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# How a Dinosaur transformed into an E-Commerce Giant

The Digital Transformation of the Otto Group

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## Abstract

**Dissertation Title:** How a Dinosaur transformed into an E-Commerce Giant – The Digital Transformation of the Otto Group

**Author:** Casimir von Borcke

**Keywords:** Digital transformation, cultural change, digitization, customer experience, platform, e-commerce, retail, mail-order, Kulturwandel 4.0 (cultural change)

Over the past few years, the topic of digital transformation has become more relevant for many companies. The ever-accelerating dynamics and rapidly emerging technologies represent significant challenges for many companies and require them to digitally transform. Many researchers have already studied several different factors that come along with the topic of digital transformation. Nevertheless, there is a lack of case studies that contain real-world examples illustrating how companies could digitally transform.

For this reason, the teaching case on the digital transformation of the Otto Group, with special emphasis on its subsidiary OTTO, was developed. The purpose of this teaching case is to illustrate the challenges that the group faced as well as the success factors that played a major role during the transformation. Also, the case demonstrates how the company has changed over the years. Furthermore, this case shows how the Otto Group succeeded in constantly developing new business models. In the end, the results achieved through the digital transformation are demonstrated and a glimpse into the future of the company will be given.

The Otto Group Case exemplifies what an important role corporate culture plays in the context of digital transformation. With the help of the cultural change at the Otto Group and the full commitment of the executive board, which could be seen, among other aspects, in the large investments made in the context of the change process, the group was able to carry out the digital transformation.

## Resumo

**Título da dissertação:** Como um dinossauro se transformou num gigante de e-commerce – a transformação digital do Grupo Otto

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**Palavras-chave:** Transformação digital, mudança cultural, digitalização, experiência do cliente, plataforma, e-commerce, retalho, mail-order, mudança cultural 4.0

Nos últimos anos, o tema da transformação digital tornou-se mais relevante para muitas empresas. A dinâmica cada vez mais acelerada e as tecnologias rapidamente emergentes representam desafios significativos para muitas empresas e exigem que elas se transformem digitalmente. Muitos investigadores já estudaram vários fatores diferentes que acompanham o tópico da transformação digital. No entanto, há uma falta de exemplos do mundo real que ilustrem como as empresas se podem transformar digitalmente.

Por essa razão, foi desenvolvido o estudo de caso sobre a transformação digital do Grupo Otto, com especial destaque para a sua filial OTTO. O objetivo deste caso pedagógico é ilustrar os desafios que o grupo enfrentou, bem como os fatores de sucesso que desempenharam um papel chave durante a transformação. Além disso, o caso demonstra como a empresa mudou ao longo dos anos. Adicionalmente, este caso demonstra como o Grupo Otto conseguiu constantemente desenvolver novos modelos de negócios. No final, são apresentados os resultados alcançados através da transformação digital e um vislumbre do futuro da empresa será dado.

O caso Otto Group exemplifica o importante papel que a cultura corporativa desempenha no contexto da transformação digital. Com a ajuda da mudança cultural no Grupo Otto e o total compromisso da comissão executiva, que se verificou, entre outros aspectos, nos grandes investimentos realizados no contexto de mudança cultural processo, o grupo foi capaz de mudar a sua cultura corporativa e, assim, realizar a transformação digital.

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## Abbreviations

AI	Artificial Intelligence
AR	Augmented Reality
BI	Business Intelligence
Bn	Billion
CX	Customer Experience
DT	Digital Transformation
IT	Information Technology
IoT	Internet of Things
KPI	Key Performance Indicator
MVP	Minimum Viable Product
OGDS	Otto Group Digital Solutions
OKR	Objectives and Key Results
SMACIT	Social, mobile, analytics, cloud, and internet of things [IoT]
VC	Venture Capital
VR	Virtual Reality

## 1. Introduction

For many companies, keeping up with existing and new competitors can be difficult, especially when it comes to digitization since technological shifts have made it easier for new disruptive competitors to enter markets (Henriette et al., 2015). However, most executives of market-leading corporations are convinced that their organization will be able to sustain the market leadership by using their existing strength in combination with the new capabilities offered by digital technology (Sebastian et al., 2017). To do so, organizations must often undergo a digital transformation (DT) by integrating new digital technologies. These technologies provide not only opportunities but also threats to companies (Vial, 2019).

In recent years, a lot has changed due to the rapid transformations in terms of disruptive digital technologies, consumer behaviors, and competition (Warner & Wäger, 2018). For many years now, consumers are increasingly using the Internet to satisfy their needs for all kinds of goods. Also, consumers' expectations concerning the service level they expect are constantly increasing (Vial, 2019). This means that customers not only want companies to meet their demands, but they expect companies to recognize their future needs today (von Leipzig et al., 2017). Nevertheless, many companies have taken several years to realize how important the transition from analog to digital commerce is or have even failed to digitally transform their business models (Hess et al., 2016).

One company that realized that they needed to undergo a digital transformation is the Hamburg, Germany, based Otto Group. The corporate group is a retail and services group that employs around 50,000 employees worldwide. The group consists of 35 direct subsidiaries that operate in three main sectors: Multichannel-retail, financial services, and services. Today, the Otto Group is one of the largest e-commerce companies in the world. The first company of the group emerged under the name "Otto Versandhandel" (from now on referred as OTTO). It was founded in 1949. Today, OTTO's online shop, "www.otto.de", is the group's leading source of income and Germany's second-largest online shop in terms of revenue. However, this has not always been the case. In the past, OTTO operated a pure catalogue and mail-order business. Nevertheless, through the restructuring of the group there was a transition from a simple catalogue business to a pure e-commerce business model. In 2018, the group's digital transformation, and the fact that more than 97% of orders were placed online, finally led to the strategic decision to completely stop publishing OTTO's main catalogue (Otto Group, 2019).



In addition, new business models, such as "About You", were launched, which enabled the group to remain competitive.

## **1.1 Academic and Managerial Relevance**

There is a lack of research with regards to how companies actually executed a digital transformation (Warner & Wäger, 2018). Also, the authors identified a lack of research that is focused on the impacts that digitization projects have on organizations. Most existing papers cover DT mainly in terms of technological innovations such as mobile technologies or analytics, however, this topic is much broader (Henriette et al., 2015). Examining how the Otto Group underwent the DT process and what challenges they faced during the process will help to close that gap. Besides, a teaching case about the digital transformation at the Otto Group will help students and organizations to better understand how a digital transformation can be framed and what impacts DT has, not only on the subject organization but also on external parties such as the end consumers. Thereby, four important aspects are examined: The importance of a corporate culture that fosters digital transformation, new ways of working that come along with such a transformation process, the development of new business models, and the impact on the IT-infrastructure, the technologies used and the resulting customer experience.

## **1.2 Problem Statement & Research Questions**

Based on existing academic and theoretical knowledge, expert interviews, and annual reports of the Otto Group, this dissertation aims to explore how the corporation has managed to overcome the challenges of the digital age, how OTTO ultimately became the second-largest e-commerce company in Germany, and how the Otto Group even has become one of the largest online retailers globally.

On the first hand, special emphasis is laid on the major challenges that the Otto Group faced in the past and how OTTO managed the transition from a pure mail-order company to an e-commerce company. On the other hand, this case study explores how new ways of working have been implemented and how new business models have been developed by the Otto Group and OTTO. Thus, critical success factors, as well as the potential that a successful digital transformation offers to organizations, can be identified based on the case. This dissertation

also highlights the results that emerged from the digital transformation of the Otto Group and OTTO. Accordingly, the following research questions are answered by this dissertation:

1. How did the Otto Group identify the need to digitally transform?
2. How did the corporate culture at the Otto Group change over the last years?
3. How were new business models developed at the Otto Group?
4. What were the critical success factors and performance results of the DT at OTTO and the Otto Group?

To answer the research questions, the thesis is divided into the following parts. First, insights such as key figures, and the main competitors in the German retail industry are provided. Secondly, past literature on the topic of digital transformation and its implications, benefits, and challenges and hurdles is reviewed. Thirdly, the changes in the retail industry resulting from digitization are outlined. Next, the teaching case examines what challenges OTTO and the Otto Group as a whole faced in the past and how the group transformed its businesses as well as created new business models to become one of Germany's largest e-commerce retailers. The case also illustrates in what way the culture, work, IT, technology, and customer experience changed in recent years. Following, results are assessed. An outlook to the future in terms of potential digital projects and developments at OTTO is examined in the next section. The final part discusses and then concludes the main aspects and findings of this dissertation.

## **2. Literature Review**

The following section helps to better understand the retail industry in Germany, the topic DT, and the overlap of the two topics. Hence the literature first characterizes the German retail landscape. Secondly, the definition of DT, as well as motivators for companies to undergo a DT and the challenges that come along a DT, are reviewed. The last part of the literature review covers the role of DT, as well as challenges and trends, in the retail industry.

### **2.1 The Retail Industry in Germany**

#### ***2.1.1 Definition: (End consumer-) Retail***

The term ‘retail’ describes the final actions and operations that are necessary to bring finished products or services to the end consumer. Retailing is the last stage in a supply chain and every company that is selling a product or service to the final consumer is conducting retail activities. In addition to sales in physical stores, in the past, there was the popular method of conducting retail sales via catalogues that were sent to households. This type of retail is called mail-order (Dunne & Lusch, 2008).

#### ***2.1.2 Key Figures of the German Retail Industry***

With a population of around 83 million people and an absolute purchasing power of around €1,776bn, the German market represents the largest consumer market in Europe (Germany Trade and Invest GmbH, 2019).

The retail sector in Germany accounts for approximately 16% of the country’s gross domestic product. This makes the retail industry the country’s third-largest industrial sector (Germany Trade and Invest GmbH, 2019). The revenue of the German retail industry was constantly growing from €427.17bn in 2002 to €625.3bn in 2017 while the total number of retail trade companies in Germany decreased from 418.122 in 2002 to 340.674 in 2017 (German Federal Statistical Office, 2019). Furthermore, consumers spent €66.73bn in 2010 and €77.78bn in 2018 on clothing and shoes while they spent €185.81bn and €235.12bn on food, beverages, and tobacco in the respective years (German Federal Statistical Office, 2019).

#### ***2.1.3 Main Competitors in Germany***

There are several competing companies that dominate the food and beverages-, the clothing-, and the home and living- retail industry in Germany. At the top is the Schwarz Group with

revenues of around €100bn in 2018, followed by the Aldi Group with a revenue of €85,59bn. In third, fourth, fifth and sixth place are the Edeka Group (€50,10bn), the Rewe Group (€43,29bn), Metro AG (€35,67bn) and the Ceconomy AG (€21,28bn) (Deloitte, 2019) (Figures converted from USD to EUR to the exchange rate of December 31, 2018). The Otto Group is in seventh place with a revenue of €13,45bn (Otto Group, 2019). However, if one looks at the e-commerce sector in Germany, one can see that the Otto Group, with an e-commerce revenue €7,638bn is in second place behind Amazon (www.amazon.de), which had a revenue of €9,28bn in 2018. Even if parts of the Otto Group's e-commerce revenues are generated abroad, the largest share is generated in Germany. This can be drawn from the fact that OTTO, which mainly operates in Germany, alone has already generated around 42% of the group's e-commerce revenues in 2018 (Otto Group, 2019). In third place among the top-selling e-commerce companies in Germany is Zalando, with a revenue of €1,44bn in 2018 (Deloitte, 2019).

## **2.2 Definition, Implications and Motivators for Digital Transformation**

### ***2.2.1 Definition: Digital Transformation***

Digital transformation is defined as “the use of new technologies to enable major business improvements to augment customer experience, streamline operations, or create new business models” (Warner & Wäger, 2018).

In this context, companies respond to the changes in their environment by using digital technologies to change their value creation processes in order to increase business performance (Vial, 2019). These technologies can be for example social, mobile, analytics, cloud, internet of things (IoT) (SMACIT), or embedded devices (Sebastian et al., 2017). Nevertheless, DT is a process that no company has entirely finished nor fully defined (Kane et al., 2015).

### ***2.2.2 Implications of DT***

The entire organization, including its culture, business models, operational processes, user experience, and digital capabilities as well as its external users are affected by a DT (Kane et al., 2015). Therefore, new ways of working are required (Henriette et al., 2015). These new ways of working involve a cultural transformation. Thereby, the willingness to take risks becomes the cultural norm for companies that undergo a DT (Kane et al., 2015). By encouraging a risk-taking culture, new capabilities can be explored, which helps organizations

to find new solutions and revenue streams. Since many different dimensions of a company are affected by a DT, a digital transformation strategy is required to coordinate and prioritize the various areas of the DT, to support governing the DT, and to reach a better operative performance (Hess et al., 2016). Such a strategy does not pursue the same goals as an IT-strategy. DT strategies are focused on the transformation of products, processes, organizational aspects, and business models as a whole, while IT-strategies are focused on the management of IT-structures within a company. This change of culture and strategy and the use of new technologies might lead to modified or even to completely new organizational structures since new digital activities are getting implemented in very different places within the company (Matt et al., 2015).

### ***2.2.3 Motivations for DT***

The digital progress in our society and economy is not only a danger for big and old-established companies but above all an opportunity to advance the business and address the customers anew (Sebastian et al., 2017). Also, digital technologies, i.e. SMACIT technologies, can define a company's business strategy which would incorporate the new opportunities presented by the digital economy. Those business strategies intend to deliver integrated business capabilities that can instantly respond to always changing market conditions (Sebastian et al., 2017). Also, companies that have a customer engagement digital strategy can increase customer loyalty through superior and innovative personalization activities, which is one of the valuable advantages of incorporating digital technologies (Sebastian et al., 2017).

Furthermore, the customer experience can be significantly improved through simplified ordering- and returns- processes, digital payment methods, and allowing for digital support requests (Sebastian et al., 2017). The use of analytics helps to know the respective customer better in order to be able to offer tailor-made services or to make processes more efficient. This in return can help to sustain or create a competitive advantage (Vial, 2019). The right leveraging of digital technologies can even enable companies to anticipate, rather than to respond, to clients' needs.

“By combining existing competencies with the capabilities offered by digital technologies”, companies can come up with new, innovative solutions for their clients (Sebastian et al., 2017). Companies, that are able to continuously innovate their products or services usually report higher business turnover levels than companies that fail to do so (Ferreira et al., 2019). Usually,

these companies also have a greater ability to “identify sustainable competitive advantages ahead of competition” (Ferreira et al., 2019).

Additionally, repetitive processes can be automated by digital technologies, which in turn can lead to the enhancement of speed and accuracy (Sebastian et al., 2017). Such automation or standardization can lead to increased agility within an organization. The reason for that is that as soon as certain core processes have been standardized, companies can “build local variations on top of the standard platform while maintaining the efficiency and integrated data that the standardization provides” (Westerman & Bonnet, 2015). At the same time, when companies have integrated systems and centralized processes, innovation can be fostered. New ideas can be tested through controlled experiments since companies can use data to vary conditions for an experimental group and a control group (Westerman & Bonnet, 2015). This is how minimum viable products (MVPs) and prototypes can be tested.

However, companies benefit from digital transformation not only in terms of customer loyalty, customer experience, innovation, and more efficient operational processes. On the labor market, too, digitally enabled companies seem to be more attractive and popular than less digitized ones. On average, 80% of the people between the age of 22 and 66 would want to work for a digitally enabled company or digital leader. Besides, a lack of digitization within a company can lead to dissatisfaction among employees (Kane et al., 2015). It is also worth to mention that DT can immensely improve internal communications (Fitzgerald et al., 2013), which in turn also leads to higher efficiency.

#### ***2.2.4 Challenges and Hurdles of Digital Transformation***

Most companies face major challenges when it comes to digital transformation and may find it difficult to start the shift (von Leipzig et al., 2017). The challenges can emerge equally along the three phases of DT: The initiation phase, the execution phase, and the coordination phase (Westerman et al., 2011).

In the initiation phase, the managers’ “digital fluency” is key to start a digital transformation. “Digital fluency” is described as the managers’ ability to “articulate the value of digital technologies to the organization’s future” (Kane et al., 2015). Also, a clear digital strategy, a collaborative culture that fosters change, as well as leaders who cultivate such a culture and who understand the power of digital technologies are needed for a sound DT (Kane et al.,

2015). However, many managers do not initially see the need to invest in new technologies and push the digital transformation forward. A lack of vision and a clear roadmap are often the reason why managers do not see the urgency of DT (Fitzgerald et al., 2013). But not only managers can be hurdles to DT. Also, employees might be skeptical about an organizational change, which, in turn, might slow down the pace of the transformation (Fitzgerald et al., 2013). This skepticism can occur since jobs might get obsolete due to automation (Westerman et al., 2011). Another reason for failing in the initiation phase may be that managers perceive the risk of change greater than the potential benefits, especially when the company is currently performing well (Westerman et al., 2011). A theory that describes this kind of mismanagement is the “Innovators Dilemma”. The dilemma describes a situation in which a well-managed company fails because the established management practices that have allowed the company to become very successful become a constraint in the development of disruptive innovations. This may be due to the fact that managers often do not want to deviate from their previous, supposedly successful path. Therefore, management practices of well-managed companies are often biased toward listening to customers and investing aggressively in new technologies (Abyad, 2019).

