Towards an Omni-Channel Framework for SME Sales and Service in the B2B Telecommunications Industry

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Abstract. The use of mobile technology has become self-evident both for private and professional use. With business customers expecting a shopping and service experience similar to the usage in private, Business-to-Business (B2B) providers must come up with new solutions. Omni-Channel management is one trend that is increasingly gaining attraction. To this end, a profound understanding of influencing factors for sales and service to small and medium enterprises (SME) is missing. Telecommunications, an industry of major importance, serves as target domain for this research endeavor that presents an omni-channel framework for SME Sales and Service. Through collaboration with one of the three largest German providers, 22 interviews were conducted and serve as the data basis.

Keywords: Omni-Channel, SME, B2B, Telecommunications.

1 Introduction

The move towards a digital society in face of the ongoing digitalization of the world impacts both people’s private and professional lives [1, 2]. Nowadays, the use of (mobile) technology has become self-evident, especially but not only for the younger generations, with 52.7% of the world population accessing the Internet from their mobile phone in 2015 and a predicted penetration of 63.4% for 2019 [3]. In light of this development, it can be observed that people adopt behaviors and expectations from their private lives and apply them to their work lives, equally.

Consequently, business customers increasingly expect shopping and service experiences similar to those they make as private consumers when procuring in the business context [4]. To respond to such changing expectations, Business-to-Business (B2B) retailers and service providers have to come up with new solutions and offers in order to excel through competitive advantage and service excellence. In this context, the concept of omni-channel (OC) management, in which information is integrated between different touchpoints and channels for a superior customer experience, gains attention and its use in B2B environments is increasingly becoming popular [5–7].

Business clients of telecommunications providers make use of numerous touchpoints throughout their customer journey. They do so to become customers in...
the first place, procure additional products, resolve incidents, or eventually end or renew their contract. With mobile telecommunication being a commodity nowadays, providers need to extend their value proposition by additional products and services [8]. To this end, offering a seamless customer experience across channels to customers is a promising vision to facilitate superior purchasing and service encounters in this competitive market.

Yet, a common coherent understanding of the concept of B2B OC is missing in academic as well as in practical managerial literature. It remains unclear how firms can use it in order to improve their customers’ journeys across different channels and touchpoints. Therefore, the objective of this work is twofold. On the one hand, the goal is to present the potential of OC environments in B2B environments in general. On the other hand, we aim to develop an OC framework for sales and service that enables telecommunications providers to offer a seamless customer experience to their Small and Medium Enterprise (SME) customers across all touchpoints and channels. In this, we will argue from the customer’s point of view since OC, in our understanding, is a customer-centric approach.

The remainder of the paper is structured as follows: In section 2, the research background is laid out. In section 3, the research methodology to create the OC framework is described. Consequently, in section 4, the design of the aforementioned framework is explained. In section 5, the work at hand is discussed and a brief outlook to further research is given.

2 Research Background

This work draws on existing research in B2B environments, as well as the OC approach and customer experience management. The aim of this chapter is to introduce the relevant concepts, define the scope and clarify their interconnection later materialized in the framework design.

B2B Environments in Telecommunications. While private consumers perform transactions in Business-to-Consumer (B2C) environments, B2B exchanges exclusively occur between corporate entities. One peculiarity in this context are the so-called buying centers. The purchasing business typically sets up a situation-specific, interdisciplinary team of different hierarchical levels for reducing the risk of a purchasing decision of an organization [9]. Being more complex, of higher volume and even higher profitability in nature, B2B markets are featured by a higher degree of customization on the selling side. From this point on, we will use business customers interchangeably with customers. Typically, sales representatives (SR) enable direct sales through on-site meetings, along with other forms that enable the selling directly to the customer without an intermediary [10]. Indirect sales characterized by legally and economically independent firms that act as resellers play a subordinate role in B2B environments, as the personal relationship created between SRs and their customers facilitates tailored solutions to the customers’ needs.
Furthermore, a highly customer-oriented service is enabled, normally realized through an internal sales support without customer contact that assists the SR in the field [11].

**Omni-Channel Management.** The proliferation of different means of contact between company and customer has led to challenges in managing channels. OC represents the latest development in this regard, where all communication between the two parties is linked, so that the customer has a superior experience regardless of the used channel [12]. The interface that the company provides to interact with the customer is termed touchpoint (TP) and here limited to company-owned TPs. Straker et al. [13] provide a classification of channels that distinguishes *traditional* and *digital channels*. The former are comprised of primarily physical and non-digital ways of interaction, while e-mail will also be considered as a traditional channel due to its self-evident omnipresence. The defining characteristic of digital channels are the reliance on the internet as underlying technology.

