

## Digital Maturity of HR in SMEs

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### Abstract

Digitalization and digital transformation processes pose chances and challenges to companies in a variety of different aspects. The present paper focuses on the digitalization of HR management in SMEs. The situation is discussed both in the light of SMEs, who are faced with unique challenges in terms of digitalization and its subsequent management. The role of the entrepreneurs/head of SMEs in driving the digitalization process is discussed. In a similar vein, the role HR departments can take both in their own digitalization and in the one of the company is displayed from various points of view, citing evidence that HR departments – especially of SMEs – often lag behind in terms of digitalization, thus not living up to their full potential as internal service partners of companies. An empirical study based on a quantitative survey explored these challenges further. A total of  $n = 16$  experts from HR departments of German SMEs assessed the digital maturity of their own departments. The results show that – in accordance with the findings derived from the literature – HR departments are still struggling with digitalization, barely making use of their data and not connecting yet to other IT systems within the company. Most experts describe the role of their departments as reactive instead of active. These findings are discussed in the light of studies on digital maturity, showing that the situation in Germany/Central Europe for SMEs and their HR departments is a complex one: On the one hand it seems clear, that digitalization can help the companies and departments on a long-term perspective – which, according to some findings, is also well-known to the executives. At the same time, HR departments typically lack the (financial) resources and the involvement to actively work on their digital strategy.

**Keywords:** digital transformation; digital HR; HR strategy; digital maturity; SMEs

### Introduction

#### State of Research

#### Digitalization and Digital Transformation

Authors such as Tapscott and Barry (2009) see the digital transformation of companies as a consequence and also as the basis of digitization. While digitization on the one hand creates the necessary technological basis for digitally transformed business processes, it also makes such a transformation necessary. Tapscott and Barry (2009) particularly emphasize the role of IT departments. According to the authors, these were purely service providers within the company for a long time and were primarily responsible for ensuring that the actual business processes were able to operate smoothly.

Today, on the other hand, IT departments shape the business itself and, as a promoter of innovation, are responsible for generating new business models and are therefore increasingly involved in strategic decisions. The importance of IT departments in the development of new business models as well as products and services is also emphasized by Gulati and Soni (2015). The authors explain that it is becoming increasingly difficult for companies to only survive in competition through the quality of their own products. On the contrary, related services, services and new business models are also required in many areas. The authors cite the product-as-a-service models of many companies as prominent examples, which often even open up additional utilization options through the use and acquisition of data.

The position of Chief Digital Officer (CDO) is often mentioned in connection with this (Dumeresque, 2014). This relatively young position is responsible for the digital transformation of a company. Dumeresque (2014) particularly emphasizes that the CDO usually occupies a strategic position alongside the CEO or CFO and is therefore clearly located at the strategic level of a company and is therefore involved in long-term strategy planning and actively contributes to it. Johnson and

Lederer (2010) describe this close connection between the CDO (and thus a representative of the digital transformation agenda) and the management level as a key success factor for the implementation of digital strategies in companies.

A study conducted by PwC (Greif, Kühnis & Warnking, 2016) looked at the degree of digitization of Swiss SMEs. According to the authors of the study, this varies greatly between the individual companies and is positively correlated with the size of the companies and negatively with their age: In other words, younger companies are more advanced in terms of digitization. The most digitized companies include companies from the IT or telecommunications industry.

Greif, Kühnis and Warnking (2016) also found differences within the company regarding digitization. As a result, internal processes are digitized the most on average, while sales or customer contact are digitized comparatively little. On the one hand, the authors of the study see this as an indication that it is easier to digitize internal processes than to actually adapt the business model or actively involve customers. On the other hand, the involvement of the company's own employees in the digitization process seems to have progressed relatively strongly.

In addition to the size and age of the company, Greif et al. (2016) also identified another relevant predictor of the degree of digitization. Following the consideration that primarily the younger generation is familiar with the topics of digitization and that decisions about whether digitization is usually made at the management level, the authors of the study also examined the relationship between the age of management and the degree of digitalization of the company. In fact, the authors were able to establish a tendency between age and degree of digitization: The younger the management, the more digitized the company is on average.