When it comes to the second phase, the execution phase, managers may find it difficult to implement digital technologies because digital transformation is different from traditional strategic change (Warner & Wäger, 2018). This is because the speed in the digital world is faster, resulting in increased volatility, complexity and uncertainty in the enterprise environment (Warner & Wäger, 2018). Fundamental parts of an organization’s capability to undergo a digital transformation are its IT-infrastructure and a sound operational backbone (Sebastian et al., 2017). The operational backbone is described as “the technology and business capabilities that ensure the efficiency, scalability, reliability, quality, and predictability of core operations”. Without an operational backbone, companies do not have the necessary basic capabilities to implement a digital strategy (Sebastian et al., 2017). In addition to an operational backbone, companies should also have a digital service platform. Such a platform offers the technology to work agilely and to promote the development and implementation of rapid innovation. Such a platform also allows the company to test new ideas and conduct experiments with MVPs (Sebastian et al., 2017). However, when it comes to digital projects, the biggest challenge for companies today is to find the right people with the relevant know-how, since managers are very likely to lack the necessary technical expertise (Westerman et al., 2011).

When the coordination phase is reached, many companies find it difficult to perform a complete transformation because there are often coordination difficulties between different business units or processes (Westerman et al., 2011). This applies in particular to very large companies that operate in both new and traditional business areas. The different departments are often able to make progress in their own areas, but practices in other departments or business units cannot be influenced (Westerman et al., 2011). Therefore, dynamic capabilities, that allow companies to adapt to rapidly changing environments (Barreto, 2010), the ability to improve the digital maturity of the employees (Warner & Wäger, 2018), and a clear company-wide vision (Westerman et al., 2011) are necessary to be successful throughout a DT.

### **2.3 Digital Transformation, Trends & Challenges in the Retail Industry**

The redefinition of corporate visions, structures, processes, culture, and business models does not only change how companies work, but it transforms entire industries (Gurbaxani & Dunkle, 2019). Since the 2000s, the retail industry underwent a rapid transformation, because electronic commerce has become widespread. Companies in the retail industry are innovating through social media, mobile, and analytics (Westerman et al., 2012). As a consequence, retailing shifted from traditional store practices to wide-ranging omnichannel practices (Souiden et al., 2019). The constant demand for new and innovative services and the continuous search for the most interactive and creative solutions in service production are constantly leading to the invention of new retail concepts (Pantano & Gandini, 2018).

Not only did the customer journey change during the last years due to new touchpoints between the customers and the retailers, but also the physical retail landscape has evolved, e.g. more pop-up- and discount stores are build (Mende & Noble, 2019). The multiple touchpoints allow companies to communicate more efficiently and to reach relevant customers at a lower cost (Grewal et al., 2017). However, to benefit from this opportunity, companies have to understand that the preferences of consumers vary across different channels and applications (Souiden et al., 2019). Thereby, companies need to recognize that certain shopper segments prefer to shop online and get the products delivered home, while others prefer to use mobile applications to purchase products and then pick them up at a physical store. Again other consumers prefer to use digital channels to research products but then go to a traditional store to actually purchase them (Souiden et al., 2019). The lift of traditional physical boundaries of the local shop leads to increasing business potential but it also challenges companies to integrate mobile channels



into their online and offline operations (Chou et al., 2016). The integration of technologies such as social media and online shopping in selling activities increases the engagement behavior of consumers with certain brands or shops, which in turn generates valuable data (Pantano & Gandini, 2018). As mentioned previously, the data can be of great value for the company in order to provide personalized services (Vial, 2019).

In the past and still, shopping is a social experience and people tend to spend more money when they are shopping with others (Pantano & Gandini, 2018). Also, purchase decisions are often influenced by social interactions with other people, such as other consumers, friends, or salespersons. However, nowadays, due to the digital transformation of retail companies and the retail industry as well as the ever-increasing usage of social media, social interactions are no longer only limited to the physical stores. Such interactions are now accessible through social media, where people can have an even larger pool of social connections (Pantano & Gandini, 2018). The use of social media and online shopping platforms also allows customers to make more informed decisions, which puts pressure in terms of pricing and service quality on the vendors (Grewal et al., 2017).

These changes in the business environment require managers to anticipate and understand the potential of digital technologies and to rethink existing “strategies, business models, and key business drivers for success” (Gurbaxani & Dunkle, 2019). For these and other reasons, it can be observed that many well-known retailers were struggling and that even some had to close down their business completely (Mende & Noble, 2019). This is because many retailers do not evolve quickly enough and therefore become obsolete. On the other hand, new retailers and stores are emerging while price transparency is increasing (Mende & Noble, 2019). Also, Mail-order companies such as Neckermann and Quelle have lost massive market shares to Internet traders such as Amazon and Zalando (Obermaier, 2016).

### 3. Teaching Case: How a Dinosaur transformed into an E-Commerce Giant – The Digital Transformation of the Otto Group

*“Fact is: the digital revolution is happening now and it is only by working together that we can shape it successfully.”*<sup>1</sup>

– The Otto Group, 2018

#### 3.1 The Otto Group History: From a Shoe Seller to a Retail Flagship

In 1949, Werner Otto founded the company “Otto Versandhandel” (“Otto mail-order business”) (from now on referred as OTTO). The company started its business by offering a mail-order service for shoes. In only its second financial year, the company published its first catalogue, which contained a total of 28 different pairs of shoes. Suddenly, customers were able to order shoes from home and OTTO became the first mail-order business that allowed its customers to pay by invoice. OTTO's product range grew rapidly and new product categories such as bicycles and electronics were introduced in 1956, resulting in the fast growth of the business. In the 1970s OTTO was able to set itself apart from the competition, such as Neckermann and Quelle, by introducing new services such as a telephone order hotline, automating certain processes and expanding into new business areas. Among others, in 1972, OTTO founded the logistics company, Hermes, to handle its own logistics processes. Thereby, OTTO has developed into a group of different companies. Nevertheless, the catalogue business became the group's strongest single source of revenue. The positive development resulted in OTTO becoming the world's largest mail-order company in 1987.



Exhibit 1: OTTO's first Catalogue; Spring/Summer 1970; Fall/Winter 1993; Spring/Summer 2011<sup>2</sup>

When mass-market personal computers were introduced in the 1990s, OTTO was able to recognize the potential of the new technology early on. This is why “www.otto.de” was established in 1995 and for the first time, the company presented many of its products online as well as on CD-ROM. At the same time, OTTO expanded further and continuously developed into a group of different business units. In the following years, the online business grew further, so that in 2007 already 500,000 products were offered online. Not only did OTTO's product range develop, but so did its shop-technology. In 2013, the company developed its own shop-software in order to be able to react quickly to the constantly changing online world. 23 years after the launch of the website, over 97% of orders were placed via the Internet, which is why the company decided to end an era: In 2018, the main catalogue was discontinued 68 years after its introduction and the business was then completely conducted online (see exhibit 2)<sup>3</sup>. Also, over the years, three core areas in which the group was active have evolved: Multichannel Retail, Financial Services, and Services (see exhibit 3). Together, a revenue of €13,446bn was generated in 2018/19. With revenues of €10,320bn in 2018/19, Multichannel Retail accounted for approximately 77% of the group's total revenue. Around 74% (of €7,638bn) of this was generated from e-commerce activities<sup>4</sup>. OTTO was able to generate around €3,200bn in revenue of this portions. The Services segment generated €2,302bn in 2018/19 while the Financial Services segment had a revenue of €824 million<sup>6</sup>.



Exhibit 2: OTTO's last Catalogue: "Ich bin dann mal App" (Eng.: "I'm off to the app")<sup>7</sup>

## Corporate Overview of the Otto Group

Multichannel Retail				Financial Services			Services
About You*	Eddie Bauer Japan	Manufactum	Schwab	Cofidis*	Hanseatic Versicherungsdienst (HVD)	Otto Group Digital Solutions (OGDS)	Baur Fulfilment
Ackermann	Eventures*	MyToys Group	Sheego	EOS Group			Hermes Europe
Baumarkt Direkt	Freemans Grattan Group	<b>OTTO</b>	Sportscheck**	Hanseatic Bank*			Hermes Fulfilment
Baur	Frankonia	Otto Group Brazil	Unito				Hermes Hansecontrol
Bonprix	Heine	Otto Group Russia	Venus				Hermes-OTTO International
Crate and Barrel	Küche & Co	Otto Japan	Witt Group				
	Lascana	Project A*					

\*Investment companies

\*\*The Otto Group sold Sportscheck in the end of 2019 to Galeria Karstadt Kaufhof

Exhibit 3: The Corporate Overview of the Otto Group (2018)<sup>8</sup>

### 3.2 How the Internet challenged the mail-order industry

When the Internet became widespread in the 1990s, many companies and their managers had no idea how their business models would change in the future. There were countless companies for which coping with the Internet became a big challenge. This also applied to classical mail-order businesses. Two of OTTO's main competitors were not able to fully leverage the potential of the Internet over the years: Neckermann and Quelle.

Although Neckermann and Quelle also had the ambition to digitize their business, despite having their own online shop, they never managed to make the leap from traditional mail-order to e-commerce. But what is it that OTTO did right while the others failed? All three companies, Neckermann, OTTO, and Quelle, have initially established a similar business model. Customers could conveniently order goods of all kinds from the catalogue at home. Compared to the classic retail store, the images in the catalogue replaced the product display in the stores, while the provided information as well as a mail- or call center replaced the function of the salesperson. The three main critical success factors in this type of business model were (1) the layout of the catalogue and the presentation of the products, (2) quick delivery times, and (3) quick and efficient handling of returns<sup>9</sup>. However, e-commerce held significantly more critical success factors to act on and the Internet has completely redefined the rules of the game in mail-order.

One of the biggest game-changers for the industry was the introduction of Amazon. Since Amazon initially focused on selling books and later CDs and DVDs, the new player was not considered a direct competitor by classical mail-order companies<sup>10</sup>. But suddenly, Amazon

continued to add segments such as fashion to its product portfolio while at the same time thousands of other retailers pushed into the internet, enabling customers to compare prices from different vendors. A major difference between the catalogue business and the online business was price flexibility. While the catalogue customer relied on the fact that the price of the goods remains stable during the lifetime of the catalogue – up to one year, the online customer relied on competitive daily prices<sup>11</sup>. While OTTO has put a lot of weight on its digitization efforts and the adaptation to these new conditions, Neckermann and Quelle have, among other severe managerial mistakes, understood these new rules too late.

One of the greatest challenges for the Otto Group in this context was to transfer OTTO's old business model into a new world. The competitors in this new world played according to completely different rules and pursued different strategies than OTTO. The group's and OTTO's heritage were both a curse and a blessing. On the one hand, the group and OTTO already had a lot of expertise, experience, and a mature logistics infrastructure. On the other hand, it was difficult and expensive to update the existing business model<sup>12</sup>. The Internet and the advancing digitization presented the Otto Group with a major challenge: How could the company survive – and perhaps even benefit from the new dynamics in the market?

### **3.3 OTTO: The (Sleepy) Early Bird**

Otto Group's management has always been curious about the new. This became clear by the fact that Otto Group's former CEO, Michael Otto, began traveling to the United States of America (U.S.A.) every two years since the 1980s to visit top-notch tech-companies and to discover which new technologies were used and developed there<sup>13</sup>. This kind of curiosity was one of the reasons why the Otto Group was able to recognize the potential offered by the Internet early on. They quickly understood that the catalogue had to adapt to the medium of the Internet. From then on, monthly fashion- and technology-products catalogues were published, which made it possible to achieve a greater product- and price flexibility. Holger Schneider, who used to work as the Head of Business Development New Media at the Otto Group, remembered: "There were still many customers with a great affinity for the catalogue. This is why OTTO was initially very cautious about discontinuing the catalogue, even though the idea was there early on."<sup>14</sup> In addition, Alexander Birken, CEO of the Otto Group, emphasized the importance of taking enough time during the digitization process to ensure that employees are taken along and that the customers of the traditional business model are not

lost<sup>15</sup>. For this reason, the function of the catalogue has changed over the years: From serving as an ordering-medium, the catalogue transformed more into a marketing tool<sup>16</sup>. Thus, the catalogue and the Internet did not exclude each other but ideally complemented each other<sup>17</sup>.

The widespread of the Internet has not only brought technological challenges, but also new competitors. These had the advantage of being in a completely different starting situation than OTTO was, as their business models were based on the opportunities that the Internet provided. Through this change in the industry, the Otto Group has realized that the company would have had to change fundamentally in order to survive and be able to compete in the much faster and more dynamic e-commerce environment of the future<sup>18</sup>. Nevertheless, the organization understood almost too late that it was not simply enough to go online with a website and to integrate new technologies, but that the company also had to transform organically. Another challenge that was associated with the old structures of the company was the image that OTTO had embodied for most: The potential customer groups that were already familiar with online retailing saw OTTO as the old-fashioned catalogue mail-order company from which one would rather not order. In order to tackle these issues, the internal change and the associated transformation of the entire Group began in 2015 with a change process called "Kulturwandel 4.0" ("Cultural Change 4.0")<sup>19</sup>. As Tobias Krüger, the Division Manager for Cultural Change at the Otto Group, remembered: "At the end of 2015, the Otto family, who is shareholder of the group, announced that they had recognized for themselves that cultural change is a strategic field of action. In the sense of: "If we want to master digitization, we must play this field"<sup>20</sup>. By this announcement, Tobias Krüger and his team were enabled to finally kick-off the cultural change at the Otto Group.

### **3.4 Dimensions of Cultural- and Digital Change**

#### **3.4.1 Kulturwandel 4.0**

*"Every major consulting company in the world has been with the Otto Group – many of them personally with me. All of them have pitched the way they think about digitization: "5 years, 30 million euros, 5000 change agents and then we're done". We told everyone: "Somehow that doesn't fit."."*<sup>21</sup>

– Tobias Krüger, Division Manager Kulturwandel 4.0, Otto Group, 2018

One day, the Otto Group realized that digitization had found its way into all areas of life. It was recognized that groundbreaking innovations such as the Internet and the smartphone have

become part of everyone's daily life and have changed not only our information- and communication- behavior, but also the way people live, shop, and work<sup>22</sup>. Compared to the digital-native companies such as Amazon or Zalando, the Otto Group came to this conclusion relatively late<sup>23</sup>. However, based on this awareness, the "Kulturwandel 4.0" process was launched in December 2015. Another reason for initiating the change process was a look at the figures: In the fiscal year 2014/15, the Otto Group suffered a loss of more than €192 million<sup>24</sup> (see exhibit 5). In this respect, the purpose of the cultural change was not only to contribute to the ability to transform the Otto Group digitally, but simultaneously to enable the organization to grow again economically. It was therefore necessary to proceed with caution so that the investments to be made would not lead to major losses in traditional business<sup>25</sup>. For the executive board of the Otto Group and the head of the cultural change division, one thing was certain: The company would not be able to survive if it would not change – in terms of corporate culture and digital capabilities<sup>26</sup>.

Another important conclusion of the Otto Group's executive board was that above all, it was the employees who were crucial for the future of the enterprise since they knew the customers and the problems best. In order to empower them and take away their fear of making mistakes, bureaucracies had to be broken, hierarchies lowered, and internal communication promoted<sup>27</sup>. As Nils Niercke, Head of E-Development at OTTO's Home & Living division, pointed out: "Before implementing new technologies that our customers can see, a digital transformation of an organization begins with changing the mindset of the management and the employees towards digitization, automation, and new scalable solutions."<sup>28</sup> By doing so, the aim of the cultural change was to exploit the diversity and the potential of the Otto Group, to bring in new perspectives of the employees, and to improve the collaboration between the different entities that belonged to the group<sup>29</sup>. A critical success factor and at the same time one of the biggest hurdles to cultural change was the inclusion and participation of the management and all employees. What distinguished the Otto Group from companies such as Amazon or Zalando: The diversity and age range of their employees, some of whom have been with the Otto Group for more than 30 years<sup>30</sup>. The complexity of this hurdle became very clear when Tobias Krüger reflected: "Five percent of the colleagues liked the cultural change and felt like it. About 80 percent said, "We need that, but you can't do it." And 15 percent were fundamentally against it."<sup>31</sup>

The cultural change of the Otto Group not only increased the willingness of employees and companies to take risks but at the same time, it represented an important enabler of digital transformation. However, this change also led to some employees leaving the company because they felt uncomfortable under the new corporate culture with flatter hierarchies. Although OTTO went online in the 1990s, there has been a lack of internal transformation and organic progress for a long time. However, this was triggered by the beginning of the cultural change process in 2015. Ultimately, this enabled the group to truly transform digitally<sup>32</sup>.

