail can tap into many sources to digitize their offerings. Figure 14.2 shows the prevalent sources that retailers can already use, but high street retailers may see the technologies behind these data sources as difficult to integrate into their service systems and as suitable only for larger retailers. However, it is a misconception that the digitization of high street retail is fully dependent on investments in novel and potentially expensive technologies. In fact, retailers are often already

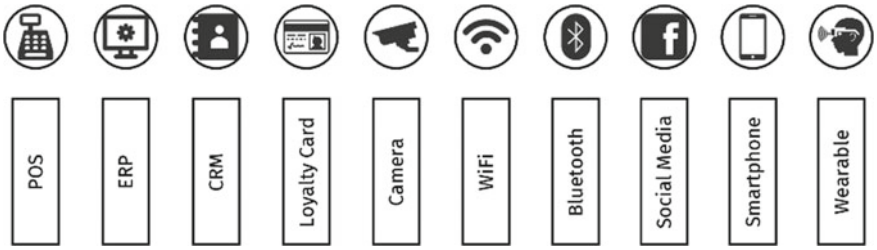

Fig. 14.2 Data (Re-)sources available for high street retail

in possession of the resources they need, such as point of sale (POS) terminals or enterprise resource planning (ERP) systems, which are valuable data providers (Li et al., 2012). Loyalty cards and customer relationship management (CRM) systems have been used for years to link customers to their transactions (Chen, 2014). In the Beckinsdale scenario, this information was made available to the boutique's salesperson, who was then able to recommend suits to Mr. Davis based on his shopping history.

Other operant resources can be found outside the high street and smart city settings. User-generated content from social media and rating and review sites are already publicly available in large quantities and—in the ideal case—provide honest and unbiased opinions (Kaplan & Haenlein, 2010). In the current setting, most content is user-generated and interactions between customers and other participants in the high street ecosystem. The local social network in the Beckinsdale example allows Mr. Davis to ask his reference group about the boutique, find a suitable gift, and learn about Ms. Paul's location. For retailers, user-generated content teaches them more about potential customers than is usually feasible during a regular customer interaction, as customers may not disclose the interests or upcoming plans to store associates but do so on their social media profiles (Stieglitz et al., 2014). Knowing their customers' personal preferences can be useful in creating better and more personalized recommendations and interactions. Thinking back to Mr. Davis and Ms. Paul, social media data could help Ms. Crawford to suggest Ms. Paul's favourite type of lilies to Mr. Davis.

Beyond the collection of data, most of the value of data marketplaces lies in its meaningful aggregation and integration. Given the vastness and diversity of data resources available, from highly structured data (ERP) to unstructured data (video, sensors), this task is complex, as information from various sources, some of which are not in the retailer's control, must be integrated to overcome retailer-specific data silos. Mr. Davis uses a digital shopping list and tracks his shopping history across stores, so the customer provides data to the retailer, which then can integrate and enrich it with the retailer's own data. Moreover, pioneer work has been conducted by heavily data-driven companies like Facebook and Google, which continuously develop more efficient systems to store, integrate and analyze collected data (e.g., Chen et al., 2016; Pedreira et al., 2016; Rendle et al., 2016).

The Beckinsdale scenario also shows that data is not only a resource that is shared and used freely, but under certain circumstances it is even a tradeable good. For Ms. Crawford it makes sense to publish her stand's details for free, since customers are not likely to be willing to pay for this data, and keeping it secret gives her no economic advantage. However, Mr. Davis' tailor has a financial interest in keeping his measurements secret (because of the investment made in obtaining the data), while the boutique owner has a financial interest in obtaining them (to avoid investing in taking the measurements himself). It should be clear, then, that both parties can maximize their utility by trading the data for money (Stahl, 2016). While selling what has been coined "information goods" would have been unthinkable only a few years ago—and may still be difficult for retailers who are involved primarily in selling tangible items—it has become an established and maturing reality (Schomm et al., 2013). Establishing data marketplaces and associated pricing mechanisms is not trivial (Stahl, 2016), but doing so can create additional revenue for retailers, regardless of their stores' operating hours. If data marketplaces are used as in the example, they can contribute to positive customer experiences across the high street.

Actors

The management and IS literature has studied information technology's potential to transform organizations for more than sixty years. Many theories, such as those related to organizational politics and culture, can be adopted to the high street ecosystem (e.g., Robey & Boudreau, 1999). We see political actors like single retailers and groups of retailers organized into marketing cooperatives that seek to exercise their power in shaping the high street to their benefit. Digitization on the high street level introduces new actors and changes the roles and power relationships of existing ones. New actors might provide services that contradict longstanding organizational culture and retail heuristics. For example, the boutique salesperson in Beckinsdale placed Mr. Davis' shopping experience and his needs over the short-term maximization of profits when he recommended a competitor's tie.

