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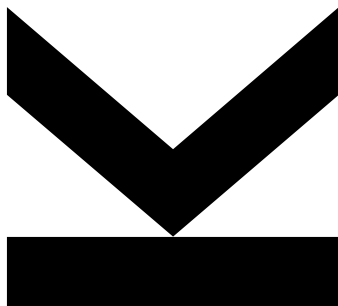
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# **THE DIGITAL TRANSFORMATION: THE ROLE OF CULTURE IN THE DT CHANGE PROCESS**



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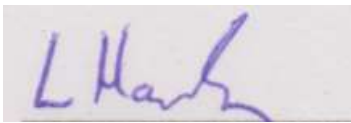
Leading Innovative Organizations

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Würzburg, 20.09.2021



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## **ABSTRACT**

Digital Transformation (DT) is a present topic for organizations. In order to take advantage of digitalization and remain competitive in the future, it is necessary for companies to implement DT. However, many challenges result from DT for organizations. There are several leadership challenges, as well as organizing, performing, belonging and learning tensions that result from it. How these challenges are dealt with is crucial for the DT capability of companies. In particular, the corporate culture plays a role in the extent to which the aforementioned challenges come to bear. The aim of this study is to find out which cultural aspects help to reduce tensions and leadership challenges.

A case study was conducted with the digitally mature company Würth Austria which launched a new digital sales tool in 2019. Employees from different hierarchy levels with a focus on sales were interviewed.

The analysis covered many cultural aspects at the different levels: artifacts, values and beliefs, and underlying assumptions that helped the company overcome the DT hurdles.

The results reveal the existence of clear features in a company's culture that help DT to be more successful. In particular, the underlying assumptions: DT is positive, employees do not have to fear transparency, and technology does not replace people are essential. While the study uncovers what aspects of culture are valuable to DT, future research is needed to work out how these features can be implemented in the company culture.

## **1. Introduction**

The Digital Transformation (DT) is an organizational change triggered and shaped by the widespread adoption of digital technology (Hanelt et al., 2020). Digitalization is increasingly reshaping the strategies of companies and promoting the redesign of business processes (Iansiti & Lakhani, 2014). By building new digital capabilities and human-machine interaction, data-driven operations can be achieved. The digitization therefore creates great transparency about the work of individuals, which increases the possibilities for organizing. At the same time Sundaramurthy & Lewis argue that this transparency and organizing can lead to multiple tensions in organizations e. g. between collaboration and control (2003). Therefore, the question arises: Does DT not only offer advantages for organizations, but does it also present them with leadership challenges that did not exist the same way in past megatrends?

On top of that, tensions arise in learning and performance between building skills for the future and ensuring success in the present (Andriopoulos & Lewis, 2009; Tushman & O'Reilly, 1996; Van Der Vegt & Bunderson, 2005). However, today the pace of technological change requires organizations to simultaneously embrace exploration and exploitation (Smith & Tushman, 2005),

enable stability and flexibility (Feldman & Pentland, 2003; Rindova & Kotha, 2001), and create contexts for learning and performance (Ghoshal & Bartlett, 1994), in order to remain competitive in an agile quickly changing environment. Therefore, leaders' responses to these tensions and their ability to perform the DT within a company can be a fundamental determinant of an organization's fate (Quinn, 1988). DT-related issues such as automated, data-driven, and virtual business processes are of high practical relevance as they offer insights into key issues of organizational change and adaptation (Hanelt et al., 2020). Since the DT has the potential to generate substantial economic benefits for organizations, which can be achieved through digital maturity with commitment, investment and leadership, it is reshaping all industries and businesses. This digital maturity entails how to respond appropriately to the emerging challenges, which is necessary in order to stay competitive in the digital environment (Mugge et al., 2020). This raises the question: **Does the ability of an organization to digitally transform only depend on the management or are there other determining factors?**

### **1.1. Problem statement**

As the DT can best be understood as continuous change that can be triggered and shaped by episodic thrusts (Hanelt et al., 2020), that may create uncertainties in organizations (Guenzi & Nijssen, 2021), it is of high relevance to understand what uncertainties occur and how to deal with them. The fact that individuals face daily tensions presents a significant opportunity to observe or manipulate their thought patterns along with their behavioral responses to those tensions (Smith & Lewis, 2011). The role of management is to recognize and then resolve tensions (Smith & Lewis, 2011). Thus, in order to guarantee a smooth change process in the DT, it is important to understand what tensions arise from digitalization in organizations especially between leadership and employees. Currently, practicing managers appear to make little use of available scientific evidence when making decisions or changing their organizational practices (Barends et al., 2017). DT is a top priority in 87% of companies, and 67% of executives say that in order to remain competitive, their company must become much more digital (Connealy, Weber & Hanrahan, 2017). However, 70% of DT initiatives fail (Hatami et al., 2018). Another factor that further accelerated DT is the COVID-19 pandemic. According to McKinsey, at the onset of the pandemic, more than 90% of B2B sales organizations moved almost immediately into remote working through videoconferencing and phone calls, with 54% of companies believing that virtual selling is as or more effective than traditional face-to-face selling (Gavin et al., 2020). This illustrates that the slow pre-pandemic adoption was not caused by technological hurdles, but rather by individual resistance (Guenzi & Nijssen, 2021). Next to these existing barriers for the DT, cultural aspects seem to be a main cause for the failures in digitalization attempts (Albrecht, 2015). Even though, the high influence of the corporate culture on an organization's ability to digitally transform is known, there is a lack of knowledge on what aspects of the culture positively influence the DT.

## **1.2. Research objectives**

The aim of this study is to give a practically applicable overview about the tensions in organizations and the leadership challenges and leadership practices that arise from the DT from the literature. There is knowledge about the fact that corporate culture has a critical influence on the success of DT initiatives and most DT initiatives fail due to culture. Thus, the main contribution of this research will be a framework of what aspects of corporate culture can help build capacity for the DT from conducting a case study. Furthermore, the aspects of the culture that help reducing the tensions and leadership challenges from digitalization will be identified.

## **1.3. Research questions**

Therefore, the following research questions are considered in more detail: **How do different levels of corporate culture help build capacity for implementing digital processes? What aspects of the levels of corporate culture support reducing manager-employee tensions and coping with leadership challenges?**

## **1.4. Structure of thesis**

In this thesis, the topic of the DT in organizations is first examined from a theoretical perspective. In particular, tensions between managers and employees, leadership challenges and strategies on how to deal with them are highlighted. Subsequently, the current state of knowledge is described and how the corporate culture influences an organization's ability to introduce digital processes. In the methodological part of the thesis, the case study with Würth Austria is described in connection with the reasons why this particular company is analyzed in order to conduct the research. After the description of the data collection and analysis, the results are first explained and later discussed. Finally, a conclusion is drawn up explaining the practical and theoretical contributions.

## **2. Theoretical Background**

There are several terms that are mentioned in connection with the digitalization of companies, that are necessary to be defined. One is digitization, which is simply the process of changing from analog to digital. The digitalization does not have a clearly defined single definition, however it is often referred to as the use of digital technologies to change business models and create new opportunities for revenue streams and to improve the value proposition. DT typically involves multiple digitalization projects, as it refers to a change in the whole organization. This is why it forces organizations to better manage change processes in general as change becomes a core



competency since the business is driven by rapidly changing customer demands (Bloomberg, 2018).

Organizations seek to better understand their customers, systems, and project successes in order to gain operational and strategic advantage (Lemon & Verhoef, 2016). Digital technologies and developments play a crucial role here, especially in terms of the ability to monitor business processes, store histories about customers, analyze data, and be constantly connected to other systems to speed up processes (Grubic, 2014). Data and the information that can be generated from it provide insight into critical business information that ultimately forms the foundation for a company's new strategies.

Digitalization is considered one of the most significant technological trends (Hagberg et al., 2016). In a business context, this megatrend represents the use of technological advances to improve the customer experience as well as operational processes and to generate new business models or improve existing business models (Fitzgerald et al., 2014). Digitalization also enables organizations to gain a better overview of internal as well as external processes (Yamamoto, 1988). In particular, this enhanced visibility helps to get a better overview of customer demand and thus to act more efficiently (Bustinza et al., 2018).

In recent years, with analyzing the trend towards to digitalization of processes, several barriers have been observed (Schroeder et al., 2016). Organizational structures are formed by formal mechanisms of management and integration of work, consisting of activities, responsibilities, coordination and control. (Bai et al., 2017). Basically, they provide employees with a structure to which they can orientate and act in order to achieve business goals. However, these structures are not static, but respond to changes in the dynamic environment (Heij, 2014). In the DT, the pace of change of the environment has been sped up. As adaptation requires a high form of coordination between different parties of the organization, information technologies in particular play a crucial role in moving from analog to digital processes (Zott & Amit, 2007).

Digital data linkages with real business processes have provided new opportunities for planning, control, and organization throughout all industries (Hirsch-Kreinsen, 2016). This offers advantages such as the exploitation of customer and market data (Stone et al. 2017), which enables companies to expand the value proposition as well as the sales channels and thus to have a higher penetration with existing customer segments as well as to develop new ones. This megatrend forces organizations to follow in order to remain competitive. The technological adaptation entails massive organizational changes, which is why it is necessary to minimize structural and employee resistance (Rungtusanatham & Salvador, 2008).

In the following the DT will be discussed from a theoretical point of view, including the tensions and leadership challenges that will arise from it in an organization and the coping strategies to handle these challenges.

## **2.1. Digital Transformation**

For the above reasons, DT is increasingly emerging as a constant subject of discussion between academics and practitioners (Hanelt et al., 2020). It is now taken for granted that its strategic importance challenges and influences managers in all industries (Correani et al., 2020). However, there is a lack of common agreement on what the term DT represents (Warner & Wäger, 2019). As contemporary organizations are affected and need to adapt, the phenomenon of DT is naturally linked to organizational change (Van de Ven & Poole, 1995). Therefore, Hanelt et al. define DT "as organizational change triggered and shaped by the widespread adoption of digital technologies" (2020).

Hanelt et al. (2020) argue that DT differs from other organizational change in three ways: first, because the technologies used, such as big data analytics, social media, mobile technology, and cloud computing, are very different from previous IT technologies in that they are generative, shapeable, and combinatorial (Kallinikos et al., 2013). Furthermore, many digital technologies are not limited to companies or industries but affect a larger ecosystem, making digital infrastructures open, flexible, and usable by everyone (Tilson et al., 2010). Therefore, past studies of change in organizations turn out to be insufficient for this field. As a final point, the authors mention the consequences of DT, such as the emergence of new business models far beyond previous IT-driven change, as these were more related to practical issues and incremental change in the company (Wessel et al., 2020). For these reasons, DT cannot entirely be explained by existing approaches to change in organizations, but a broader view is needed, since it is unclear if existing knowledge about organizational change can be used to explain DT (Hanelt et al., 2020).

### **2.1.1. Leadership challenges**

There are numerous leadership challenges that arise in the DT. Kreutzer, Neugebauer, and Pattloch (2018) argue that the biggest DT challenge is time. The greatest enemy they identify is sloth, especially of medium and large companies, which blocks the change process. The reason for this delay is the fact that DT is seen as a technology change rather than a business change, which makes it challenging for leaders (WEF, 2015). The speed of digital innovation furthermore accelerates the pace of change, making it difficult for leaders to maintain competitive advantage. Therefore, it is necessary for leaders to change and to shift the traditional views of how leaders were viewed - autocratic and knowledgeable - to a more collaborative approach in which individuals and teams are empowered (Neubauer, Tarling & Wade, 2016). This shift poses a challenge for many leaders. Ancarani & Di Maura (2018) agree and argue that leadership also

needs to adapt to digitalization by empowering employees and changing culture. Here, Jakubik and Berazhny (2017) state that new business environments require leadership that is no longer egocentric but alter centric and concerned with solving challenges of collaboration and teamwork to create high performing teams. These leadership challenges are associated with a lack of vision and vision for digitalization. These visions from top management should be radical and transformative, which is often not the case (Fitzgerald et al., 2018). Finally, companies often face challenges in finding digitally experienced workers (Colbert et al. 2016).

### **2.1.2. Leadership in the DT**

Digital working greatly increases the speed of processes within companies, which means that those need agile working methods combined with digital expertise in order to be able to work quickly and flexibly. In particular, creating shared value with customers is a challenge for traditional industries because other skills are required from workers to support these innovations (Lenka et al., 2017). First and foremost, it is essential that leaders articulate clear visions to successfully implement DT in their organizations (Ismail et al., 2017).

These effects of DT force leaders to proactively respond to new realities in a world that is volatile, uncertain and complex. Therefore, in the digital workplace, leaders are more concerned with influencing others than leading excessively with power (Bolden & O'Regan, 2016). Thus, the requirements for leaders are being redefined. For leaders, it is no longer exclusively about being charismatic, omniscient, and omnipotent, but leaders now have to know when to lead, support, train, and influence others. The demands on leaders are now characterized by a combination of motivational tools and leadership styles that include technopreneurial, transformational, transactional, and authentic elements (Hamilton et al., 2016).

Furthermore, digital leadership requires the skills to create cooperation between generations and close the gap between strategy and operations, as well as to attract the best talent and execute transformations within the organization (Hamilton et al., 2016). Schwarzmüller et al. (2018) argue that especially relationship-based leadership has become much more important in the DT.

Therefore, Neubauer et al. (2017) state that the skills digital leaders need to have in order to succeed are characterized by agile leadership, which is adaptive and visionary. At the same time, it is necessary for this type of leader to accept feedback and the fact that others know more, have the ability to change their minds, and be open to communication with all stakeholders. Open communication in particular plays a crucial role, as the vision for DT must be communicated throughout the company. Once a vision for change is created, it needs to be communicated powerfully and frequently by leaders. Since it will likely compete with other day-to-day business messages, it must be communicated in an effective way. Mugge et al. (2020) have shown that there is a big difference in open communication between digitally mature and digitally evolving

organizations. Overall, digitally mature organizations have a higher level of transparent and open communication within their organization.

Kane et al. (2018) found that the best leaders for DT share commonalities. These were separated into several groups. Those successful digital leaders provide direction (vision and purpose), set the course for innovation, enable execution by empowering employees, collaborate across organizational boundaries, are inspiring to their employees, have the ability to make business decisions under uncertain conditions, continuously build their skills, and influence stakeholders.