### ***3.4.2 New ways of working***

*“The ongoing transformation at OTTO and the use of office clouds has revolutionized our work significantly.”<sup>33</sup>*

– Ingo Bertram, Press Spokesman Tech & IT, Otto (GmbH & Co KG), 2019

Since 2015, the Otto Group has put a lot of emphasis on integrating new ways of working as well as transforming the Otto Group to be prepared for the challenges of the future and to become a more attractive employer. In addition to marginal changes, such as the fact that the members of the board of directors were from now on addressed by first names, the cultural change also meant that the server- and file-structures were updated and converted to Microsoft’s office cloud MS Office 365 in 2016. This, in turn, enabled the employees to act independently of time, space, and location. The only things that were from now on needed to work were a mobile phone and a computer. This might have been the standard for most digital-native companies, but for a long-established company, like the Otto Group, this way of working was not imaginable a few years before<sup>34</sup>. As Holger Schneider remembered: “When I joined the Otto Group in 2006, it was even difficult to get a company mobile phone or laptop and employees had to document their working hours with a punch-card and report them to their department manager.”<sup>35</sup>

However, punch-cards became history and new modernized office spaces that fostered internal communication as well as communication across different business units, have been created. Furthermore, through the new means of working and through a stronger feedback culture, Otto’s employees felt more engaged and thus began working closer together<sup>36</sup>. As Nils Niercke reflected: “It really has to be said that the new architecture, the new social spaces and common workstations that have been created are truly remarkable. On the one hand, this raises the feel-good factor, but above all, it strengthens the cooperation among each other.”<sup>37</sup> Also, through



the implementation of new communication channels, such a group-blog, the exchange of information between the different business units and different teams became more efficient. From now on, recurring problems could be solved quickly through simpler communication channels.

Also, in the Home & Living sector, which was OTTO's most important division, a lot has changed in terms of new working methods. Due to its special services, the broad product range, the logistics network provided by Hermes, and an innovative product presentation in the online shop, the Home & Living sector was able to strongly differentiate OTTO from competitors such as Amazon or Ikea. By adapting the "Objectives and Key Results" (OKR) method, the employees in the Home & Living department began to work closer together. This was achieved by the implementation of an online tool in which each employee entered his or her objectives and key results by which each task was put into a higher context. Nils Niercke explained: "Through the new tool, everyone could see what the others were currently working on, what their objectives and results were, and then assess where they could support each other if necessary." The implementation of the OKR method led to a culture, in which the employees started to support each other instead of working against one another, which has often been the case in the past<sup>38</sup>.

Another approach that has changed the way people and departments were working was the introduction of an "Agile Center". Through this, managers and employees of departments that did not come from IT, which was already working very agile, were taught an agile mindset and agile working methods, such as Scrum and Kanban<sup>39</sup>. These working methods provided teams with a better overview of the different work- and project- streams and allowed them to work better together. In addition, for the digital transformation to be successful and to integrate and enable every employee, the "Lifelong Learning" program was launched<sup>40</sup>. The idea behind this was that every employee should develop a basic understanding of the subject of digitization and its significance for the Otto Group. As part of this project, every employee got access to an e-learning course that provided them with a basic training on this topic. This e-learning had to be carried out by each employee during working hours and took about 12 hours. Further modules were to be developed over the next few years<sup>41</sup>. But managers also had to be familiarized with the topic of cultural change and digital transformation, which redefined their role. In order to remove possible uncertainties for middle management, leadership roles were redefined: From now on there were the roles of People Lead, Project Lead, and Content Lead.

This meant that people who were actually good at project management have now been freed from being people lead, which meant that managers could grow more<sup>42</sup>.

### **3.4.3 New Business Models**

*“A lot has been tried in the past. The foundation of Project A was planned, and Otto was one of the initial partners of Eventures. But there were also attempts to create new business models on their own.”<sup>43</sup>*

– Holger Schneider, Former Head of Business Development New Media, Otto Group, 2019

Over the past years, the Otto Group has built up various pillars in order to develop new business models. In doing so, the Otto Group always retained a focus on digital business models and technological innovations<sup>44</sup>.

First of all, there have been employee initiatives, such as the company "Lieferbote" (translates to English as “Delivery Boy”), which was developed by an employee of the group’s business development department. The idea behind this business model was to develop a distribution model for local pharmacies so that customers could order medicines at their homes. Another initiative that became Hamburg's first unicorn was “About You”<sup>45</sup>. The e-commerce fashion retailer was founded in 2014 and was valued at more than €1bn in 2018. The online fashion shop became one of the fastest-growing e-commerce companies in Europe<sup>46</sup>. The special features of About You were the high degree of personalization, the creation and publishing of content through stories that contained famous protagonists, and cooperation with influencers and bloggers. Through new means of marketing, such as the influencer awards TV show “About You Awards” or the music festival “About You Pangea”, the company was able to generate more than 15 million active users a month<sup>47</sup>.

In 2016, the Otto Group founded the company builder "Otto Group Digital Solutions" (ODGS) which became another enabler for the group to build new business models. ODGS focused on the development of start-ups in the fields of e-commerce, fintech, and logistics. With the help of Otto Group’s assets such as customer data, logistics infrastructure, and partnerships, ODGS could accelerate the growth of new business models<sup>48</sup>. Also, the Otto Group started to invest in new business models through the operational venture capitalist (VC) Project A. This VC invested into early-stage companies and supported them with expertise in areas like IT, marketing, and business intelligence (BI). On top of that, the Otto Group became a major investor at the international early-stage investor Eventures, which invested mainly in

technology startups, such as Farfetch, Sonos or Groupon<sup>49</sup>. Through these early investments, the Otto Group was able to gain primary access to innovative ideas and business models<sup>50</sup>.

Another initiative that led to the development of OTTO's subsidiary "OTTO now" was called "30 under 30". As Krüger remembered: "Initiatives like OTTO now would never have been possible without a cultural change."<sup>51</sup> Within the context of this initiative, the following question was asked: "Who are the 30 wildest people under 30 at OTTO and what would happen if you put enough money in their hands?"<sup>52</sup> The result was OTTO now. Through this portal, customers could rent goods for a certain period of time instead of buying them.

#### **3.4.4 IT-Overhaul**

*"A few years ago, when we completely overhauled the IT-structure to be able to move away from the outdated system, this was certainly a potential crisis scenario for us."*<sup>53</sup>

– Ingo Bertram, Press Spokesman Tech & IT, Otto (GmbH & Co KG), 2019

As with most big old companies, the first large computers were used by the Otto Group in the 1960s<sup>54</sup> (see exhibit 8). Over the years, new individual systems have been developed and expanded on the basis of these old computer systems, which ultimately led to a confusing IT landscape. For this reason, it was decided in 2017 that the company would have to move away from the old system in order to remain capable of acting in the future and being able to respond to the constantly changing external and internal environment. This change was accompanied by a great deal of uncertainty as it was difficult to assess how deeply the IT-system was anchored in the company. The uncertainty even reached so far that it was not even clear whether the overhaul of the system would result in all parcel tapes stopping. In the end, everything went smoothly, and the old infrastructure was replaced<sup>55</sup>. However, Tobias Krüger highlighted: "We are still investing hundreds of millions into our IT-infrastructure for it to remain up to date."<sup>56</sup>

#### **3.4.5 The new Customer Experience**

*"Our customers now had the opportunity to place the respective furniture virtually in their homes to test whether the dimensions and colors fit"*<sup>57</sup>

– Nils Niercke, Head of E-Development Home & Living, OTTO, 2019

The technological change at the Otto Group, and especially at OTTO, also became visible from the customers' point of view. By analyzing customer information, the customers' needs and

preferences were evaluated. This meant that the respective teams could develop the perfect products and services to meet the preferences and demands of their individual customer segments<sup>58</sup>. Even though business intelligence was also used when OTTO was still mainly focused on its catalogue business, this topic became increasingly important through the DT at the Otto Group and through the evolution in technological possibilities. Suddenly, it became feasible and cheap to store and evaluate mass data<sup>59</sup>. Hence, the importance of BI began to receive more attention, as it would help to better support the individual business units. As Andreas Frenkler, Vice President Business Intelligence at OTTO, pointed out: “Nowadays you can no longer rely on your experience because it is no longer worth anything. However, through data analysis, you can understand the new complexity and make the right decision.”<sup>60</sup> For example, BI enabled the online marketing team to evaluate cookies to see which intersection in the customer journey needed to receive more attention. This made it more accurate to determine how the marketing budget would be spent.<sup>61</sup>

By incorporating the analytics that came from BI, OTTO was able to work on new services to improve the customer experience (CX). In August 2019, for example, OTTO released a new digital service called "Connected Commerce". This service allowed customers in the OTTO online shop to see whether a desired item was available locally in a nearby shop, such as an ECE shopping center<sup>62</sup>. The real estate project development company ECE was one of the Otto Group's subsidiaries. ECE planned, built, leased, and managed commercial properties such as shopping centers throughout Europe<sup>63</sup>.

In the Home & Living segment, OTTO continuously invested in the expansion of innovative technologies that were intended to enhance CX. For example, one of the biggest projects in this division was the replacement of real product photos by computer-generated imagery<sup>64</sup>. To support this project, the Otto Group invested €2,6 million into it in 2018<sup>65</sup>. The technology allowed OTTO to create the entire image content on the PC. Thereby, a digital database was created which in turn enabled OTTO to develop 3D-images for the use of augmented- and virtual reality (AR and VR). In 2018, the Home & Living team implemented AR-models in OTTO's niche online shop “Your Home”, which was solely specialized in furniture and in which customers got a more sophisticated furniture-customer-experience<sup>66</sup>. Since this shop was much smaller than otto.de, it also served as a proving ground in which new technologies were tested before they got implemented on otto.de.

### 3.5 Results of the Transformation

*“Above all, we measure in a qualitatively way at business unit level how we experience the change and in which areas we have become better. However, it is not possible to derive economic performance indicators directly from this.”<sup>67</sup>*

– Tobias Krüger, Division Manager Kulturwandel 4.0, Otto Group, 2019

Since the beginning of cultural change and the associated digital transformation in 2015, much has happened at the Otto Group. First of all, the group as a whole has succeeded in increasing revenues since 2015 (see exhibit 4). The company was also able to be profitable again since 2016<sup>68</sup> (see exhibit 5). Besides, a culture has been created that has prepared and enabled the Otto Group for digital transformation. The CEO of the Otto Group, Alexander Birken, explained that employee surveys showed that the company has made significant progress in digitization and cultural change over the last three years. At the same time, the expectations of employees have risen<sup>69</sup>. But, as Ingo Bertram explained, the digital transformation was still in full swing: “We are on the right track and a lot is happening, but the transformation is not finished yet. But considering the increasing digitization progress in the industry, I also wonder whether such a transformation can ever be completed.”<sup>70</sup>

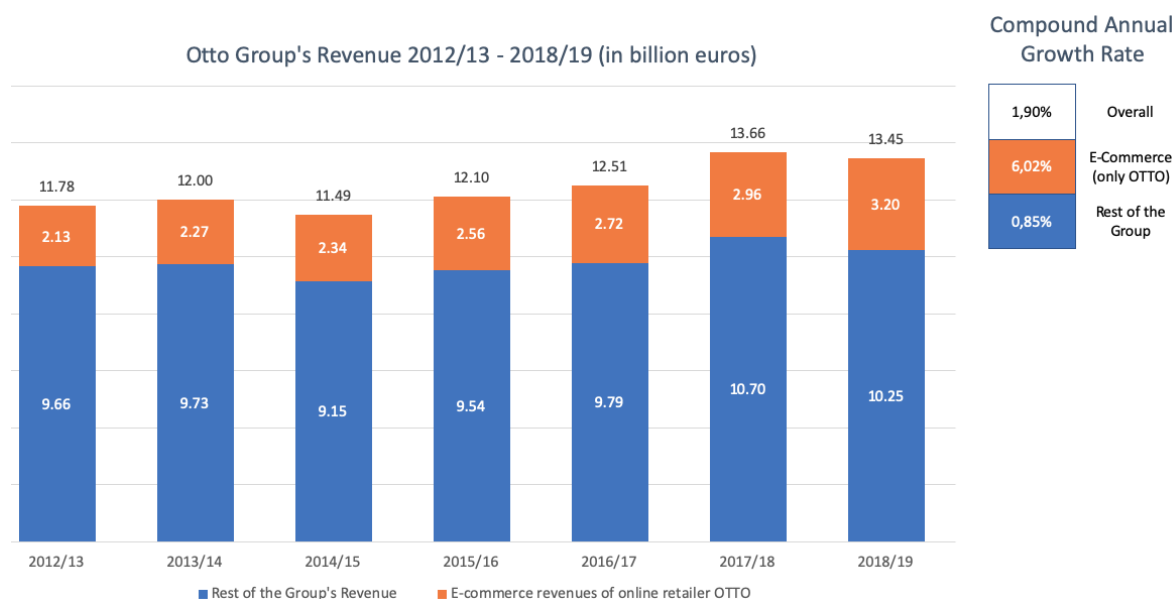


Exhibit 4: E-commerce revenues in relation to the group revenue 2012/13 to 2018/19 (in billion euros) & CAGR<sup>71</sup>

As Tobias Krüger emphasized: “At the end of the day, the biggest performance indicator is profit before tax for the entire group. [...] But the impact of our cultural and digital change is

not measured at holding level but mainly in qualitatively terms at legal entity level.”<sup>72</sup> Even though the revenue-, profit-, and EBIT(DA) trends showed a positive trend in the two years after the cultural change process pulled off 2015, and even though the compound annual growth rate of OTTO’s e-commerce business was significantly large compared to the one of the rest of the group’s businesses (see exhibits 4 & 5), it was difficult to assign the explicit degree of the processes’ influence to these measures<sup>73</sup>. As Nils Niercke explained: “Basically, most projects are a strong investment in the future. There are currently no reliable measurement parameters available, to measure for example the impact of the previously mentioned 3D-models, which are intended to give customers a new experience.” However, he strongly believed that due to the new technology, the number of goods returned would decrease significantly in the future<sup>74</sup>.

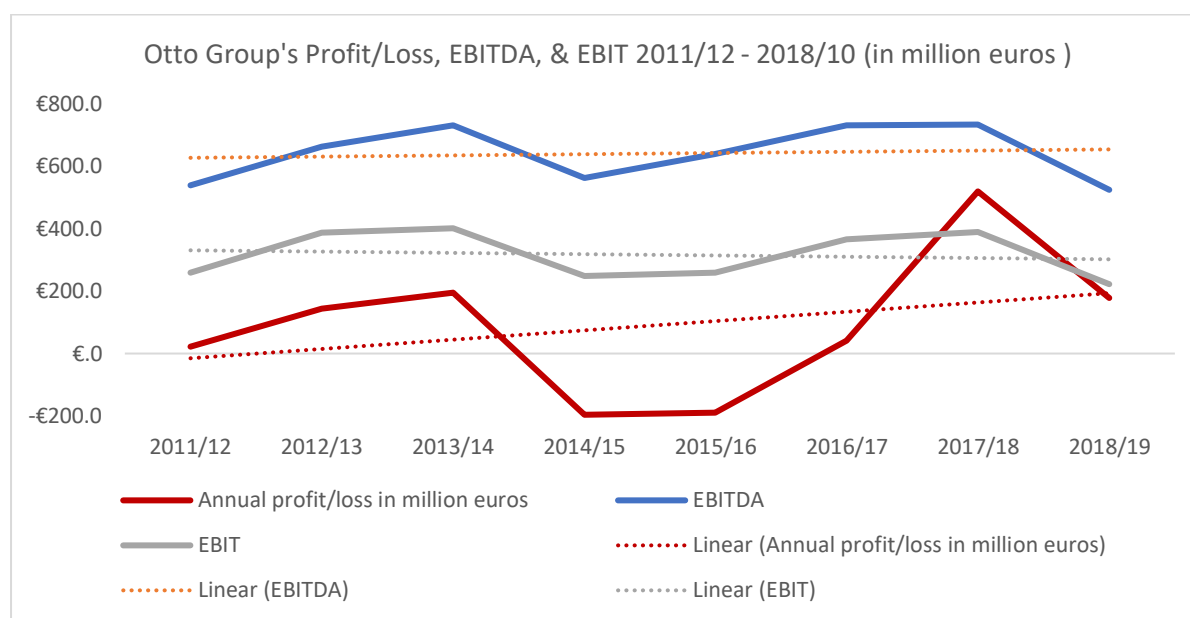


Exhibit 5: Annual profit and deficit, EBITDA, & EBIT of the Otto Group from 2007/08 to 2018/19 (in million euros)<sup>75</sup>

One KPI that has significantly increased when the cultural change process started to bear fruits was the productivity level in OTTO’s service centers, i.e. call centers, where fluctuation has declined, and the number of sick leave notifications has fallen. The same applied to warehouse logistics<sup>76</sup>.