In Beckinsdale, a form of high street alliance changed the traditional mode of competition between retailers to one of cooperation, united by the common goal of a prospering high street (Gomes-Casseres, 1997). As known from online affiliate networks, the boutique might receive a provision for referring the customer. In a similar vein, the data marketplace allows retailers to exchange customer information. We maintain that platforms enable retailers to participate in digitization because of economies of scale and scope. Marketplaces and networks bring actors together and facilitate the exchange of services. Many digital encounters in the Beckinsdale example would be all but impossible for a single retailer who has limited financial resources and technical expertise. For example, why would a SME retailer publish a mobile app for his or her store? From a customer's standpoint, a central interface with which to receive information on retailers in the vicinity is more valuable than using a single retailer's app, about which a foreign visitor to the high street might not

even be aware. The Beckinsdale Companion also strengthens the customer's role; we already saw how customer-facing digital technologies empower customers in their relationships with retailers. While generic third-party solutions for price comparison or product searches are out of single retailers' control, a central local platform like the Beckinsdale Companion can empower customers for the mutual benefit of the high street's stakeholders (Faulds et al., 2018).

The actors in Beckinsdale provide various types of services within the unified interface of the Companion. Customer-facing services are provided by the municipal authorities (e.g., parking), retailers (e.g., promotions), a local platform provider (e.g., beacon-based navigation, location-based recommendations), third-party service providers (e.g., local delivery), and other customers (e.g., the local social network). We also see that digital communication and coordination mechanisms support existing "offline" high street services, such as a child-care service. While a stable mode of cooperation between retailers, third-party service providers, and municipal bodies has been established in the Beckinsdale example, for other cities complex organizational questions arise: Who introduces a platform? What cost and revenue structures are available? What remunerations, sanctions, and governance structures exist? Who can provide a service to whom? How are collaboratively provided services delivered with regard to a steady level of service quality across providers? The Beckinsdale Companion provides a digital business directory that replaces the Yellow Pages that publishing companies traditionally provided, but will these companies run this digital counterpart, or are there new intermediaries? In Germany, we already see third parties who provide digital platforms and modules as white-label solutions that local operators can license. Moreover, the role of local marketing cooperatives might be affected as well. Rival cooperatives in some cities might result in both introducing digital services on high street level, but from the customer's standpoint, rival offerings that lack integration are inferior to a central, integrated service platform like the one in Beckinsdale. One might observe displacements and platform races that are similar to those that are occurring in mobile operating systems and programming languages.

(Co-)Creation of Value

Burnsley's retailers engaged in a price war and lost, while retailers in Beckinsdale understood that a price war is pointless and focused on other strategies instead (Brynjolfsson et al., 2013; Rao et al., 2000). Relevant kernel theories in marketing and customer behavior research include those related to customer satisfaction, service quality, customer relationship management, and customer engagement. Most prominently, research has suggested that retailers and other service providers focus on co-creating customer experiences to increase the customers' value perceptions (Betzing et al., 2018; McColl-Kennedy et al., 2015b).

Customer experience theory addresses customers' responses to retailers and other actors (McColl-Kennedy et al., 2015a). Based on a comprehensive literature review,

Lemon and Verhoef (2016) defined customer experience as the customer's "cognitive, emotional, behavioral, sensoric and social responses to a firm's offerings during the customer's entire purchase journey" (p. 74). Customers respond both consciously and unconsciously to encounters with retailers at multiple touchpoints and form their experiences dynamically over time.

With the introduction of new interfaces and service contexts (Glushko, 2010), we see digital customer experiences that are facilitated by interacting with technology (e.g., using a web-shop) and hybrid online-offline customer experiences, where analog and digital channels are mixed (McColl-Kennedy et al., 2015a). The SDL acknowledges that "value is always uniquely and phenomenologically determined by the beneficiary" (Vargo & Lusch, 2016, p. 8) so customers assess the co-created value by means of accrued interactions with the retailer and other actors (Tynan et al., 2014).

Value is dynamic in nature, as customers continuously re-evaluate their experiences along the customer journey with respect to the "purpose or objective that is directly served through product/service usage" (Lemke et al., 2011, p. 847). Consequently, high street actors cannot prepare canned experiences for customers to retrieve. To what extent service encounters serve the customer's experience is individual to the customer's perception and depends on external influences like the customer's personal cultural and social belief system (McColl-Kennedy et al., 2015b). For example, Mr. Davis consulted his friend Ms. Paul before visiting a store and might now associate the store with a positive social response even if he had never visited it. The creation of customer experience also depends on the customer's willingness to engage in co-creation, the other actor's responses, and the customer's perception of its value (McColl-Kennedy et al., 2015b), which can be further distinguished into "experiential/hedonic, symbolic/expressive and functional/utilitarian" (Tynan et al., 2014, p. 1062) types of customer value.

Mr. Davis' shopping trip is a high street experience comprised of intermingled experiences and customer journeys. Mr. Davis was willing to grant permission for a store to use his information, and he actively engaged in co-creation at multiple encounters. Based on his interactions with the local social network, Mr. Davis bought flowers and visited Ms. Paul, which addresses the social and emotional responses that lead to an hedonic experience (Tynan et al., 2014). Interactions with the boutique and its salesperson resulted in different types of customer value. Based on Mr. Davis shopping list, shopping history, and measurements, the salesperson responded efficiently to Mr. Davis needs, which resulted in a functional experience. Mr. Davis will use the suit and tie he bought as a form of outer-directed self-expression toward his new client, leading to a form of both expressive and social customer value.