Kazim's study (2019), in which he interviewed 19 participants in a DT leadership position, concludes that the organization's vision statement on DT, which should be derived from leaders' needs, must ensure that employees at every organizational level understand what DT means to them. In doing so, leaders must ensure that stakeholders expectations are met by establishing a clear roadmap that emphasizes the intentions and commitment of top management. In addition, the author noted that leaders need to continuously experiment with digital innovators to include fail-fast and accelerate scenarios for digital innovation as a predefined part of a vision with clearly defined roles and responsibilities. DT leadership requires a central core that retains influence and power over decentralized business units which need autonomy in decision making on digital strategies. As a result, digital leaders need a high level of entrepreneurial leadership to overcome challenges and seize opportunities.

Table 1 shows a summary of the main characteristics a leader should have in order to successfully digitally transform an organization:

Leadership	
Challenges	Characteristics
<ul style="list-style-type: none"> <li>• Time and sloth that block change, as DT is seen as technology not business change (Kreutzer et al., 2018; WEF, 2015)</li> <li>• Shift traditional view of leading (autocratic and knowledgeable) to collaborative approach where individuals and teams are empowered (Neubauer et al., 2016)</li> <li>• Empower employees and change culture (Ancarani &amp; Di Mauro, 2018)</li> <li>• Leadership no longer needs so be egocentric but alter centric and</li> </ul>	<ul style="list-style-type: none"> <li>• Agile working methods with digital expertise to work quickly and flexible. Skills that support innovation that creates customer value through digitalization (Lenka et al., 2017)</li> <li>• Ability to articulate clear visions to successfully implement DT in their organization (Ismail et al., 2017)</li> <li>• React proactively in a volatile, uncertain and complex world and have the ability to influence others (Bolden &amp; O'Regan, 2016)</li> </ul>

<p>concerned with solving challenges of collaboration and teamwork to create high performing teams (Jakubik &amp; Berazhny (2017)</p> <ul style="list-style-type: none"> <li>• Lack of vision for digitalization &amp; vision from top management is not radical and transformative (Fitzgerald et al., 2018)</li> <li>• Difficulties in finding digitally engaged workers (Colbert et al., 2016)</li> </ul>	<ul style="list-style-type: none"> <li>• For leaders, it is no longer exclusively about being charismatic, omniscient, and omnipotent, but leaders must now know when to lead, support, train, and influence others (Hamilton et al., 2016)</li> <li>• Skill to create cooperation between generations and close gap between strategy and operations as well as to attract the best talent and execute transformation (Hamilton et al., 2016)</li> <li>• Relationship-based leadership has become more important (Schwarzmueller et al., 2018)</li> <li>• Agile leadership that is adaptive and visionary. Accept feedback and the fact that others have more knowledge, the ability to influence people and open communication to all stakeholders (Neubauer et al., 2018)</li> <li>• Successful digital leaders provide direction (vision and purpose), set course for innovation, enable execution by empowering employees, collaborate across organizational boundaries, are inspiring to their employees, have the ability to make business decisions under uncertain conditions, continuously build their skills and influence stakeholders (Kane et al., 2018)</li> <li>• Leaders need to establish a clear roadmap according to top management visions and need to</li> </ul>
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	have a high level of entrepreneurial leadership (Kazim, 2019)
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Table 1: Leadership challenges and Characteristics

### 2.1.3. Tensions

Studies have demonstrated that for established companies, DT can lead to the emergence of different and competing needs, which potentially is a barrier to DT success (Svahn et al., 2017). In this regard, a wide variety of types of tensions can arise in companies. For example, Wiener et al. (2018) identified typical potential conflicts in a study of several organizations: Digitalization can lead to differences in online and offline customer demand, increased complexity of processes, changes in employee requirements, online cannibalization of offline revenues, differences in ways of operating, and price differences between online and offline products. Other tensions were discovered by Svahn et al. (2018) and classified into four sets of tensions: Existing versus required capabilities, product versus process orientation, internal versus external collaboration, and control versus flexibility. Another study by Thoren et al. (2017) summarized those tensions occurred because institutional logics related to existing professional and organizational norms and emerging logics related to DT collided.

Now the question arises how can these tensions be categorized and what can be done about them?

One way to categorize them is to use the paradox literature, where four categories of paradoxical tensions are identified. *Organizing tensions* which emerge when complex systems create competing designs and processes to achieve a desired outcome (Smith & Lewis, 2011). *Performing tensions* arise from the multiplicity of stakeholders leading to competing strategies and goals (Smith, & Lewis, 2011). *Belonging tensions*, that relate to contradictions in terms of identity and interpersonal relationships. (Smith & Lewis, 2011). *Learning tensions* occur when dynamic systems change, innovate, and renew, which involves building on and demolishing the past to shape the future, and require the organization and its employees to acquire different skills (Smith & Lewis, 2011).

Soh et al. (2019) suggest that all four types of tensions are present in the DT. For example, identifying differences between online and offline customer requirements and online cannibalization of sales are tensions in performance, while tensions in learning arise from the relationship between existing and required skills and differences in workforce abilities. Tensions between product and process, between internal and external collaboration, and between control and flexibility represent tensions in organization. Finally, the clash of existing professional norms with those arising from DT illustrates the tensions in the area of belonging.

The authors also address triggers of the paradoxical tensions. Thus, changes in DT lead to the emergence of performing tensions between the different sales areas of online and offline sales, as well as belonging tensions of direct sellers, who received new internal competition. Scarcity leads to organizing and learning tensions, as new processes and technologies need to be learned and adopted by employees.

One important factor regarding tensions that needs to be taken into consideration is, they never really go away, but just become latent if managers use the right responses (Soh et al., 2019). Thus, they can reappear when initiated by changing conditions.

Therefore, the responses and coping strategies to the tensions mentioned above are crucial. One aspect we need to keep in mind here is the fact, that norms and behaviors obviously seem to play an important role in the matter of tensions in the DT. Table 2 shows an overview about the paradoxical tensions within an organization and examples about what kind of tensions may occur in organizations because of the DT.

Paradoxical tensions	
Tensions	Examples
Organizing tensions	<ul style="list-style-type: none"> <li>• Product and process (Svahn et al., 2018)</li> <li>• Between internal and external collaboration (Svahn et al., 2018)</li> <li>• Between control and flexibility (Svahn et al., 2018)</li> </ul>
Performing tensions	<ul style="list-style-type: none"> <li>• Identifying differences between online and offline customer requirements</li> <li>• Online cannibalization of offline sales (Wiener et al., 2018)</li> </ul>
Belonging tensions	<ul style="list-style-type: none"> <li>• Clash of existing professional norms with those arising from DT (Thoren et al., 2017)</li> </ul>
Learning tensions	<ul style="list-style-type: none"> <li>• Relationship between existing and required skills (Svahn et al., 2018)</li> <li>• Differences in workforce abilities (Wiener et al., 2018)</li> </ul>

Table 2: Paradoxical Tensions from DT

#### **2.1.4. Coping strategies**

Once tensions arise, there are several ways for management to deal with them. The strategies to deal with friction are also divided into different categories: defensive and receptive (Tsoukas & Cunha 2017). Defensive ways of dealing result from a cultural, cognitive, and behavioral desire for stability and emotional anxiety caused by a low tolerance for contradictions (Tsoukas & Cunha, 2017). This approach presents short-term solutions that aim to bypass the tension. This only creates a temporary relief of the tension without actually understanding the paradox or resolving it in a sustainable way (Jarzabkowski et al., 2013). An existing option for this is division, so that a conflicting entity is temporarily or permanently divided from one another (Poole & Van de Ven, 1989). An example for this approach is the organizational separation of a DT unit from the IT department, with the DT unit acting independently as an internal service provider (Chanas et al., 2019).

Receptive responses, on the other hand, occur when individuals have developed cognitive and behavioral complexity and emotional composure (Tsoukas & Cunha, 2017). These impulses are characterized by considering both poles of paradoxical tension and therefore the likelihood of long-term resolution is much greater, as paradox is considered a natural condition (Smith & Lewis, 2011). A typical approach is mutual accommodation, which recognizes that both poles are important and independent and therefore one must accommodate both, usually through trade-offs (Jarzabkowski et al., 2013). One possible response is synergy, in which the various conflicting elements are coordinated to be mutually beneficial (Hargrave & Van de Ven, 2017). For example, the Gregory et al. (2015) study discussed how the focused company developed a standardized core IT platform with differentiated satellite IT components that can be changed without compromising the standardization of core IT.

#### **2.1.5. The role of culture in change processes**

In addition to the tensions and challenges described above, as well as leadership requirements, Albrecht (2015) sees cultural aspects as the biggest culprits in failed DT attempts, with support for DT being one of the biggest obstacles. Similarly, Hansen et al. (2011) and Matzler et al. (2018) rank the importance of culture for a company's ability to digitally transform as very high. They argue that one of the essential activities at the strategic level is to establish a DT-friendly culture in order to attract new generations of employees and to create digital mindsets among its workforce.

This brings up the question of how the culture of a corporation can be described and defined and what aspects of culture make it easier to digitally transform? First, the concept of culture and the aspects relevant to DT are delineated



Kotter (2008) hypothesizes that there are two levels of organizational culture that differ in terms of visibility and resilience to change. At a deeper, less visible level, culture refers to values that are shared by people in a group and tend to persist over time, even as membership changes. This makes it very difficult to change culture at this level because members are often unaware of many of the values that unify them. At a more visible level, culture depicts the behaviors or style of an organization that new employees are automatically encouraged to adopt by their colleagues, for example in terms of dress or greeting. While it is still difficult to change culture at this level, it is not nearly as difficult as at the less visible level. These levels strongly influence each other - for example, the value of engagement with customers influences the response time to customer inquiries.

Another way to look more closely at a company's culture is through the metaphor of the iceberg model. Schein (1985) describes culture as something that is everywhere in the organization and characterizes its members. He divides culture into three level.

Schein mentions the so-called artifacts as the first visible level. Artifacts are the first thing you can see, when you visit a company for the first time. So, things like the company's building, the façade, the logo and the dress code. But also, the way employees talk to each other, about the organization or to people from the outside. They provide an insight into how the organization wants to appear on the first sight and how it appears to you. Thus, artifacts are visible organizational structures and processes that are easy to observe, but difficult to interpret, as this is subjective and people look on it from their point of view. Thus, they are related to the observer's life and associated values. In the iceberg model, the artifacts are represented as above the water surface because they can be perceived by everyone.

The second level are the values and beliefs of an organization and the third level is the underlying assumptions. The values and beliefs can be something simple, like the mission statement, or the values statement, that define why an organization does what it does. These shared values or sometimes exposed values can be influenced by those who prevail influence on the group: the leaders. Thus, the values and beliefs are the organization's stated values and norms and present the formal rules under which the organization works.

At the bottom level there are underlying assumptions or the basic assumptions. This level presents the core of an organization. If a basic assumption is firmly rooted in a group, members will perceive any behavior based on any other basis as incomprehensible. Underlying assumptions are routines and norms in everyday life that we neither challenge nor debate and are thus extremely difficult to change.

Schein claims that they represent an unconscious level of culture where the underlying values are taken for granted as an organizationally accepted way of perceiving the world. As a result, they

are very difficult to relearn and change. Moreover, they are often difficult to describe and are understood only by people who are familiar with the way the organization works. The underlying assumptions are not written down somewhere and are invisible, but they do exist and are very powerful. According to Schein (1985), there are six types of underlying assumptions:

1. Assumptions about the truth in physical and social matters.
2. Assumptions about the meaning of time in a group.
3. Assumptions about the ownership and allocation of space, the symbolic meaning of space around people.
4. Basic assumptions about the intrinsic or ultimate aspects of human nature, whether human nature is essentially good or bad.
5. Assumptions about the relationship of the organization to its environment and about the perception of work.
6. Assumptions about the proper way people interact, about the appropriate distribution of power and responsibility, and about the appropriate way to settle conflicts and make decisions.

According to the iceberg metaphor, the second and third levels appear to be things that cannot be directly perceived and thus are under the water surface.

The interaction of these levels can create tension in the organizations because the values and beliefs that are written down on paper can be very different from the actual culture in an organization. Schein argues that when you look inside an organization, there is often a much greater underlying assumption. As can be seen in figure 1, the visible part of the culture can be changed more easily, while the invisible part, especially the underlying assumption, are relatively hard to change. However, the iceberg model is a good way to dive into the topic of organizational culture.

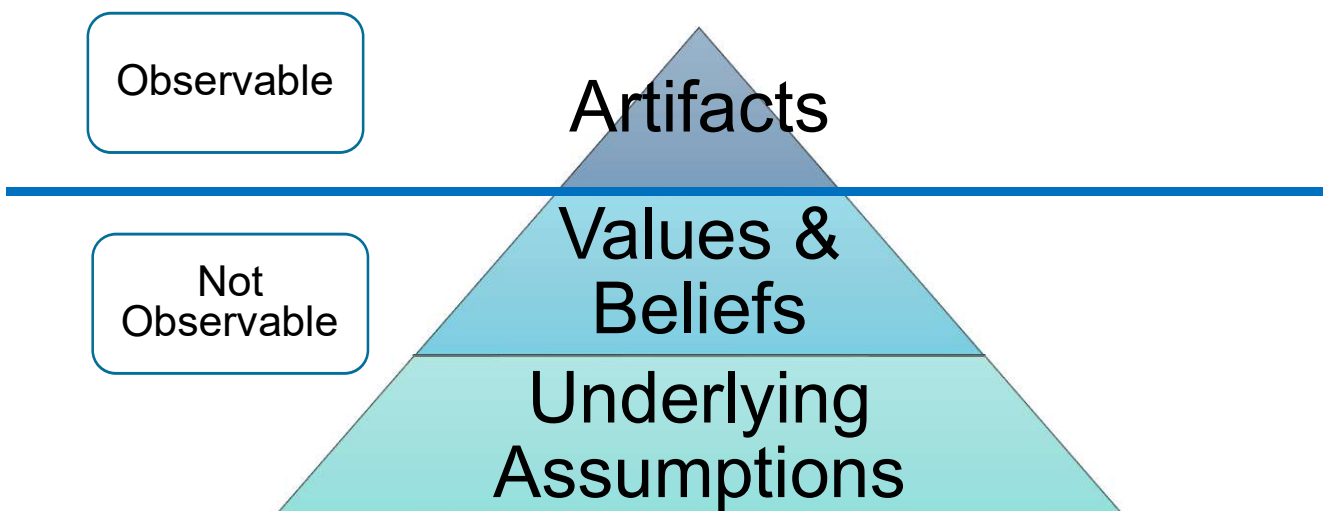


Figure 1: The Iceberg Model of Culture (Schein, 1985)

Now the question remains, how organizational culture is related to the DT. Mugge et al. (2020) argue: "A poor culture, combined with resistance to change, can be detrimental for organization leaders if they become out of touch with business realities". Which also counts for the DT. Companies need to have certain aspects in their culture if they do not want to fail the DT. Story and Song (2017) see the implementation of a data-driven culture as one of the biggest challenges in the transformation of business models. Culture becomes so important in DT because of the role of governance and leadership, as business leaders must guide the transformation journey, communicate the vision throughout the organization, and seek to reduce employee resistance, requiring organizations to simultaneously adopt a new strategy and culture (Gudergan Buschmeyer, 2015).

