Mastering the Digital Transformation of Sales

Summary

Managerial and academic literature provides only limited guidance on how to drive the digital transformation of sales. We develop a model that prescribes an in-depth analysis of sales processes, goals for each process in terms of effectiveness and efficiency, and a structured set of digital responses. We built this model from qualitative interviews with 19 key informants and tested the model in a cross-national sample of 540 managers. For managers, our paper provides actionable guidelines on how to drive the digital transformation of sales, a large set of inspiring examples, and an international benchmarking opportunity.

KEYWORDS: digital transformation, sales management, selling, processes

Introduction

Companies are investing heavily in their digital transformation—and one of their primary fields of action is the sales organization.[i] However, many companies struggle in capitalizing on these efforts. For example, a research by Accenture from 2016 found that although 75% of sales executives said that sales tools today are an integral part of the sales process, but only 15% described their sales tools as truly effective.[ii] Likewise, a study by the Sales Management Association[iii] shows that only 42% of companies say they have a culture of data-driven decision making, and on average, companies analyze only 12% of the data they collect. 68% of companies claim that they under-invest in sales reporting and analytics technology. Two-thirds of companies do not have a social media strategy for their sales teams, which leads the Sales Management Association to conclude that "as one of the most powerful and effective branches of digital sales, social selling seems underutilized by organizations to their detriment."

Companies' struggles are not surprising, seeing that they are offered only limited conceptual guidance: prior literature has mostly examined specific aspects of digital transformation without providing prescriptions on how to holistically transform sales. Given this lack of guidance, many companies have engaged in a game of trial and error. As one manager recently told us, digitalization of sales in his company "looks like a random and incremental process."

We aim to advance managerial practice by developing a prescriptive model of how to develop and implement a strategy for the digital transformation of sales. To this end, we first reviewed the relatively scant literature on the transformation of sales. Subsequently, we ran a qualitative study comprising 19 semi-structured interviews with 8 managers and 11 salespeople from 7 companies in different industries. Using insights from these interviews, we developed our model, which prescribes an in-depth analysis of sales processes, the identification of current pains and potential gains in effectiveness and/or efficiency, as well as a structured set of digital responses.

Using this model, we then analyze the current state of digital transformation in sales processes in an international sample of companies (N = 540) and highlight the distinctive features of the most successful companies. We also discuss practical examples of how leading companies manage the digital transformation of their sales processes to better create and capture value. Our paper thus provides actionable guidelines and a large set of inspirations for managerial practice on how to drive the digital transformation of sales. In addition, managers may use our results to benchmark their own status of digital sales transformation against an international sample of companies.

Literature Review

Digital transformation refers to "the process of using digital technologies to create new—or modify existing—business processes, culture, and customer experiences to meet changing business and market requirements."[iv] Despite considerable advances of knowledge about the digital transformation of sales, the existing literature exhibits two key limitations. First, prior research typically focuses on selected phenomena (like salespeople's adoption of CRM technology, sales force automation and customer self-service technologies to increase sellinge efficiency, and, more recently, the impact of artificial intelligence on the sales organization)[v] and thus builds partial models covering one specific aspect of transformation. Such partial models cannot guide sales managers' digital transformation endeavors holistically. Second, whereas many studies investigated the impact of digital transformation on *marketing* strategies and activities, with a strong emphasis on end consumers, much less explored has been the impact of digital technologies on *sales processes* and consequently on the activities of salespeople and the related relationships with B2B customers, as well as dealers, distributors, and partners in channel relationships.

To holistically investigate the digital transformation of sales processes, such processes should be identified first. Usually, they can be broken down into several phases, each one including

multiple sub-processes and dozens of specific activities.[vi] Specifically, despite industry-specific differences, most scholars agree that the selling process incorporates a *pre-selling phase* (including sub-processes such as prospecting, qualifying leads, preparing a call), a *selling phase* (including sub-processes such as making a presentation to a customer, negotiating terms and conditions), and an *after-sales phase* (including sub-processes such as servicing the customer and keeping the relationship alive through follow-up calls).[vii]

The sales process may involve several people from different departments in the selling company, ultimately requiring salespeople to also spend time in internal processes, develop internal navigation competencies, and the ability and willingness to share activities, information, and other resources with colleagues from other organizational units.[viii] For example, in the pre-selling phase salespeople may need to interact with colleagues from marketing to gather information to qualify leads and collect customer and market information to prepare for their sales call. In the selling phase salespeople may relate to their technical departments to define the specifications in the proposal and with colleagues from finance to agree on prices and discounts. In the after-sales phase salespeople may need to communicate with their colleagues in the logistics, customer care, and technical assistance departments to make sure that customers continue to have a positive experience. To sum up, salespeople need to manage multiple and complex activities in the interaction with customers, but also inside their own organizations.

Digital technologies may be used by salespeople in different phases and sub-processes of the selling process for different purposes.[ix] Specifically, some digital technologies are used solely by the salesperson, for example in the planning activity or in postcall duties, and usually not seen or not even known by customers. A typical example is every CRM-like solution. Other digital technologies automate tasks during an interaction. Examples are configurators of solutions used in the provision of information and electronic signatures. In other cases, clients are given the

opportunity to use digital technologies to gather information, search inventories, locate products, determine avilability, or place orders autonomously (e.g., through an e-commerce platform). Digital technologies may also facilitate information sharing and communication processes in intrafirm, cross-functional interactions between salespeople and their colleagues in other departments.

The previous elaborations illustrate that "digital transformation" is a complex phenomenon that encompasses various technologies potentially impacting various sales processes. To create value for practitioners, a prescriptive model necessarily needs to tap into this complexity and provide guidance on the specific yet generalizable options managers can draw from when they aim to transform sales digitally. To conceptualize these options, we decided to comprehensively examine the status quo of how digital technologies impact selling processes in practice through a qualitative study on companies from different industries.

Study 1: Conceptualization of a Prescriptive Model of Digital Transformation in Sales

As a sample for this initial study, we acquired a convenience sample of 8 managers and 11 salespeople from 7 leading companies in different industries (see Table 1). The interviews followed a semi-structured questionnaire aimed at carving out common practices in the digital transformation of sales. Specifically, because our main focus is the transformation of processes, we started by asking respondents how digital technologies had transformed their sales force everyday working activities. Depending on the answers, we then probed deeper to understand why and how companies specifically digitally transformed the respective sales activities. All interviews were audiotaped and transcribed verbatim.

To analyze the interviews, we carefully processed all transcripts and iteratively clustered similar statements. A first notable and overarching finding was that many practitioners missed

strategic clarity in their companies' digital transformation of sales processes. Consider the following two quotes:

> "To me, the digitalization of sales in our company largely looks like a random and incremental process. I don't see a plan with clear priorities and well-defined steps, my personal understanding of the transformation is based on intuition and common sense. As a sales supervisor, I don't have a plan to guide this change. I am learning by doing, through experience, supported by my curiosity and willingness to accept this challenge more than by my company and a sound method."

> "In our company, digitalization is seen as an unavoidable urgency, but without a clear corporate plan on what should be done and how. I mean, we have a general, master plan for digital transformation, but no formal plan about its vertical implementation in terms of of actual and precise transformations to be done at the sales function level."

Against this backdrop, we analyzed practitioners' examples of digital transformation in detail, aiming to induce generalizable prescriptions. Hereby, our basic premise was that although these examples may have emerged in a "random and incremental" manner, clustering and abstracting them will allow us to infer how companies should make decisions about the digital transformation of sales processes. This procedure resulted in our prescriptive model of digital transformation in sales provided in Figure 1. The model constitutes of a flowchart that leads managers through the decisions they need to take when aiming for digital transformation and presents options to consider. In the following, we elaborate on each of these decisions and options in detail.