In summary, Greif et al. (2016) once again state that digitization - regardless of the industry - is associated with increased corporate success and is therefore a key challenge for European SMEs. For Switzerland – as an example of a central European country – as a business location, in particular, the experts see a need to catch up and a particular relevance here: Swiss consumers are above average active in the use of digital content, and due to the high personnel costs in Switzerland, automation (as a part of digitization) can make long-term success of Switzerland as a location.

### **The Situation in Small and Medium Enterprises**

Digital transformation of small and medium-sized enterprises (SMEs) - such as Li, Su, Zhang and Mao (2017) - is a relatively unexplored area in which the authors identify a research gap. At the same time - as Chen, Jaw and Wu (2016) describe - digital transformation offers a multitude of opportunities, especially for SMEs, to increase their success. Li et al. (2017) describe that the digital transformation itself, as well as its causes, success factors and consequences, have already been well researched. According to Li et al. (2017), the path from the search for optimal internal management systems (as one of the first stages of digital transformation) to cross-border technologies such as e-commerce and completely changing business models is generally well explained. Relevant factors for the digital transformation of SMEs are, according to the researchers, their skills, whereby they place particular emphasis on leadership and organizational skills in their research. Based on the Theory of Dynamic Managerial Capabilities (DMC), the authors defined leadership as the ability of managers to expand, integrate and reconfigure the organization's skills and resources. The organizational skills are described by Li et al. (2017) defined as the ability to perform tasks in an efficient and satisfactory manner. They also point out that there must be an overlap between the requirements of the respective industry and the skills that an organization needs.

They found that entrepreneurs with a shortage in these skills and resource areas were able to drive digital transformation in their companies, in particular through services and functionalities from third-party providers.

At the same time, however, the focus is on the role of the entrepreneur himself: he initiates and accelerates the path to digital transformation and is responsible for the strategy (Li et al., 2017). Li et al. (2017), however, do not go into what happens if the entrepreneur does not push the path himself.

Implementing the role of the CDO is also seen as one of the main challenges for SMEs (Becker, Schmid & Botzkowski, 2018). Its roles differ significantly from those of CDOs in larger companies: In SMEs, the CDO's primary responsibility lies in digitization and strategic management. According to the results of Becker, Schmid and Botzkowski (2018), these two task clusters take up 66% of the time of CDOs for SMEs. This leaves relatively little scope in the areas of IT, marketing and program development. In comparison, this ratio seems to be much more balanced for larger companies.

The situation seems to be even accentuated for SMEs in the field of craft and trade, as authors such as Frederiksen and Runst (2016) point out. A lack of organizational structures and digital knowledge from which a big share of SMEs in these fields suffer, can imply that digitalization efforts are either not undertaken at all, are not very successful or are even diametral to success. Therefore, Hammermann and Stettes (2016) point out, that skills necessary for successful digitalization should be stronger focused on, especially in SMEs. In order to do so, the HR department seems to play a major role, as Petry and Jäger (2018) point out. HR departments are one of the core functions of companies to support the digitalization process by providing knowledgeable employees and creating an innovation fostering corporate culture. This, of course, also implies that HR departments themselves have to face the challenge of digitalization and digital transformation.

For example, as stated by Petry and Jäger (2018), Oertig, Estermann and Thoma (2017) also describe that the HR position has a double role in the digitization process. On the one hand, HR is encouraged (as also postulated by Ulrich, 1998) to drive the transformation of the company as a change agent. On the other hand, it is itself subject to the task of increasingly digitizing.

In response to this challenge, Oertig, Estermann and Thoma (2017) attempted to develop a maturity model that shows how far the digitalization of an HR department has progressed. The authors postulate three phases on the way to digital maturity, which are achieved by testing, consolidating, automating and optimizing.