While in business management KPIs are typically associated with revenue, cost, and profit, in the digital world also other KPIs, that are related to visibility, relevance, and reach, play an important role<sup>77</sup>. In recent years OTTO has increasingly relied on social media channels for the communication of marketing campaigns. This can be seen, among other things, in the fact that

the company has published more and more content on Instagram since the beginning of the transformation in 2015 (see exhibit 6)<sup>78</sup>.

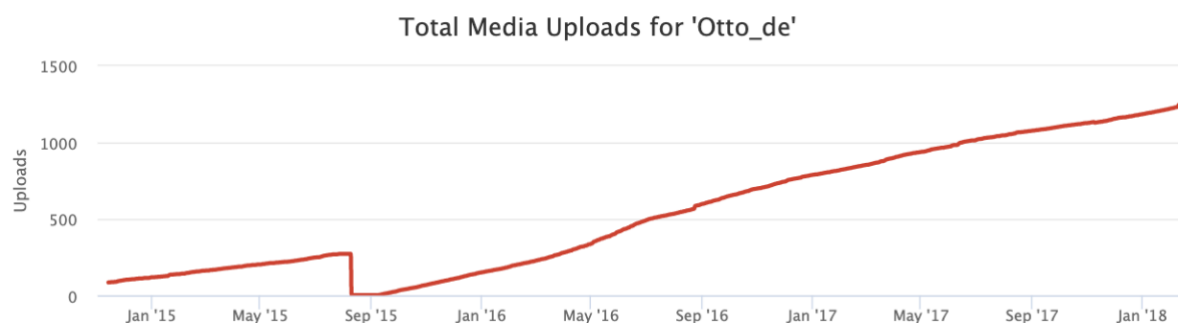


Exhibit 6: OTTO's Total Amount of Media Uploads on Instagram (January 2015 to January 2018)<sup>79</sup>

It seemed that OTTO was quite successful with this: The number of followers has risen continuously in recent years. Although with about 128,000 followers OTTO was still far behind Amazon (2,1 million) and Zalando (808.000), the number of followers increased by 70% between November 2018 (74.753) and November 2019 (127.879) (see exhibit 7)<sup>80</sup>. In the years since the beginning of the cultural and digital transformation in 2015, OTTO has been able to increase its relevance considerably. Besides, OTTO has also managed to appear as a relevant brand through other social media channels. In order to rejuvenate the brand and to appeal to younger target groups, OTTO became active in the social media app "Tiktok" in 2019. On Tiktok, users, 70% of whom are younger than 25, can create and publish their own video content as part of a challenge or advertising campaign<sup>81</sup>. With its first campaign, or so to say Tiktok-challenge, OTTO has already succeeded in having 59,000 videos posted by Tiktok-users that contained the corresponding hashtag (#MachDichZumOtto) in the first six days. Within four weeks, 147 million views were reported on Tiktok videos that contained the campaign's hashtag<sup>82</sup>. As these statistics show, OTTO has changed its business not only in terms of moving from catalogue to online retail while modernizing its corporate culture, but also in terms of marketing methods.

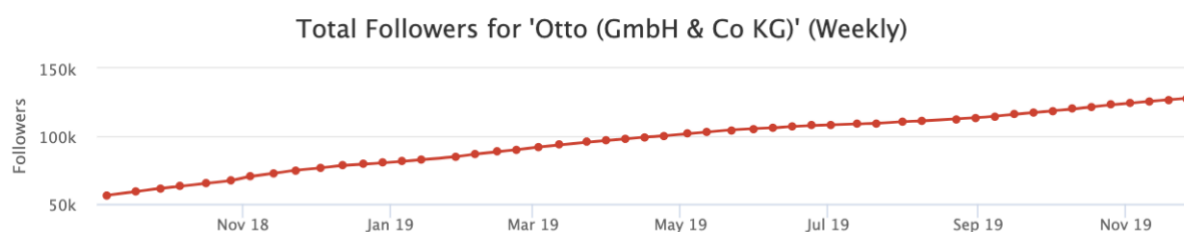


Exhibit 7: Total Number of OTTO's Followers (October 2018 to November 2019) <sup>83</sup>

Furthermore, the activities undertaken within the context of the digital and cultural transformation allowed employees to work more flexibly and approach problems more efficiently and from a new perspective. The ability to communicate more easily and to exchange and share information was also a result of the transformation<sup>84</sup>. Simultaneously, the communication did not only improve within the individual business units but also across the different legal entities of the Otto Group.

Besides, the digital and cultural transformation of the Otto Group has made the company more attractive to new talents<sup>85</sup>. As Tobias Krüger pointed out: “We have a significant increase in profiles that we would not have received just a few years ago. This applies not only to the quantity, but above all to the quality of the applicants. Suddenly there are many more top-class applicants who find us now more attractive than they did a few years ago.”<sup>86</sup>

### **3.6 An Outlook to the Future**

*“The linkage of the individual value creation points and the various devices in the customer journey will increase in the future. This will lead to increasing transparency, which in the end will lead to the further optimization of product prices and delivery speed for our customers”<sup>87</sup>*

– Nils Niercke, Head of E-Development Home & Living, OTTO, 2019

The outlook to the future of the Otto Group and OTTO was wide-ranging and there were many projects in progress. One of the most important projects for the future was the transformation of OTTO’s business model from a pure online retailer to an e-commerce platform<sup>88</sup>. Andreas Frenkler explained that it was necessary to further expand the platform business in order to be able to offer customers what they would expect. Furthermore, according to Frenkler, pure online retailers, such as OTTO, would have no future if they did not transform into a platform<sup>89</sup>. As Marc Opelt, Chairman of the OTTO Management Board and Management Board for Marketing, predicted: “In 5 years we will have a platform with a prospering business and a high degree of automation.”<sup>90</sup> The idea would be that different suppliers and partners would be able to offer their products through OTTO’s platform. By 2019, 450 partners were already registered. However, these have been added manually. In the future, the partner-onboarding process should become fully automated so that new vendors could independently register themselves on the OTTO platform, as this was already the case at companies such as Amazon or eBay<sup>91</sup>. OTTO aimed to have up to 3.000 partners registered on their platform by 2020<sup>92</sup>. From a technological perspective, it was possible by the end of 2019 for dealers to register



themselves on the platform<sup>93</sup>. However, as Ingo Bertram pointed out: "To automate the registration process may sound trivial, but it is not at all. It must be ensured that certain company values, such as the non-sale of genuine fur goods and unethical produced products, are safeguarded."<sup>94</sup> The Otto Group's values, which were based on fairness, sustainability, and ethical production, have played and would continue to play a major role in this context, also in order to differentiate the group clearly from its main competitor, Amazon<sup>95</sup>. In addition, OTTO did not want prohibited symbols to be used in the online shop. This would be prevented by image mining, which would be carried out by the analysis of BI. Possibly, the same technology might make it possible in the future, to use images instead of text to search for products in the online shop<sup>96</sup>.

Another future-oriented project contained the implementation of chatbots. In 2019, OTTO's customer service was staffed 365 days a year, 24 hours a day. Their service covered areas such as order taking, parcel tracking, and product advice. In order to make customer service even more customer-oriented and efficient in the future, OTTO was experimenting with artificial intelligent (AI) chatbots. It was important to the company not to make call center employees redundant, but to assign more demanding and less monotonous tasks to them. Nevertheless, OTTO was still at the very beginning in terms of the implementation of chatbots<sup>97</sup>.

Another area that OTTO intended to strongly expand in the future was the Connected Commerce service. When the service was launched in 2019, customers could only see whether the products of their interest were available at ECE stores. In the future, however, customers should also be able to reserve and even pay for products in advance through the online shop. This would enable clients to shop according to their personal needs. Moreover, it was also planned that this service would be offered across the board so that the products could be reserved and purchased not only at ECE stores, but in even the smallest shop in the surrounding area of the customer<sup>98</sup>. In addition, the Connected Commerce Service was about to be linked to other platforms<sup>99</sup>.

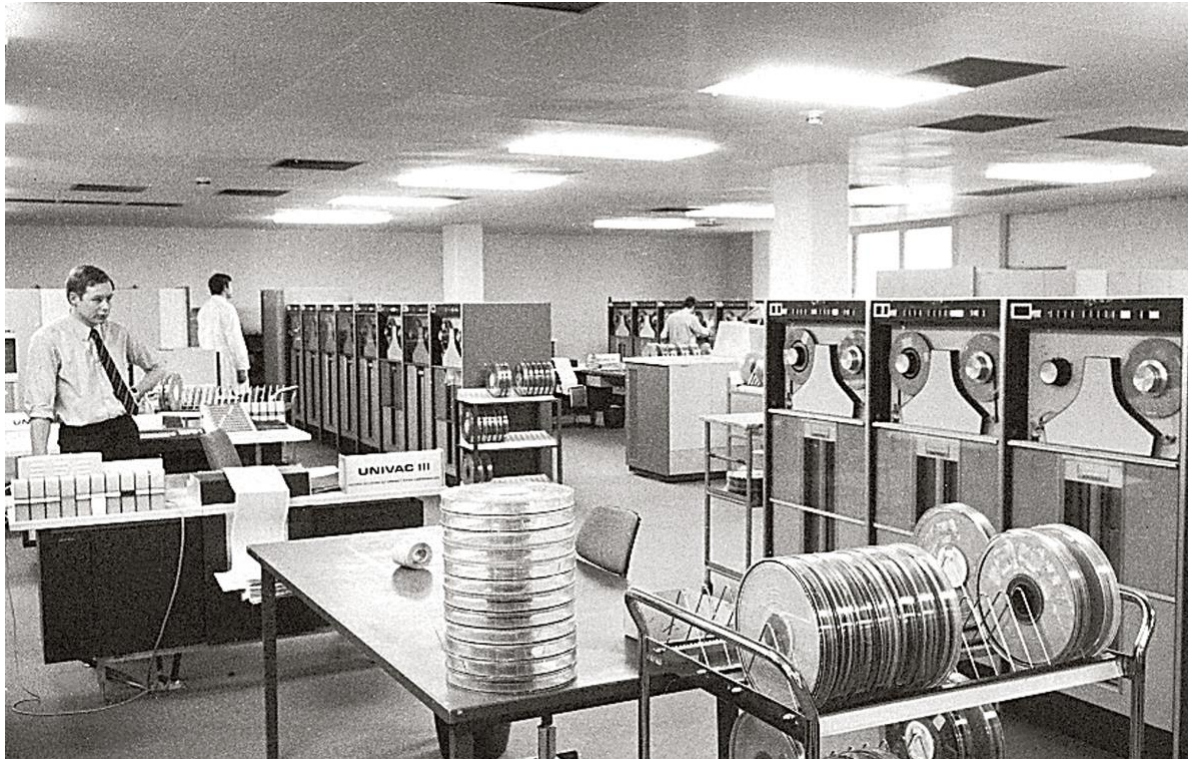
The future for the Home & Living sector would look a little different. According to Nils Niercke, the journey from online to offline would accelerate significantly in the future, so that the online shop would have a more processing and handling role, while the stationary shop would serve more as a source of inspiration<sup>100</sup>. In order to be able to use this trend in the own interest, the creation of synergies in cooperation with stationary retailers could lead to the

discovery of niches in which they could join forces without stealing each other's market shares<sup>101</sup>. “We bring a superb online experience and there are large retailers who have great stationary experience. These abilities can be combined”<sup>102</sup> as Nils Niercke said. Also, the use of AR technology would be further expanded, so that clients of otto.de would be able to virtually place the furniture of their interest in their home and thus test it before they finally complete the order<sup>103</sup>. Andreas Frenkler pointed out that customer centricity was becoming more and more important. The aim would be to optimize the customer experience along the entire customer journey, and not just at the channel level<sup>104</sup>. Also, Andreas Frenkler had the vision that the Otto Group would become a technology-driven company in the future<sup>105</sup>.

In recent years, the Otto Group and OTTO have undergone an immense transformation from a traditional mail-order business to pure online business. But the actual digital transformation could only get off the ground when the cultural change began. In the future, the Otto Group will have to ask itself again and again whether this change of the company and the associated investments have paid off. It will also show whether OTTO will be able to become a serious alternative to Amazon in the platform business, not only on a national level but potentially across borders. Also, time will show whether, at some point, the Otto Group will reach the stage where technologies drive processes and not the other way around.

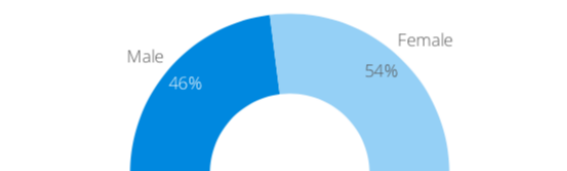
## 4. Additional Exhibits

*Exhibit 8: UNIVAC III, the first Computer at OTTO, 1961<sup>106</sup>*

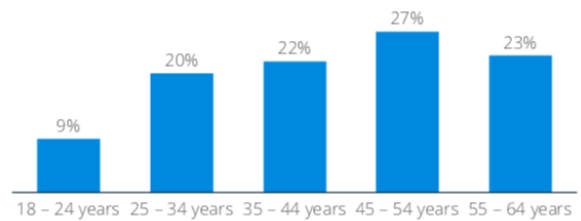


*Exhibit 9: Overview of otto.de customers (2019)<sup>107</sup>*

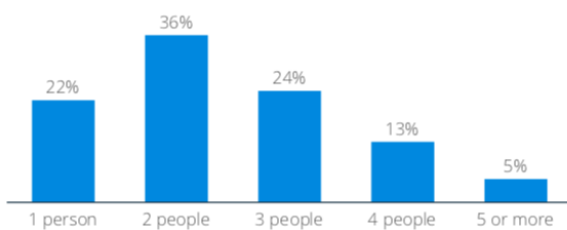
### Gender



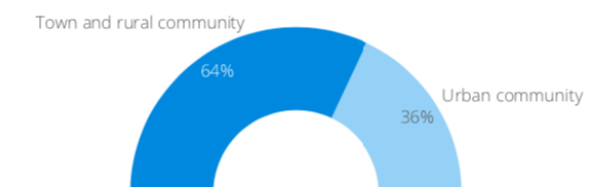
### Age



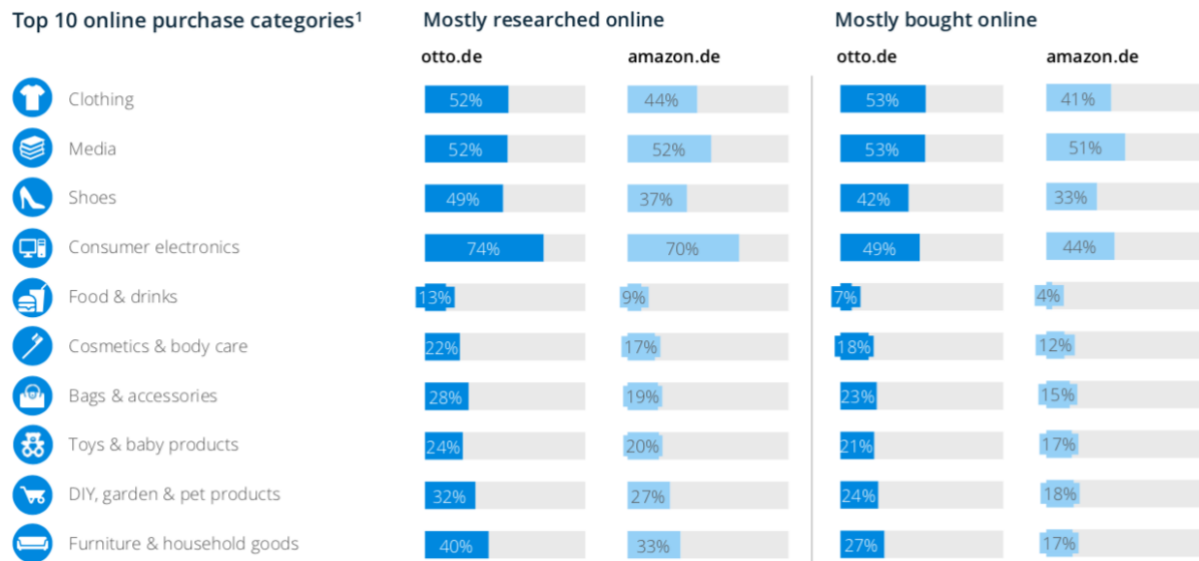
### Household size



### Community type



*Exhibit 10: Results from the questions: "Which of these items have you bought online in the past 12 months?" and "Which of these products do you mostly buy/order online rather than offline?"<sup>108</sup>*