Place Figure 1 about here

Table 1: Interview partners

Name of the company	HQ location	Industry	Revenue (billion USD)	Short profile	Interviews
Company 1	US	Specific BU: Personal safety	~ USD 32 bn (2017)	Company 1 is a manufacturer and marketer of a broad range of products and services. The company operates in different segments and sells products through various distribution channels, including directly to users and through a range of wholesalers, retailers, jobbers, distributors and dealers in a range of trades in various countries around the world. Our interviews focused on Company 1's Personal Safety business.	• Marketing & Sales Director • Account manager • Account manager
Company 2	Germany	Pharmaceuticals	~ EUR 18 bn (2017)	Company 2 researches, develops, and manufactures pharmaceutical products. The company offers prescription medicines, consumer health care products, biopharmaceuticals, pharma and chemical production, and veterinary medicines. Company 2 markets its products worldwide. Company 2 is one of the pharmaceutical industry's top 20 companies.	• District manager • Account manager • Account manager
Company 3	Germany	Market research	~ EUR 1.5 bn (2016)	Company 3 is a market research company offering online pricing intelligence, audience measurement and insights, point of sales tracking, consumer panel research, brand development, retail analytics, and consumer demand forecasting services. Company 3 serves automotive, consumer goods, fashion and lifestyle, financial services, health, media and entertainment, public services, retail, technology, and travel and tourism industries.	• Sales manager • Account manager
Company 4	Liechtenstein	Building and construction	~ CHF 5.6 bn (2018)	Company 4 is a world leader in the design and manufacture of cutting-edge technologies, software and services for the professional construction industry. Company 4 develops and manufactures products, systems, software and services and has roughly 250,000 individual interactions each day with customers, most of the times directly on construction sites.	• Head of Digital & Brand • Account manager • Account manager
Company 5	Italy	Eyeware	~ EUR 9 bn (2017)	Company 5 is a worldwide leader in the design, manufacture and distribution of fashion, luxury, sports and performance eyewear. Its brand portfolio includes proprietary brands and prestigious licensed brands. The Group's global wholesale distribution network covers more than 150 countries and is complemented by an extensive retail network of approximately 9,000 stores.	• Trade marketing manager • National account manager
Company 6	US	Fast Moving Consumer Goods	~ USD 67 bn (2018)	Company 6 is focused on providing branded consumer packaged goods to consumers around the world. The company owns many leading brands worldwide brands and sells its products in approximately 180 countries and territories primarily through mass merchandisers, grocery stores, membership club stores, drug stores, department stores, distributors, baby stores, specialty beauty stores, e-commerce, high-frequency stores and pharmacies.	• Area manager • Digital sales support manager
Company 7	UK	Telecommunications	~ EUR 47 bn (2018)	Company 7 is a telecommunications company that provides a range of services, including voice, messaging and data across mobile and fixed networks. The company has a customer base comprising individuals, domestic businesses of all sizes, multinationals and public sector departments, with a range of communications needs. The company reaches its customers through direct sales teams, indirect partners, and telesales channels.	• BU director • Sales transformation manager • Key Account Manager • Key Account manager

Gain strategic clarity on the core focus of transformation: Defining the "what"

The first decision managers need to take is which processes to digitally transform. On a macro level, digital transformation is not confined to particular areas of the sales organization, but comprehensively affects all sales-related processes. However, as our interviews revealed, on a micro level, companies typically do not aim to digitally transform all of these processes simultaneously, but clearly prioritize selected processes on which they subsequently focus their digital transformation. In the following, we elaborate on specific examples.

Starting from the selling process, first, when it comes to the *pre-selling* phase and its related sub-processes, a frequently mentioned example in our interviews was the impact of digital technologies in transforming prospecting and qualifying. Consider the following quote by a salesperson from Company 1:

> "In the prospecting and qualifying phases of the selling process, we have started using social selling tools and social media, like LinkedIn, or even simply our customers' website, to search and gather information about members of the decision making unit we may contact. We now also use the new CRM system to see, for example, if some colleagues from other business units in our company have already worked with that client in the past. All these changes have been driven by digital innovation, and they certainly affected the way we work."

Second, when it comes to the *selling* phase of the selling processes and its related sub-processes, our interviewees frequenty explained how they digitally transformed their product presentation. Consider the following example mentioned by a manager from Company 5:

> "In the most important trade show of our industry we typically presented our new products using the strongest teatralization possible. However, this year we did not present any physical product: we only used virtual mirrors and gave customers the opportunity to wear our sunglasses only virtually. And we have started doing the same in our meetings with retailers. ... Historically, our salespeople typically had to bring with them to the customer's stores approximately 420 physical samples of products for every new collection. Now they only bring about 150 physical samples, whereas the rest of the collection is presented in a digital version, on the sales force tablets and in the digital control room in our showroom, depending on the type of

customer. Clients can easily filter the products by brands, price, gender, materials, type, front shape, and colors."

Third, digital technologies substantially transform key activities also in the *after-sales* phase of the selling process and its related sub-processes, as a Company 1 salesperson told us:

> "We sell our products through distributors. Since many of these resellers are small and de-specialized, they usually cannot solve customer problems related to our products, because they don't know them well enough. Therefore, when a customer has a problem, say, for buying a spare part, he sends me by WhatsApp a picture of the product and asks me for assistance. Then I can give him in real time the solution, and by doing this I am actually providing a valuable service not only to him, but also to our distributor. The key advantages of sharing photos is the speed of response to the customer needs and requests".

Interestingly, the interviewees also reported on the digital transformation of processes *outside* the phases of pre-selling, selling, and after-sales. For example, a salesperson from Company 6 explained to us how his company transforms the training of salespeople:

> "All contents are available on a digital platform and automatic reminders are periodically sent to salespeople. We have a very rich collection of programs: some are mandatory, some others are optional. Every salesperson has a personal account and a dedicated section. It is a very efficient system."

To allow our model to comprehensively capture sales-related processes like the one above, we decided to move away from clustering them into pre-selling, selling, and after-sales. Instead, building on our interviews we distinguish between the transformation of *customer interaction* processes and *internal* processes. Internal processes relate to all activities without customer interaction and thus comprise pre-selling activities like planning the calls and preparing a presentation, as well as sales force management processes like sales force training and sales planning and control. We propose that managers should systematically map internal and customer interaction processes and, as outlined in the following, analyze the potential to improve each process through digital technologies.

Gain strategic clarity on the core focus of transformation: Defining the "why"

Our interviews highlighted that the two fundamental reasons for digital transformation in sales are to increase effectiveness and efficiency of processes. Thus, taken together with our previous insight, the foci of digital transformation can ultimatley be summarized in two dimensions:

1. *Core focus of digital transformation:* internal processes (i.e. cross-functional or intra-sales team processes, pre-call activities like preparation of visits, training and development of the sales force, sales planning and control, etc.) or customer interaction processes;
2. *Ultimate goal of digital transformation:* increasing efficiency or effectiveness. To illustrate, the adoption of digital solutions aimed at simplifying administrative, back-office processes (e.g., procedures for managing extra discounts or getting approvals from other departments) is a typical example of focus on increasing the efficiency of internal processes. In contrast, the use of highly engaging digitally-enabled gamification solutions for training the sales force is an example of focus of the transformation on increasing the effectiveness of internal processes.

Our interviews also revealed when companies regard improvements of process effectiveness and efficiency through digital technologies as particularly desirable. Specifically, a central theme we discovered throughout the respondents' elaborations was that digital technologies compensate for prevailing lacks of knowledge, speed, reach, and perceived value. We elaborate on these in the following.