### Digital HR

The past decade has led to a significant increase in the use of innovative, IT-driven developments in the area of HR management (Marler and Parry, 2016). The basis for this is the increasing spread of enterprise resource planning (ERP) software, which is the starting point for the increasing standardization and automation of many HRM activities. By automating many standard processes - as Marler and Parry (2016) argue - HR management can gain strategic importance and become more involved in such processes. This is a requirement that researchers in the field of strategic and sustainable human resource management have been making for a long time (Kramar, 2014).

Results from Melanthiou, Pavlou and Constantinou (2015) show that digital recruitment can have an advantage over classic methods: The authors speak of a time saving of up to 30 percent if the application process increasingly uses digital strategies to recruit new employees is set. The use of video conferences is also cited as a valuable contribution to digitization: This means that the costs of an application can also be significantly reduced for applicants and, in turn, a more efficient process is made possible.

There are also corresponding advantages of digital measures on the cost side: If new job ads are placed via social media instead of classic ads or other offline access, this can mean a cost saving of up to 90%. In addition, the authors emphasize, this strategy can also help a company to present itself in a more modern and contemporary way, which - in the context of employer branding - can in turn offer an advantage. This is particularly important for companies in the IT or high-tech sector.

Successful companies tend to make bigger use of their data than less successful ones, LaValle, Lesser, Shockley, Hopkins and Kruschwitz (2011) argue – not only in their general business decisions but also in the field of HR, where successful companies follow more data-driven strategies than their less successful competitors.

### Methodology

The current paper followed a quantitative approach, driven by the proposal of Oertig, Estermann and Thoma (2017) who described a model of assessing the digital maturity of HR departments in SMEs. The authors proposed three major stages on the way to digital maturity, starting with a phase labelled *Ad Hoc*, where digital solutions such as Microsoft Word and Microsoft Excel are used, but no connection of HR functions to other digital platforms in the company exists. Problems are solved when necessary, in this step, without strategic, long-term goals in the field of digital transformation. The second stage is labelled *Integrated Solutions*. This step, according to Oertig et al (2017) sees digital connections of the HR function to other departments and their digital platforms. Digital processes are supporting and guiding the work of the HR departments in this stage. Data is widely accessible and first steps towards automatization of tasks are taken in this stage. The third and final stage of digital maturity of HR departments is labelled *Analytics* and describes one of the core goals of digital transformation, as mentioned in chapter 1.3 with a gaze towards the work of LaValle et al (2011): The usage of data to make meaningful predictions is one of the most powerful applications of digitization and characterizes the third stage of digital maturity (Oertig et al, 2017).

This classification was taken as a base for a quantitative survey with 11 items conducted via the Online Platform *SurveyMonkey*. The questions were posed as closed questions and formulated in close accordance with the classification presented by Oertig et al (2017).

A total of  $n = 16$  participants stemming from an expert group of HR managers in German SMEs took part in this study in regards to the digital maturity of their own departments.

### Empirical Results

The 11 items implied different aspects of digital maturity, ranging from the usage of digital measures in the recruitment process to the connection of HR applications with other company applications and the usage of data. The general implementation of these modern principles of HR management were considered for the sake of this analysis to be indicators of digital maturity of HR departments. Selected results will be presented within this segment of the paper, with a conclusion of the empirical findings forming the end of the segment.