*Exhibit 10: Otto Homepage 1995<sup>109</sup>*



Exhibit 11: Otto Homepage 2019<sup>110</sup>

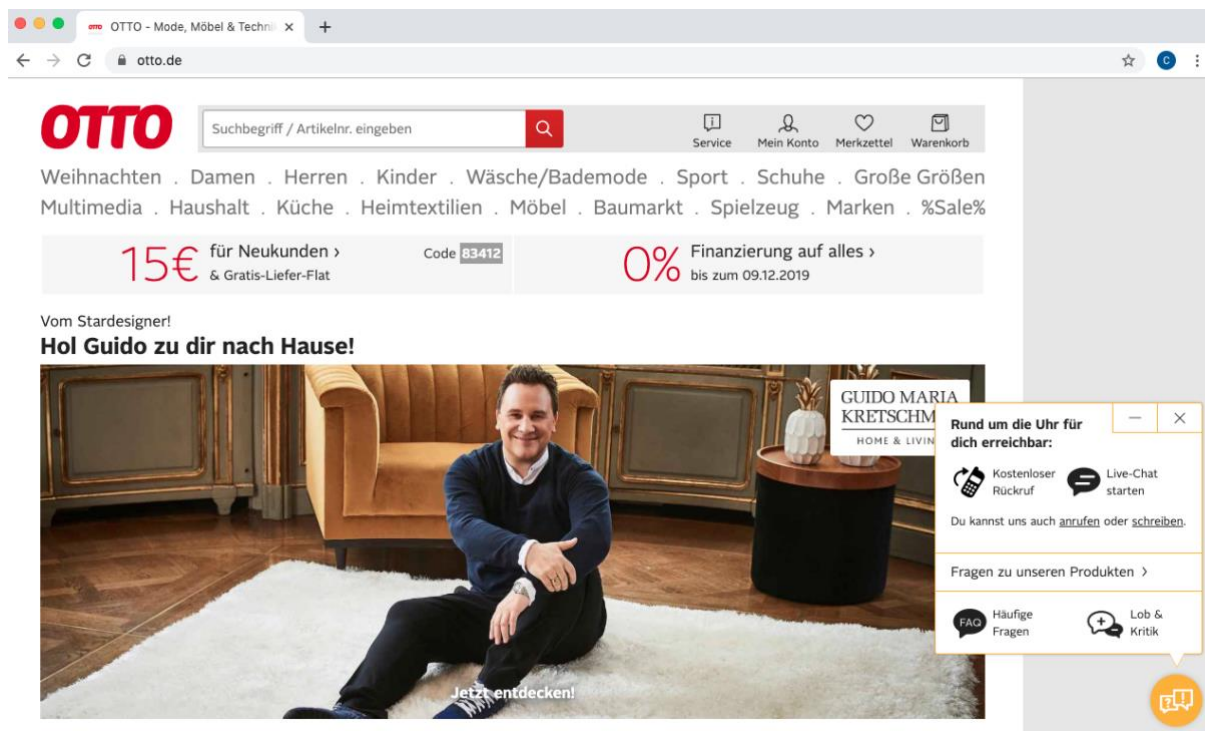
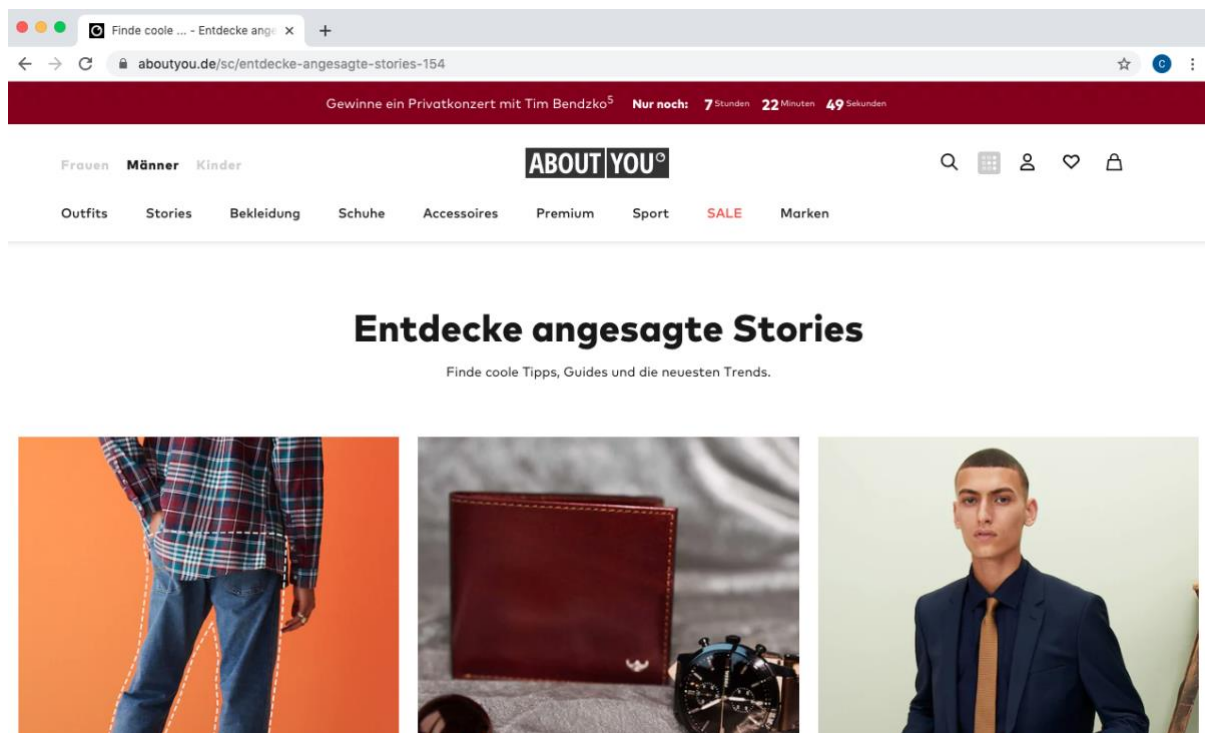


Exhibit 12: About You Homepage 2019<sup>111</sup>



*Exhibit 12: Otto Group Headquarter, Hamburg, Germany<sup>112</sup>*



## 5. Teaching Notes

### A. Case Overview

This case focusses on the digital transformation of the Otto Group. Thereby, special emphasis is put on the group's most important revenue center, which is the e-commerce company OTTO. Over the past years, the group has undergone a massive cultural and digital transformation at both holding and corporate levels, which is still in full swing. In order to make the degree of corporate change sufficiently clear, the case begins with an explanation of the Otto Group's corporate history. This illustrates where the company has its roots, which makes it clear that the company is a former mail-order-dinosaur. The case then illustrated the challenges posed by the introduction of the Internet. The next section displays that even though the Otto Group realized the potential of the Internet early on, for many years the company forgot about a major enabler for digital transformation: The corporate culture.

However, when the Otto Group recorded a loss of over €190 million in 2014, the executive board realized that the company had to transform completely for its survival. Thus, the process "Kulturwandel 4.0" ("Cultural Change 4.0") was brought to life. Its content is explained in the following section. Next, the changes resulting from the cultural change in the way people work at the Otto Group are explained. Thereby, the reader is made aware of the strong influence that cultural change has on dimensions such as internal communications and work-efficiency, and thereby ultimately on digital transformation. Subsequently, the case illustrates the extent to which the IT-infrastructure, the technologies used, and the resulting improved customer experience at the Otto Group have changed in recent years as a result of the digital transformation.

To illustrate the effects of the cultural and digital transformation on the Otto Group, results of the transformation are presented in the following section. It is important to understand that it is very difficult to accurately measure success in such an extensive transformation, as many of the projects are future-oriented. The case ends with an outlook to the future, which, due to the many and rapid changes in the digital world, affects several subject areas.

## **B. Teaching Objectives**

The teaching case was designed to familiarize students with the topic of digital transformation. This topic is highly relevant as there are many companies for which it was very challenging to cope with the dynamics and the speed of digital development. For this reason, the case also introduces two of OTTO's former main competitors, Neckermann and Quelle, which were not able to fully leverage the opportunities of the Internet. Furthermore, this case is intended to enrich the existing literature, as only a few case studies exist that illustrate real-life examples of digital transformations of companies.

The history of the Otto Group and how it dealt with change is intended to give students an insight into the company to better understand the problems that digitization poses for large old companies, such as OTTO and its former competitors, Neckermann and Quelle. An important driving force behind the successful digital change at the Otto Group was, among other things, the creation of a digital mindset among the management and employees that was achieved by cultural change. Ultimately, this enabled the company to open up to digital evolution. Furthermore, the case highlights various dimensions that have been changed at the Otto Group over the last few years in the context of digital and cultural transformation: The corporate culture, the ways of working, the discovery and formation of new business models, the IT-infrastructure, and the usage of new technologies which resulted in the enhancement of customer experience.

Since this teaching case is intended to bring the subject of digital transformation closer to students, four teaching objectives can be derived: (1) First of all, the students should recognize the key success factors of a digital transformation in order to understand how multi-layered such a transformation is. (2) It is also important for students to recognize which are the most important enablers of a DT and how important the topics of corporate culture and top management commitment are. (3) Furthermore, students should also learn what an immense impact the application of digital technologies can have on the interaction with external parties such as vendors and customers. (4) Also, the case has been designed in such a way that the topics mentioned are not necessarily Otto Group-specific but transferable to other companies and industries. For this reason, after reading the case, students should be able to apply and adapt the various success factors and implications to other companies and industries.



Above all, students should be able to grasp the most important challenges, enablers, and key success factors for a digital transformation. Consequently, the potential that a digital transformation brings with it and the necessity to go through such a fundamental transformation process, to be able to react as a company to an ever-changing and fast-moving digital environment, should be apprehended by the students.

### **C. Assignment Questions**

- 1) In a later interview, Holger Schneider stated that the key success factors for the group's digital transformation to be (1) top management commitment, (2) having a portfolio of different change-activities, (3) and having a trial and error attitude to build a learning organization. Do you agree? Were there additional factors that also contributed greatly to the success of Otto Group's digital transformation?
- 2) Despite its success in digital transformation, the Otto Group was by no means the first company in its market or country to change. In your opinion, what is more important - to carry out the transformation correctly or at the right time?
- 3) What lessons learned would you take away from the Otto Group's case in enhancing customer experience? How did technology help? What's replicable in other competitors and other industries?
- 4) Now, that the transformation was in full swing, OTTO was planning to further transform its business model into a pure platform one. Do you think this makes sense, given their strategy, capabilities and a new competitive landscape?

## **D. Answers to Assignment Questions**

### ***Question 1: Key Success Factors***

*(1) To answer the first question, one can look at the key success factors at the macro level:*

Several key success factors for a successful digital transformation can be identified throughout the case. These various success factors could possibly be classified into the following categories: 1) Top management commitment; 2) willingness (and the company's financial power) to take risks; 3) curiosity for the unknown; 4) empowerment of employees.

Certainly, one of the biggest enablers for the digital transformation of the Otto Group was the initiation of the "Kulturwandel 4.0" process in 2015. The cultural change, that did not only take place on the holding level but also the subsidiaries level helped the Otto Group significantly in creating a professional environment in which the employees got empowered and in which the digital transformation of the group could flourish. Nonetheless, this cultural transformation would not have been possible if the four above-mentioned categories had not been fulfilled. When Tobias Krüger and his team started developing the initiative, it was crucial for them that the initiative was supported by the highest level of the Otto Group. This was underlined by the fact that the Otto family recognized the cultural change as a strategic field of action that was necessary to master the digital transformation. Furthermore, Michael Otto's travels to the U.S.A. in the 1980s and his aim to learn what was going on across the Atlantic Ocean underlines the importance of the curiosity for the unknown. The case also shows how crucial it was to empower the employees, to create a digital mindset among them, and to include all of them along the journey of the cultural- and digital transformation. The importance of the company's willingness to take risks is not only pointed out by the fact that the Otto Group heavily invested into new business models and VCs such as About You, Project A, and Eventures, but also by the fact that the Otto Group committed itself to start cultural change in general, which also led to employees leaving the company. Also, the heavy investments in the overhaul and maintenance of the group's IT-infrastructure were associated with a great amount of uncertainty and show the importance of top management commitment and the willingness to invest and to take on risks.

*(2) The second approach to answering the first question involves considering the key success factors more at the micro-level:*

First of all, the case points out several activities that have been undertaken to create a corporate culture that allowed the Otto Group to transform digitally. Thereby, hierarchies were lowered, bureaucracies were reduced, and the internal communication was fostered. Furthermore, the server- and file-structure was updated and transferred to Microsoft's office cloud MS office 365 which enabled the employees to work more flexibly. The case also points out that new work- and social spaces have been built which led to higher cooperation among the group's employees. Other micro-level success factors that can be identified throughout the case involve new ways of working. For example, the adaptation of the OKR method in the Home & Living department, as well as the implementation of the Agile Center to teach employees agile methods such as Scrum or Kanban, empowered the different divisions and its employees to work more efficient and closer together. Moreover, it was crucial for the Otto Group that its managers and employees built an understanding of digitization topics so that they would recognize the relevance of the digital transformation for the Otto Group. Another micro-level success factor that is described in the case was the overhaul of the IT-system without which it would not have been possible to digitally transform the company. The usage of customer data to conduct analytics can be seen as another mean for the Otto Group and its subsidiaries to digitally transform. The data analysis enabled the different business units to conduct their marketing activities more efficient and to create products according to the customers' needs.

*(3) Further insights on key success factors retrieved from the expert interviews:*

Ingo Bertram pointed out that just going online as a company is simply not enough. In his opinion, a strong willingness and openness to change the organization is crucial<sup>113</sup>. Also, Andreas Frenkler pointed out that the top management must demand and support the change process while being willing to spend money on it<sup>114</sup>. Along with this, a certain mindset as well as the courage to initiate and pull off changes, even if those decisions could be uncomfortable at times, must be given<sup>115</sup>. Likewise, Tobias Krüger pointed out the importance of these two topics, too<sup>116</sup>. Ingo Bertram also supposed: "In the end, it is important to always look to the future and ask yourself: "What could be things that will possibly come up?" – And then to adapt them as quickly as possible." In this context, it is important to have good innovation management, which is always challenging the status quo, and which also dares to throw

favorite ideas overboard<sup>117</sup>. Andreas Frenkler explained how important it has always been at OTTO, to leave the microcosm and to explore new technologies and ideas. This becomes clear by the fact that Michael Otto began traveling to the U.S.A. every two years in the 1980s to understand what was happening there<sup>118</sup>.

Holger Schneider also stressed how important the commitment of the top management is. In his opinion, the executive board must exemplify the topic of cultural change and digitization and make it clear again and again how important this is. Schneider also emphasized that there is not only the one and only digitization action that is right, but that a digital transformation is a combination of several issues. He reflected: “At the Otto Group, it was not just one initiative, but many initiatives that ultimately led to a transformation. That's why you have to build up a portfolio of different actions.”<sup>119</sup> To then be successful, companies need a trial-and-error attitude, whereby the trial should take place at a time when it is not yet too expensive to fail<sup>120</sup>.

Nils Niercke and Andreas Frenkler have put a lot of emphasizing on the importance of the team. In Niercke’s opinion, the key to success is a combination of creating a digital mindset among the management and employees, hiring people with a lot of technological know-how and who think outside the box, and being willing to take risks and invest in digitization projects<sup>121</sup>.

The core statements of the interview partners are summarized in the following two tables:

Interviewee	Key Success Factors	Category
<b>Ingo Bertram</b>	1. Willingness and openness to change	1
	2. Courage to initiate change, even if it can be uncomfortable at times	2
	3. Having a look into the future and continuously ask yourself the question: What could become important in the future	3
	4. Good innovation management and continuously questioning of the status quo	1 & 2
	5. The courage to throw “favorite ideas” overboard	2 & 3
<b>Holger Schneider</b>	1. Top management commitment	1
	2. Having a portfolio of different change-activities	1
	3. Having a trial-and-error attitude, to build a learning organization	2
<b>Nils Niercke</b>	1. Creation of a digital mindset among the employees	4
	2. Willingness to invest and take risks	2
	3. Having people with know-how in terms of new technologies and system	4

<b>Tobias Krüger</b>	1. Having the financial power to carry out a DT	2
	2. Willingness of the management to change the company	1
	3. Creation of a digital mindset across the entire organization	4
<b>Andreas Frenkler</b>	1. Top management that demands and supports change and that is willing to spend money on it	1 & 2
	2. Many smart people and people who think outside the box	4
	3. Open culture that questions the status quo	3
	4. Risk-taking culture and freedom to try things out	2 & 3
	5. Exploring new ideas	3

Exhibit 15: Key Success Factors listed by the Interviewees

Category	Bertram	Schneider	Niercke	Krüger	Frenkler	Total
Top management commitment	X X	X X		X	X	6
Willingness (& company's financial power) to take risks	X X X	X	X	X	X X	8
Curiosity for the unknown	X X				X X X	5
Empowerment of employees			X X	X	X	4

Exhibit 16: Frequency of how often the respective interviewees have mentioned aspects that fit the four categories

### **Question 2: Digital Transformation – Doing it correct vs. at the right time**

*The optimal answer to the question should lead to the conclusion that the correct execution is more important than the correct timing.*

#### **(1) Doing it right:**

As already mentioned, the Otto Group began the cultural and digital transformation when competitors were considerably ahead in terms of digitization. However, when the "Kulturwandel 4.0" process was launched in 2015, the company has started to transform itself with full commitment. Thereby it was very crucial not to lose customers and that the employees were taken along. It was also necessary to proceed cautiously, so that the possible losses, resulting from large investments, in the traditional business would not be too great. As the case shows, a digital transformation is not possible without the right corporate culture. There are also other success factors, such as top management commitment and a certain willingness to take risks. If these and other success factors are not present, it can be difficult for companies to transform themselves completely. Due to the determined execution of the transformation

and the high financial investment made by the Otto Group, it is possible to argue that the disadvantages resulting from the late start of the transformation could be compensated. Furthermore, because of the high commitment and the cautious procedure of the board of directors, the conditions at the Otto Group were transformation-friendly and the digital transformation could be carried out correctly. This may show that the right execution is more important than the right timing.