First, respondents noticed that in non-digitalized sales-related processes, employees are frequently unable to access all knowledge required to make adequate decisions. In these situations, respondents regard digital technologies as an avenue to remedy *lacks of knowledge*, as the following example from a salesperson from Company 4 illustrates:

> "In the case of well-established relationships with long time customers, the typical problem was that these clients oftentimes have more information on the history of the relationship than our salespeople, especially because the members of our sales force change over time as a consequence of turnover and job rotation. This information asymmetry complicated the entire selling process. Now, thanks to digital innovation, this situation has been re-balanced, since our CRM system gives our sales force the opportunity to get a comprehensive picture of the history of the relationship with every single customer before approaching that client."

Second, beyond alleviating a lack of knowledge, respondents frequently perceive the *lack of speed* in non-digitalized sales-related processes as a major hurdle to higher effectiveness and efficiency. Again, companies use digital transformation to remedy such lack of speed, as illustrated by an example from a salesperson from Company 3:

> "Especially in some instances, like in the case of tenders and with international key accounts, we must improve the ability to more rapidly submit consistent, well structured and financially sustainable proposals and quotations. The bidding process is therefore undergoing major changes. Digital technologies are helping us in several ways. For example, we need to share more and better information on a specific customer or opportunity across divisions, regions, etc. and we need to become faster and faster in using digital tools for estimating the cost of a specific project."

Third, respondents see digital transformation as instrumental in remedying a *lack of reach*, that is, compensating for the fact that members of the sales force cannot (or should not, in case of time wasting, not or poorly value-adding activities such as mere order taking) manage all company interactions with customers during the selling process, and/or customers cannot interact with the seller when, where, and how they prefer throughout the customer journey. One predominant form of digital transformation in this respect is the addition of digital interaction channels, as illustrated by a manager from Company 5:

> "Historically, clients placed the order directly to the field salesperson visiting them, or by the phone. Today, our customers can place the orders mainly through three different channels. The first is when they meet in person our salespeople, which happens especially when we launch our new products, three times a year. The second channel is our portal, which customers use mainly for re-ordering products and for orders of special version specifically requested by the end consumers. The third channel is the telephone, that has now been largely replaced by our portal, which

> frees up time not only to our salespeople, but also, and mainly, to our customer service call center."

Fourth and last, the examples raised by respondents illustrate that gains in effectiveness and efficiency through digital transformation result from alleviating a *lack of perceived value*. For example, digital technologies help select and communicate the right product with the right message for each customer. As a manager from Company 1 told us:

> "One of the main problems is that, when communicating with our customers, salespeople should be able to deliver more tailor-made, value-adding and engaging messages that customer cannot find on digital touchpoints. Consider that we have more than 18,000 B2B clients in our "Personal Safety" business, and obviously each of them wants to be treated differently. So we want digital technologies to help our sales force deliver more customized messages to every single customer. We are increasingly trying to do so, for example, by investing in sentiment analysis, better analyzing historical data in our CRM, and providing salespeople with higher quality and easier-to-customize sales contents."

Building on these findings, we propose that managers should systematically inspect potential gaps that currently limit the effectiveness and efficicency of each process mapped in the first step. After having prioritized processes based on their potential to improve effectiveness and efficiency by filling prevailing lacks of knowledge, speed, reach, and perceived value, managers should decide how to accomplish this using digital technologies.

Choose consistent digital pathways for the transformation: Defining the "how"

An in-depth analysis of the examples we collected yielded six underlying themes of how technology alleviates the lacks of knowledge, speed, reach, and perceived value that we previously carved out. We label these these the *6 S pathways* of digital transformation in sales: substitute, supplement, service, simplify, support, and share. In the following, we elaborate on each of these pathways.

First, digitalization in sales takes the form of a pure *substitution* of human beings (salespeople), for example with digital channels or robots. This pathway is succinclty summarized in the following quote by a salesperson from Company 6:

> "In our business, the management of orders from our clients is now totally digitalized. Customers place orders directly through their portal, with no involvement of salespeople at all. For salespeople these changes can be quite scary, because they suggests that for some processes human beings can be completely replaced by digital technologies. Digitalizing means reducing the number of salespeople in the field, but it is also an opportunity, because only the best ones will remain, and they will have to make the most important decisions and will be given more responsibilities to create value for the high-stakes customers."

Second, although substitution may be the priority in some phases of the selling process, our research suggests that more frequently companies aim to give their clients more options to interact with them, that is, companies aim to *supplement* salespeople with other channels and touchpoints which customers may use. Clearly, the use of multiple channels for interacting with customers implies a need for coordination across all the relevant phases of the selling process. This is true, for example, for the product presentation phase, as clarified by this example cited by a manager of Company 5:

> "The opticians cannot find the new collections on our portal before the new products are presented to them by our sales force… This is because we want to incentivize the face-to-face meetings between our clients and our sales force. We don't want to substitute the salesperson with digital channels, also because, among other things, the average order sizes placed on the online channels are usually much lower than the one made after a visit in person."

Third, companies increase effectiveness and/or efficieny through digital technologies by providing digital *service* to customers, especially in the form of helping their partners better manage their value chain and business model. A good example is provided by Company 5, which in the relationship with its retailers moved from a sell-in to a sell-out strategy: that is, the company aimed to help retailers better manage their stores to sell more products to end-consumers. As a manager from Company 5 told us:

> "We completely replaced any printed, paper-made point-of-sale materials with digital screens in more than 6,000 stores of our customers and partners. This allows the customization, store by store, of the contents presented on the screen, depending for example on the trends in sales as well as on the specific nature and characteristics of the end consumers visiting that specific store."

Fourth, beyond servicing, our interviews clearly highlighted that digital technologies are frequently used to *simplify* activities (both for the customer and for the salesperson) and therefore typically increase efficiency. An example is provided by a salesperson from Company 4:

> "In the past, our salespeople had to waste a lot of time for collecting orders from a highly fragmented customer base, since in our market clients are characterized by a high geographical dispersion. With the introduction of e-commerce and electronic ordering our salespeople can save a lot of traveling time for such a basic task like order taking. Usually, the salesperson helps the customer place the first electronic order, and then the client becomes autonomous. Recently we have simplified the order placement process, especially for the small customers with a low familiarity with digital technologies, by introducing a system where they receive a pre-defined e-mail with a PDF version of the offer and a clickable "place the order" icon. The big and more technology-savvy clients, instead, place the orders through portals directly connected to our e-commerce platform, where orders are automatically generated with no contact at all with salespeople. In general, these digital innovations in the order taking phase allow our sales force save a lot of time for adopting a consultative selling approach and therefore focusing on more value-adding processes and relationships, and ultimately become more relevant for selling complex solutions that customers typically do not buy online."[x]

Fifth, many salespeople and managers we interviewed underlined that digital technologies are aimed at *supporting* the sales force, usually through sales enablement initiatives, such as the provision of digital, customized sales contents tailored for a specific opportunity, or of digitalized training programs for their salespeople, or after-sales, follow-up activities. For example, in the case of Company 2, a salesperson told us:

> "I now can choose from 37 different types of pre-defined follow-up e-mails to send to my clients after the visits. Thanks to the system we currently use, depending on the type of customer I met and the nature of the visit I did, a tool on my iPad suggests the most appropriate follow-up e-mail to send, with personalized messages and contents for that specific customer".

Sixth and last, digital transformation fills prevailing lacks and hereby improves effectiveness and efficiency by facilitating the *sharing* of information. For example, this pertains to sharing of knowledge (e.g., price lists) between the field sales force and the company as well as to sharing best practices among different members of sales teams, across different units and departments of a company, and between sellers, buyers, partners, and distributors. For example, a manager from Company 2 told us:

> "Our Integrated Customer Engagement strategy largely relies on our Integrated Customer Plan, which is mainly based on the sharing of information provided by the salesperson, the Marketing department and the Med Info unit. This tool allows our salesforce to better analyze data and hence select and deliver, for example, customized promotional and scientific contents to our customers."