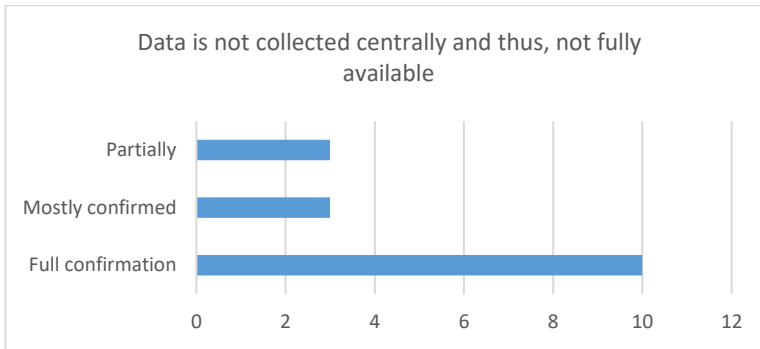


Figure 1 - Data collection by HR

10 out of 16 experts fully agreed, that so far data is not stored centrally and thus also not fully available for further usage (figure 1). The remaining four experts stated that this is either partially or mostly the case, with none answering the opposite way, which would imply a more advanced handling of data. In regards to IT solutions a similar picture presented itself (see figure 2). Again the vast majority of HR experts stated to use un-connected solutions with no or barely any connection to other departments and their IT systems and solutions.

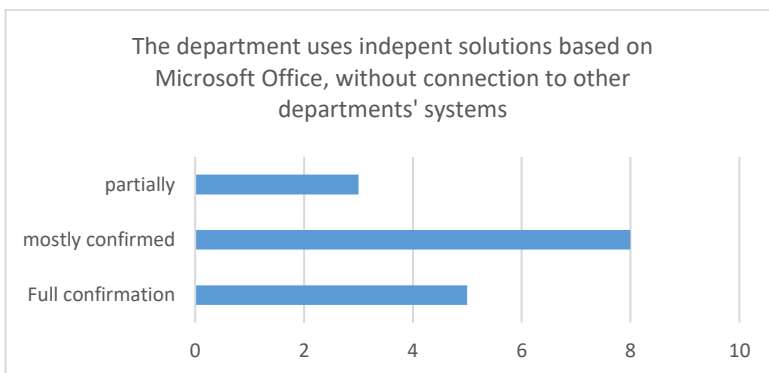


Figure 2 - Independent HR solutions

In regards to the general data usage the biggest share of experts agreed that this is partially happening already, with one expert pointing out, that there is already a comparatively strong data usage in place in their department. Five of the experts, however, claimed that big data is not yet an issue for them and their departments.

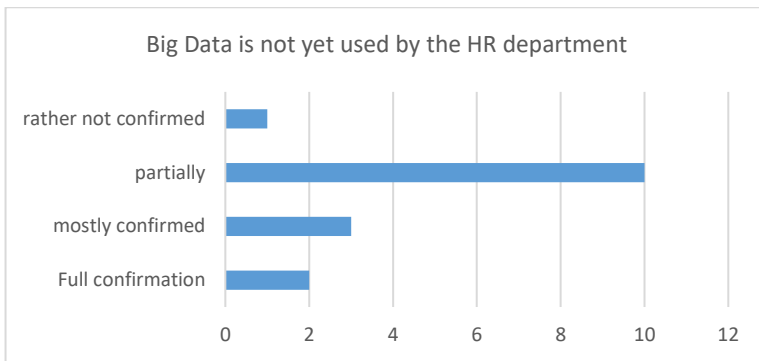


Figure 3 - Big Data usage

In general, the experts also mostly shared the opinion that their respective departments were mostly reacting to changes in the company instead of actively driving those (figure 4).

