



DIGITAL MATURITY AND ITS INFLUENCE ON CORPORATE CULTURES

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Abstract: *This research paper complements existing research approaches regarding the digital maturity level of companies. Furthermore, this research approach complements existing research findings. In terms of content, it relates the dimensions of individuals in companies, teams, leadership behavior, and corporate culture. In particular, the interaction between corporate culture and leadership behavior is the focus of this research approach against the backdrop of the digital maturity level. This research approach presents a matrix classification of companies according to four company typologies. This matrix enables companies to be classified and assessed in terms of their leadership behavior and digital maturity level. In addition, this research paper already shows the first qualitative interim research results and results of the evaluations of one type of company defined in the theoretical part of this research.*

Keywords: *digital business models, leadership, corporate culture, digital maturity*

INTRODUCTION

Collaboration in companies around the world has changed significantly, not least because of the 2019 COVID pandemic. Collaboration is increasingly taking place in virtual spaces. Cross-functional collaboration within interdisciplinary teams is increasing and managers are facing new challenges in managing their employees. But remote collaboration doesn't just offer new opportunities for companies and executives. It also presents them with new challenges regarding their teams remotely. This part of the research can be seen as a continuation of the first research paper by Diana Schröder entitled "DIGITAL LEADERSHIP AND CORPORATE CULTURE: WHAT CHALLENGES DO MANAGER ENCOUNTER AND HOW DIGITALITY INFLUENCES LEADERSHIP BEHAVIOUR". Research conducted and published by MIT Sloan Management Review in collaboration with Deloitte Digital in 2016 shows that 90% of the 1000 CEOs interviewed are convinced that business is being transformed and influenced by digital business models. 70% of interviewees even believe they do not have the right skills and leaders to embrace and adapt to these evolving structures. Preparing a company for digitality and the digital future means aligning and changing the entrepreneurial activities and structures, the people and, above all, the culture in synchronization with the organizational goals. Companies should succeed in integrating their digital strategy into the company's overall strategy. This means that processes, business models, as well as the promotion and retention of talents, will be transformed by technology. The corporate culture, which is characterized by common values and features, plays a central and decisive role. Characteristics such as the willingness to take risks, to try new things, the investment in talents and its advancement, as well as the development of leadership personnel such as business executives and managers significantly shape companies in terms of their digitality and help them to drive innovation and significantly advance the digitalization of their business. Managers and the leadership style they use to lead teams and employees are closely intertwined with the culture of a

company and have an immense influence on the organizational structure and the prevailing corporate culture. Last but not least, the attitude of managers with regards to digitally driven topics and framework conditions, such as technologies or the willingness to work remotely (e.g., home office), has a strong influence on the corporate culture of a company. The culture is also influenced by the employees and their own willingness to try out new things, find new ways of working together, and their identity and willingness to take on responsibility. It is therefore more important that a corporate culture is characterized by uniform values and that these are also lived and intensified over time.

CURRENT STATE OF RESEARCH

In the literature, countless studies can be found on leadership and the connection between leadership and corporate culture. Several frameworks have proven to understand cultural differences within companies and have helped to evolve different dimensions that can be helpful to understand cultural differences. Denison and his colleagues developed a culture framework which puts organizational culture and effectiveness in relation to each other (Denison, 1984, 1990; Denison & Mishra, 1995). The study using data from 764 organizations shows four essential cultural traits – mission, consistency, adaptability and involvement – which can be related to criteria of effectiveness (Denison & Mishra, 1995). The following table 1 shows the four different cultural traits and the associated criteria of effectiveness that influence them (Denison et al., 2003).

cultural traits	predictors for	criteria of effectiveness
mission consistency	Strategic ->	profitability
involvement adaptability	Operational ->	innovation
adaptability mission	Operational ->	sales growth

**Table 1. Cultural traits and its related criteria of effectiveness
(based on Denison et al., 2003)**

The study by Denison et al. (2003) also shows that a common understanding and perspective on the organizational culture can be possible in multinational corporations. It can also be measured and tracked to have a predictable impact on the effectiveness of the company. It is proven that cultural traits of organizations have an impact on the performance of the company and its business. The effectiveness of organizations can be linked to differences in the organizational behavior, the values of work, the organizational culture and last but not least to the leadership behavior in a company. But what is missing in this context is the digital aspect. It is clear that companies have to be prepared to the digital future of their businesses. This change has been driven fast over the past couple of years and has presented companies with the challenge that they will have to overthink their future strategies, business models and non the less their internal business processes.