Implement consistent actions to drive the transformation

To understand how managers operationalize the digital pathways outlined above, we also coded the interviews for the specific transformational actions which managers took. This procedure resulted in nine action codes, which we aggregated to three higher-level themes: digitalization of *information*, digitalization of *internal processes*, and digitalization of *customer interaction processes*. In the following, we elaborate on these themes.

First, a central theme that emerged is the *digitalization of information*. More specifically, managers consistently emphasized the importance of *collecting*, *analyzing*, and *disseminating* data to pave the 6 S pathways. To illustrate, to *substitute* or *supplement* salespeople, machine learning algorithms may help customers efficiently navigate through online portals. To *service* customers, companies may provide them with digital rather than analog information. To *simplify* activities, companies may analyze salespeople's traveling data to optimize routing and avoid unnecessary calls to customers. To *support* the sales force, companies may run predictive analytics on customers' conversion or churn probability and *share* this information with salespeople via the

CRM system. The previous elaborations are well in line with prior litearature that has identified data and analytics as the backbone of any digital transformation endeavor.[xi]

The second central theme that emerged is the *digitalization of internal processes*. More specifically, managers implemented the 6 S pathways by using digital technologies to *automate* processes, *harmonize* processes (standardizing them across different members of the sales force), and *prioritize* processes (allocating resources across different opportunities). To illustrate, companies may speed up back-office processes particularly for A-level customers through robotic process automation, resulting in faster reponse times and consistent service quality vis-à-vis customers. This example shows how the digitalization of processes can simultaneously pave the way for the *substitute*, *supplement*, *simplify*, *support*, and *service* pathways.

The third set of actions refers to the role digital technologies can play to improve the *digitalization of customer interaction processes*. In detail, managers implement the 6 S pathways by *providing digital channels of interaction with customers*, *digitally enhancing services to offer more value-adding solutions to customers*, and *personalizing the marketing mix to better adapt contents, messages, interaction channels, etc. across different opportunities/customers*. To illustrate and as described previously, digital channels in the form of online portals with personalized content may *substitute*, *supplement*, or *support* salespeople. Digital services such as remote monitoring or industrial software systems may improve *service* to customers and *simplify* activities, such as operating and maintaining machines.[xii]

Taken together, the three categories of actions outlined above capture the fundamental applications of digital technologies that are conducive in implementing the 6 S pathways of digital transformation in sales organizations. As additional illustration, Table 2 outline specific actions taken by the companies in our sample. Importantly, as highlighted in the short examples mentioned above, we underline that the same pathway may be pursued and implemented, in practice, by

adopting several actions, and that the same type of action (e.g., using digital technologies to collect data) may be used to implement different pathways simultaneously. That said, we speculate that depending on the nature and fundamental goals of the digital transformation in sales adopted by a specific company, some pathways should be more frequently and typically associated with some actions, and that the consistent management of a combination of the different components of our model in Figure 1 is the key to success. In the final part of our paper, we will illustrate this idea by comparing two different forms of digital transformation adopted by company types called "enablers" and "replacers" respectively.

Table 2: Examples of key actions to implement the transformation strategy

Action	Example from our interviews
Collect data	Implement sentiment analysis to gather more sophisticated data on individual customers (Company 1)
Analyze data	Implement the analysis of data on international key accounts and cost estimates to improve bidding processes (Company 3)
Disseminate data	Implement access for salespeople to all training contents on a digital platform (Company 6)
Prioritize processes	Implement predictive analytics to prioritize the customers to invest on (Company 2)
Automate processes	Implement automatic reminders of new training contents for salespeople (Company 6)
Harmonize processes	Implement digitalized sales contents to standardize agents' communication (Company 7)
Provide digital channels	Implement social selling tools (Company 1), portals (Company 5), e-commerce channels (Company 4)
Digitally enhance services	Implement virtual presentations of products in digital showroom (Company 5)
Personalize the marketing mix	Implement selection of 37 different types of pre-defined follow-up e-mails salespeople can send to their clients after the visits (Company 2)

Source: authors' elaboration

Monitor the transformation through consistent KPIs

To continously monitor the transformation against their predefined goals, we propose that managers need to select adequate KPIs. Building on Kaplan and Norton's seminal balanced

scorecard model,[xiii] we suggest that KPIs can be effectively structured in bottom line, cost, process, customer, and learning & innovation KPIs. Needless to say, the KPIs to monitor should be chosen closely in line with the the goals companies aim to achieve through digital transformation (that is, effectiveness or efficiency gains by remedying prevailing lacks). Therefore, for example, cost-based and many process-based KPIs may usually be more consistent with goals of efficiency gains, whereas bottom-line, customer-focused and learning-oriented KPIs may usually be more in line with the goal of effectiveness gains.

Summary

Depending on the goals sales organizations pursue for different processes, they should carefully select consistent digital pathways (6 S) as well as actions to implement these pathways and KPIs. As an example, if the goal of the digital sales transformation is to increase effectiveness in the interaction with customers by filling a lack of perceived value, companies may choose to invest in digital technologies and solutions supporting their sales force and aimed at servicing the customer, mainly by adapting value propositions, proposals and communications, as well as by augmenting the customer experience, and they should set clear customer KPIs (e.g., customer satisfaction, net promoter score) as well as bottom line KPIs (e.g., growth in sales). In sharp contrast with this example, if the main goal of the digital transformation is to increase efficiency in internal processes by filling a lack of speed, then companies may invest in digital technologies that help simplify processes, mainly through automation.

Study 2: A Cross-National Quantitative Study of our Framework

Research approach and data collection

How does managerial practice perform against our prescriptive framework of managing the digital transformation of sales? To elucidate this question, we ran a cross-national survey study spanning the US, UK, Germany, and Italy aiming for three research goals:

1. To empirically identify dimensions along which companies' status of digital transformation of sales differs,
2. To empirically identify typical configurations of these dimensions and develop a corresponding taxonomy, and
3. To explore the outcomes of the different configurations.

Our taxonomical research approach is consistent with the configurative approach to organizational analysis that studies complex phenomena through overall patterns of multiple variables rather than through selected variables and their bivariate relationships.[xiv] Our approach to configurations uses cluster analyses to group organizations empirically. In selecting the input variables for the classification, we used the categories identified in our prescriptive model, which rests on the qualitative insights from Study 1. In addition to variables that will be used as inputs for the clustering procedure, we also explore outcome variables (e.g., self reported assessment of market performance and success in managing the digital transformation) and control variables (e.g., industry and strategy type). These variables are purely descriptive and do not enter the cluster analysis.[xv]

We approached senior sales managers through a professional panel provider. This process resulted in a final sample of 540 sales managers (34% from the US, 31% from Italy, 18% from Germany, 17% from the UK). In line with our goal to have a variety of different companies by size and industry in our final sample, approximately one third of respondents' companies (32%) have a total turnover above 100 million dollars, 28% are between 50 and 100 million dollars, another 32% are between 10 and 49.9 million dollars, 8% are below 10 million dollars. In terms of industries,

22% come from B2B services, 16% from industrial goods, 12% from ICT, another 12% from financial services, 11% from consumer goods, 6% from consumer services, 5% from pharma/healthcare, another 5% from distribution and commerce, 11% from other industries. Respondents are mainly general managers (31%) and sales managers (30%), followed by digital managers (17%) and marketing managers (12%). In the online questionnaire, drawing on our prescriptive model, we asked respondents to evaluate their sales organization along 25 variables, describing the various elements of a firm's digital sales transformation strategy. Specifically, we asked repondents to evaluate the extent to which (1) their digital sales transformation strategy had been designed starting for a systematic analysis of sales-related processes (two items, drawing on the "what" component of our model, i.e. internal and customer interaction processes), (2) their digital sales transformation followed a clear strategic plan (three items, drawing on the "why" component of our model[xvi]), (3) their digital sales transformation strategy built on each of the 6 S pathways of transformation (six items, drawing on the "how" component of our model). Futhermore, turning to the implementation of respondents' digital sales transformation strategy, we asked (4) to what extent they leveraged each of the 9 actions and (5) to what extent they monitored their digital transformation on each of the five KPIs. In addition, we collected a set of descriptive variables which we will use to characterize the clusters to be developed. The descriptives comprise companies' performance-related variables (market performance, digital transformation performance), companies' industry and strategy, and further variables pertaining to digital transformation (e.g., perceived importance, perceived nature of digital transformation as an "evolution" or "revolution," focus on digitalizing products or processes, focus customers affected, existence of an organizational unit in charge). All items were measured on nine-point Likert-type scales, anchored "not at all" and "very much"/"completely."