Further, four key typologies of digital channels can be named [13]. *Functional* channels serve varying purposes (interaction, diversion, functional) in bi- or unidirectional communication for informative, supportive, promotional or revenue-generating content, while *social* channels are driven by the bidirectional interaction among the users and with the company and feature informative and promotional content. *Community* channels are run by users and used for diversion, i.e. participating in recreational activities. *Corporate* channels are unidirectional and have functional purpose seen in the provision of information.

**Customer Experience Management.** Customer experience has recently become a major buzzword in Marketing and strategic priority [14]. While being subjective in nature, companies seek to understand the customer’s journey before, during and after a purchase to optimize the customer experience by utilizing a customer-centric view. Customers nowadays tend to use more than one channel in their journey, so that a clear connection to OC management becomes clear: The holistic view of customer experience management is mirrored in the postulated channel integration of OC management for a seamless and consistent experience. As the journey proceeds, different organizational units (e.g. sales or after-sales service personnel) are *touchpoints* to the customer, which additionally need to follow the one-face-to-the-customer paradigm. Concluding, the customer experience is influenced vertically (through different channels) and horizontally (over time through different touchpoints).

### 3 Research Methodology

To develop an OC framework for sales and service in the telecommunications industry, a design-oriented approach is taken. The framework—the artifact to create—can be classified as a model with respect to the terminology proposed by Hevner et al. [15]. For its development, the Design Science Research Methodology (DSRM) proposed by [16] is applied. The DSRM consists of six phases. The first
phase—problem identification and motivation—and the second phase—define the objectives for the solution—have already been described in the introduction. In the next section, an analysis of customer communication channels as a basis for the development of the OC framework will be delineated. During this phase, 22 expert interviews were carried out in close collaboration with one of the three major telecommunications providers in Germany to elaborate the requirements for and the contents of the OC framework. Each interview took 30 to 60 minutes and the predefined questions were sorted into the corresponding phase of the defined selling process or customer journey at the provider, depending on the interviewee. This approach guaranteed coverage of all phases. The third phase—design and development—will be described in the fifth section. The demonstration—the fourth phase of the DSRM—will be described afterwards. Here, an approach of argumentative demonstration based on use cases is applied. The fifth phase—evaluation—could not yet be carried out and will be part of future research. The sixth phase—communication—is accomplished by this work and future publications, likewise.

4 Customer Communication Channel Analysis

In order to develop an OC framework for SME sales and service in the telecommunications industry, the relevant channels making up the OC customer experience have to be identified first. The interviews were mainly conducted to this end. Of the 22 interviewees, 17 can be identified as internal experts stemming from SME sales people, sales managers, customer service managers, product and software experts. The remaining five interviewees are customers which are at the center of attention when trying to improve the customer experience through a seamless OC offer.

During the analysis of the interviews, two major channel groups could be identified on the basis of the work on digital channel design by Straker et al. [13] as described in the research background: traditional channels and new, digital channels. In this, e-mail, although being digital by nature, will be regarded as a traditional channel due to its status as more and more legally accepted medium of communication. Furthermore, some of the digital channels were disregarded due to their low relevance in B2B environments, such as Pinterest or Flickr. In addition to the typology, some other channels were identified. These are mobile instant messaging (MIM), video conferencing, chat bots and professional corporate social platforms like Xing or LinkedIn. The full list of identified channels for customers, can be differentiated into traditional and digital channels. Traditional channels are (1) Face-to-Face and Point of Sale, (2) Phone, (3) Paper mail and fax, (4) E-Mail, which are described in the following along with digital channels shown in Table 1.

Face-to-face communication is essential, especially in the B2B context and when it comes to more complex issues and products. The interviews have shown that both internal experts as well as SME customers make a strong argument for the necessity of face-to-face appointments when dealing with complex topics or negotiations, e.g.
fixed net infrastructure. As for the point of sale, it is less common to consult branch shops for B2B issues. However, branch stores should be capable of providing all business customers with basic services like SIM card replacements or booking of standard tariff options in order to act as “one face to the customer”.

As it was found during the interviews, the phone—along with e-mail—is the most frequently used channel for customers and sales representatives to interact. In order to provide customers with an OC experience, each contact via phone has to be documented properly. Regarding hotlines, customers of telecommunications providers are currently faced with a great number of different phone numbers for different requests. Although it might make sense to have separate phone numbers for several reasons, the number of hotlines that are communicated to customers should be kept as low as possible in order to provide the most comfortable customer experience. Another finding of the interviews is that paper mail and fax are increasingly replaced by e-mail as a legally accepted way of business communication. However, an abolishment of paper mail and fax is not yet possible due to more traditional customers. Similar to the phone, e-mail is a very frequently used channel for both outbound and inbound communication of telecommunications providers. This trend was also supported by both internal and external interviewees.