In the end, not only have customer experiences been co-created, but the exchange of service have also yielded economic, financial, and social value for the high street actors (Chandler & Lusch, 2015). Central to the digital transformation in high street retail is the provision of seamless high street experiences, where all stakeholders collaborate to contribute to the experience (Faulds et al., 2018). Retailers are responsible for the co-creation of customer experience with their customers both within their store and on high street level with the help of digital technologies and interfaces.

How Will the Tale Continue?

We have seen that high street retail is in a transformation and that the digital age is both boon and bane for high streets. With omnichannel retail and hybrid digital high street services, the borders between digital and physical customer experiences are blurring, and manifold touchpoints and actors are competing at every point in the customer journey. In Burnsley, the high street retailers were not able to respond to the challenge of digitization, and their high street degraded.

Information systems research can make a positive contribution to addressing high streets' social, political, and economic problems. As seen in Beckinsdale, by transferring some of the benefits of e-commerce to the high street ecosystem and combining them with the integral benefits of physical brick-and-mortar retail, the local retailers can collectively make both digital and physical value propositions that go beyond e-commerce to foster lasting customer experiences. We envision that, on the way to becoming fully digital, high streets can evolve to using central digital platforms as an improvement over individual- and retailer-specific approaches. In this highly cooperative scenario, actors in the high street ecosystem have to join forces for the common good by converging data from retailers, customers, and municipal bodies on a central hub. Thus, value is created by a community of high street actors within a *digital platform ecosystem* (Tiwana, 2014).

Alliances and platform business models are in stark contrast to traditional high street retail business models, so they require that retailers undertake a mind shift. Much of the value created in the Beckinsdale example results less from selling goods and services than from high street actors' being intertwined in ever-changing constellations and united on a digital platform. Hence, traditional business models and strategies that are tailored to the creation of value only from the inside of an organization cease to be applicable.

Central digital platforms have an undeniable financial incentive: The investment required to create a fully digitized customer experience are daunting even for large Internet enterprises and chain retailers and are simply impossible for the average SME high street retailer. However, where individual budgets are insufficient, shared effort can go a long way. Since, digital retail online and on the high street is inherently data-driven, shared investment not only supports the transformation from traditional to digital but also widens the available data for local platforms. Strong digitized high streets might even draw online players back into the physical world. Bell et al. (2017) showed a trend in formerly pure online players' opening offline showrooms to increase demand and reach customers in person. Bringing high street retailers together on a single platform also vastly lowers the entry barriers for new or more risk-averse retailers by reducing the individual upfront financial investment and creating lagged benefits from instantaneous visibility. The inclusion of laggards in the platform ecosystem is beneficial for incumbent participants as well, as the additional retailers increase the high street's appeal by making the ecosystem more diverse and offering additional opportunities for value co-creation. At the same time, complexity

for customers and retailers is reduced since all interactions are carried out via a single touchpoint, similar to a "one-stop shop," a central vision of e-government.

In the joint research project *smartmarket*^{2}, a consortium of information systems, marketing, and service researchers from the universities of Duisburg-Essen, Paderborn, and Münster and industry partners, we are jointly designing and developing a central platform to accompany the physical high street ecosystem with digital services and to foster the co-creation of digital customer experiences. From a service marketing perspective, our future research will investigate how the co-creation of customer experiences influences customers in their decision processes, how different types of customers and segments react to digital interventions, and how customers evaluate these hybrid online-offline experiences.

Although digital customers expect personalized service from retailers, privacy concerns with regard to their location, shopping list, and purchase history remain. Future studies should investigate customers' privacy-related decision-making on collaborative platforms. Legal issues, such as those related to the EU General Data Protection Regulation (GDPR), and ethical considerations must also be taken into account. From an economic perspective, a digital platform requires a sound business model, multiperspective business processes, and a service provider that acts as an intermediary between high street stakeholders. In addition, the central platform influences power relationships on the high street, so future research should investigate how existing networks might evolve or disperse and how new alliances might form since, from a technological perspective, a central platform is a highly complex system that requires a sound architecture and interfaces to the various stakeholder systems.

Several challenges must be addressed before the digital high street is in a position to strike back, but cooperation and a central digital representation are paramount for the ability of high streets as a whole to prevail. In Beckinsdale, where rich information is available to all high street participants, the retail marketing heuristic "deliver the right message to the right person at the right time" is taken to a new level by means of hyper-relevant messages and value-added digital services across the high street. However, Bradlow et al. (2017) reminded us that "retailers will need to consider both the ethical and potential boomerang effects that many customers feel when products are hyper-localized" (p. 81). In the near future, we will see how innovative high streets set themselves apart from their less-innovative and purely "analog" counterparts. Information systems research cannot alleviate all problems high streets face, but they can help high streets meet the digital expectations of their connected and empowered customers—for the best of times!

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