### **(2) *Doing it at the right time***

As the Otto Group Case shows, big-old companies can transform themselves. However, various factors play an important role. In addition to top management commitment and a certain willingness to take risks, it can be argued that the timing of the digital transformation is of crucial importance. The Otto Group suffered significant losses in 2014, which led to the realization that the company had to rethink its way of working and its business model to get back on track. Thus, the process "Kulturwandel 4.0" was brought to life, which, among other things, allowed the digital transformation to begin properly. One could argue that the Otto Group, especially in comparison to other companies, started very late to transform itself and to put a stronger focus on digital capabilities. On the other hand, it could also be argued that the late start of the transformation and the fact that the company had made heavy losses have led to the digital transformation receiving the attention it needed to be successful. Furthermore, when looking at German medium-sized companies and large corporations, it can be seen that they are often managed very conservatively, and that digitization has by no means arrived in all industries and companies yet. If this comparison is drawn, it may become clear that although the Otto Group focused on digital transformation very late compared to born-digital companies, they were not so late compared to long-established German companies.

### ***Question 3: CX Lessons Learned***

#### **(1) *The more obvious***

The case illustrates the importance of business intelligence and analytics. As Andreas Frenkler said: "Nowadays you can no longer rely on your experience because it is no longer worth anything. However, through data analysis, you can understand the new complexity and make the right decision." With the help of BI and data analysis, the various business units were supported in the optimization of products or services, right up to perfection. These

optimizations ultimately benefitted the customer experience. In addition, innovative technologies such as AR and VR were used to improve the shopping experience for the customers in the Home and Living sector. Through these technologies, customers were enabled to virtually test furniture in the desired environment before making a purchase. This, in turn, would lead to a well-founded purchase decision and, ultimately, to fewer returns. Also, the use of technologies enabled new collaborations that have not previously existed, such as the collaboration between OTTO and ECE. This cooperation allowed customers to see whether certain items were available in local bricks and mortar stores. In the future, however, customers would also be allowed to reserve goods in local stores and to pay online if desired. In this way, OTTO would become able to respond even better to the preferences of the individual customer. Other e-commerce companies might be interested in offering a similar service, but they often do not have the advantage of having a real estate developer as a sister company. However, the use of AR and VR could be more easily replicated by other furniture manufacturers such as Ikea.

*(2) The not-so-obvious: In addition to the aspects already mentioned, a mature answer should also mention aspects that influence the brand touchpoints, which are also part of the customer experience.*

Important parts of the customer experience are the touchpoints through which the customers interact with the brand. One company that was briefly presented in this case was About You. Besides the strong focus on personalizing the online shop and the creation and publishing of stories, About You hosted the TV influencer award show "About You Awards" and the music festival "About You Pangea". These events increased the interaction of customers with the About You brand. OTTO has also expanded its marketing channels in recent years. Through social networks such as Instagram and Tiktok, the brand was entering the everyday lives of younger target groups. In particular, by launching the Tiktok campaign, OTTO has succeeded in getting users to actively interact with the OTTO brand. Furthermore, the Connected Commerce service was changing the conventional customer journey. Also, OTTO planned to use chatbots in customer service in the future. This, in turn, would lead to the customer service to be even more customer-oriented and efficient, which would also improve the customer experience. Nevertheless, chatbots were already used in customer support in all kinds of industries and companies, although this was usually not yet working smoothly. To take

advantage of this technology, it will be crucial to ensure smooth communication between the chatbot and the customer.

#### ***Question 4: Building a Platform***

One of OTTO's biggest plans was to transform its business model into a platform. However, this raises the question of whether this development is desirable from both the company's- and the customer's point of view. On this question, students should be able to consider arguments for and against the expansion of the business model into a platform and finally conclude whether, in their opinion, becoming a platform makes sense for OTTO. The following paragraphs illustrates various arguments against and for OTTO's plans of building a platform.

##### ***(1) Arguments against the platform:***

The difference between a platform and a simple online shop would be that not only OTTO would sell goods via its online shop, but that other dealers could also register on OTTO's platform to sell their products. To remain true to their corporate values, the partners would have to play according to OTTO's rules: For example, no genuine fur products or products from unethical production may be sold on the OTTO platform. By adhering to its corporate values, in which fairness and sustainability play an important role, OTTO wants to differentiate itself from its biggest competitor, Amazon. Despite the high investments in the expansion of the platform business and the automation of the partner-onboarding process, it might become difficult to assure that all products offered by the partners comply with OTTO's values. One risk could be, for example, that a partner who has signed the code of conduct may have its products produced under unethical conditions. If such information were to be published, it could harm the image of the OTTO brand considerably. Another issue that could potentially be considered in this context is whether it would ever be possible for OTTO to even come close to Amazon's market share. This seems very unlikely, as Amazon already has a much broader partner- and product base. This advantage can hardly be matched. Besides, Amazon operates internationally, whereas OTTO's focus is clearly on the German market.

##### ***(2) Arguments in favor of the platform:***

However, as Andreas Frenkler stressed, it will be essential for OTTO to offer customers more choice than it does today to be able to meet their demands. In this context, he also pointed out



that a pure online retailer that is as broadly positioned as OTTO would have no future without the platform business. This argument in favor of the shift towards platform business probably carries more weight than the possible risks, for example, the non-compliance with the code of conduct by partners. Furthermore, it can be argued in favor of the platform business that OTTO's storage costs are likely to decrease as the products are ordered directly from the various retailers. An important component in the platform business is also a well-developed logistics infrastructure. While other players have had to build this up over many years, OTTO has the advantage that it has already been built up via the group's own logistics service provider Hermes. OTTO would therefore possibly have a good starting position to become the "German Amazon". In the end, however, the question remains as to whether OTTO will succeed in attracting customer groups who are already customers of Amazon.

## 6. Discussion

This teaching case examines the digital transformation of the Otto Group and OTTO. Within this teaching case, the different areas that have changed as a result of the transformation of the company and the means that were applied to create these changes are explored and presented. Also, the case makes it particularly clear what an important role the corporate culture and top management commitment play in a digital transformation. In addition to showing the results that the Otto Group and OTTO have achieved so far, this case study offers a multi-faceted outlook on the company's future.

Even though the radical change in the Otto Group's corporate culture has enabled the group to lay the foundation for a comprehensive digital transformation, it also led to some employees, who were not satisfied with the shift, to leave the company. Also, revenue declined slightly in 2018/19, which was not necessarily related to the transformation, but it showed that the Otto Group would still need to continue thinking about what would have to improve in the future. This raises the question of whether the activities that the Otto Group carried out in the context of the cultural- and digital- transformation were enough and the right ones to prepare the group for the challenges of tomorrow. Moreover, it can also be discussed whether OTTO's plan to transform its business model into a platform, and thereby to become a serious alternative to Amazon, would be the right step.

In a digital transformation, the whole organization, including its culture, its business model, and its external stakeholders, are affected (Kane et al., 2015). In the process, an increased appetite for risk should become the cultural norm (Kane et al., 2015) and new means of working should be integrated into everyday working life (Henriette et al., 2015). Another aspect that comes into play in a digital transformation is the notion of combining existing competencies with the capabilities offered by digital technologies to come up with new, innovative solutions (Sebastian et al., 2017). In turn, the customer experience would significantly be enhanced through digital technologies (Sebastian et al., 2017). Even though all these aspects can be found in the Otto Group Case, a lack of progressiveness can still be observed in some areas of the company.

An essential aspect of extending the business model into a platform that OTTO has not yet taken into account is the internationalization of the business. OTTO focused solely on the German market, which becomes clear by the fact that there is no option to display the website

in English or any other language that is not German. By the end of 2018, about 10.9 million people with foreign citizenship lived in Germany, of whom about 50% were aged between 20 and 45<sup>122</sup>. However, the number of people with a migrant background was about twice as large (2018: 20,8 million; 2017: 20,3million)<sup>123</sup>. Taking into account the increasing diversity of people from different nationalities living in Germany, especially among younger people, and considering the fact that online trading, in particular, is not dependent on national borders, OTTO should perhaps consider becoming more international. Also, when looking at competitors such as Amazon, Zalando or eBay, it becomes clear that national borders are becoming blurred for e-commerce companies. Zalando, for example, supplies customers in 17 countries<sup>124</sup>, while Amazon is available in 16 countries<sup>125</sup>.

Furthermore, expanding OTTO's online shop into a fully automated platform, on which various retailers can offer their goods, would possibly allow OTTO to cover the demands of a broader spectrum of consumers. However, it is questionable whether this in combination with the new marketing strategy, that was much focused on social media, would be enough to ultimately attract and retain the younger target groups OTTO was aiming for to secure future sales. Furthermore, the prospect of becoming a serious alternative to Amazon might be limited by certain barriers. On the one hand, with a revenue of €9.28 billion in 2018, Amazon already had a significant advantage over OTTO, with a respective revenue of about €3.2 billion. Furthermore, Amazon offered around 229 million products in Germany in 2016<sup>126</sup> whereas OTTO offered around 3 million products in 2018<sup>127</sup>. In addition to that, it would be questionable whether customers who want to buy from a platform would choose OTTO over Amazon if OTTO would not be able to offer significantly lower prices or any other benefit for the customers. Also, the difficulties that could arise from the automated registration of partners would potentially pose further risk. To differentiate itself from Amazon, OTTO would have to safeguard the partners' compliance with its corporate values, which were based on fairness, sustainability, and transparency<sup>128</sup>.

As mentioned by Andreas Frenkler, to survive in the future, it would become crucial for OTTO to offer a broader product range to its customers, which would only become possible through the transformation into a platform. However, it can be argued that although the transition to the platform might be the right move, in order to remain competitive, this platform should then be more internationally oriented and not focus solely on the German market.

## 7. Conclusion

The constantly changing business environment and the ongoing innovation of technologies pose a huge and hardly manageable challenge for many companies. Because of the high relevance of this topic and since only a few teaching cases that cover real-life examples about how companies went through a digital transformation exist, I decided to write a teaching case about the digital transformation of the Otto Group. The transformation of the Otto Group was one of the most relevant and exciting corporate transformations in the German market. Also, with a revenue of around €13,4bn in 2018, the group has a significant size.

The Otto Group's significant losses in 2014 were a wake-up call for the Executive Board to initiate radical change in order to survive as a company. The case has shown how important it was for the transformation to be carried out successfully, to first create a corporate culture that would enable the group to transform digitally. To do so, not only the commitment of the group's top management was required, but especially the one of the employees. To successfully transform, bureaucracies had to be broken and hierarchies lowered. Besides, large investments were made to implement a new IT-infrastructure, as well as to create new workspaces and meeting rooms to promote communication between employees. Among others, these activities have enabled the Otto Group to digitally transform, which lead to an enhanced customer experience and an increased attractiveness of the group on the labor market, and to ultimately become one of the largest e-commerce companies in Germany. However, the future will show whether OTTO, with its plan of transforming its e-commerce business to become a platform, can succeed in becoming a serious alternative to Amazon.

Although this case makes it clear that the Otto Group had to invest several hundred million euros, a research gap still exists in terms of identifying the costs associated with a digital transformation. Furthermore, there is still a need to further investigate in the future what quantitative results can be attributed to a digital transformation.

With the help of this case study, I was able to deepen my knowledge about digital transformation and the different factors influencing such transformation. I have also developed an understanding of the main motivations for companies to transform, the many challenges associated with digital transformation, and key success factors that enable companies to execute a digital transformation. Through the interviews I conducted, I also gained a profound insight into the company and a clear understanding of the Otto Group's approach.

**Appendix: Interview Summaries**

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## **Appendix A: Ingo Bertram, Press Spokesman Tech & IT; Otto (GmbH & Co KG)**

For Ingo Bertram, the term ‘digital transformation’ describes a fundamental transformation that affects the whole organization, including working methods such as the ability to work remotely, which in turn affects all employees. In his opinion, the digital transformation of the Otto Group is the most far-reaching change process the company has ever gone through. According to Bertram, the digital transformation at the Otto Group is in full swing and many changes are currently taking place. However, in his opinion, Otto is at most in the first third of the transformation, whereby he also says that the transformation is a process that will never really be completed. In the mid-90s, Otto went online with otto.de. But due to the new competitive landscape, shaped by companies like Amazon, Zalando, and eBay, Otto had almost without exception 'digital natives' as competitors. Thus, the enterprise recognized in the change of the industry that it must adjust. He also stressed that old analog business models, especially in an incredibly dynamic and fast-changing e-commerce environment, cannot survive if they do not keep up with this change. Furthermore, Otto recognized this almost a bit too late. Even Otto went online in the 90s, there was a lack of internal change for a long time. However, it really got off the ground in 2015, when the process "Kulturwandel 4.0" (“Culture Change 4.0”) was launched. The cultural change has not only brought small changes, such as a more casual approach across hierarchies, but also a fundamental transformation of the server- and file-structure, so that Office 365 is now used. The office cloud, which is now in use, revolutionized working at Otto significantly, so that employees can work remotely. A few years ago, this was not even imaginable at Otto. Through this cultural change and strong social media activities, Otto is able to be much more attractive to new, young employees than it was a few years ago. Nevertheless, Otto is not yet as firmly anchored in the minds of young people as it could theoretically be. In the furniture sector, OTTO scores ahead of Amazon with its service and variety of products. For example, if you order a refrigerator, it is not only delivered but also installed. If desired, the old one can then be taken directly by the deliverer and disposed of. However, according to Bertram, OTTO can still catch up in terms of services in other areas. One project that is heading in this direction is called "Connected Commerce", which involves synchronizing the OTTO product range with the over-the-counter product range. This would, for example, enable customers to reserve or directly pay for a product via otto.de, and then pick it up at a physical store later, or to have it delivered on the same day. About two years ago, the Otto Group underwent a major change in IT. In the past, the 'new' systems were further developed on the basis of the old systems. One day, however, it was realized that the old systems had to be separated in order to continue working efficiently in the future. This decision led to a crisis situation, as it was difficult to assess whether there would have been any major damage from switching to a new system. In the end, however, everything went smoothly. Ingo Bertram also stressed in the interview how important the right mindset is for a digital transformation. A big difference between OTTO and companies like Zalando is the much more diverse workforce, some of which have been working for OTTO for over 30 years. It is important to take these people with you and integrate them into the new processes. On the subject of process automation, Bertram explained that Otto is experimenting with chatbots, among other things. The aim is not to replace employees, but to redesign task areas. However, the company is still in the early stages of this process. Ingo Bertram has named five key success factors for digital transformation: 1) Willingness and openness to change, 2) Courage to initiate change, even if it can be uncomfortable at times, 3) Having a look into the future and ask yourself the question, what could become important?, 4) Good innovation management and the questioning of the status quo, 5) The courage to throw "favorite ideas" overboard.