<table>
<thead>
<tr>
<th>Touchpoint group</th>
<th>Customer touchpoint</th>
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<td>Functional</td>
<td>Self-Service Platform</td>
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<td></td>
<td>Mobile Apps</td>
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<td>Live Chats and Chat Bots</td>
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<td>Website, Web Enquiries, Newsletters</td>
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<td>Video Conferencing</td>
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<td>Social</td>
<td>Social Networks (Facebook, Google+, Twitter)</td>
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<td>Corporate Social Platforms (LinkedIn, Xing)</td>
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<td>Mobile Instant Messaging</td>
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<td>Corporate</td>
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<td>Digital Feedback Forms</td>
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**Functional channels.** In the interview analysis, a self-service platform was identified as the main application that is offered to customers. As mobile applications are considered separately, this channel will further be referred to as self-service platform within the framework that is being designed. While such platforms give customers the chance to handle several administrative and largely standardized tasks like contract extensions and SIM card exchanges on a client basis, the internal interviewees see a lot of potential for improvement and further development of these.

*Mobile apps* have become a self-evident part of people’s everyday life. In business environments—especially in large companies—the functionality of such apps is usually restricted to a certain degree. Here, the transfer of functionality from the
existing self-service platforms to the mobile apps along with a corresponding role and rights management could enhance the customer experience in a B2B context.

Chats are increasingly present on all kinds of websites [7]. Chats can be differentiated in live chats with real service agents and virtual assistants or chat bots, which are powered by AI [17]. Either way, chats are suited for rather simple requests or quick questions about a product or service. Interview partners have stated that they prefer talking to someone on the telephone when it comes to more complex issues or use e-mails for documentation reasons. However, it should be part of an OC strategy to offer this additional, situation-sensitive channel to account for simple questions.

Websites are often the first touchpoint for potential customers. It is, therefore, of major importance that the information displayed on the website is consistent with the information available in all other channels, which is a basic principle of OC management. In B2B telecommunications, offers for customers are usually negotiated individually using master agreements. As a consequence, the websites of the major providers are held informative with less focus on specific prices and rather suggesting personal contact for individual quotes. Accordingly, websites should be individualized for different customer segments, e.g. self-employed people, SME customers, large corporations, and public authorities.

As an alternative to on-site face-to-face meetings, video conferencing is a communication channel that facilitates personal interaction. Instead of depending on third-party software, proprietary video conferencing tools or unified contact center solutions of the telecommunications provider can be used for example to bring together a customer, a sales representative and a technical expert on a complex fixed net project. However, video conferencing in general is not suited to be used with any touchpoint (e.g. hotline personnel), but rather with those where a personal relationship should be facilitated, e.g. with the dedicated SRs.

Social channels. The usage of social networks is not limited to the private lives of people anymore as they increasingly gain relevance in the B2B context [18]. Despite corporate restrictions that might hinder people from using social networks on behalf of their employer, people are used to these networks from their private experience. Similar to web chats, social media channels are more suited for simple standard requests, e.g. regarding tariff options or roaming. Nevertheless, social media channels can also be used in a simplex fashion (i.e. one-way communication) to announce news while focusing less on the interaction with the network. This can be easily followed by experts on the customer side, potentially generating up- and cross-selling potential.

Corporate social platforms such as LinkedIn or Xing, are specifically made for the business context. Although the platforms are primarily used for recruiting purposes, they can also serve as a communication channel between telecommunications providers and their (potential) customers. During the interviews, one SR stated, for example, that he regularly employs Xing as a channel for social selling.

Seeing the proliferation of mobile instant messaging with providers like WhatsApp, such services increasingly gain importance in internal business communication, as it was also mentioned by some interviewees. Yet, using such third-party services as a means of communication caused mixed reactions among
interviewees and are subject to privacy and security concerns. Here, to still be able to offer such channels to business customers if requested, proprietary MIM solutions could help ensuring privacy, security as well as proper documentation of the customer contact as part of an OC approach. However, a major downside of such solutions is the missing adoption among the customers.