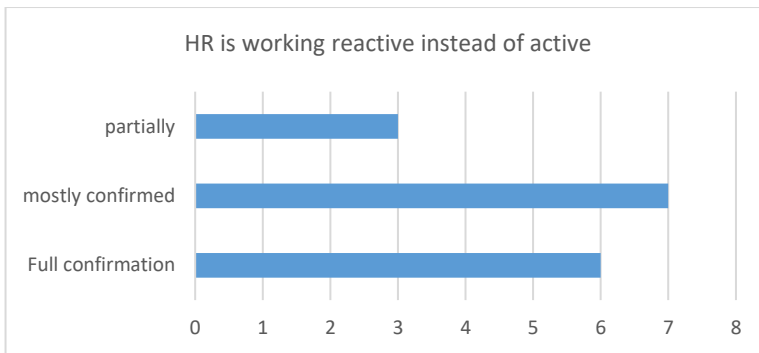


Figure 4 - Reactiveness of HR departments

Concludingly, the analysis of the experts' opinions on their own departments and their respective implementation of digital strategies showed, that the results by Oertig et al (2017) still seem to ring true. Oertig et al (2017) stated that a majority of SMEs struggle with the digitalization of their HR departments, which, subsequently, poses a major challenge for the companies. The results found within this empirical assessment of 16 HR departments of SMEs showcases the same situation – HR departments seem to be not very strongly connected to the rest of their business environment with digital solutions that do not make use yet of company-wide IT systems or central data-storing. There seems to be a reactive strategy in place in terms of handling new developments and approaches – most experts fully or mostly agreed, that their department reacts instead of acting itself.

### Discussion and Conclusion

Digitalization of HR departments is an important challenge for companies, as this process does not only allow for more efficient HR processes but also acts as a supporter of other business units and processes. The more digitalized HR departments become, authors such as Oertig et al (2017) or Petry and Jäger (2016) show, the more likely they are to actively support the other business units of companies in their drive for digitalization. This general digitization, subsequently, is seen as one of the core drivers of corporate success, which seems to be especially true for SMEs, who are – as findings such as the ones by PWC (Greif et al., 2016) show – among the strongest benefiter of digital transformation. HR departments can strongly shape the success of company-wide digitalization as they can provide the necessary skills or adequately skilled employees, that are needed for such processes – a challenge with which especially SMEs in trade and craft sometimes seem to struggle (Frederiksen & Runst, 2016). Melanthiou, Pavlou and Constantinou (2015) also show,

that the digitalization of the HR department cannot only be a strong supporter for other business units but can also yield direct results for the HR departments themselves – their processes can be made more (cost and time) efficient and it can lead to better results in the recruitment process, as modern HR approaches (such as employer branding and digital recruitment) can attract talent.

However, the survey of 16 experts from the HR management of German SMEs showed, that most HR departments in this field do not yet seem to be in the later stages of digital maturity, rather they seem to still be struggling with the implementation of such processes and approaches. These findings, however, do not necessarily imply a fault of the HR departments. Authors such as Kramar (2014) showed that HR departments typically lack funding especially for development processes. HR departments, Kramar (2014) points out, need monetary and general support by top-management in order to live up to their true potential. Ulrich (1998) postulated, that HR departments should be drivers of change and innovation in companies. As Petry and Jäger (2016) show, the necessary support for HR departments does seem to be a problem, especially for smaller companies which – as Hammermann and Stettes (2016) point out – would urgently need the best possible employees, especially in the light of a general lack of talents in the areas of trades and craft (Hogeforster, 2001). Scientific literature, however, for the biggest part focuses on the optimal implementation of modern, digital and sustainable HR management and discusses these approaches often in the field of IT or high tech companies. However, observations such as those by Brandenburg, Haas and Byrom (2006), show, that similar challenges (those arising from digitization, globalization, ageing societies and the resulting lack of employees) exist in branches such as trade, craft and construction. However, little is known about how these challenges are addressed within these branches, also Brandenburg et al (2006) imply, that they are not “as diligent in implementing strategic HRM programs as other industries” (p. 89). This also shows in the empirical findings of this work – most experts agreed in various items, that the HR strategy of their respective companies is barely satisfying.

The responsibility to push for stronger digital transformation – especially in SMEs – lays with the entrepreneur or top management itself, authors such as Li et al. (2017) point out. They explain that companies in this segment heavily rely on their owner’s or manager’s ability and awareness in terms of digital transformation. One of the major steps that can be conducted in order to foster this transformation is the instalment of a CDO, who can act as a connector between various business functions, including the HR function. The digital HR strategy thereby should be part of a general digitalization strategy, with a close link of CDO, C-level management and the HR department being of utmost importance in order to foster a successful approach towards HR management (Kramar, 2014).

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