To understand the difference between digitally mature companies and digital development companies, Mugge et al. (2020) examined key investments, key investment focus, success of their initiation strategies, design philosophy, digital leadership, communications, and functional unit characteristics. When analyzing the first factors, it became clear that the primary focus is on the digital business. When analyzing the latter three activities (design philosophy, digital leadership and communications), this is less noticeable but equally important, as it shows top management's reactions to cultural difficulties and how the company intends to deal with the biggest challenge, the organization's resistance to change. Further, the authors argue that cultural factors can have a major impact on how new business models are developed and evolve in organizations. The CEO of Microsoft, Satya Nadella, said about the influence of culture on DT: "Culture change is not an abstraction; it is really walking the walk" (Nadella & Euchner, 2018).

#### **2.1.6. Part summary**

In summary, DT is shaped by widespread adaptation to new technologies (Hanelt et al., 2020) and a certain level of digital maturity is necessary for organizations to remain competitive in the long term in a rapidly changing environment (Mugge et al., 2020). DT involves multiple digitalization projects and therefore means a change, not only of the technological way, but in the whole organization (Bloomberg, 2018). Besides the need to change, DT also offers great opportunities for companies to better understand their customers, projects, systems and processes to gain a strategic advantage (Lemon & Verhoef, 2016). This change represents one of the biggest technological trends (Hagberg et al., 2016). Thus, this trend is of enormous strategic importance, which affects and challenges managers and leaders in all industries (Correani et al., 2010) as DT represents a continuous change (Hanelt et al., 2020) that can lead to tensions in organizations. These paradoxical tensions can be classified into four categories: organizing tensions, performing tensions, belonging tensions, and learning tensions (Smith & Lewis, 2011). There is already relevant research on aforementioned tensions and strategies on how to deal with them. Here, there are defensive and receptive coping strategies (Tsoukas & Cunha, 2017).

Due to the tensions, some leadership challenges are shaping up. The main ones are: time constraints (Kreutzer et al. 2018), a shift from conservative leadership that characterizes itself as autocratic and omniscient to collaborative leadership in which individuals and teams are empowered (Neubauer et al., 2016), a lack of vision for DT from top management (Fitzgerald et al., 2018), finding qualified personnel (Colbert et al., 2016), and above all establishing a culture of change (Ancarani & Di Mauri, 2018). In addition, demands on managers are changing significantly. For example, there is a particular emphasis on enabling agile working methods in combination with digital expertise (Lenka et al., 2017). Moreover, a major requirement is the ability to bridge gaps between collaborating generations - namely strategy and operations (Hamilton et al., 2016) - which is possible precisely through relationship-based leadership (Schwarz Müller et al., 2018). Most important for leaders is to formulate clear visions for DT in organizations and translate them into goals (Kazim et al., 2018; Neubauer et al., 2018).

Corporate culture is cited as one of the most common reasons why DT fails in organizations (Albrecht, 2015). Every aspect of the culture, i.e., the artifacts, the values and beliefs, and the underlying assumptions (Schein, 1985), play a crucial role in the enforceability of DT. Thus, changing the culture is considered essential to benefit from DT (Mugge et al., 2020; Nadella & Euchner, 2018; Gudergan & Buschmeyer, 2015). There is a research gap in the exploration of the DT from an internal perspective, where the cultural change dimension that leadership and DT bring in an organization needs to be investigated. Kazim (2019) argues that such an investigation should “delve into the culture of learning cultures associated with DT and leadership.” Similarly, Hanelt et al. (2020) pose the following questions in relation to culture and the DT: "How and why does embedding in evolving digital business ecosystems change organizational cultures? How do existing cultures and the evolution toward adaptive organizational design interact?". Therefore, more research is needed in relation to culture and DT. To narrow the research gap, the following research questions are addressed for the purpose of this master's thesis:

How do different levels of corporate culture help build capacity for implementing digital processes?  
What aspects of the different levels of culture support reducing manager-employee tensions and coping with leadership challenges?

To answer the questions raised, a case study was conducted with Würth Austria, which is described in the following chapter.

### **3. Methods**

This research work is part of a broader research project on the topic of digitalization of enterprises in Austria. Several companies were analyzed and case studies were created to get a holistic view of the topic of DT.

For the purpose of this master thesis, a single instrumental case study was created in which, as described in the theory section, a problem or an issue is analyzed on the basis of a suitable case. In order to examine the influence that corporate culture has on digitalization capability and to synthesize new knowledge, it was necessary to identify a single company that fulfills the corresponding prerequisites (Lewis, 2015).

### **3.1. Research Approach**

This thesis follows a qualitative research design with a deductive approach (Eisenhardt, 1989). Using this research strategy is considered an appropriate qualitative methodology for studying technology adoption and use in organizations (Darke, Shanks, & Broadbent, 1998) and a pertinent method for creating emerging theoretical constructs, propositions of moderate scope from case-based, empirical evidence (Eisenhardt & Graebner, 2007).

The qualitative research was used as it is appropriate in order to analyze the culture people do perceive and have within an organization, as the research is more concerned with the interpretation of the results. Furthermore, as there is a lack of knowledge about how culture influences the ability of organizations to digitally transform, the research design is deductive, where Schein's Iceberg Model of organizational culture and its culture levels are used as themes.

The research is going to use qualitative methods, because it needs to be identified how members of the organization (managers and members of the operating core) experience the change processes of the DT. It is the goal to create generalizable statements, through the experiences of the members of the organization that later on need to be proved in detail. Thus, Würth Austria was selected as the only organization to be analyzed, as there is a lot of experience with the introduction of digital processes.

Interviews have been conducted in the case study to gain knowledge and qualitative information about the experience people had, their views and their feelings. The research method of interviews was selected in order to get more in-depth understanding of the topic and to explore the views, experiences, beliefs and motivations of the individual participants (Gill et al., 2008). The interviews were transcribed and analyzed and interpreted for the above-mentioned reasons.

For the purposes of this Study, a Case Study was conducted. This is considered appropriate because it helps the researcher to better understand the history of a company, as well as its institutional and organizational mechanisms (Tellis, 1997). Moreover, this method is an appropriate approach for conducting empirical research when the phenomenon under investigation cannot be easily decoupled from the organizational context (Akkermans & van Helden, 2002). Considering the relevance of digitalization in the company under study, this single case study provides an opportunity to illustrate and portray this phenomenon for practical

application, as well as to provide a basis for new theory and further research in this area (Yin, 2018).

### **3.2. Research Context**

The case study was conducted with Würth Austria. Würth Austria is a company of the globally active Würth Group, which consists of 400 companies in more than 80 countries and has 81,000 employees, 33,000 of whom are permanent sales representatives. In this context, the Würth Group is the world market leader in the sale of assembly and fastening materials, generating sales of EUR 14.41 billion in 2020. The Würth Line companies take care of the core business. This relates to screws, screw accessories and anchors, tools, chemical-technical products and occupational safety. So-called Allied Companies supplement the range with products for “do it yourself” (DIY) and home improvement stores, electrical installation materials, electronic components and financial services. In its philosophy, Würth describes a strong brand policy, a forward-looking product strategy, customer proximity, a quality offensive, visionary thinking and a strong corporate culture (Würth Group, 2021).

Würth Austria was founded in Vienna in 1962 and in 1999 the company headquarters were relocated to Lower Austria. The company employs about 900 people and in 2020 generated sales of EUR 223.7 million. The network of Würth Shops consists of over 60 branches and is being continuously expanded in Austria. According to Würth Austria, the corporate culture is characterized by the values of a family business: reliability, straightforwardness and a partnership-based approach (Würth Austria, 2021).

At Würth Austria, a new digital tool for sales called Speedy-Touch, was rolled out in April 2019. This tool is an app that is specially tailored for the sales force and gives employees a 360° view of the customer. Through direct interfaces to the CRM and ERP system, information can be retrieved quickly and many processes, such as visit planning, tour planning, visit documentation and placing orders can be handled digitally. At the same time, mapping these processes digitally enables greater transparency about internal processes and customer information. Speedy-Touch basically is an application that can be used on mobile devices for internal and external processes. Würth Austria has already had some experience in the past with the introduction of digital processes, such as the introduction of a CRM system. Therefore, the opportunity arises to accompany the organization during the introduction of a digital tool and to analyze and critically reflect on the resulting tensions, leadership challenges, coping strategies and how culture influences that process. This organization is ideally suited to determine to what extent a digitalization-friendly culture already prevails within Würth that supports the introduction of new

digital tools. This is why Würth Austria, as a pioneer company of digital processes, was selected for this research.

### **3.3. Data Collection**

The interviews followed a semi-structured format, where the interviewer used a developed guide to the topic that was to be covered in the conversation. The interviews were conducted through video calls due to the COVID-19 situation on two different dates and took place with up to three interviewers out of a group of four interviewers in November 2020.

During the interviews open questions were raised, where an emphasis was placed on understanding the changes in the relationship between leaders and employees and how the introduction of digital processes influenced this relationship. The Interviews lasted from 41 to 91 minutes as can be seen in table 3 and were based on an interview guide. However, the participants had the possibility to express their views or other points they considered to be interesting for that particular topic. Each interview was recorded with the participant's permission and all the interviews were held in German. For this research relevant sections have been translated into English.

In table 3 the employees that have been interviewed are listed. The interviewees were all employees of the organization to be analyzed, Würth Austria. In the group of eight interviewed, there were two women and six men. This suggests that there is a gender bias towards men. Of those interviewed, two were from Speedy-Touch direct environment as system owner of the system and head of sales controlling, respectively. They have direct responsibility for the system and have been intensively involved with its introduction and further development. Furthermore, the overall sales manager of Würth Austria and a business unit manager were interviewed. These people therefore see the DT from a top management perspective. Three district managers with HR responsibility can be found in the candidate group. In addition, one employee from HR development responsible for training was interviewed.

The educational qualifications of the employees vary widely. They range from no high school diploma to a master's degree. The length of service is also very different, but all employees have been with Würth Austria for at least 5 years at the time of the survey. It is also worth noting that some of the respondents described themselves as having a high level of digital affinity and others as the opposite.

Time in Organization	Position	ID	Interview duration	Gender
<b>10 years</b>	System Owner Speedy Touch	I1	72 min	f
<b>5 years</b>	Sales Controlling	I2	66 min	m
	Business Unit Manager	I3	76 min	m
	Managing Director	I4	86 min	m
<b>9 years</b>	District Manager	I5	52 min	m
<b>5 years</b>	District Manager	I6	41 min	m
<b>16 years</b>	District Manager	I7	91 min	m
<b>8 years</b>	Personnel Development	I8	82 min	f

Table 3: List of Interviewees

### 3.4. Data Analysis

In order to describe a sound theoretical model, the method as in the approach of Gioia et al. (2013) was used, which consists of three steps. First, first order categories were identified, which dealt with relevant patterns related to the digitalization of processes and thus the DT of organizations within Würth Austria. These were kept in the language of the interviewees. Subsequently, these categories were combined into second-order categories, which were further divided into eight essential analytical dimensions, which allowed to analyze which areas of DT were most frequently addressed. These eight dimensions are: Culture, Tension, Leadership challenges, Solution, Speedy-Touch (Technological), Transparency, Change Management and Bugs (Technological). In order to be able to further develop the theory of culture in the digitalization of processes, the most important dimension for this research was the culture dimension, where a deductive approach was used, as the levels for Schein's Iceberg Model of organizational Culture (artifacts, values and beliefs and underlying assumptions) were used as the second order themes.

Since the focus of the research is on culture and its influence on the DT capability of a company, the analysis focused on this domain. The analysis and categorization were divided into three stages. During the analysis, a set of terms, codes and categories quickly emerged. In this first order analysis, no attempt was made to form a small number of categories, which is why the number was initially extremely high and the categories were disorganized.

As the research progressed, the goal was to identify commonalities and differences between the identified categories. Here, the large number of categories was combined into a smaller number, which were given labels. In the example of the analysis of the dimension of culture, it was possible to classify the three levels of culture, whereby the artifacts and values as well as beliefs could be summarized directly as labels, while the underlying assumptions required an interpretative



approach. The former was answered by questions such as "What symbols are used in the company?" or "What practices are displayed?".

In the 2nd-order analysis, we are thus at a more theoretical level where the emerging themes are considered to help us describe the phenomena we can observe. Basically, the focus is on emerging concepts that do not yet exist in theory, or on existing concepts that stand out, as in the case of the culture dimension. Once the process resulted in a workable set of themes, the third step began, in which these themes were grouped into aggregate dimensions, as can be seen from figure 2. When the process was complete and a workable set of 1st-order terms, 2nd order themes, and aggregate dimensions existed, the basis of the data structure was in place, as shown in figure 2. This allows for a quick visual overview of the analysis on one hand, and on the other hand, it allows for a better understanding of the procedure, which is a necessary component in demonstrating the resilience of qualitative research (Pratt, 2008).