**Community channels.** *Online forums* are a common platform that is offered to customers by all telecommunications providers where customers get to help each other and be assisted by service agents publicly. In the business context, such platforms are usually not offered. Similar to chats and social channels forums are suited for minor requests or simple questions, or to pool requests by multiple customers, which is often done in the B2C context. Forums offer a way for providers to communicate answers and solutions to common problems to a larger audience and make these solutions available in the long-term. However, according to the analysis, such platforms are less suited for B2B environments where requests are usually more specific and individual. In contrast to social channels that provide additional value when used as outbound channels for information and news, forums offer less added-value for providers in the business context so that they will probably not pose as an as important channel to offer to B2B customers as part of an OC approach.

As with the social networks before, it is beneficial for telecommunications providers to be present on common *online video platforms* with YouTube as the most prominent example to fulfil the expectations that consumers project into their professional lives.

**Corporate channels.** Offering *Frequently Asked Questions* (FAQ) for basic topics and promoting them to customers can help to prevent unnecessary requests by providing a way to solve questions themselves. The contents of the FAQ should be based on common customer enquiries and regularly be updated to improve them gradually. In the context of OC, the consistency of information is essential. It is, therefore, beneficial to limit the FAQ to questions applicable to all customer segments or clearly distinguish the corresponding customer segment in order to avoid confusion.

Providing customers with a means to give *feedback* is an essential part when it comes to improving the customer experience and is therefore crucial in an OC context. Making use of available customer contact data to request feedback after an interaction, e.g. by sending a SMS or an e-mail following a call to the hotline, is a convenient way to collect recent feedback. In the case of negative experiences, follow-up calls can be made to unsatisfied customers in order to mitigate damage and prevent customer churn. Apart from that, the possibility to provide feedback gives customers the feeling of being heard and taken seriously if it is accordingly answered and taken into account.
5 Design of the Omni-Channel Framework

From the analysis of traditional and digital customer touchpoints in the previous section, the structure for the OC design can be derived, i.e. the channels that should be offered by a telecommunications provider to facilitate an OC approach. Based on the channel design, implications for the organizational and IT infrastructures of B2B telecommunications providers can be derived. The resulting framework is depicted in Figure 1.

![Figure 1. Omni-channel framework for B2B telecommunications providers](image)

On the left-hand side of the framework, the customers are placed, since in the customer-centric OC approach the customers pose the starting point of analysis. Next to the customers, the previously elaborated channels are placed to illustrate their communication purpose. On the right-hand side, the telecommunications providers are located, divided into three sub-parts. The leftmost of these parts are the touchpoints which customers can reach via the different channels. Next to the touchpoints, the internal organizational structure of the provider is depicted. The dashed line is chosen to illustrate that the touchpoints are embedded into the organizational structure, but the structure is not directly visible and important to the customers. As the focus of this work lies on sales and service, other remaining departments are not part of the framework. The rightmost part shows the IT infrastructure. Similar to the organizational structure, only such systems and tools that were identified as relevant for OC and in the scope of this work are included.

**SME customers.** The customer side is not further specified in detail as there are no insights into the individual organizational structure and it should represent any SME
customer a telecommunications provider might serve. Any part of the customer organization can turn to the provider’s touchpoints.

**Telecommunications provider.** On the provider side, channels are used by several touchpoints, which is illustrated by both traditional and digital channels pointing at all touchpoints. Naturally, not all touchpoints use every channel so that a corresponding customer touchpoint management is required that regulates which channels are used by each individual touchpoint. As channels will be used equally by both sales and service, all touchpoints need to have access to the same databases and software systems in order for OC to work. Correspondingly, there are implications for the organizational and IT infrastructures of telecommunications providers.

### 5.1 Implications for the Organizational Structure of Telecommunications Providers

With regard to the organizational structure, the traditional split of the departments sales and service into separate silos, which is common in many companies, needs to vanish and closer collaboration is required. This convergence is illustrated in the framework by the diagonal division into sales and service which stands for one integrated unit. It has to be noted that this does not mean that the creation of one enormous department under a new name is required, but rather calls for the necessity of holistic collaboration and a common understanding of customers. This involves the same segmentation of customers, the common access to all relevant customer data, no matter whether sales- or service-related, as well as seamless internal communication processes and tools in order to be able to offer an OC experience to customers. By taking a customer-centric perspective through a customer journey approach, the potential of such convergence can be laid out: As sales activities happen before after-sales service activities, the customer experience is fostered horizontally by making use of information collected in prior phases of the customer journey.