Statistical analyses

Cluster analysis groups firms with similar characteristics together across a set of variables, thus leading to homogeneous empirical types[xvii], and has been frequently used to divide a sample of companies into several groups that demonstrate a high degree of association. As a first step, to limit analytical complexity, we reduced the number of items to be included in the cluster analysis by determining underlying factors through principal components analysis with Varimax rotation. Table 3 shows the results of the factor analysis we ran on these items. Four items[xviii] had to be dropped because of cross-loadings. The analysis yielded five factors with a total variance explained of 71.36%. Moreover, all the factors extracted from the measures meet the reliabity criteria in terms of Cronbach's alpha.[xix] Keiser-Meyer-Olkin Measure (KMO) of sampling adequacy is also acceptable (KMO = 0.962 > 0.5), and Bartlett's Test of Sphericity (BST) is significant ($p < 0.001$) for the five sets of variables. Furthermore, these five factors have adequate face validity.

The final factor structure largely corresponds to our conceptual framework. Factor 1 was labelled "Strategic clarity" and it incorporates both the process-basis of a digital transformation strategy as well as the clear, formal specification and communication of the strategy in the organization. Interestingly, the digital pathways of transformation split into two separate factors: Factor 2 includes the substitute and supplement pathways and was therefore named "Sales force replacement", because it incorporates options of total or partial replacement of salespeople by digital technologies. Factor 3 was labelled "Sales force enablement" and incorporates all internal factors supporting the work of salespeople. Factor 4 incorporates seven out of the original nine digital transformation actions (two were dropped in the factor analysis). Finally, Factor 5 includes three of the five KPIs we originally posited companies may use to monitor their digital sales transformation (again, the other two were dropped in the factor analysis).

Table 3: Factor loadings

Factor ID:	1	2	3	4	5
Factor label:	Strategic clarity	Sales force replacement	Sales force enablement	Actions	KPIs
***α*:**	.86	.60	.87	.91	.81
Digital sales strategy designed around the analysis of all the relevant phases of the selling process	**.74**	.16	.20	.29	.19
Digital sales strategy designed around the analysis of all the relevant phases of the customer journey	**.74**	.15	.22	.22	.27
Clarity of digital sales transformation strategy	**.69**	.08	.27	.16	.33
Formal and detailed plan for the digital transformation of sales	**.57**	.10	.37	.14	.46
Substituting salespeople by technology	.25	**.44**	.28	.18	.24
Supplementing/integrating salespeople with other interaction channels	.21	**.76**	.02	.16	.31
Supporting salespeople in carrying out the processes	.39	.13	**.72**	.25	.01
Improving sales force training and development	.081	.07	**.71**	.26	.36
Improving sales force planning and control systems	.21	.09	**.70**	.35	.22
Sharing more and better information with other units	.22	.13	**.66**	.33	.22
Servicing the customer	.42	.21	**.59**	.31	-.03
Automate processes, actions, initiatives	.18	.11	.27	**.74**	.21
Add value to customers	.17	.17	.38	**.71**	.14
Analyze data and information	.40	-.03	.24	**.70**	.23
Add new channels of interaction with customers	.08	.34	.24	**.68**	.20
Acquire data and information	.42	-.03	.19	**.63**	.32
Facilitate salespeople's access to data/information	.19	.09	.43	**.60**	.21
Allocate resources	.23	-.06	.32	**.52**	.48
Learning & Innovation oriented KPIs	.39	.014	.13	.25	**.65**
Bottom line performance KPIs	.36	.12	.15	.30	**.64**
Cost based KPIs	.25	.15	.28	.36	**.61**

Cluster typology development and description

Entering the five factors identified previously into a k-means cluster analysis yielded four clusters of firms, characterized by statistically significant differences along critical dimensions in terms of their digital sales transformation approaches. Table 4 presents the mean scores of the five underlying common factors for each cluster. In the following, we describe and label the companies in each cluster, and then analyze and contrast their digital sales transformation approaches in terms of descriptive variables.

Table 4: Final clusters

Cluster ID:	1	2	3	4
Cluster label:	Digital sales transformation leaders	Digital sales transformation laggards	Digital sales enablers	Digital sales replacers
Factor: Strategic clarity	.86	-1.58	-0.12	-0.25
Factor: Sales force replacement	.77	-0.80	**-1.36**	**0.22**
Factor: Sales force enablement	.61	-1.45	**.88**	**-0.51**
Factor: Actions	.86	-1.63	.11	-0.28
Factor: KPIs	.89	-1.50	-.26	-0.16

Note: The values represent the distance from the mean value for each factor.

Cluster 1: Digital sales transformation leaders

Firms in this category are characterized by the highest market performance[xx] as well as reported success in managing the digital transformation of sales. We therefore categorize firms in this group as "digital sales transformation leaders." They achieve an above average score on the factors strategic clarity of digital sales transformation, KPIs for digital sales transformation, key actions, and enablement. Companies in this cluster mainly see digital transformation of sales as an evolution rather than a revolution, and give it high importance. They strongly digitalize their offerings, even more so than the sales processes. In addition, they mainly digitalize the pre-selling and the selling phases—particularly for the most attractive customers and for attracting new customers. Furthermore, they are clearly above average in having a specific organizational unit in charge of the digital transformation of sales. Firms in this category account for 38.2% of our total sample (N = 197). This cluster has an over-representation of companies from new economy and ICT, and their strategy is mainly brand/product leadership.

Cluster 2: Digital sales transformation laggards

Companies in this cluster have the worst market performance as well as reported success in managing the digital transformation of sales. As such, we labelled them "digital sales transformation laggards." These firms have a strongly below average score on all factors (strategic

clarity of digital sales transformation, KPIs for digital sales transformation, key actions, enablement). They see digital transformation of sales as a revolution, they mainly digitalize for the least attractive customers and for the existing customer base. Firms in this cluster mainly digitalize the pre-selling and after-sales phases of the selling process. They are clearly below average in having a specific organizational unit in charge of the digital transformation of sales. Firms in this category represent 14.3% of our total sample (N = 74). This cluster has an over-representation of B2B firms[xxi], and of companies whose strategy is trying to proactively develop customized solutions to their customers.

Cluster 3: Digital sales enablers

These companies have average values on the factors strategic clarity of digital sales transformation and KPIs of digital sales transformation, but are clearly above average on the factors enablement and actions, and have the lowest score in the replacement factor. Therefore, we label them "digital sales enablers." Firms in this cluster perceive the digital transformation of sales as a revolution and as extremely important. They have a strong focus on digitalizing both their offerings and the selling process. They digitalize with the same emphasis on all customers, without priorities, independent from their attractiveness. Firms in this cluster digitalize all phases of the selling process (pre-selling, selling, after-sales). They are below average in having a specific organizational unit in charge of the digital transformation of sales processes. Furthermore, these companies achieve an average market performance (but their sales growth is below average) as well as an average stated performance in terms of managing the digital transformation of sales. Firms in these category represent 15.3% of our total sample (N = 79). They mainly belong to the traditional, old economy. This cluster has an over-representation of companies whose main goal is developing adaptive solutions, customized around the requests and needs of their customers.