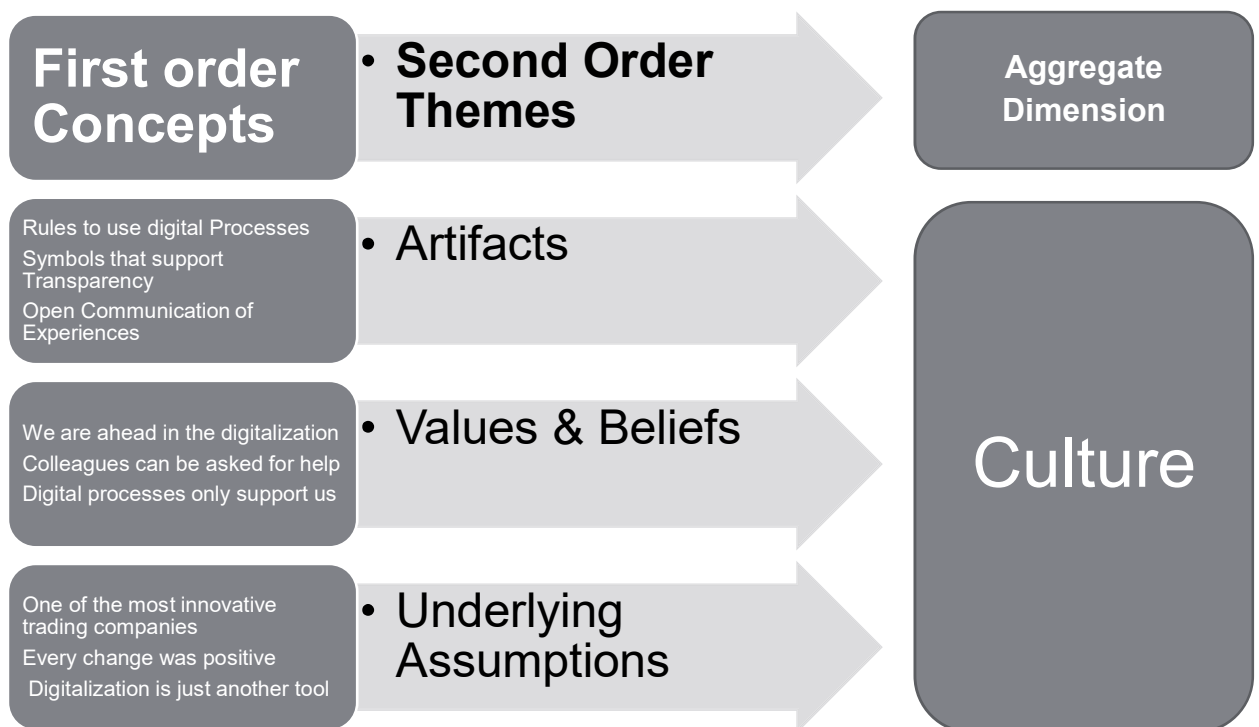


Figure 2: Data structure - Reproduced from Corley and Gioia (2004)

#### 4. Results

278 Passages and statements from the interviewees related to the introduction of digital processes and how these affected tensions in the organization, as well as the leadership challenges that resulted were mentioned. 49% of the statements, or 135 statements in figures, were related to culture. The second most mentioned category, at 22%, was solutions related to tensions and leadership challenges. 10% of the statements were related to leadership challenges, 8% to the newly introduced tool, Speedy Touch, and 6% to tensions resulting from the introduction of digital

processes in the organization. The remaining 5% were associated to change management, as well as transparency and technical shortcomings of the system as can be seen in figure 3.

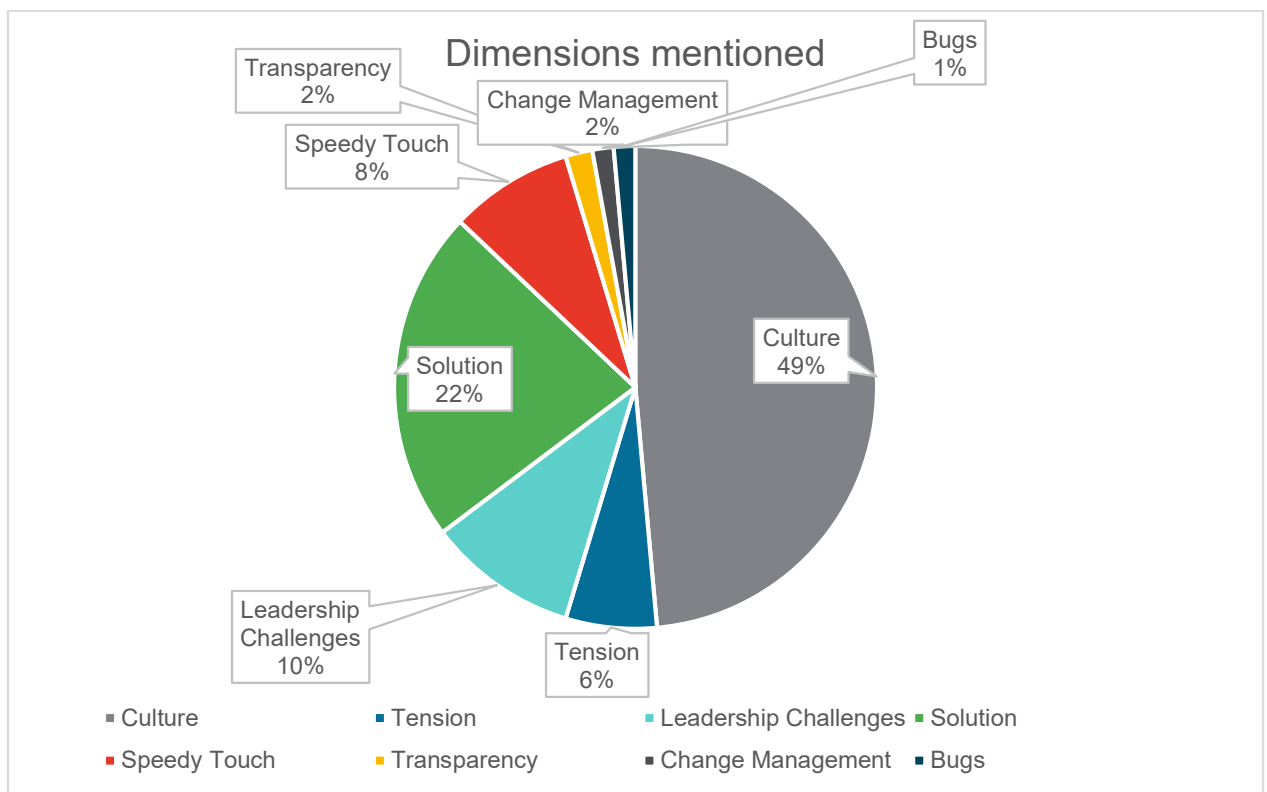


Figure 3: Dimensions mentioned

Würth Austria has some experience in implementing digital processes and thus DT. Therefore, this company was chosen to analyze the influence of culture on the DT capability of an organization. I2 comments on a large digitalization project, the CRM introduction, in this way: "CRM itself as an introduction that was introduced in 2009 and then expanded further and further, above all it was also about the topic of acceptance and use of the CRM system, I think everyone will confirm that, you cannot say that, there is now a CRM system, please use it, you have to transport the benefit and clearly stay on it and yes, that was my main focus in the end very strongly directed towards sales, you have to say." The company learned from the introduction of the CRM, which triggered some fears among employees. I2: "The CRM system and then you just have quite quickly the issue of transparency and I am now somehow controlled, is always pursued so quite also that: now you can determine where I am." For this reason, a different approach was taken to the change process when Speedy Touch was introduced. I2: "Yes, we also did it with Speedy Touch, it has to be said. That you make it a bit more iterative and bring it in smaller bites. You say, now somehow the module and that is now important, there I can put the focus on it and then comes the next, so that was already an experience that we have implemented speedy touch then also so, because the speedy touch, when we talk about it, it also has several elements." I1 describes the functionality of the Speedy Touch tool, which was introduced in 2019: "Speedy-Touch is an app for our field sales force. Direct field sales reps, direct to the customer. Speedy-

Touch is built to provide a 360° all-around view to the customer but also be the point-of-sale sales tool. This means that the sales staff takes Speedy-Touch with him, has all the information from the customer, but also for the customer quasi brochures digitally with the entire catalog digitally with and can directly with the customer fill the shopping cart and send the offer. This means that the customer also dives into Speedy-touch and selects the products in Speedy-touch and the sales representative can send it off immediately. Of course, the all-around is for the sales representative.". The following section describes the cultural aspects that played a role in the introduction of Speedy-Touch.

The dimension culture, was further divided into three themes according to Schein (1985): Artifacts, values and beliefs and underlying assumptions, in order to explore in more detail which cultural aspects are decisive for a successful DT at the visible and invisible levels. The separation of statements about the different levels of culture are illustrated in figure 4: Culture levels.

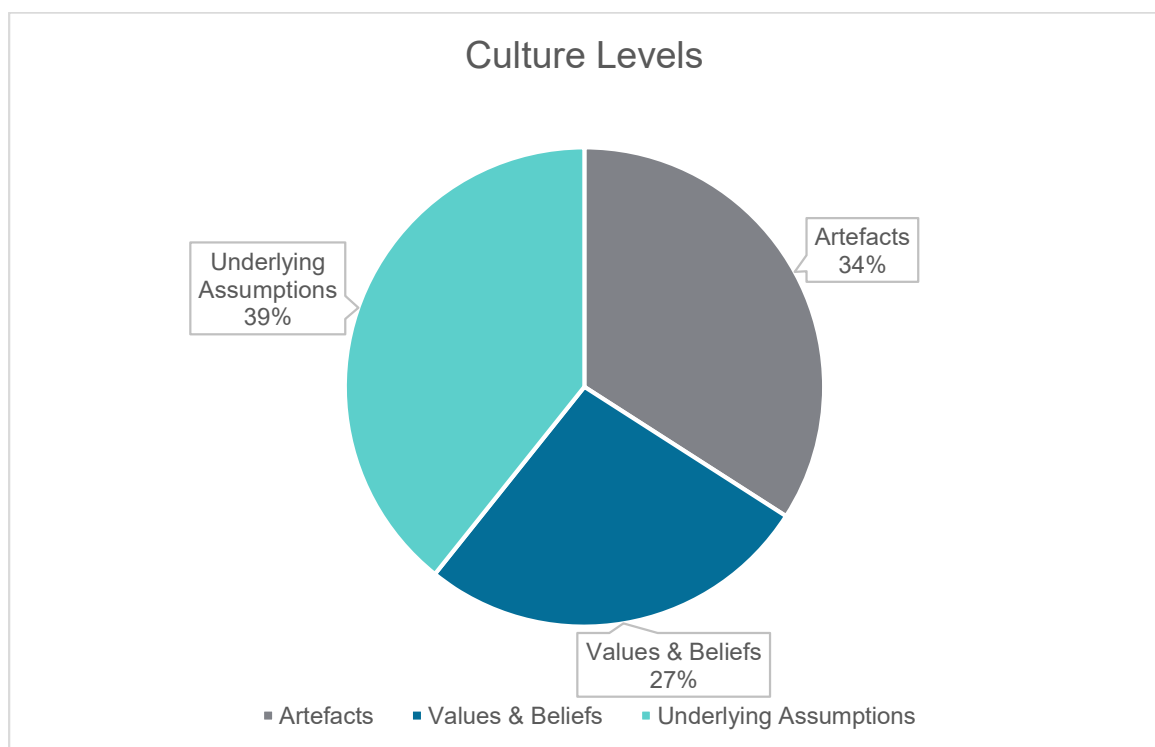


Figure 4: Culture Levels

#### 4.1. Artifacts

Artifacts are what people have created and the practices, rituals, symbols and behaviors they engage in (Schein, 1985). It quickly became clear that many processes and practices at Würth Austria were already taking place digitally before the Corona situation. I1 says in this regard, there were already "Many processes digitized: Microsoft 365, investment application, intranet, 20 years of SAP, CRM since 2013, Yammer for internal communication." From this it can be seen that it was practice for employees to work through processes digitally. I1 goes on to say that video

conferencing and calls were possible without any problems because the option of online meetings already existed beforehand and was utilized. During Corona, this infrastructure made it possible to switch completely to digital within a short period of time. Thus, I1 saw "home office during Corona (as) problem-free". Furthermore, this suggests that every employee was already equipped with digital devices even before the COVID-19 pandemic, which can be seen as another artifact.

The digital maturity of the company is made particularly clear by I1's statement that there is an established process for rolling out new digital technologies. I2 is underlining these habits of using digital practices. Here the following statement is made about the internal communication platform Yammer: "we have Yammer in use and we have had that in use for I must now estimate somewhere three years before Corona or before this year. That is of course also in the whole internal communication very well used, because just the contributions are shared in the groups it concerns, then they are also discussed, people leave a like and so on. That has helped us before. Of course, this was also used well for internal communication from the management or from the crisis team, so to speak, in the direction of employees, there were always these Corona announcements with a sequential numbering and everything is well documented and can be read in Yammer." But even after the introduction of digital processes, there are predetermined practices and routines that indicate a strong use of digital opportunities. For example, there is a predetermined communication flow in which feedback and suggestions for improvement are given for Speedy Touch or parts of it. I2 describes the opportunity for field staff to give feedback: "From field staff directly when we are in exchange on the topic of Speedy Touch".

Furthermore, it is routine for managers to share best practices with their staff when meetings occur. The business unit manager I3 gave the following instruction to his district managers in this context: "at every meeting where you are, take a part where you exchange best practice examples so that consciously, please take time for that, because the best examples are the practice examples from colleagues and not from the boss."

Another artifact is the rule established by the management that 30% of meetings should continue to be digital even after the pandemic. I4 comments on this: "For me, a rule where I said I want 30% of the meetings to continue to be digital". In addition, according to I4, there are clearly established rules for a digital approach. Employees at Würth Austria are actively communicating on the internal communication platform about best practice examples and even, major critics were positive about the new tool after being convinced of its capabilities. I4 expressed the following opinion: "I can still remember one letter exactly, one of the biggest critics then wrote to the team without our intervention that he really was one of the biggest critics and he got involved and he wants to take that back because he simply sees that he is now driving much more optimized and actually saves himself time.", regarding tour planning in Speedy Touch. I8 agrees with this statement and adds that both critical and positive comments are always welcome on this platform.

Würth Austria works a lot with symbols, which ultimately mean great transparency for all employees. On the one hand, the calendars of all employees, from logistics staff to the managing director, are accessible to everyone, as are public rankings of sales employees. I4 notes with regard to transparency through Speedy-Touch: "We already have a lot of rankings, a lot of reports out there, we always have the monthly report where every salesperson is ranked, so they see that anyway and not much has changed. I think transparency, was already existing before.". This transparency is also reflected in the symbol of business cars. For example, according to I4, employees with higher sales figures get better cars. I4: "the better the salesman, the better the car."

This open behavior with internal data is, to a conscience degree, also lived towards the customers. "We don't hold back any data, so the customer gets all the data he needs from us." is, according to I5, the premise that employees follow during customer meetings. Basically, I4, I6 and I8, i.e., persons with direct sales responsibility, describe the working conditions of field sales employees as very independent. However, managers are also encouraged to allow only those employees great freedom who are successful. I8 says about this behavior: "At Würth, we have been living the motto for ages: If you do a good job, you have all the freedom you need. And they are more or less left alone by their managers, and that is certainly an issue that we have noticed since the introduction of Speedy Touch that managers are now perhaps a bit more confident to look at certain figures and facts."