## **Appendix B: Holger Schneider, former Head of Business Development New Media; Otto Group**

During Holger Schneider's time at the Otto Group, his role was to support the executive board to assess the e-commerce market and to develop an e-commerce strategy. Before he joined the group, there was no e-commerce-strategy and business development team. Schneider explained that in his time it became increasingly clear that Otto's online channel had to become more relevant. At that time, the online channel was still clearly separated from catalogue sales and purchasing, which are now strongly intertwined. At the time of Holger Schneider, this silo separation still worked well, but it became increasingly important to link channels with the growing relevance of online commerce. According to Schneider, the dynamics and rapid growth of the e-commerce market and the newly created competitors were one of the greatest challenges for digitization at the Otto Group. Added to this is the image that OTTO has embodied for most: The new customer groups that were online had OTTO in mind as the old catalogue mail-order company. Furthermore, the transition from catalogue to e-commerce at OTTO was much slower due to the outdated processes than at the digital native companies. In the transition from the catalogue to e-commerce, OTTO noticed that there were still many client groups with a paper affinity, which is why the company was cautious about discontinuing the catalogue completely. For this reason, the function of the catalogue has changed over the years: In the past, the catalogue served as an ordering medium, whereas later it became more of a marketing tool. Various activities have been tried out in the past to develop new business models. Among other things, the foundation of Venture Capitalist Project A was prepared. The Otto Group also acquired a major stake in the international early-stage investor Eventures. In addition, there were some attempts to develop own business models internally. For example, the company "Lieferbote" was founded, which established a distribution model for local pharmacies. Tarek Müller later set up the successful online shop "About You". Schneider described the corporate culture he experienced at the Otto Group as very hierarchical. When Holger Schneider joined the Otto Group, there was not even an opportunity to surf the Internet freely. There were also punch cards and employees had to report their working hours to the respective department manager at the end of the month. In recent years, however, the Otto Group has put a lot of emphasis on integrating new forms of work. New possibilities have also been created in terms of space, such as free seating and modernization of the offices. This is intended to promote the exchange of information and make work more attractive - and of course to attract young talent. Schneider also emphasized that employees today feel more involved through a stronger feedback culture, and thus work closer together. The Otto Group is also becoming more attractive for specialists who are urgently needed for a digital transformation as a result of cultural change. In terms of technology, Holger Schneider distinguished between internal and external tools. When Schneider was with the Otto Group, information was stored in central folders. However, this was not very common and was only used by a few employees. In addition, it was even difficult to get a company mobile phone or laptop as an employee. Today, mobile phones and laptops are standard equipment for employees. Later, the sharing of information was also further expanded through the integration of MS Office 365, among other things. If one looks at the technologies that are used externally, analytics is very important, this was the case in the past and is still the case today. In addition, the topic of Business Intelligence (BI) has become increasingly important in recent years. On the one hand, this was built up at holding level, but also in the individual company OTTO a BI division was built up. Holger Schneider names three core success factors for a digital transformation: 1) top management commitment, 2) having a portfolio of different change-activities, 3) a trial-and-error attitude, to build a learning-organization.

## **Appendix C: Nils Niercke, Head of E-Development Home & Living; Otto (GmbH & Co KG)**

In 2015, Nils Niercke joined OTTO as Junior E-Commerce Analyst Manager. He now leads the home and living E-Development team, which is a strategic unit that advises the board on technology- and business field development. Home & Living is considered to be OTTO's most important division, as OTTO's special customer services, its product range, its logistics network, and its product presentation in the online shop can differentiate OTTO from competitors such as Amazon. Nevertheless, Niercke believes that the marketing for the special services is still expandable, as many customers do not know which extra services OTTO offers. One of the biggest projects that Nils Niercke is currently working on is the introduction of computer-generated imagery to replace real photography. The goal is to create the entire image content on the PC. This will enable customers to place the furniture virtually in their homes. With the help of a digital database, it is already possible for OTTO to create 3D objects for the use of augmented- and virtual reality (AR and VR). Last year AR models were already implemented in the "Your Home" app. Your Home is a niche shop that is also operated by OTTO. In this shop, new projects like the AR models are tested before they are implemented on otto.de. Niercke strongly assumes that existing processes, such as photo processes in the Home & Living sector, will be increasingly digitalized. In his opinion, however, the digital transformation of a company begins much earlier: By building a digital mindset of employees and by building automated processes and scalable solutions, the basis for the digital transformation is created. In Nils Niercke's opinion, an important topic in this context is the development of agile working methods, such as Scrum and Kanban, which already takes place across the entire organization. A significant improvement in the Home & Living sector was achieved by the introduction of the Objectives-and-Key-Results method. The goals and activities of each employee are recorded in an online tool, which places them in a higher overall context. This allows one to look at the goals and tasks of colleagues to find out where they can support each other. Thus, the employees no longer work against each other, which was often the case in the past, but with each other.

In the future, Nils Niercke sees the trend that customers will move more from online to offline commerce, which will give online shops a more processing and handling role, while offline shops will serve as a strong source of inspiration. In addition, processes between the customer and the supplier will become more interlinked as well as transparent and fast delivery will play an increasingly important role. It would be imaginable for Niercke that OTTO would create synergies in cooperation with stationary retailers, since they have no particular expertise in online commerce, while OTTO has no strong expertise in traditional stationary retailing. This could lead to the discovery of niches in which they could join forces without stealing each other's market shares. Regarding performance results, Niercke said that most digital projects, such as the 3D models mentioned above, are an investment in the future. However, he believes that the customer behavior will change a lot. For example, he assumes that the return rate of furniture will drop significantly, as customers will have the opportunity to place the furniture virtually in their home with the help of AR and thus test it before they finally complete the order. Nils Niercke named three critical success factors for the digital transformation of a company: 1) The creation of a digital culture and mindset, as it is crucial to integrate and enable all employees in the change process, 2) Willingness to invest and take risks in order to replace existing systems and introduce new ones, 3) having people with know-how in terms of new technologies and systems.



## **Appendix D: Tobias Krüger, Division Manager Kulturwandel 4.0; Otto Group**

Tobias Krüger explained that for him, digital transformation is the starting point for cultural change 4.0. He explained that customer behavior is changing, which is why business models and corporate structures must also change. The Otto Group also noticed that the strategic work and the infrastructure had to change. Krüger believes that the challenges of digital transformation can be overcome above all by a new corporate culture. Nevertheless, he said, many other factors must work together to make digital transformation a success. On the subject of results, Tobias Krüger said that these are not measured stringently on the holding level. The largest performance indicator is the pre-tax profit of the entire holding company, i.e. the consolidated Group result. However, he stressed that the KPIs of cultural change are not measured quantitatively but qualitatively. In order to answer the question of how the change is experienced, case studies are developed to compare how work used to be compared to how it is done today. The derivation of economic performance indicators is difficult. But what can be seen, for example, is that productivity in the OTTO call centers has increased, and fluctuation and sick leave have decreased. The same applies to warehouse logistics. Krüger has also said that employee satisfaction is measured by each legal entity itself. There are areas in which this has increased, but there are also areas in which satisfaction has remained the same or even declined. However, he stressed that this is not so bad at all, because there is now at least a stronger exchange and it is easier to clarify the reasons. The change in culture has made employees more honest in their answers and more critical. This promotes transparency and exchange. One KPI that has improved greatly is the number and quality of applications. The company has a significant increase in profiles and high-caliber candidates, which they would not have received in the past. On the subject of business models, Krüger said that initiatives such as or OTTO now would not have been possible without a cultural change. OTTO now was an initiative in which the 30 craziest employees under 30 received a million euros to develop a new business idea. OTTO now emerged from this. In Krüger's opinion, the greatest challenge for the Otto Group in the context of digital transformation was bringing together the old and the new. A further challenge for him personally was to clarify the necessity of the topic of corporate culture in order to get the mandate to deal with the topic of cultural change. He also emphasized that born-digital companies like Amazon, for example, play by completely different rules. On the one hand, these companies have completely different investment streams, on the other hand, these companies pursue completely different exit strategies. In addition, OTTO's Heritage is both a curse and a blessing. On the one hand, there is a lot of know-how, experience, and a mature logistics infrastructure, on the other hand, it is difficult and expensive to bring these infrastructures and processes up to date because the technologies have changed so quickly in recent years. An example that illustrates how quickly technology is changing and how difficult it is to keep up is About You. About You is extremely good at the personalization of the online shop. About You was able to do this much better than Zalando, for example, because they used new programming techniques and technologies from the beginning, which did not exist when Zalando was founded six years before. This is why it is difficult for Zalando to catch up on this. For this reason, Krüger said, the Otto Group is investing hundreds of millions in the IT-infrastructure. Tobias Krüger hopes that in 5 years OTTO will already be a platform with a high degree of automation and strong customer loyalty. Furthermore, he named three success factors for a digital transformation: 1) the financial power to carry out a transformation in the first place, 2) the strong will of the management to change the company, 3) the creation of a digital mindset across the entire organization.

## **Appendix E: Andreas Frenkler, Vice President Business Intelligence; Otto (GmbH & Co KG)**

According to Andreas Frenkler, a digital transformation is not possible without BI and BI is not possible without a digital transformation. For him, the term 'digital transformation' describes the technologization of a business model. For this, he said, the willingness and openness of all persons involved in a company is necessary. At this point, cultural change came into play. Thus, the potential of BI cannot be leveraged if an organization is not ready. Andreas Frenkler has described that the Otto Group's digital transformation actually made it possible to do BI because it became cheaper to store and evaluate mass data. This led to Otto trying things out early on. For example, prototypes were built on the topic of prognostics to see what can be done with the data. Thus, the BI topic has gained acceptance in the specialist departments. One of the drivers was the technological development that made it possible to evaluate data. But Andreas Frenkler also emphasized that even when OTTO was primarily active in the catalogue business, BI was used to ensure that the catalogue was sent to people with the most likely ordering potential. Frenkler explained that the 'customers' of the BI department are OTTO's specialist departments, such as purchasing, sales or logistics. In sales and online marketing, for example, there was the challenge of allocating to budgets. For this purpose, cookies were evaluated to see which intersection in the customer journey needs to receive more attention. This has led to a much more efficient way of how the money is spent on different advertising channels. This was one of the first use cases. Frenkler also explained that by conducting analyses, recommendations are created for the customer. But BI also comes into play in areas that the end customer does not immediately see. As an example, Frenkler mentioned that by calculating sales forecasts one can create a better personnel deployment plan, which in the end is indirectly noticed by the customer because OTTO can deliver faster. According to Andreas Frenkler, one topic that is becoming increasingly important is customer centricity. The aim is to optimize the customer experience along the entire customer journey, and not just at the channel level. Data analysis can be used, for example, to identify if a customer has seen an advertisement and subsequently visited the website. Then, for example, a voucher can be issued automatically because it is assumed that this could be the best promotion at that moment. Regarding new business models, Andreas Frenkler said that while BI is not the source of ideas, it helps a lot in making decisions and automating processes. Another development that is currently being worked on is the possibility of image searches in the online shop. So, it would be imaginable that instead of using text to search for a certain product, a photo could be used. BI provides the necessary data so that images can be analyzed. In addition, OTTO does not want prohibited symbols to be used in the online shop. This can be prevented by image mining, which is carried out by the analysis of BI. Andreas Frenkler also talked about an important milestone that was recently reached: Dealers can now register automatically on the platform. This is to be scaled up next year. In five years, Andreas Frenkler sees OTTO as a platform with a high degree of automation. This is necessary so that OTTO can offer its customers what they need to offer them. In addition, the range of products will be expanded to make OTTO an alternative to Amazon. However, he also stressed that it will not be possible, but also not desirable, to overtake Amazon. In addition, OTTO will defend its market leadership in the Home & Living segment and further expand it there. Frenkler also said that the Otto Group is not yet a technology-driven company, which is why he has the vision that this will be the case in the future. That would mean that the technologies drive the processes and that the IT capabilities are scaled in the value streams. Sustainability and fairness will also continue to play an important role. For Andreas Frenkler, there are five key success factors for a company to transform itself digitally: 1) Top management that demands and supports change and is

willing to spend money on it, 2) many smart people and people who think outside the box, 3) openness to question and challenge the status quo, 4) a risk-taking culture and the freedom to try things out, 5) leaving the microcosm and exploring new technologies and ideas.

## Bibliography

- Abyad, A. (2019). The Innovator ' s Dilemma. *Middle East Journal of Business*, 14(2), 10–14.
- Barreto, I. (2010). Dynamic Capabilities: A review of past research and an agenda for the future. *Journal of Management*, 36(1), 256–280. <https://doi.org/10.1177/0149206309350776>
- Chou, Y. C., Chuang, H. H. C., & Shao, B. B. M. (2016). The impact of e-retail characteristics on initiating mobile retail services: A modular innovation perspective. *Information and Management*, 53(4), 481–492. <https://doi.org/10.1016/j.im.2015.11.003>
- Deloitte. (2019). *Retail in Germany Dossier*. Retrieved from <https://www.statista.com/study/33337/retail-in-germany-statista-dossier/>
- Dunne, P. M., & Lusch, R. F. (2008). *Retailing* (6th ed.). Thomson South-Western.
- Ferreira, J. J. M., Fernandes, C. I., & Ferreira, F. A. F. (2019). To be or not to be digital, that is the question: Firm innovation and performance. *Journal of Business Research*, 101(June 2018), 583–590. <https://doi.org/10.1016/j.jbusres.2018.11.013>
- Fitzgerald, M., Kruschwitz, N., Bonnet, D., & Welch, M. (2013). Embracing Digital Technology: A New Strategic Imperative | Capgemini Consulting Worldwide. *MIT Sloan Management Review*, 55(1), 1–13. Retrieved from <https://www.capgemini-consulting.com/SMR>
- German Federal Statistical Office. (2019). *Retail in Germany Dossier*. Retrieved from <https://www.statista.com/study/33337/retail-in-germany-statista-dossier/>
- Germany Trade and Invest GmbH. (2019). Consumer Markets and Retail Landscape. Retrieved November 7, 2019, from <https://www.gtai.de/GTAI/Navigation/EN/Invest/Industries/Consumer-industries/consumer-markets-retail.html>
- Grewal, D., Roggeveen, A. L., & Nordfält, J. (2017). The Future of Retailing &. *Journal of Retailing*, 93(1), 1–6. <https://doi.org/10.1016/j.jretai.2016.12.008>
- Gurbaxani, V., & Dunkle, D. (2019). Gearing Up For Successful Digital Transformation. *MIS Quarterly Executive*, 18(3), 209–220. <https://doi.org/10.17705/2msqe.00017>
- Henriette, E., Feki, M., & Boughzala, I. (2015). The shape of digital transformation: A systematic literature review. *Ninth Mediterranean Conference on Information Systems (MCIS)*, 431–443.
- Hess, T., Benlian, A., Matt, C., & Wiesböck, F. (2016). Options for formulating a digital

- transformation strategy. *MIS Quarterly Executive*, 15(2), 123–139.
- Kane, G. C., Palmer, D., Phillips, A. N., Kiron, D., & Buckley, N. (2015). Strategy, not Technology, Drives Digital Transformation. *MIT Sloan Management Review and Deloitte University Press*.
- Matt, C., Hess, T., & Benlian, A. (2015). Digital Transformation Strategies. *Business and Information Systems Engineering*, 57(5), 339–343. <https://doi.org/10.1007/s12599-015-0401-5>
- Mende, M., & Noble, S. M. (2019). Retail Apocalypse or Golden Opportunity for Retail Frontline Management? *Journal of Retailing*, Vol. 95, pp. 84–89. <https://doi.org/10.1016/j.jretai.2019.06.002>
- Obermaier, R. (2016). Industrie 4.0 als unternehmerische Gestaltungsaufgabe: Strategische und operative Handlungsfelder für Industriebetriebe. In *Industrie 4.0 als unternehmerische Gestaltungsaufgabe*. [https://doi.org/10.1007/978-3-658-08165-2\\_1](https://doi.org/10.1007/978-3-658-08165-2_1)
- Otto Group. (2019). *Annual Report 2018/19*. Hamburg.
- Pantano, E., & Gandini, A. (2018). Shopping as a “networked experience”: an emerging framework in the retail industry. *International Journal of Retail and Distribution Management*, 46(7), 690–704. <https://doi.org/10.1108/IJRDM-01-2018-0024>
- Sebastian, I. M., Moloney, K. G., Ross, J. W., Fonstad, N. O., Beath, C., & Mocker, M. (2017). How big old companies navigate digital transformation. *MIS Quarterly Executive*, 16(3), 197–213.
- Souiden, N., Ladhari, R., & Chiadmi, N. E. (2019). New trends in retailing and services. *Journal of Retailing and Consumer Services*, 50(August 2018), 286–288. <https://doi.org/10.1016/j.jretconser.2018.07.023>
- Vial, G. (2019). Understanding digital transformation: A review and a research agenda. *Journal of Strategic Information Systems*, 28(2), 118–144. <https://doi.org/10.1016/j.jsis.2019.01.003>
- von Leipzig, T., Gamp, M., Manz, D., Schöttle, K., Ohlhausen, P., Oosthuizen, G., ... von Leipzig, K. (2017). Initialising Customer-orientated Digital Transformation in Enterprises. *Procedia Manufacturing*, 8, 517–524. <https://doi.org/10.1016/j.promfg.2017.02.066>
- Warner, K. S. R., & Wäger, M. (2018). Building dynamic capabilities for digital transformation: An ongoing process of strategic renewal. *Long Range Planning*, 52(3), 326–349. <https://doi.org/10.1016/j.lrp.2018.12.001>
- Westerman, G., & Bonnet, D. (2015). *Revamping Your Business Through Digital*

*Transformation*. Massachusetts Institute of Technology: MITSloan Management Review.