Cluster 4: Digital sales replacers

Firms in this cluster have average values on factors strategic clarity of digital transformation of sales, key actions, and KPIs for the digital transformation of sales, but are strongly above average in the factor replacement. Therefore, we label them "digital sales replacers." These companies have an average perceived importance of the digital transformation of sales. They mainly focus on digitalizing sales processes rather than their offerings, and mainly digitalize for the least attractive customers, as well as equally for existing ones and new ones. They digitalize either only the selling or both the pre-selling and the selling phases. They achieve average performance in terms of management of the digital transformation of sales, and below average market performance (especially in terms of profitability). The cluster represents 32.2% of the total sample (N = 166). It has an over-representation of B2C firms whose strategy is based on price leadership and/or best quality to price ratio.

Whereas cluster 1 and 2 represent the extreme and quite straightforward cases of successful and unsuccessful management of digital transformation, the other two clusters represent intermediate cases reflecting substantially different strategic options that deserve a more in-depth discussion. They are also juxtaposed in Table 5.

Table 5: Digital sales enablers and replacers

	Digital sales enablers	Digital sales replacers
Typical company profile	Companies whose main goal is developing adaptive solutions, customized around the requests and needs of their customers	Companies whose strategy is based on price leadership and/or best quality to price ratio
Industry type	Mainly B2B	Mainly B2C
Key business challenge	Increase sales growth	Increase profitability
Perceived importance of the digital sales transformation	Extremely high	Average
Most frequent goal of the digital sales transformation	Increase effectiveness in the interaction with customers to fill a lack of perceived value and a lack of knowledge	Increase efficiency both in internal process and in the interaction with customers to fill a lack of speed or a lack of reach
Most typical key digital pathways	Support, Service, Simplify, Share	Substitute, Supplement
Predominant typical actions	Collect individual customer information, Disseminate customer and organizational information, Personalize actions, Digitally enhance services	Automate, Add channels, Prioritize, Collect and analyze big data
Key challenge in the management of digital transformation	These companies aim at transforming all sales processes for all customers. When (too) many things are transformed simultaneously the key challenges are represented by a lack of prioritization (by segment and phase in the sales process) and unclear organizational responsibility/ownership of the digital transformation.	These companies mainly replace salespeople only in some phases of the sales process, and primarily for some customers only. Therefore, a key challenge is represented by the (re)design and implementation of a multi-channel, integrated, and consistent customer experience management strategy. When salespeople are not fully replaced, a typical issue is how to turn them into value-adding, consultative salespeople for managing customers and selling processes not switched to digital touchpoints.
Company example	Hilti, a world leader in tools for the professional construction industry, launched On!Track, a GPS asset management solution for helping customers better manage their equipment . Salespeople can adopt consultative selling, have access to a wide variety of digital content, manage their customer relationship through a customized CRM system, and have plenty of tools to increase the customers' jobsite productivity.	Allianz, a world leader in the insurance industry, introduced Allianz1. Allianz1 provides a configuration tool where customers can autonomously select the protection they want, the term, persons, and properties insured. Allianz1 is mainly used for the more commoditized, less attractive, and less profitable Property & Casualty products. Insurance agents still dominate the scene in selling more complex insurance products, like Life and Health.

Source: authors' elaboration

Comparing digital sales enablers and replacers

Enablers are mainly B2B companies aiming to escape price competition and differentiate themselves by offering customized solutions and adopting a consultative selling approach. In keeping with the Service-Dominant logic[xxii], these companies provide tailored, value-adding propositions based on complex bundles of product–service solutions built around the individual needs of every single customer. To do this, companies need "ambidextrous" sale forces[xxiii] willing and able not only to sell, but also to provide services to their customers, i.e. to be more effective in customer interaction processes and therefore fill a lack of perceived value. To do so, a lack of knowledge usually has to be filled, mainly by using digital technologies to better undestand unexploited value drivers for each individual customer. To support their sales force and strengthen its ability to service customers, enablers invest in digital tools helping salespeople better acquire information and then adapt value creation and communication (e.g. more customized proposals) and augment the customer experience. Enablers may also use digital technologies to create value and deliver better experiences for customers by simplifying processes. Lastly, the digital pathway of sharing fosters co-creation of value between buyers and sellers by facilitating their exchange of information as well as a stronger cross-functional coordination of organization-wide efforts to manage customers holistically (e.h. through CRM technologies). Consistent with this, enablers choose actions aimed at providing salespeople with real-time, easy access to information (e.g., about product features and availability, delivery time, feasible financial terms and conditions, history of the relationship with the customer) to craft customized solutions and allowing better adaptation and augmented, tailor-made offerings for their customers. To monitor their digital transformation, enablers set customer-focused KPIs (e.g., customer satisfaction and net promoter score), bottom line KPIs (e.g., sales/profit growth) and sometimes also learning KPIs (e.g., development of best cases and validation of innovative value propositions). In sum, many B2B firms increasingly compete on service differentiation and therefore use digital technologies mainly

to develop customized solutions largely implemented by consultative sales forces that have to be properly enabled to be more effective and act as "knowledge brokers"[xxiv] for their customers.

An example of a sales enabler is Hilti, a supplier of technology for the professional construction industry. Hilti provides its sales force with technologies such as a digitalized product catalogue, predictive maintenance, usage/performance monitoring, and personalized reporting for each customer. Hilti also invested in digital technologies like mobile systems for jobsite product selection, ordering and purchase tracking, installation and usage instructions, and troubleshooting support. Thanks to digital technologies, Hilti salespeople can go beyond simply selling their building and costruction tools, and can develop and sell customized value-adding solutions such as software for customers' fleet management and asset tracking through a GPS system. Hilti On!Track is an asset management system solution helping construction firms to manage and track their tools across multiple job sites. This software aims to solve some common problems like expired certifications, lapsed maintenance, broken tools, and missing assets. The system tracks all the equipment used and maintained by a company and provides customers with full visibility into what assets they have, where such assets are located, who is using them, and when they need to be maintained or repaired. Hereby, users save costs and make their business more profitable.

To implement this digital, value adding solution, Hilti salespeople start with an onsite consultation with customers wherein their existing equipment and business processes are analyzed. A specific, customized project is then developed (for example, customers can decide which of their employees are authorized to register and process tools and equipment in the system). After that, salespeople place tags on the assets and assist customers in registering the tagged assets to the system. Customers can then use a mobile app to scan barcodes and access the cloud-based system.

In short, starting from an in-depth understanding of the customer's business model, Hilti increased its effectiveness in all customer interaction processes and its ability to create value for

customers. Accordingly, Hilti chose the digital pathways of support and service and implemented them mainly by adapting actions and augmenting experiences. Because the ultimate goal of this strategy is to create economic value for the customer (i.e. increasing jobsite productivity), Hilti monitored its digital transformation through customer KPIs (e.g., customer satisfaction and net promoter score, but also cost reduction in customer operations) together with bottom-line KPIs (e.g., sales or profits from software like the On!Track asset management system).