In summary, the following artifacts can be identified in the Würth Austria culture. Many processes and practices have already been taking place digitally for a considerable time, such as via the internal communication platform Yammer, via Microsoft 365 or the CRM system and every employee who needs digital devices is equipped with them. There is even a routine for the roll-out of new digital systems. Part of this routine is sharing best practices at meetings within the organization. This sharing of experiences is encouraged by executives and infrastructure. Symbols have a prominent role as artifacts of the Würth Austria culture. Above all, these are associated with great transparency, such as the link between sales success and the staff car. This transparency is also lived out by disclosing internal data to customers. Furthermore, it is a common practice to give employees a lot of freedom when they are successful.

## **4.2. Values and Beliefs**

In addition to the visible practices, there are unwritten rules, the norms, and values and beliefs that determine what is significant (Schein, 1985).

At Würth Austria, one of these values is direct and open communication, supported by digital processes. Thus, I1 sees, "I have to say that at Würth we already maintain a culture where people can talk to each other in person, so to speak, or are also willing to help, I have to express that

globally now, and that supports the DT." I1 emphasizes that people can talk to each other in person, that there is a willingness to help, and that digital merely supports this. This suggests the value of open communication.

This openness to new systems is again evident in the expectations for Speedy Lead, a digital leadership tool whose implementation is imminent. Thus, I6 says about the upcoming implementation: "I see it mainly very positively. All the new things that are coming, because it will simply help us in our day-to-day work."

Furthermore, in addition to openness, the value of cooperation is evident. I7 emphasizes this cooperation with the following statement: "I don't think so at all. Well, I'm glad that I can contribute a lot of my ideas, that I can share them with my colleagues. That I can also discuss them with my boss. I also have a very good relationship with my boss."

It is salient that Würth Austria always monitors its competition and wants to stay ahead of it. I2 emphasizes: "For us, the biggest challenge will of course be how do we continue to get through and what are our competitors doing, how are they growing or how and what are they changing? So how can we continue to assert ourselves well against our competitors?" The value of competitive orientation can be derived from this.

At Würth Austria, openness to new developments is a significant value. Almost every interviewee, at different levels, mentioned this in some form. For example, district manager I6 said: "You have no choice and when a new system comes along, you have to adapt to it. Very simple." and I5: "No idea what's coming up honestly. I'm happy the way it is, what's coming is coming." The district managers are merely presented with new digital tools without being able to exert much influence on their design themselves right at the beginning, yet these statements suggest that an openness to new systems prevails at this level. I5 underlines this openness with the statement: "Digitalization [...] That is normality, that is a matter of course".

In contrast to the substitution through the digitization of processes, for example through the shift to online, a certain conviction of the interviewees' trust is striking. Significantly, I6 responds to the question of whether the use of digital channels will replace sales employees in the long term as follows: "I absolutely don't believe that, because as I said, sales always work in a face-to-face context or still does. Digital processes and media simply support us in sales. It is to facilitate certain procedures and processes in the background." The sales employees are thus successfully convinced that the digital tools are merely intended to support them, but cannot replace their tasks – which results in the value of trust.

On the part of the management, a certain affinity for risk can be detected at Würth Austria with regard to DT. The CEO has a background in IT and thus drives this development forward and is also willing to take risks, as I8 from HR Development notes: "You can see that his affinity with the topic is also driving it forward quite strongly." For the interviewees, it showed a willingness to learn and support others, or to ask questions when something was not clear. I7 clarifies this: "But I'm

also not embarrassed to say that I don't know that now, I can't do that in this form. I ask for help from a colleague, a management colleague, who is perhaps better versed in the subject."

A strong customer orientation is evident in all interviewees. Digital processes are seen as an opportunity to respond even better to the needs of customers.

Particularly due to the symbols mentioned in the artifacts, there is also a certain amount of competition at Würth Austria, as especially the sales employees are put under pressure, as it is easy to spot how successful they are.

It can be stated that there are significant values and convictions that are lived out at Würth Austria. On the one hand, open communication among employees is important, supported by a willingness to help. There is also an openness to new systems and thus to change. Particularly between different hierarchical levels, cooperation is practiced that is not characterized by a hierarchical arrangement. Customer and competitor orientation is essential. With regard to customers, the aim is to design processes across the company in such a way that they offer added value, and with regard to the competition, the aim is always to be one step ahead. There is a great deal of trust on the part of sales employees, as they are convinced that digital processes will not replace employees in the long term. A key value that comes from management is the willingness to take risks. Among the interviewees, there is also a willingness to learn and competitiveness.

### **4.3. Underlying Assumptions**

The underlying assumptions are unconscious, taken for granted suppositions on how issues should be tackled (Schein, 1985).

The underlying assumption need to be categorized into the six types of assumption that form the paradigm for every organization. However, not all types of assumption can be found through the means of an interview.

Firstly, the assumptions about the truth in physical and social matters:

With regard to DT, a generally positive attitude toward digital processes can be perceived as an underlying assumption at Würth Austria. This is expressed in several statements by different interviewees. For example, I1, from a support function, says: "I am convinced that the digital world will also bring us a great deal of positive benefits, because information can be accessed more quickly." This is due, among other things, the positive experiences that the employees have had, such as the advantage over the competition due to digital processes, which I4 describes as follows: "We have basically had a huge advantage over our competitors, because we are very well positioned online, because we have also had our stores, which have been available online."

The openness to new technologies stems from the fact that the infrastructure, especially the information technology infrastructure, is viewed positively throughout the company. I4 is of the opinion: "We are very well equipped in terms of infrastructure, regardless of whether it's a cell

phone, a notebook, or other devices that we use, we are also used to our Speedy-Touch tool, which the sales staff are now used to using with the digital device to go to the customer." Thus, a trust in IT can be identified as an underlying assumption. This is confirmed by the statement of I1: "We have an IT department that always looks to see if we are ahead."

Another underlying assumption that appears in many statements is the conviction that the digitization of processes is merely a support, or in other words: technology does not replace people. From a management perspective, I3 comments on this as follows: "[...] on the other hand, of course, this basic sensitivity of "takes your job away," I don't think it's there anymore, because you see that the tool is just a supplement and the sales representative is the management to it," and also at the district manager level, the following statement from I6 can be inferred from the underlying assumption: "In the medium-term, I just see that it's becoming more and more transparent, the whole thing. Even more fast-moving than today. Short process paths. But as I said, nonetheless the sale is always face-to-face, that certainly won't change. The support from digital tools is simply increasing [...] That's not a disadvantage for us in sales. I see more of an advantage there."

An underlying assumption is covered by some statements of the interviewees. Change is necessary is the tenor of these statements. I7 describes: "And there you can see how important it is to keep up with the times and to develop further." This assumption of change and adaptation in the organization even goes so far that I6 describes DT as follows: "There is just one more technology. Which helps me. But it's not the revolution that we sometimes think digitalization will bring." I3 also sees DT more as another change process: "DT is simply another change process and the basic principles of how to deal with change processes and how to act are not changing so radically now, as well as they have also addressed it: Explain the benefit and it works I noted.". The reason for this openness to change is the underlying assumption of trust in IT already described, as well as the positive experiences that employees have had at Würth Austria. I5 summarizes this as follows: "But looking back, every change was positive. Every change ultimately made sense."

There can be found an underlying assumption about the type of intrinsic or ultimate aspects of human nature, whether human nature is essentially good or bad:

Especially from the support departments, which only indirectly participate in value creation, there is an understanding that they have to be empathetic in order to implement digital processes. I2 confirms this with the following statement: "I think it takes a certain basic understanding that when you introduce something new, you have to put yourself in the role, in the position, of the others and think about what they actually need and what is their daily job, so to speak. And when I change the chair and get involved in this point of view".

There is also one assumption about the type of relationship of the organization to its environment and the perception of work:



I4 notes that Würth is also ahead of its customers in terms of DT: "In parts yes, or I would almost say for the most parts yes, because we just serve the trades very strongly and if it doesn't go in the direction of large customers who just have certain structures, then we are certainly ahead of our customers, yes." These are indications that, based on positive experiences, there is an open-mindedness toward change and DT. Würth Austria sees itself as a pioneer of digitalization. Statements about this are exclusively positive. I5's statement is representative of this: "I think we have always been pioneers in this area somewhere. We have always linked them together very well somewhere. I am speaking now for Würth Austria, we have also gone down this Microsoft path, with CRM, BW and whatsoever. For me, it was always perfect. It has always fit in with the times and I have never had the feeling that we are one step behind. In fact, the opposite was the case.". This suggests that digitalization is seen as beneficial for the company.

Furthermore, there are assumptions of the type of the proper way people interact, about the appropriate distribution of power and responsibility, and about the appropriate way to settle conflicts and make decisions:

As can be seen from the statements of I2, I3, I4, I5 and I6, according to their perception the relationship between supervisor and employee has not changed, nevertheless that many processes have become even more transparent. This indicates that employees are not afraid of transparency. This transparency is even so essential that I1 speaks of a debt to fetch information in the company: "That is, one no longer waits for information, but one simply fetches it oneself, the turnaround is already noticeable that one can access information quasi yes: a debt to fetch, may I call it that, that one can really access information and is no longer dependent on anyone else."

Due to the previously mentioned artifacts and the value of open communication, employees are used to the fact that success, for example, is communicated very openly, which suggests that transparency is perceived as something normal. In this regard, I3 says, "Transparency, it's sort of so deeply ingrained in the genetics of Würth that it actually builds on that and doesn't change that much more."

It can be concluded, there are four underlying assumptions about the truth in physical and social matters: The positive attitude toward digital processes, the openness to new technologies, the conviction that technology does not replace people and that change brings benefits. There are no underlying assumptions about the meaning of time in a group and about the ownership and allocation of space, the symbolic meaning of space around people. However, there is the underlying assumption of the need to be empathetic while creating processes, which can be categorized in the type of underlying assumptions about the intrinsic or ultimate aspects of human nature and whether human nature is good or bad. There is the assumption about the relationship of the organization to its environment and the perception of work that Würth Austria is a pioneer of digitalization in relation to customers and competitors. Finally, there are two underlying assumptions about the type of the proper way people interact, about the distribution of power and

responsibility and about the appropriate way to settle conflicts and make decisions: Employees are not afraid and transparency and the better I am, the more freedom I have.

The following figure illustrates the three culture levels at Würth Austria:



Figure 5: DT culture at Würth Austria

## 5. Discussion

### 5.1. Theoretical Implications

The problem, or research gap is there is limited knowledge about how an organization's culture at different levels fosters DT capability and what aspects of culture are helpful in dealing with challenges in the change process. In the following section, the research questions raised are addressed and discussed. The results indicate that there is a strong correlation between an organization's capacity for DT and the culture of that organization, as the implementation of the speedy touch digital tool at Würth Austria was rather smooth. Regarding this the results of the first research question will be discussed:

## **RQ1: How do different levels of corporate culture help build capacity for implementing digital processes?**

Having looked at the different levels of Würth Austria's culture in the results, we will now analyze how these influence the company's digital transformability. Because as stated by Mugge et al. (2020), "Poor corporate culture combined with resistance to change can be determinant for an organization's leaders when they lose touch with business reality." Accordingly, Würth's three cultural levels are considered and analyzed.

### **5.1.1. Artifacts**

The visible artifacts of Würth Austria's culture already show that the company is not at the beginning of DT, but is already advanced. As described in the results, there are numerous processes that are digital, which in turn means that a lot of change management has already taken place and the company is very experienced in rolling out and implementing digital processes. This is also reflected in other artifacts. There is a roll-out routine that is always applied when new processes need to be introduced. This shows that the organization has learned from the experiences and mistakes of past digitalization projects and is therefore prioritizing other elements. First and foremost is the implementation of the CRM system, which was a very big first step of DT. One of these practices, which can also be interpreted as an artifact, is best practice sharing, which is common for employees of the organization and is lived accordingly. It challenges many organizations that DT provides unprecedented transparency into how a wide range of employees work, as well as how successful they are. This may well lead to a rejection of the system. At Würth Austria, the artifacts also illustrate a very open approach to figures and information. This is reflected, for example, in the employees' business cars, which become higher class with increasing sales success and vice versa. Likewise, the open behavior with data and sales figures of individual employees is significant, so that digitization and the transparency that goes with it do not present employees with a completely new situation. The fact that digital equipment is available to all employees further illustrates an existing level of maturity of digitization and a focus on it in the culture of the company.

Artifacts are merely visible practices and symbols of a culture. At Würth Austria, however, the artifacts already provide decisive advantages for digital transformability. On the one hand, there is a great deal of experience in implementing change projects; on the other hand, symbols and general practices show how much value is placed on transparency in the company.

In order to analyze in more detail, the culture that ensures that DT works well at Würth Austria, it is necessary to look at the layers that are not directly visible.

### **5.1.2. Values and Beliefs**

Microsoft's CEO said "Culture change is no abstraction; it is really walking the way." This suggests that the success of DT depends strongly on the culture of a company. Especially values and beliefs play an important role. As written in the Results, many values and beliefs could be identified at Würth Austria, which will now be analyzed for their influence on DT.

Communication, or open communication, is the ability of the organization to form internal and external knowledge networks and to share information with each other. After the cultural analysis, it became clear that this is very prominent internally within Würth, but also with other companies in the Würth Group, which means that the experience of others can be used more effectively. The will to help is also present at Würth Austria. Especially internally, many of the interviewees experienced the offer of help. Furthermore, the organization is open to change. This describes the openness to new ideas and the willingness to accept change, implement it and thus promote change. This is one of the most crucial values of the corporate culture for DT, because only those who are open to change will accept it at the end of the day. Cooperation between employees, which is expressed through open communication and the will to help, is the positive attitude within the organization towards teamwork and cross-functional cooperation, as well as the willingness to work with external partners, such as customers. In DT, there is closer collaboration with many partners, which is reflected in this value. Customer & Competitor Orientation plays an equally important role for Würth Austria. This describes the orientation of all activities towards satisfying customer needs and being better than the competition - products and processes are therefore aimed at customer needs and are continuously adapted to meet them. This value gives employees intrinsic motivation, which is critical to their willingness to change. Trust refers to the shared trust between the organization, management and its members. This value was frequently mentioned by the interviewees because the possibility of good cooperation is based on it. Especially on the conflict related to flexibility and leadership, i.e., the relationship between manager and employee, this aspect plays a major role in DT, as a completely different transparency is made possible. The willingness to take risks is a value that primarily affects top management, but it can be found at all levels of the organization, as employees are also prepared to deal with new technologies. But it is precisely this decision-making under uncertain conditions that is an integral part of DT and a necessity if you want to stay ahead of your competitors. Willingness to learn goes hand in hand with cooperation and willingness to help. This is especially crucial to compensate for knowledge gaps that occur, for example, due to the age gap. Finally, there is a certain competitiveness at Würth Austria, which on the one hand may be a hindrance for DT, as it could negatively influence the cooperation, but on the other hand is positive, because it motivates employees to deal with improved tools.