Westerman, G., Calm ejane, C., Bonnet, D., Ferraris, P., & McAfee, A. (2011). Digital Transformation: A Roadmap for Billion-Dollar Organizations. *MIT Sloan Management*.

Westerman, G., Tannou, M., Bonnet, D., Ferraris, P., & McAfee, A. (2012). The Digital Advantage: How Digital Leaders Outperform their Peers in Every Industry. *MIT Sloan Management*.

## Endnotes

- 1 Otto Group. (2019). *Annual Report 2018/19*. Hamburg.
- 2 Otto Press Photos: <https://www.ottogroup.com/en/presse/material.php>
- 3 Otto (GmbH & Co KG). (2019). Start-up since 1949 – OTTO's past. And future. Retrieved November 10, 2019, from <https://www.otto.de/unternehmen/en/unternehmen/history.php>
- 4 Otto Group. (2019). *Annual Report 2018/19*. Hamburg.
- 5 Statista Dossier: Otto Group (2019)
- 6 Otto Group. (2019). *Annual Report 2018/19*. Hamburg.
- 7 Image Source: BILD – <https://www.bild.de/geld/wirtschaft/wirtschaft/tschuess-otto-letzte-auflage-des-katalog-klassikers-gedruckt-58580246.bild.html>
- 8 Otto Group. (2019). *Annual Report 2018/19*. Hamburg.
- 9 Chen, S., & Leteney, F. (2000). Get Real! Managing the Next Stage of Internet Retail. *European Management Journal*, 18(5), 519–528. [https://doi.org/10.1016/S0263-2373\(00\)00041-4](https://doi.org/10.1016/S0263-2373(00)00041-4)
- 10 Article: Neckermann-Pleite zeigt den Niedergang des klassischen Versandhandels; <https://www.welt.de/newsticker/news3/article108326600/Neckermann-Pleite-zeigt-den-Niedergang-des-klassischen-Versandhandels.html>
- 11 Schöllgen, G. (2010). *Gustav Schickedanz: Biographie eines Revolutionärs*. Berlin: BV Berlin Verlag GmbH.
- 12 Interview: Tobias Krüger, Division Manager Kulturwandel 4.0 (Cultural Change), Otto Group
- 13 Interview: Andreas Frenkler, Vice President Business Intelligence, Otto (GmbH & Co KG)  
& Podcast: On the Way to New Work, Episode 150: Alexander Birken, CEO Otto Group (12.08.2019)
- 14 Interview: Holger Schneider, Former Head of Business Development New Media, Otto Group
- 15 Podcast: On the Way to New Work, Episode 150: Alexander Birken, CEO Otto Group (12.08.2019)
- 16 Interview: Holger Schneider, Former Head of Business Development New Media, Otto Group
- 17 Schöllgen, G. (2010). *Gustav Schickedanz: Biographie eines Revolutionärs*. Berlin: BV Berlin Verlag GmbH.
- 18 Interview: Ingo Bertram, Press Spokesman Tech & IT, Otto (GmbH & Co KG)
- 19 Interview: Ingo Bertram, Press Spokesman Tech & IT, Otto (GmbH & Co KG)
- 20 Interview between Tobias Krüger (Division Manager Kulturwandel 4.0, Otto Group) and Sebastian Purps-Pardigol (Kulturwandel.org), 2019, Retrieved from <https://kulturwandel.org/film/otto-group-tobias-krueger/>
- 21 Purps-Pardigol, S. (2018). Otto Group: Tobias Krüger. Retrieved November 20, 2019, from <https://kulturwandel.org/gespraech/otto-group/>.
- 22 Otto Group Website: <https://www.ottogroup.com/de/karriere/Unternehmenskultur/Kulturwandel-4.0.php>
- 23 Interview: Ingo Bertram, Press Spokesman Tech & IT, Otto (GmbH & Co KG)

- 24 Purps-Pardigol, S. (2018). Otto Group: Tobias Krüger. Retrieved November 20, 2019, from <https://kulturwandel.org/gespraech/otto-group/>.
- 25 Podcast: On the Way to New Work, Episode 150: Alexander Birken, CEO Otto Group (12.08.2019)
- 26 Purps-Pardigol, S. (2018). Otto Group: Tobias Krüger. Retrieved November 20, 2019, from <https://kulturwandel.org/gespraech/otto-group/>.
- 27 Interview between Tobias Krüger (Division Manager Kulturwandel 4.0, Otto Group) and Sebastian Purps-Pardigol (Kulturwandel.org), 2019, Retrieved from <https://kulturwandel.org/film/otto-group-tobias-krueger/>
- 28 Interview: Nils Niercke, Head of E-Development Home & Living, Otto (GmbH & Co KG)
- 29 Otto Group Website: <https://www.ottogroup.com/de/karriere/Unternehmenskultur/Kulturwandel-4.0.php>
- 30 Interview: Ingo Bertram, Press Spokesman Tech & IT, Otto (GmbH & Co KG)
- 31 Purps-Pardigol, S. (2018). Otto Group: Tobias Krüger. Retrieved November 20, 2019, from <https://kulturwandel.org/gespraech/otto-group/>.
- 32 Interview: Ingo Bertram, Press Spokesman Tech & IT, Otto (GmbH & Co KG)
- 33 Interview: Ingo Bertram, Press Spokesman Tech & IT, Otto (GmbH & Co KG)
- 34 Interview: Ingo Bertram, Press Spokesman Tech & IT, Otto (GmbH & Co KG)
- 35 Interview: Holger Schneider, Former Head of Business Development New Media, Otto Group
- 36 Interview: Holger Schneider, Former Head of Business Development New Media, Otto Group
- 37 Interview: Nils Niercke, Head of E-Development Home & Living, Otto (GmbH & Co KG)
- 38 Interview: Nils Niercke, Head of E-Development Home & Living, Otto (GmbH & Co KG)
- 39 Interview between Tobias Krüger (Division Manager Kulturwandel 4.0, Otto Group) and Sebastian Purps-Pardigol (Kulturwandel.org), 2019, Retrieved from <https://kulturwandel.org/film/otto-group-tobias-krueger/>
- 40 Interview: Nils Niercke, Head of E-Development Home & Living, Otto (GmbH & Co KG)
- 41 Interview between Tobias Krüger (Division Manager Kulturwandel 4.0, Otto Group) and Sebastian Purps-Pardigol (Kulturwandel.org), 2019, Retrieved from <https://kulturwandel.org/film/otto-group-tobias-krueger/>
- 42 Podcast: On the Way to New Work, Episode 150: Alexander Birken, CEO Otto Group (12.08.2019)
- 43 Interview: Holger Schneider, Former Head of Business Development New Media, Otto Group
- 44 Interview: Holger Schneider, Former Head of Business Development New Media, Otto Group
- 45 Interview: Holger Schneider, Former Head of Business Development New Media, Otto Group
- 46 About You Website: <https://corporate.aboutyou.de/de/presse/about-you-wird-zum-ersten-unicorn-aus-hamburg-%E2%80%A8heartland-a-s-steigt-als-neuer-investor-bei-fashion-tech-start-up-ein>
- 47 WWD: How Customer Data Is Changing Fashion Retailing: Thanks to data flows, customers are telling the apparel industry what they want, rather than the other way around (28.08.2019)
- 48 Otto Group Website: <https://www.ottogroup.com/de/die-otto-group/konzernfirmen/OGDS.php>



- 49 Interview: Holger Schneider, Former Head of Business Development New Media, Otto Group
- 50 Otto Group. (2019). *Annual Report 2018/19*. Hamburg.
- 51 Interview: Tobias Krüger, Division Manager Kulturwandel 4.0 (Cultural Change), Otto Group
- 52 Interview between Tobias Krüger (Division Manager Kulturwandel 4.0, Otto Group) and Sebastian Purps-Pardigol (Kulturwandel.org), 2019
- 53 Interview: Ingo Bertram, Press Spokesman Tech & IT, Otto (GmbH & Co KG)
- 54 Interview: Ingo Bertram, Press Spokesman Tech & IT, Otto (GmbH & Co KG)
- 55 Interview: Ingo Bertram, Press Spokesman Tech & IT, Otto (GmbH & Co KG)
- 56 Interview: Tobias Krüger, Division Manager Kulturwandel 4.0 (Cultural Change), Otto Group
- 57 Interview: Nils Niercke, Head of E-Development Home & Living, Otto (GmbH & Co KG)
- 58 Interview: Holger Schneider, Former Head of Business Development New Media, Otto Group
- 59 Interview: Andreas Frenkler, Vice President Business Intelligence, Otto (GmbH & Co KG)
- 60 Interview: Andreas Frenkler, Vice President Business Intelligence, Otto (GmbH & Co KG)
- 61 Interview: Andreas Frenkler, Vice President Business Intelligence, Otto (GmbH & Co KG)
- 62 Interview: Ingo Bertram, Press Spokesman Tech & IT, Otto (GmbH & Co KG)
- 63 ECE Website: <https://www.ece.com/unternehmen/daten-und-fakten/>
- 64 Interview: Nils Niercke, Head of E-Development Home & Living, Otto (GmbH & Co KG)
- 65 Otto Group. (2019). *Annual Report 2018/19*. Hamburg.
- 66 Interview: Nils Niercke, Head of E-Development Home & Living, Otto (GmbH & Co KG)
- 67 Interview: Tobias Krüger, Division Manager Kulturwandel 4.0 (Cultural Change), Otto Group
- 68 Statista Dossier: Otto Group (2019)
- 69 Interview: Alexander Birken, CEO, Otto Group; Harvard Business Manager, April 2019: “Die Alternative War die Insolvenz”
- 70 Interview: Ingo Bertram, Press Spokesman Tech & IT, Otto (GmbH & Co KG)
- 71 Otto Group. (2019). *Annual Report 2018/19*. Hamburg. & Statista Dossier: Otto Group (2019)
- 72 Interview: Tobias Krüger, Division Manager Kulturwandel 4.0 (Cultural Change), Otto Group
- 73 Interview: Tobias Krüger, Division Manager Kulturwandel 4.0 (Cultural Change), Otto Group
- 74 Interview: Nils Niercke, Head of E-Development Home & Living, Otto (GmbH & Co KG)
- 75 Statista Dossier: Otto Group (2019)
- 76 Interview: Tobias Krüger, Division Manager Kulturwandel 4.0 (Cultural Change), Otto Group
- 77 Magazine Article: Digitale Transformation KPIs – Digital systematisch entwickeln (Insight); <https://www.manyimize.com/digitale-transformation-kpis/>

- 78 Instagram Summary Otto\_de; [https://socialblade.com/instagram/user/otto\\_de/monthly](https://socialblade.com/instagram/user/otto_de/monthly)
- 79 Instagram Summary Otto\_de; [https://socialblade.com/instagram/user/otto\\_de/legacy](https://socialblade.com/instagram/user/otto_de/legacy)
- 80 Instagram Summary Otto\_de; [https://socialblade.com/instagram/user/otto\\_de/monthly](https://socialblade.com/instagram/user/otto_de/monthly)
- 81 Podcast: O-Ton – Der Podcast von OTTO; Episode 2: Sahra Al-Dujaili (Social Media Team Lead, Otto GmbH & Co KG) (14.11.2019)
- 82 Podcast: O-Ton – Der Podcast von OTTO; Episode 2: Sahra Al-Dujaili (Social Media Team Lead, Otto GmbH & Co KG) (14.11.2019)
- 83 Instagram Summary Otto\_de; [https://socialblade.com/instagram/user/otto\\_de/monthly](https://socialblade.com/instagram/user/otto_de/monthly)
- 84 Interview: Nils Niercke, Head of E-Development Home & Living, Otto (GmbH & Co KG)
- 85 Interview: Nils Niercke, Head of E-Development Home & Living, Otto (GmbH & Co KG)
- 86 Interview: Tobias Krüger, Division Manager Kulturwandel 4.0 (Cultural Change), Otto Group
- 87 Interview: Nils Niercke, Head of E-Development Home & Living, Otto (GmbH & Co KG)
- 88 Otto Group. (2019). *Annual Report 2018/19*. Hamburg.
- 89 Interview: Andreas Frenkler, Vice President Business Intelligence, Otto (GmbH & Co KG)
- 90 Podcast: O-Ton – Der Podcast von OTTO; Episode 1: Marc Opelt (Chairman of the OTTO Management Board and Management Board for Marketing, Otto GmbH & Co KG) (14.11.2019)
- 91 Podcast: O-Ton – Der Podcast von OTTO; Episode 1: Marc Opelt (Chairman of the OTTO Management Board and Management Board for Marketing, Otto GmbH & Co KG) (14.11.2019)
- 92 OTTO Website: <https://www.otto.de/unternehmen/de/newsroom/news/2019/OTTO-Facts2go-2019.php>
- 93 Interview: Andreas Frenkler, Vice President Business Intelligence, Otto (GmbH & Co KG)
- 94 Interview: Ingo Bertram, Press Spokesman Tech & IT, Otto (GmbH & Co KG)
- 95 Podcast: O-Ton – Der Podcast von OTTO; Episode 1: Marc Opelt (Chairman of the OTTO Management Board and Management Board for Marketing, Otto GmbH & Co KG) (14.11.2019)
- 96 Interview: Andreas Frenkler, Vice President Business Intelligence, Otto (GmbH & Co KG)
- 97 Interview: Ingo Bertram, Press Spokesman Tech & IT, Otto (GmbH & Co KG)
- 98 Interview: Ingo Bertram, Press Spokesman Tech & IT, Otto (GmbH & Co KG)
- 99 OTTO Website: <https://www.otto.de/unternehmen/de/newsroom/news/2019/connected-commerce-otto-und-ece-allianz.php>
- 100 Interview: Nils Niercke, Head of E-Development Home & Living, Otto (GmbH & Co KG)
- 101 Interview: Nils Niercke, Head of E-Development Home & Living, Otto (GmbH & Co KG)
- 102 Interview: Nils Niercke, Head of E-Development Home & Living, Otto (GmbH & Co KG)
- 103 Interview: Nils Niercke, Head of E-Development Home & Living, Otto (GmbH & Co KG)
- 104 Interview: Andreas Frenkler, Vice President Business Intelligence, Otto (GmbH & Co KG)

- 105 Interview: Andreas Frenkler, Vice President Business Intelligence, Otto (GmbH & Co KG)
- 106 Otto Press Photo: <https://www.ottogroup.com/en/presse/material.php>
- 107 Statista Global Consumer Survey (2019)
- 108 Statista Global Consumer Survey (2019)
- 109 Website: <https://etailment.de/news/stories/Otto.de-Wir-antizipieren-schneller-20551>
- 110 Website: [www.otto.de](http://www.otto.de)
- 111 Website: <https://www.aboutyou.de/>
- 112 Otto Press Photos: <https://www.otto.de/unternehmen/de/newsroom/news/2019/OTTO-Facts2go-2019.php>
- 113 Interview: Ingo Bertram, Press Spokesman Tech & IT, Otto (GmbH & Co KG)
- 114 Interview: Andreas Frenkler, Vice President Business Intelligence, Otto (GmbH & Co KG)
- 115 Interview: Ingo Bertram, Press Spokesman Tech & IT, Otto (GmbH & Co KG)
- 116 Interview: Tobias Krüger, Division Manager Kulturwandel 4.0 (Cultural Change), Otto Group
- 117 Interview: Ingo Bertram, Press Spokesman Tech & IT, Otto (GmbH & Co KG)
- 118 Interview: Andreas Frenkler, Vice President Business Intelligence, Otto (GmbH & Co KG)
- 119 Interview: Holger Schneider, Former Head of Business Development New Media, Otto Group
- 120 Interview: Holger Schneider, Former Head of Business Development New Media, Otto Group
- 121 Interview: Nils Niercke, Head of E-Development Home & Living, Otto (GmbH & Co KG)
- 122 German Federal Statistical Office: <https://www.destatis.de/EN/Themes/Society-Environment/Population/Migration-Integration/Tables/foreigner-age-groups.html>
- 123 German Federal Statistical Office: [https://www.destatis.de/DE/Presse/Pressemitteilungen/2019/08/PD19\\_314\\_12511.html](https://www.destatis.de/DE/Presse/Pressemitteilungen/2019/08/PD19_314_12511.html)
- 124 Zalando Website: <https://corporate.zalando.com/en/company/who-we-are>
- 125 Amazon Website: <https://www.amazon.de/>
- 126 Statista on Amazon: <https://de.statista.com/infografik/7849/bei-amazon-deutschland-gelistete-produkte/>
- 127 OTTO Website: <https://www.otto.de/unternehmen/de/unternehmen/kennzahlen.php>
- 128 Interview: Ingo Bertram, Press Spokesman Tech & IT, Otto (GmbH & Co KG)