### 5.2 Implications for the IT Infrastructure of Telecommunications Providers

The importance of the IT infrastructure as a prerequisite for an OC strategy was highlighted before. As OC is a customer-centric approach that improves the customer’s experience by facilitating seamless switching between channels and touchpoints, customer data is the central asset that has to be available across all touchpoints the customer can reach out to. Therefore, a Customer Relationship Management (CRM) system is essential for the management of customer data and represents the core system in the OC framework. However, no standard CRM solution is capable of offering all functionalities that are required by specific industries, e.g. telecommunications. Therefore, such systems either have to be customized or integrated with additional systems. Along with rather static master data like a customer’s company name, address, or industry, there is transaction data, e.g. current customer requests. Especially this type of customer service-related data may not
always be stored in the same software system as customer master data. However, in order to realize OC properly, the data should either be stored in the same system or, alternatively, in different fully integrated systems in order to ensure access to all data from each system. Especially for service departments, a system for service case management is relevant. In order to ensure that cases are handled quickly and by the right people, such a tool should work as a workflow management tool that implements clearly defined business processes based on the ideally integrated organizational structure of sales and service that was discussed before.

Moreover, a common tool for pricing is necessary to guarantee price consistency across touchpoints and enable both sales and service employees to give transparent information on individual conditions for each customer. Finally, although the common system environment should enable all employees to provide the same information, redirection of requests and cases on the phone will be necessary at times so that a state-of-the-art call routing system needs to be in place to connect customers seamlessly to other touchpoints without them having to take action, either triggered by service agents or by Interactive Voice Response systems. As mentioned before, the rules for redirection have to be clearly defined by business processes and should be supported by a workflow management tool that allows the assignment of tasks to other teams or employees, for instance, ideally in the CRM system itself.

### 6 Demonstration of the Omni-Channel Framework

In order to demonstrate the feasibility of the developed OC framework, a fictive use case is presented at this point. However, this use case was mentioned as a huge potential of such an approach in many of the interviews that were lead during the analysis phase. The use case was mentioned before and is presented as a persistent shopping cart across touchpoints.

Usually, a shopping cart in an online shop is limited to the website or at best also accessible using a mobile app. How storing the customer’s shopping cart centrally can help improve both the customer experience as well as increase sales as part of an OC strategy, will be explained in the following.

In case the customer has doubts about tariffs, options or devices that are not easy to self-solve online, there should be an option to directly contact an agent using a chat, e-mail or phone. By automatically including the customer number in the chat or e-mail or automatically retrieving it when they call from their number recognizable by their provider, the customer can automatically be routed to a service agent who has all information on the shopping cart available. By giving the agents write-access to the customer’s shopping cart on demand, the customer can be assisted in their choice of products and be helped quickly, e.g. by adjusting options or changing tariffs in the cart. These interactions with the customer can also be used as an opportunity for up- and cross-selling by the provider, especially when they contact their SR with questions, who should equally have full access to the customers’ shopping carts.

Similarly, all quotes made by SRs or any other touchpoints should be available for customers to look at, including all individual conditions within the self-service
platform. By storing this data centrally and accessible for all touchpoints, it is guaranteed that the customer can contact any touchpoint with questions and all touchpoints can take the information into account when advising customers or making their own quotes. It also helps to avoid that offers are made by other touchpoints, when SRs have already made one and thereby prevent customers from making confusing experiences that may deteriorate satisfaction.

Most importantly, it has to be ensured that the self-service solution reflects the exact pricing conditions that the customer would get at any other touchpoint so that the customer does not refrain from using it in the future. For example, sometimes price reductions are given for online orders as part of promotion in order to shift more orders to online channels.

Apart from the case when customers actively contact a provider with a request concerning their shopping cart, they can also leverage the information from their customers’ online behaviors proactively, e.g. by sending notifications upon open, not ordered shopping carts, individualized product information or newsletters to corresponding customers.

7 Discussion

In this article, the development of an OC framework for sales and service in the B2B telecommunications industry on the basis of the Design Science Research Methodology was described. While the need for such a framework was shown in the motivation, the lack of it was emphasized in the research background. During the development, 22 expert interviews with both internal sales experts and external customers were carried out to verify, extend and abolish the typology of communication channels—both traditional and digital—by Straker et al. [13]. On the basis of four traditional channels and twelve digital channels—grouped into functional, social, community, and corporate channels—the OC framework was derived afterwards showing the way of communication along with the respective internal touchpoints, the internal organizational structure as well as the IT infrastructure needed for such an OC approach. The feasibility of the framework was demonstrated on the basis of a fictive, yet in the interviews often-mentioned use case.

Up to now, the evaluation of the OC framework for telecommunications providers in practice is still missing. This evaluation will be carried out in close collaboration with one of the three major German telecommunications providers, which has already provided access to the internal experts and the customers for the expert interviews in this work. Moreover, the framework and the implications for both the organizational and IT infrastructures should be verified and/or adapted by testing them out in a bigger context, probably not limited to the German telecommunications market.
References