It can be stated that many of the values and beliefs that could be found through the cultural analysis at Würth Austria are important and supportive for DT, however, some values that are also crucial, such as tolerance of mistakes (Hartl & Hess, 2017) could not be found.

### **5.1.3. Underlying assumptions**

In addition to the artifacts and the values and beliefs, it is necessary to look at the underlying assumptions on which the levels above are based. As described in the results, the general tenor at Würth Austria is that DT is positive. This assumption is reflected in the values and statements of those surveyed and forms a basic prerequisite for DT to be accepted in the company. In addition, the employees of Würth Austria see themselves as pioneers of digitalization in relation to competitors and customers, which increases their motivation to expand this position even further and thus, above all, to remain better than the competition. Through the artifacts and open communication, the normality of transparency emerged in the company - resulting in no fear of transparency. This underlying assumption causes there to be less fear of implementing digital processes as they provide a high level of transparency. At the same time, there is a high level of trust in IT, which is often seen as the initiator of the introduction of new processes because they have usually meant improvement in the past. This is the basis for the assumption that change brings improvement and thus justifies the open mindset of employees. Probably the most important underlying assumption is that technology does not replace people. The company is generally very sales oriented and very focused on interpersonal selling - this favors the willingness of the sales force to open up to new tools because they see themselves as non-substitutable. The whole company is focused on making sales as easy as possible, so especially in the support departments the view is to be empathetic when it comes to implementing new processes so that they can be used optimally by the sales force, which in turn has a positive effect on the expectations of the sales team towards these new processes. Finally, there is an underlying assumption at Würth, which is very closely related to the competitiveness value, that the better you are, the more freedom you get - so employees try to use the new tools to their advantage in such a way that they achieve this success and the freedom that comes with it.

So, the first research question can be answered in the following way: There is a generally positive attitude towards DT in the company, as can be seen from several levels of the culture. Most important, however, are the three underlying assumptions: DT is positive, don't be afraid of transparency, and technology doesn't replace people. Würth Austria has managed to establish these assumptions in the mindsets of its employees, setting the stage for successful DT.

**RQ2: What aspects of the different levels of culture support reducing manager-employee tensions and coping with leadership challenges?**

#### 5.1.4. Tensions

As tensions are potential barriers to DT (Svahn et al., 2017), it is important for organizations to keep them as low as possible in order to present the change process as frictionless it can be. Therefore, the four types of tensions and the examples that can arise due to DT are compared with the different levels of culture. The tensions and the aspects of culture that help reduce them are discussed below. There is also an illustration of this under each paragraph which shows the tension, an example and the three layers of the iceberg model of culture and the relevant features of it.

First, there are the organizing tensions that results when complex systems create competing designs and processes to achieve a desired outcome.

Svahn et al. (2018) cite tensions that can arise from products and processes. Companies need to decide to either focus on digitizing the products or services they offer or on digitized processes. The former strategy aims to increase customer benefits, while the latter aims to increase internal efficiency. Würth Austria has managed the resulting organizing tensions, which are as well related to the allocation of resources, with a sequential rollout. On the one hand, the CRM was first introduced in 2009 for internal process optimization, which was necessary to later digitize the processes to the customer and the customer experience, as well as the channels for the products. At the artifact level, the prevailing roll-out routine of digital processes and change processes is decisive. This is supported by the value of Customer & Competitor Orientation, because the company's employees have the goal to be one step ahead of their competitors from an efficiency perspective and to provide their customers with the best customer experience. This is underpinned by the underlying assumption that Würth Austria is a pioneer in digitalization compared to its customers and competitors.

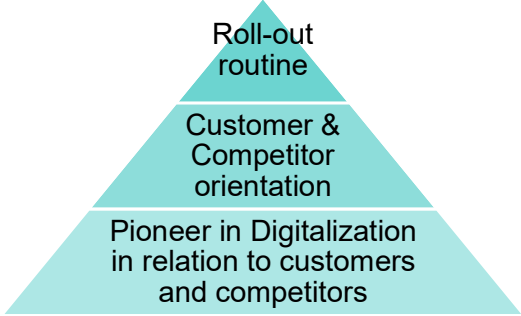
Tensions	Example	Influential cultural aspects
Organizing Tension: from products and processes	Sequential digitalization of products and processes	 <p>Roll-out routine</p> <p>Customer &amp; Competitor orientation</p> <p>Pioneer in Digitalization in relation to customers and competitors</p>

Figure 6: Product and Process Tensions and Handling

Another example of organizing tensions are those between internal and external collaboration (Svahn et. al, 2018). While external collaboration has the potential to build relationships with customers, minimize R&D, marketing and product development costs, and improve customer

service, internal collaboration helps improve the company at its core. For external collaboration in particular, DT enables closer collaboration and integration with customers, partners, or other market participants. From a cultural perspective, Würth Austria has been shaping the use of digital processes for some time, both internally, such as Yammer, and externally, such as the online store. This use of digital tools as an artifact helps to reduce the tension of external vs. internal collaboration. This is backed up in the company by the value of cooperation, which is lived out both internally and externally. This shift towards external collaboration is supported by underlying assumption: No fear of transparency, as employees are not concerned or worried when external parties have insight into their own data and processes and thus internal cooperation and collaboration is not impaired.

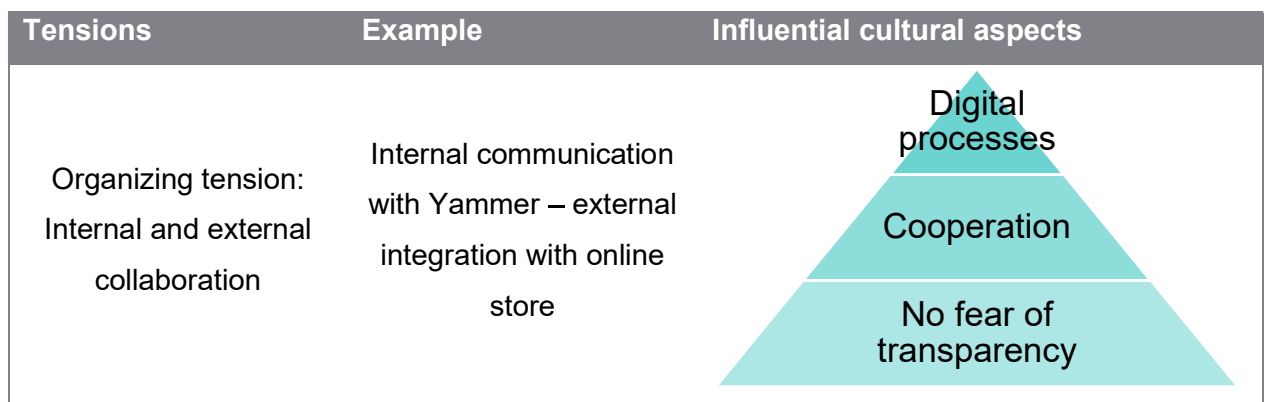


Figure 7: Internal and External Collaboration Tensions and Handling

A final example of organizing tensions that arise because of DT is that of control and flexibility (Svahn et al., 2018). The tension between control and flexibility is one thing that is often discussed when it comes to DT. The digitization of processes makes them absolutely transparent and thus enables more control over the workforce. While on one hand this allows for improvements in processes and a better overview from a management perspective to ultimately make better decisions, on the other hand there is a feeling that employees lose some of their freedom. Transparency was a dimension that was mentioned several times in the interviews. However, in the culture of Würth Austria, transparency was omnipresent even before the digitization of the organization. Let's look at this from a cultural perspective: There are several artifacts that show that especially sales and its success were communicated very openly. The artifact that best demonstrates this is the employee car, which varies based on sales success. So, the more successful an employee, the better the car and vice versa. There is also an open approach to data, so that statistics about employees in the organization are openly available. Behind these artifacts are the values of open communication, which is absolutely important at Würth Austria, and competitiveness. Certainly, these artifacts support competitive behavior in the organization, but thereby reduce the organizational tension between control and flexibility, as this was present

even before the DT. The basic assumptions behind this are no fear of transparency and, above all, "the better I am, the more freedom I have". This deliberately added aspect of the Würth culture means that employees are accustomed to an open approach to data and thus to a certain ability of management to exercise control. On the other hand, management only exercises a great deal of control if the goals are not achieved by the employees.

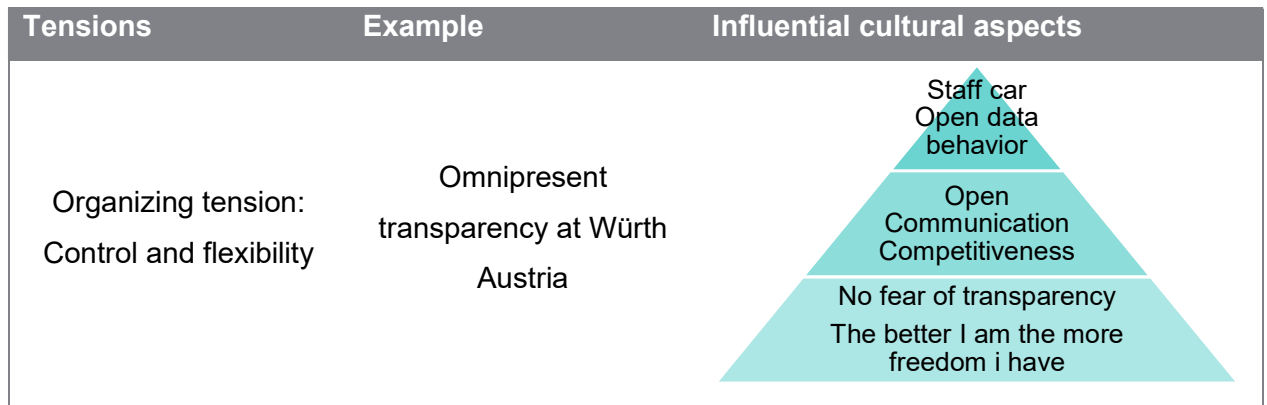


Figure 8: Control and Flexibility Tensions and Handling

Next, there are the performing tensions, which occur because a multiplicity of stakeholders leads to competing strategies and goals (Smith & Lewis, 2011).

One of the tensions that arise in this context is the differences between the requirements of online and offline customers. There are several differences between online and offline shopping, such as location, convenience, knowledge, how inviting a sale is, and price (Qi et al., 2016). Online shoppers generally prefer a convenient shopping experience on an easily accessible platform where they can make a purchase within a short time using common payment methods. One sales staff skill frequently mentioned by interviewees is the ability to provide consultation. The employees advise the customers and do not only take care of the sale. There are different requirements in Würth Austria's customer segments. Some of the customers prefer contactless online shopping for the goods they need, while others want consultation. To a large extent, it is up to the sales staff to decide what the customers prefer. One artifact that helps employees make this decision is sharing best practices. Successful employees are encouraged to share their experiences. In this context, they show their colleagues how to approach customers to identify their needs. Even though there is a lot of competition in the collaboration, there is a willingness to help each other. This value underpins the open sharing of positive experiences. Finally, the underlying assumption that Würth Austria is a digitalization pioneer vis-à-vis customers and competitors supports the value and the artifact, as employees have a desire to promote the organization's digital edge.



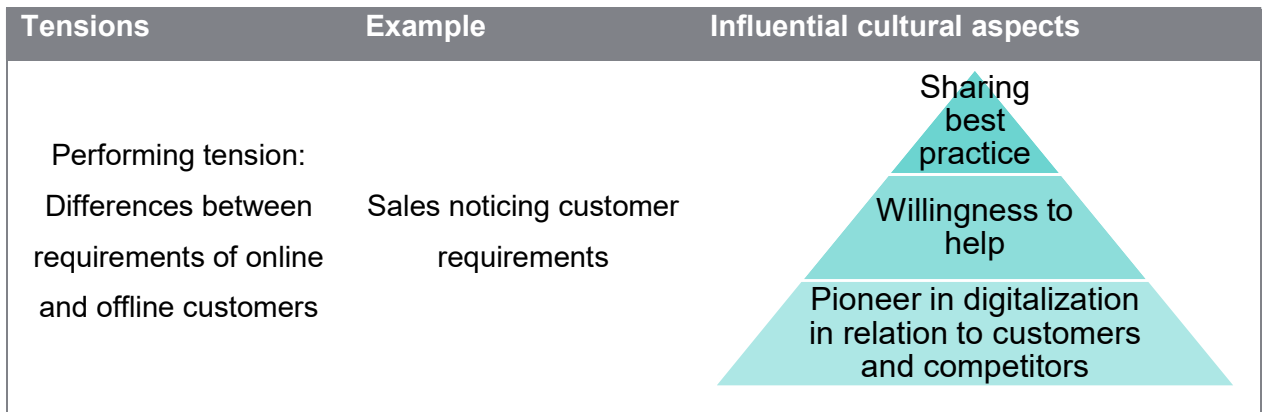


Figure 9: Requirements of Online and Offline Customers Tensions and Handling

Closely related to the latter tension is the performing tension of online cannibalization of offline sales. This tension primarily affects sales staff, who worry that it will become more difficult for them to achieve their sales quotas because a large proportion of sales - from customers they serve - are generated online. Sales staff tend to fear that they will eventually be completely replaceable by online sales. Two artifacts of the culture support the view that this is not the case. The first is the sheer number of digital processes, as people are used to internal and external processes being digitized, and the second artifact is again the sharing of best practices, as employees take the fear out of each other. The value that mainly helps to reduce these tensions is customer and competitor centricity, as sales people understand that customers have certain requirements and preferences, which may be to shop online, and if they want to stay ahead of their competitors and offer the best value to their customers and prospects, they need to be open to selling online, even if it may lead to cannibalization of their sales. At Würth Austria, the prevailing belief is that technology does not replace people. As can be seen from the results, where it was mentioned several times by almost all of the people surveyed, and across all hierarchical levels. As employees are convinced of this assumption, there is less tension about online cannibalization of offline sales.