In contrast with enablers, digital sales replacers operate mainly in B2C markets, i.e. data-rich environments favoring investment in digital technologies to exploit the potential of information about millions of customers that can be efficiently gathered in multiple touchpoints. When data about millions of interactions is available, a critical mass exists making digital technologies more effective than humans (i.e. salespeople) in the processing of information. As a result, investments in process automation solutions are particularly likely to yield positive returns. Furthermore, in many B2C industries brand and price are more important than salespeople to create value for customers, thereby reducing salespeople's value-add, ultimately making them less relevant and therefore easier to replace. Thus, the goal of digital sales transformation for the replacers cluster is to increase efficiency both in internal processes and in the interaction with customers, typically by filling a lack of speed or a lack of reach. More specifically, to be more competitive on price, replacers usually try to reduce commercial costs and therefore focus on the digital pathways of subsitute or supplement by replacing salespeople (completely, or in specific phases of the selling process) with other touchpoints for customers with lower costs per contact. Hence, replacers usually use cost-based and process-focused KPIs to set goals and measure the performance of their digital transformation projects. In terms of typical key actions that characterize replacers, we highlight the importance of adding channels (to give customers more alternatives to interact with the company), as well as actions aimed at improving information

management (especially the acquisition and analysis of big data), the automation of processes, and a more efficient allocation of resources to different segments, typically prioritized through predictive analytics made possible by millions of data points.

An example of replacer is provided by the insurance giant Allianz, which invented Allianz1 to increase the efficiency in the quotation phase of the selling process. The quotation process typically exhibits a lack of speed with time-consuming and complex procedures, which Allianz tackled through the substitution digital pathway. Specifically, Allianz1 replaced human interactions (with insurance agents) through a self-service configuration tool combining modular product technology and a digital customer experience. Allianz1 allows customers to autonomously select the protection they want including the terms, persons, and properties insured. Big data and CRM profiling (i.e. the actions of acquire info and analyze data) enable a "FastQuotation" configurator based on a few simple questions customers have to answer. Before Allianz1, the traditional insurance selling process required 13 separate quotation processes, each with an average of 30 questions. As such, the obvious KPIs for this example of digital transformation are process-based, i.e. the increase of operational efficiency through time savings and cost savings compared to the traditional insurance agents. Clearly, this replacement strategy can be pursued successfully in mass-market B2C industries, like insurance, where millions of customer intractions and data points make big data and CRM profiling more powerful and meaningful, and for relatively commoditized products and services. In contrast, insurance agents still dominate the scene in selling more complex insurance products, like Life and Health, whereas Allianz1 is mainly used for the more commoditized, less profitable Property and Casualty products.

The Digital Transformation of Sales: Guidelines for Managers

Most companies recognize the importance of transforming their sales organization digitally, yet many struggle to set and implement a corresponding agenda. Against this backdrop, the objective of this paper was to provide guidance on how to manage the digital transformation of sales processes. To this end, we reviewed extant literature, conducted in-depth interviews with practitioners, induced a prescriptive framework of digital transformation, and analyzed the implementation of this model through a cross-country study. Hereby, this article provides at least three sets of clear guidelines for managers. First, managers may use our prescriptive framework to steer their digital transformation endeavors. We suggest that companies start by carefully mapping their sales processes. Before running a deep-dive analysis of these processes, managers may reduce complexity by briefly juxtaposing the importance of each process agains its current performance (an importance–performance matrix may serve as a handy visualization). They may then focus their further analyses on those processes that are highly important, yet under-performing. For these processes, managers should identify critical pains that digitalization may help resolve and choose digital pathways accordingly. The result is what we consider to be a minimum viable digital sales transformation strategy. To further prioritize between their analyzed processes, managers may juxtapose the projected investment against the projected effectiveness or efficiency gains. To implement this strategy, managers should subsequently deduce key actions required to transform their sales processes and set adequate performance indicators. Table 6 shows an exemplary excerpt of a digital transformation plan developed using the template we suggest (in this example, the four processes were selected after a preliminary importance–performance analysis). Importantly, such an analysis could and should be run for each relevant target segment of the company if the necessity to digitalize is different for different types of customers. Second, managers may use the result from our cluster analysis as a benchmark for their own digital transformation endeavors. We carved out four clusters of companies with differing intensity and foci of digital transformation. Based on our

descriptions, managers may assess which segment their company has the strongest similarities. Managers may then focus on capitalizing on the strengths and remedying the weaknesses inherent to each segment. Third, managers may take the examples provided by this article as an inspiration for their own digital transformation endeavors. Importantly, we cited examples from vastly different industries, across all sales processes, and of different disruptive potential. Managers may pick and choose examples that resonated with them and adapt these examples to their own companies. Lastly, while our recommendations will facilitate a structured approach, managers should be aware that their digital transformation endeavors are unlikely to be a sure-fire success. This was summarized by a manager in one of our interviews: “Managing this transition has not been simple… it took us 18 months both to overcome resistance to change and exploit the potential of technologies at their best.”

Table 6: Exemplary excerpt of the digital transformation plan of a machine manufacturer

	Key sales processes to be transformed digitally			
	Prospecting	Qualifying	Presenting	Following up
Limits to effectiveness / efficiency? *Lack of **knowledge**, lack of **speed**, lack of **reach**, lack of **perceived value***	**Lack of reach**: Sales organization does not have access to new leads in the market	**Lack of knowledge:** Salespeople do not know conversion likelihood	**Lack of perceived value:** Customers don't perceive enough benefits relative to competition	**Lack of speed:** Large e-mail backlog
Key pathways to remedy lacks? *Substitute, supplement, simplify, support, share, service*	**Support:** Regularly generate leads through web crawling	**Share:** Share win probability for each lead with salesepeople (derived from predictive analytics)	**Service:** Quantify the value of solutions for a specific customer's business model through ROI calculators	**Supplement:** Use a chatbot function to answer customer requests
Required investment to implement these key pathways? ($ or High/Medium/Low)[a]	Low	Low	High	Medium
Aimed-for gains in effectiveness / efficiency? ($ or High/Medium/Low)[a]	Medium **effectiveness** gain: Increased number of leads	High **efficiency** gain: Increased hit rate per proposal	High **efficiency** gain: Increased hit rate per presentation	High **effectiveness** gain: Improved response time
Refined priority of digital transformation of this process? (High/Medium/Low)	Low	High	Medium	Medium
Key actions required to implement these pathways? *Collect, Analyze, and Disseminate data; Automate, Harmonize, and Prioritize internal processes; Provide digital channels, Digitally enance services, Personalize the marketing mix*	**Automate processes:** Develop a web crawler that generates new leads	**Analyze data:** Develop a predictive model that is able to estimate win probability for each lead **Prioritize internal processes:** Integrate the predictive model into the lead qualification process	**Analyze data:** Develop a ROI caclulator and integrate it in the master pitch presentation **Personalize the marketing mix:** Develop a ROI calculator and integrate it in presentation requirements	**Provide digital channels:** Develop a chatbot and integrate it on the company's service portal
KPI to monitor the progress of the implementation? *Bottom line, cost, process, customer, learning & innovation*	**Process KPI:** Number of leads	**Process KPI:** Hit rate per proposals	**Bottom line KPI:** Expected contribution margin	**Customer KPI:** Satisfaction with service

[a] Managers should strive for a monetary quantification. If a monetary quantification is not possible, managers may rather use a qualitative assessment on a High/Medium/Low scale.

Source: authors' elaboration

[i] A.J. Freimark, J. Habel, S. Hülsbömer, B. Schmitz, and M. Teichmann, "Hidden Champions – Champions of the Digital Transformation?" *IDG Business Media*, 2018, https://press.esmt.org/sites/default/files/hci_study_hidden_champions_champions_of_digital_transformation_en_0.pdf.; J. Singh, K. Flaherty, R.S. Sohi, D. Deeter-Schmelz, J. Habel, K. Le Meunier-FitzHugh, A. Malshe, R. Mullins, V. Onyemah, "Sales profession and professionals in the age of digitization and artificial intelligence technologies: concepts, priorities, and questions," *Journal of Personal Selling & Sales Management*, 39/1 (2019): 2-22.

[ii] See "Empowering Your Sales Force: It's Not Just Automation. It's Personal." *Accenture*, 2016, https://www.accenture.com/t00010101T000000Z__w__/gb-en/_acnmedia/PDF-8/Accenture-Digital-Sales-Empowering-Your-Sales-Force-POV.PDF.

[iii] See "Sales Analytics Capabilities," *Sales Management Association*, April 21, 2017.

[iv] See "What Is Digital Transformation?", *Salesforce*, 2019, https://www.salesforce.com/products/platform/what-is-digital-transformation/.

[v] See for example F.D. Davis, R.P. Bagozzi, and P.R. Warshaw, P. R., "User acceptance of computer technology: a comparison of two theoretical models," *Management Science*, 35/8 (1989): 982-1003; A. Wedell and D. Hempeck, "Sales force automation—here and now," *Journal of Personal Selling & Sales Management*, 7/2 (1987): 11-16; B. Weijters, D. Rangarajan, T. Falk, and N. Schillewaert, "Determinants and outcomes of customers' use of self-service technology in a retail setting," *Journal of Service Research*, 10/1 (2007): 3-21; Singh et al. (2019), op. cit.

[vi] G.W. Marshall, W.C. Moncrief, and F.G. Lassk, "The Current State of Sales Force Activities", *Industrial Marketing Management*, Vol. 28 (1999): 87-98.

[vii] W.C. Moncrief and G.W. Marshall, "The evolution of the seven steps of selling," *Industrial Marketing Management*, 34/1 (2005): 13-22.

[viii] C.R. Plouffe and D.W. Barclay, "Salesperson navigation: The intraorganizational dimension of the sales role," *Industrial Marketing Management*, 36/4 (2007): 528-539; H. Terho, A. Haas, A. Eggert, and W. Ulaga (2012), "'It's almost like taking the sales out of selling'—Towards a conceptualization of value-based selling in business markets," *Industrial Marketing Management*, 41/1 (2012): 174-185.

[ix] M. Ahearne and A. Rapp, "The Role of Technology at the Interface Between Salespeople and Consumers," *Journal of Personal Selling and Sales Management*, 30/2 (2010): 109-118.

[x] Importantly, quotes like this suggest that the digital transformation of some processes may be appropriate for some customer segments, but not for others. Additionally, when digital technologies are used to replace salespeople or help them save time in non-value-adding activities, then they should use their freed-up time in a better way, especially through consultative selling. We revisit these insights in Table 8.

[xi] C. Pettey, "Why Data and Analytics Are Key to Digital Transformation," *Gartner*, 2019, https://www.gartner.com/smarterwithgartner/why-data-and-analytics-are-key-to-digital-transformation/.

[xii] B. Schmitz, O. Ploetner, V. Jarotschkin, and J. Habel, "The Current Frontier in Industrial Manufacturing: Bringing Software Systems to Market," *The European Business Review*, January 20, 2020, https://www.europeanbusinessreview.com/the-current-frontier-in-industrial-manufacturing-bringing-software-systems-to-market/.

[xiii] R.S. Kaplan and D.P. Norton, "The Balanced Scorecard: Measures that Drive Performance," *Harvard Business Review*, (January-February) (1992): 71-79. Although the original model incorporates four dimensions, considering the efficiency–effectiveness foci of the digital transformation of sales, we suggest to split the "financial perspective" dimension into two different dimensions (bottom line measures and cost measures). In fact we believe it is more appropriate for companies to clearly separate efficiency-focused KPIs (cost oriented) from effectiveness-focused KPIs (bottom line oriented).

[xiv] D.J. Ketchen and colleagues, "Organizational configurations and performance: A meta-analysis," *Academy of Management Journal*, 40/1 (1997): 223-240; A.D. Meyer, A.S. Tsui, and C.R. Hinings, "Configurational approaches to organizational analysis," *Academy of Management Journal*, 36/6 (1993): 1175-1195.

[xv] C. Homburg, O. Jensen, and H. Krohmer, "Configurations of marketing and sales: a taxonomy," *Journal of Marketing*, 72/2 (2008): 133-154.

[xvi] Due to our finding in Study 1 that most companies strived for both effectiveness and efficiency and simultaneously experienced all (or most) of the lacks of knowledge, speed, reach, and perceived value, we refrained from asking questions about these particular elements of our prescriptive model. Instead, we focused on the importance of following a clear and overarching strategic plan rather than digitalizing in a piecemeal, ad-hoc manner.

[xvii] B.D. Rapkin and D.A. Luke, "Cluster Analysis in Community Research: Epistemology and Practice," *American Journal of Community Psychology*, 21/2 (1993): 247-277.

[xviii] These items are: "The implications of the digital transformation in terms of roles, responsibilities and targets of every individual member of your sales organization have been clearly specified and communicated", "The goals of the digital transformation of your sales organization have been quantified in terms of specific KPIs to be achieved in terms of Customer based measures (e.g. % of customers «engaged» in multiple channels, views, users, requests for information, etc.)", "The goals of the digital transformation of your sales organization have been quantified in terms of specific KPIs to be achieved in terms of Process based measures (e.g. time savings, user's self-service downloads, etc.)", "To what extent does the digital transformation of sales processes in your company have the goal to align, i.e. standardize the selling process/approach across different members of your sales force", "To what extent does the digital transformation of sales processes in your company have the goal to adapt contents, messages, interaction channels, etc. across different opportunities/customers"

[xix] More specifically, with only one exception all factors are above the recommendede threshold of 0.7, see J.C. Nunnally, *Psychometric Theory* (New York, NY: McGraw-Hill, 1978). The only exception is the "Replacement" factor: however, it satisfies the threshold of 0.6, which is deemed acceptable especially when the factor incorporates few items (only two, in our cases) and measures a new construct with exploratory purposes; see J. Hair, W. Black, B. Babinn, R. Anderson, and R. Tatham, *Multivariate Data Analysis* (New Jersey: Pearson Educational, 2006).

[xx] We asked respondents to provide a self-reported assessment of their market performance compared to their competitors on a scale from 1= much worse to 10 = much better. The average score of respondents from cluster 1 is 8.24, whereas from respondents in cluster 2 it is 6.14. An ANOVA revealed that this difference is statistically significant at the 99% confidence level. The mean value for the total sample is 7.35. Similarly, we also asked respondents to indicate their company's sales growth in the last year. Again, and consistent with the above, respondents from cluster 1 reported a growth of their sales revenues 6.32% higher than respondents from cluster 2. Again, the ANOVA showed that this difference is statistically significant at the 99% confidence interval. Based on this evidence, we can conclude that companies in cluster 1 have the highest self-reported market performance, whereas companies in cluster 2 have the lowest.

[xxi] We asked respondents to indicate the breakdown of their sales between B2B and B2C markets (in fact, most companies may sell to both customer types). Respondents from cluster 2 reported an average breakdown of 60% B2B and 40% B2C, whereas respondents from cluster 3 indicated on average 48% and 52% respectively. The ANOVA test showed that this difference is statistically significant (at the 95% confidence interval).

[xxii] See R.F. Lusch, R. F., and S.L. Vargo. *Service-dominant logic: Premises, perspectives, possibilities* (New York: Cambridge University Press, 2014).

[xxiii] T. Yu, P.G. Patterson, and K. de Ruyter, "Achieving service-sales ambidexterity", *Journal of Service Research*, 16/1 (2013): 52-66

[xxiv] W. Verbeke, B. Dietz, and E.J. Verwaal, "Drivers of sales performance: a contemporary meta-analysis. Have salespeople become knowledge brokers?", *Journal of the Academy of Marketing Science*, 39/3 (2011): 407–428