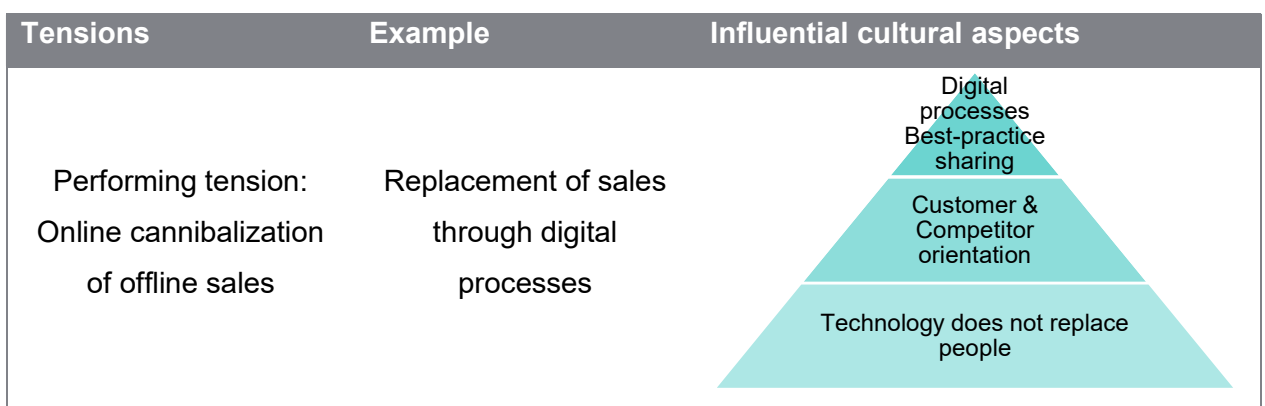


Figure 10: Online Cannibalization of Offline Sales Tensions and Handling

Furthermore, there are examples of belonging tensions that relate to contradictions in terms of identity and interpersonal relationships (Smith & Lewis, 2011).

An associated tension caused by DT is the clash of existing professional norms with those arising from DT (Thoren et al., 2017). A classic example of a clash of norms with DT is face-to-face and remote work. While a few years ago it was common to work in the office, today it is normal to work from home or from any location with the help of technological means. This trend received a boost from the Corona pandemic, as companies had to adapt to changing circumstances. Moreover, studies suggest that telecommuting will remain a norm even after the COVID-19 pandemic (Fadinger & Schymik, 2020). While this may have created tension at many companies, it was only partially the case at Würth Austria. As the results show, respondents agreed that home office was an immediate possibility. Even if some managers and supervisors did not like this at first, which led to tensions, they could be convinced of the advantages of remote working. Culturally, two artifacts are of great importance for this. First, since many digital processes were introduced at Würth Austria, it was already normal and possible to work digitally. Second, there were many executives, especially in sales, who were actively driving this through best practice, so others could easily adapt. The value and norm of openness to change helped keep this tension in check. The underlying assumption of trust in IT is extremely helpful in reducing these tensions as it helps establish the new norm.

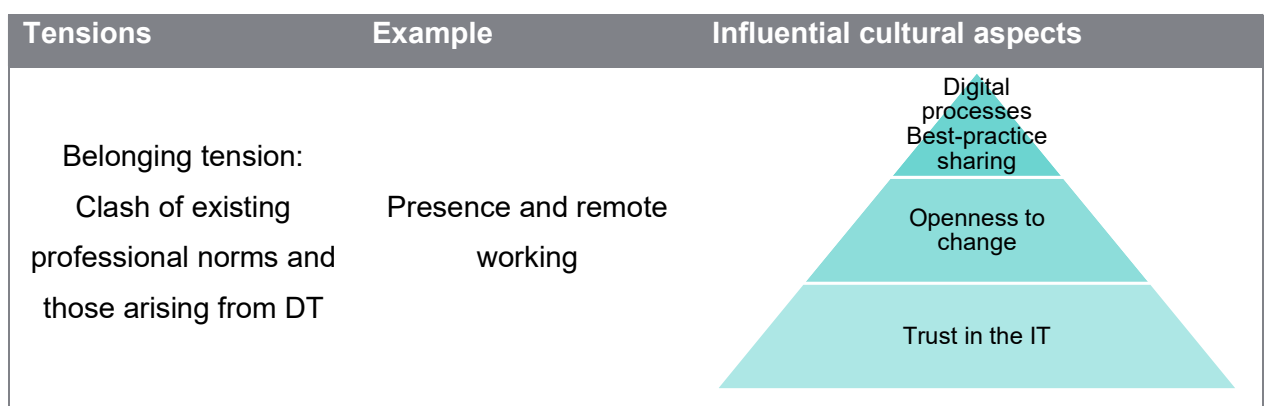


Figure 11: Clash of existing professional normas and those arising from DT Tensions and Handling

Finally, there are learning tensions, which occur when dynamic systems change, innovate, and renew, which involves building on and demolishing the past to shape the future, and require the organization and its employees to acquire different skills (Smith & Lewis 2011).

One learning issue that arises in DT is the relationship between the skills available and those required (Svahnet al., 2018). There are several skills required in DT, including technical skills, highly adaptive collaboration, complex problem solving, digital responsibility and entrepreneurship, and creativity and innovation (Bradshaw, 2013). Some of them are significantly different from the skills required before the digital era, such as technical understanding,

entrepreneurship, and creativity and innovation. DT requires individuals to be ambidextrous. This creates a skills gap among employees, which ultimately leads to tension and a disruption of the change process. Würth Austria's culture reduces these tensions through several measures. One artifact that stands for digitalization is the digital equipment that is available to every employee wherever it is required. In addition, the values of willingness to help, cooperation and willingness to learn make it easy for individuals to ask their coworkers for help, as the results show. In this way, employees help each other even without major change measures initiated by HR development or other departments, and help close the knowledge gap resulting from DT. The reason why the company's employees are so open to change is the underlying assumption that DT is positive. Employees are not afraid of change, but are open to it because they are convinced that this change is necessary and will ultimately benefit everyone in the company.

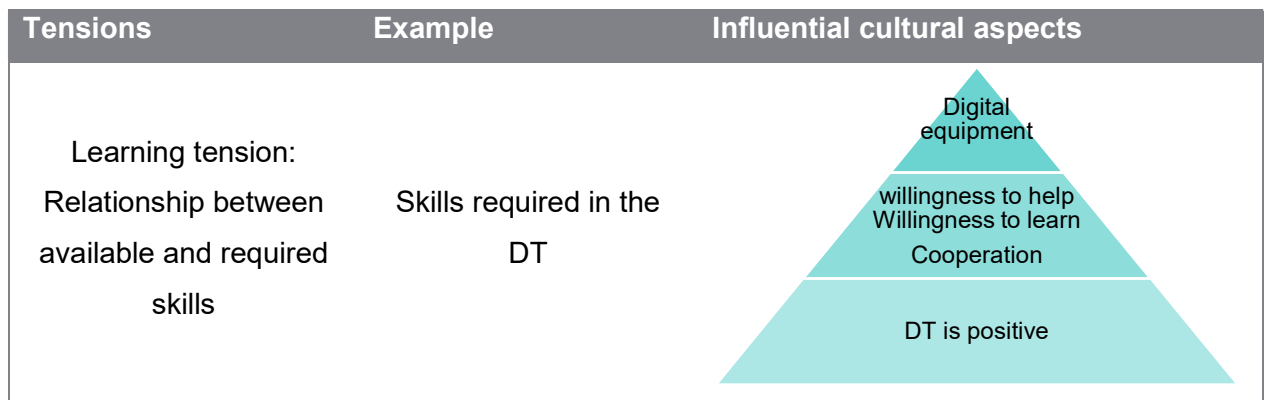


Figure 12: Relationship between available and required skills Tensions and Handling

Closely related to this, learning tensions may arise due to differences in workforce skills during DT (Wiener et al., 2018). People with experience using digital devices in a private context are likely to adapt more easily to new technologies in a work context. Thus, there are differences in the skills of the workforce. In the context of DT, there is often a gap between different generations-the so-called demographic or age gap-as young people tend to use digital devices more often in a private context. This divide can create tension between different parts of the workforce, making it incumbent on the organization to bridge the gap. Culture can play a critical role in this move. Similar to the relationship between existing and required skills, especially the artifacts of existing digital processes, digital equipment and best practice sharing also play a role as employees are encouraged to engage with the new processes, even if they are unable to do so. The values of open communication, collaboration and a willingness to learn make it easy to identify these gaps, which is essential to closing them. Only when people openly admit that they are unable to manage certain processes can they be taught how to manage them, which is often not the case and leads to tension and thus disruption of the change process. The underlying assumption that the DT is positive supports people to openly communicate a lack of skills and thus to receive help. The results show that this was very often the case at Würth Austria.

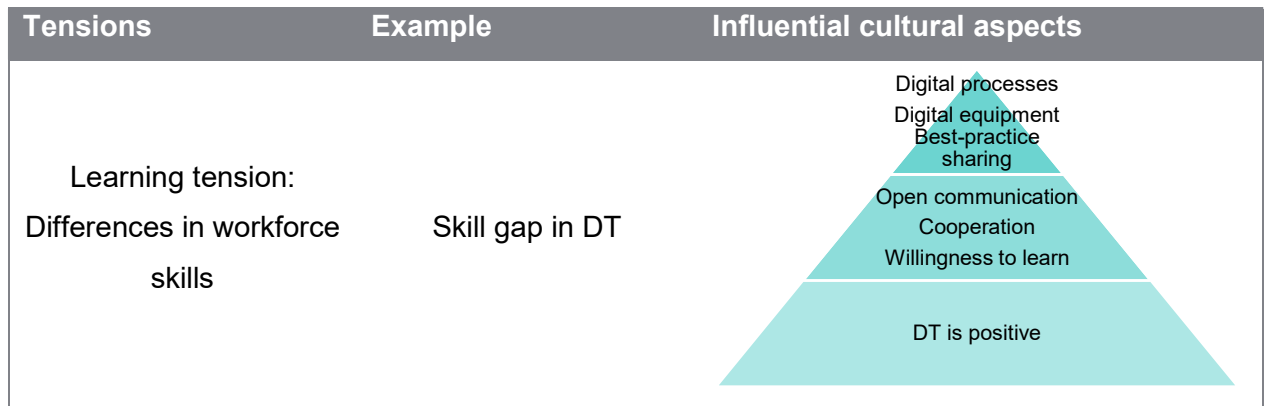


Figure 13: Differences in workforce skills Tensions and Handling

### 5.1.5. Leadership challenges

In the following the impacts on culture on DT related leadership challenges will be discussed.

According to the WEF (2015) and Kreutzer et al. (2018) one challenges that occurs for leaders is time and sloth within an organization that block change, as the DT is seen as a technology not a business change. As can be seen from the results, several respondents mentioned that they do not see digitization or DT as a radical change, as is often suggested in the literature, but rather as another change process where the benefits simply need to be communicated to help people adapt to the new technologies. Thus, they agree with the statement that DT does not change business. However, when looking at the cultural levels of the organization, it is clear that DT means more to the organization than just a change in technology and thus is less of a challenge to leadership. Looking at the key artifacts that could be identified, there are already a lot of digital processes that include processes directly involving the customer. These processes are underpinned by the value of customer and competitor orientation and the underlying assumption: Würth Austria is a pioneer of digitalization in relation to customers and competitors. So, when it is claimed that digitization is just another change process, this refers to individual changes or individual processes that are implemented, which happens very often, while the combination of these individual new processes actually represents the change of the entire company. It can be concluded from this that DT is not perceived by employees as a radical change and that the corporate culture has a high degree of digital maturity, which makes time and sloth at least less of a leadership issue.

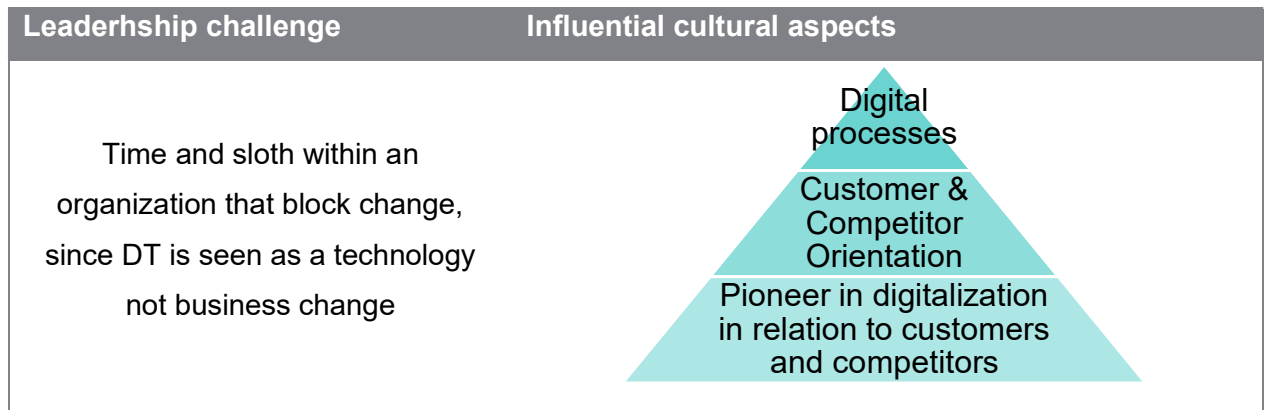


Figure 14: Time and sloth Leadership Challenge and Handling

A second challenge for leadership is the transition from the traditional view of leadership (autocratic and knowing) to a collaborative approach where individuals and teams are empowered (Neubauer et al., 2016; Ancarani & Di Mauro, 2018). In addition, leadership needs to be alter centric rather than egocentric and address collaboration and teamwork challenges to create high-performing teams (Jakubik & Berazhny, 2017). This is also a major challenge that Würth Austria faces. In general, the interviewees describe a lot of flexibility for successful employees, so they can use the means they prefer as long as there is a good quota. On the other hand, there is a lot of support, but also tracking, for those who are not quite as successful. Nonetheless, the goal of the interviewees, especially those who were in a leadership position, was to empower the team and ultimately the individual members of the team to solve any challenges that arise, such as technical challenges that some have. The artifact of sharing best practices probably best illustrates how culture fosters a collaborative approach in the organization. Even on a day-to-day basis, people tend to share their experiences - even across hierarchical boundaries - which shows the tendency toward cooperation in the organization. The values of cooperation, the willingness to help and the willingness to learn, further support this tendency to work together. The cultural reason people are willing to do this is the underlying assumption within the organization that DT is positive. However, this cultural analysis lacks information on how different leadership styles are influenced by culture because few leaders were interviewed. So, from the researcher's point of view, collaboration between employees is definitely influenced by the culture of the organization, but no conclusion can be drawn about how leadership is influenced by it.

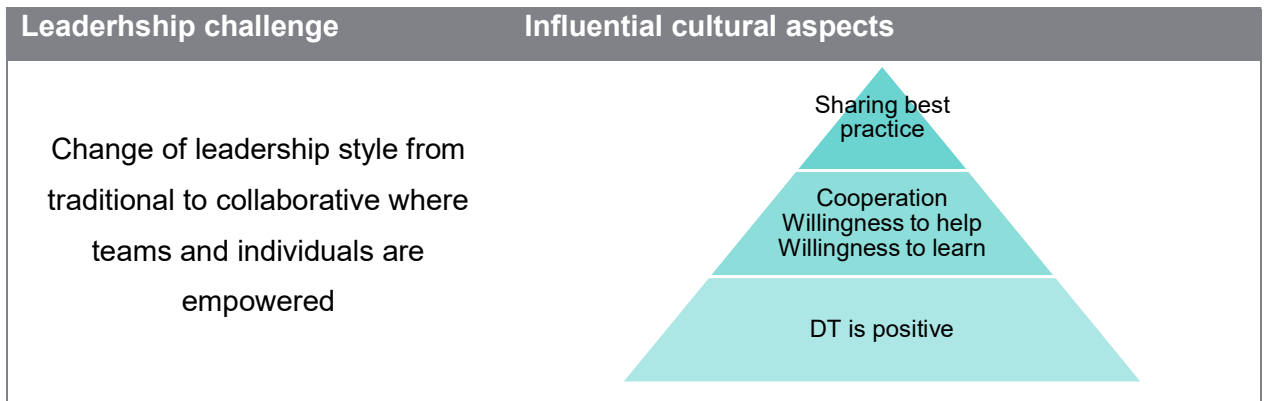


Figure 15: Change of leadership style Leadership Challenge and Handling

Another challenge for leadership in DT is the lack of a vision for digitalization and the vision of top management is not radical and transformative (Fitzgerald et al., 2018). At Würth Austria, DT is supported from the very top, as indicated by several interviewees, which is evident in the results. This top-down approach, which is often not present in the DT, makes it possible to implement different aspects in the culture of the organization that also support the vision. The fact that two artifacts are digital processes and digital devices already shows that there is a strong orientation towards DT. The values of open communication and openness to change illustrate how the vision is embedded in the culture of the organization. Most importantly, the underlying assumption that DT is positive shows that there is a clear message from the top that the organization needs to focus on DT to be successful in the future. However, this cultural analysis does not offer insights into how this vision has been so successfully realized, but can only describe which aspects of the three levels of culture demonstrate the presence of a DT vision that appears to be radical and transformative.

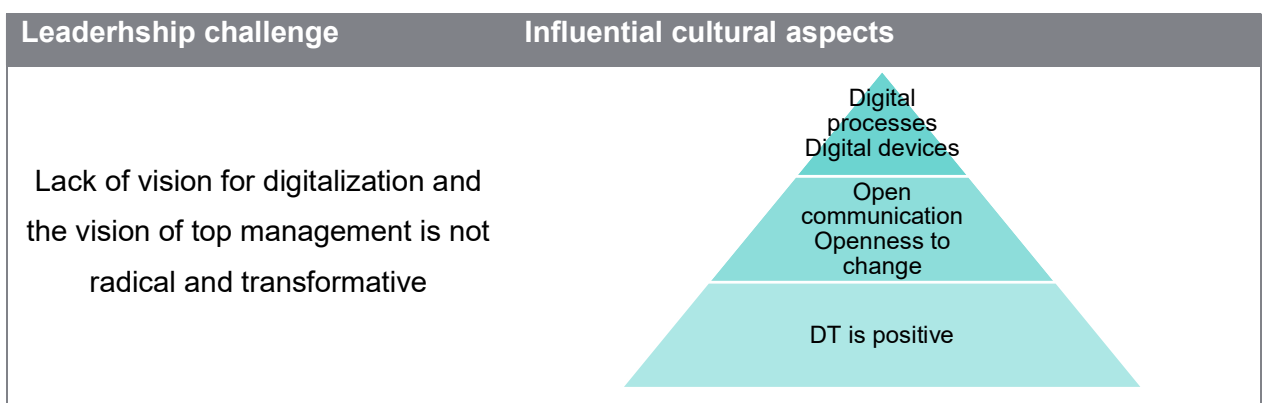


Figure 16: Lack of vision Leadership challenge and Handling

Finally, a remaining challenge for leaders is the difficulty of finding digitally engaged employees (Colbert et al., 2016). This challenge can be influenced to a large extent by culture, but very much only by a part of culture that can be perceived from the outside - the artifacts. Digitally mature employees tend to go to companies that are themselves digitally mature. The only or most

important thing they can perceive within a short period of time - the recruitment process - are the artifacts. Nevertheless, if they learn what digital processes already exist in the company, what digital equipment the employees have in the company and how the best practice exchange works, they will probably get an understanding of how digitally mature Würth Austria actually is. There is probably even an opportunity to learn about the company's values and beliefs in the interviews. But attracting digitally engaged employees relies on a leader's ability to do so. Thus, the noticeable culture is only one step in gaining the attention of digitally engaged employees.

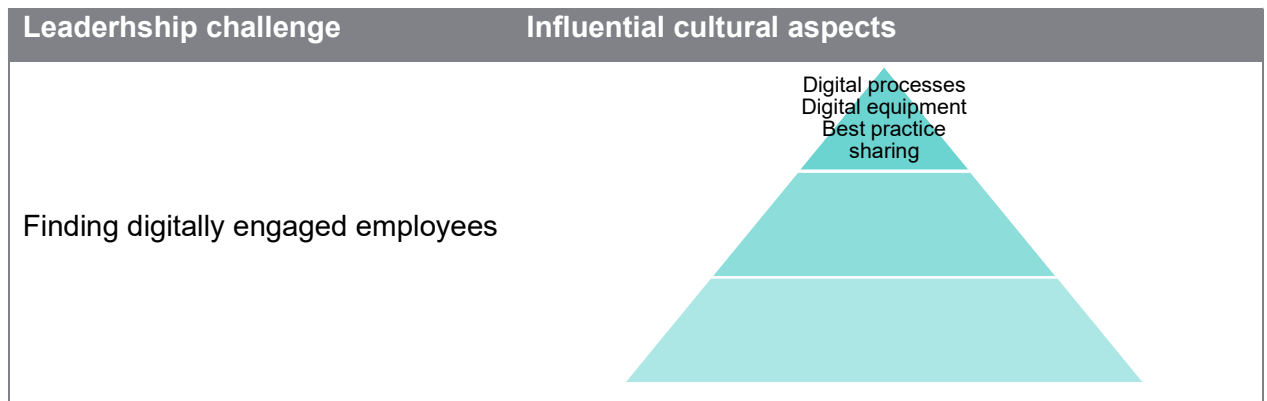


Figure 17: Finding digitally engaged employees Leadership challenge and Handling

We can therefore state that many aspects of the culture at Würth Austria ensure that tensions between superiors and employees can be reduced. At the various cultural levels, aspects have been established in the organization that ensure that any tensions that may arise do not come to bear, or do so to a much lesser extent. Furthermore, the culture in the company helps to reduce the leadership challenges resulting from DT. It must be noted that culture plays only a subordinate and rather supporting role than a dominant one. Especially in dealing with the leadership challenges, a lot depends on the respective leader.

## 5.2. Practical implications

In addition to the theoretical implications already mentioned, the results found can also be applied in practice by managers or leaders in companies. After all, researchers consider the establishment of a digital data-driven culture to be one of the greatest challenges (Story & Song, 2017). Moreover, most digitization projects fail because of corporate culture (Albrecht, 2015). Therefore, knowledge about how different aspects of a company's culture affect its DT capability is essential. Thus, the findings help practicing managers and leaders in three different ways.

First, the results provide an overview of what cultural features are present in a company that is relatively successful in DT. This means that parts of this culture can be established in the company itself, thereby improving DT capability.

Second, it explains potential sources of tension and analyzes which areas of culture help neutralize or reduce them. The graphics provide a good overview of which features of the culture have a particular influence here.

Third, leadership challenges that arise because of DT are explained. At the same time, these are also compared with the culture of the company and the aspects that at least facilitate these challenges for leaders. In a practical context, this provides the opportunity to change the culture so that fewer challenges can be expected.

### **5.3. Limitations**

It should be noted that this study has several limitations. First, there is the number of interviewees. Eight people were interviewed at Würth Austria, but the company has more than 900 employees. Therefore, the statements cannot be transferred to the entire company and thus cannot be generalized in their entirety; for this, interviews with more persons would have had to take place. Furthermore, the sample profile should be noted. Firstly, only two of the eight interviewees were women, which suggests a gender bias towards men. Furthermore, in addition to support functions, only people with management responsibilities were interviewed, which makes a bias towards management positions very likely. With regard to the chosen method where the iceberg model of organizational culture analysis was applied, it should be noted that it is difficult to draw conclusions about the deep structure of an organization especially the underlying assumptions with the chosen method of data collection - the interviews. In the data analysis process, there was the difficulty that all interviews took place online via video call, which was also due to the pandemic situation. It is a limitation that the interviews did not take place in a live and on-site setting, as otherwise the interviewers could certainly have gone into more detail about the reactions such as facial expressions and gestures of the interviewees. The time factor should also be mentioned, as the interviews only took place on two days and each had to stick to a time frame. It would certainly have been possible to find out even more through the interviews. Due to the chosen time of the interviews - November 2020 - there was a strong focus on the COVID-19 pandemic, as the second lockdown in Austria started shortly before. Conditional on this, the focus was more on digitization due to COVID-19, rather than the introduction of Speedy-Touch. In addition, DT is very fast moving and therefore dependent on the timeliness of data. Since the evaluation of the interviews took place only a few months after the collection of the data, this can be mentioned as a further limitation.

### **5.4. Need for future research**

The master thesis has shown which features of culture are conducive to the DT of organizations and which aspects of the different levels of culture contribute to reducing or eliminating the tensions that can arise during DT in companies and which parts of the corporate culture help to



minimize the challenges for leaders. In this context, the existing theory of DT was extended to show what influence the culture of an organization, especially at the different levels, has on digital transformability. Since these aspects and extensions of the theory were only established on the basis of a small number of interviewees in one company, it is necessary to conduct further quantitative research in order to verify the theses and assumptions made and, if necessary, to explore further important cultural aspects for DT.

In addition to research on which areas of culture positively influence digital transformability, it is also important for future research projects to explore how such a culture can be created. This research is mainly focused on identifying how culture affects companies in relation to digitalization but not on how such a culture can be implemented.

Since Würth is a multinational company, it is also interesting to explore how the digitalization culture is presented in other national companies in order to find out what influence the culture of a country or region has on how digitally transformable a company is.

## **6. Conclusion**

The aim of the study was to identify cultural aspects that effectively contribute to capacity building for DT in organizations. Based on the qualitative analysis of the single case study of Würth Austria, the two research questions could be answered. For the first research question, it was determined how the artifacts, values and beliefs, and underlying assumptions influence the organization's capacity for DT. It can be determined that a lot of experience and a strong focus on transparency contributed to the development of this culture. Transparency was already present beforehand and is expressed through a variety of symbols. The introduction of digital processes and products has been sequential, so employees have become accustomed to constant digital change. There are several values that are critical in the culture for digital maturity. These include customer and competitive focus, trust, collaboration and a willingness to learn, help and take risks. However, the most important things in the culture of Würth Austria are the basic assumptions that DT is positive, that employees need not be afraid of transparency, and that technology does not replace people. In the second research question, it was possible to answer which features of the different levels of culture help to reduce the tensions between leadership councils and employees, as well as to deal with leadership challenges. In particular, the aspects of culture that helped to deal with typical examples of the four types of tensions, organizing tensions, performing tensions, belonging tensions and learning tensions, that occur during DT were emphasized. In particular, the value of customer and competitor orientation, as well as a confidence that digital processes cannot replace people, were found to be helpful in addressing these tensions. In addition, culture can also contribute to dealing with, or mitigating, leadership challenges. However, it must be concluded that the influence of culture is very limited here, so that at the end of the day, the behavior of the leader has a much greater influence on how these challenges are handled.

The single case study with Würth Austria was selected because this company successfully implemented DT to a large extent. The organization already had a number of digitization projects in the past, so that a certain routine was prevalent, which was evident in the introduction of new digitization projects. At the same time, the implementation of the sales platform and the Speedy-Touch sales tool provided the opportunity to accompany the introduction of a digital tool, including all hurdles and other incidents. It was expected that the qualitative research, conducting the interviews, would provide a more detailed insight into the culture of the company and, using the Iceberg culture analysis model, determine which parts of the culture are related to digitalization. The results largely match the expectations, although it must be noted that in this type of research, the search for underlying assumptions in particular presented a certain challenge, as this requires a longer-term view of the organization to be analyzed. Accordingly, the approach was effective in terms of answering the research questions, but requires quantitative confirmation of the findings obtained. At the same time, the aforementioned answering of the research questions revealed which aspects of culture are of great importance, but only partially how they can be installed in an organization, which is why further research in this area is necessary.

Based on this conclusion, practitioners should consider which aspects of culture are helpful to achieve a successful DT in their organization. For example, a gap analysis can be conducted to determine what an organization's culture currently looks like and what features of culture help overcome hurdles such as tensions and leadership challenges. Then practitioners can create a plan for how to implement these characteristics into the organization's culture to overcome these hurdles.

It has been proven that organizational culture is one of the main reasons for DT failure (Albrecht, 2015). However, there was a research gap in studying DT from an internal perspective, where the dimension of cultural change that leadership and DT bring about in an organization needed to be studied. And there was a research gap regarding the interaction between existing cultures and the evolution toward adaptive organizational design. This study helped to fill this research gap by identifying what cultural aspects can and have contributed to building more capacity for DT and thus not letting DT fail because of culture. In addition, it can serve as a practical guide for organizations to meet the demands of DT.

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