Another study by the MIT Sloan Management Review in corporation with Deloitte Consulting LLP and Deloitte Services LP found that digital trends will greatly impact businesses in the future and lead them to organizational change processes. MIT Sloan Management Review together with Deloitte conducted its fifth annual survey of more than 3,700 business executives, managers and analysts from international organizations from more than 131 different countries and 27 different industries, from organizations of various



sizes. In order to understand and contribute the insights of the study to a richer understanding, they interviewed also business executives from several industries to understand the practical issues that organizations are facing in order to digital maturity and change processes (Kane et al., 2016).

The result of the study (compare Fig. 2 „Rating of company culture regarding the company’s digital maturity (SLOAN Management Review”) shows that digitally mature organizations share the same values and views. The difference between digitally mature organizations and immature organizations is that they are more willing to take risks, try new things and experiment, invest sustainably in their own talents and recruit leaders, and train and develop their own leaders within the framework of their own soft skills. Creating an effective culture is an immense challenge that companies are increasingly facing. Digitally mature companies are shaping a culture of change in which taking risks, trying new things and, above all, working together in an agile and collaborative way is desired. Such a culture must be created and lived. This in turn requires a new way of thinking, especially at the level of senior management, as managers must increasingly trust and offer their employees the freedom and opportunities to try out new things. They must also encourage their employees to take responsibility for what they do and to take risks. This, in turn, has a major impact on the willingness to make mistakes and the error culture in a company. This also means that the leadership team, especially in senior management, must be developed in a digital environment and also learn digital skills.

Above all, soft skills play a decisive role and are more important in these times than technological expertise. Skills such as communicating a transformative vision, being a forward thinker or a corresponding mindset that sensitizes for change and the corresponding change process are decisive and success-leading in addition to other leadership competencies and collaborative skills. The study also shows that the respondents see the greatest challenge to the digital transformation and maturity of the company in internal processes and workflows.

The following chart shows what the biggest threat is that their companies are facing as a result of digital trends.



Fig. 1. Threats that companies are facing (Kane et al., 2016)

This figure shows the need to take a closer look at internal processes and procedures and to critically examine the current status quo within a company. The following figure shows what a digital culture could look like and how the participants of the research rate these components regarding their companies digital maturity.

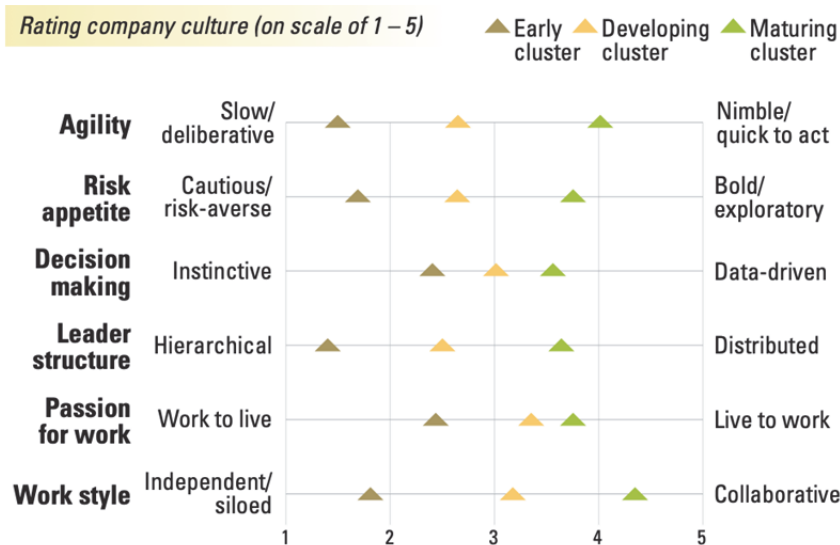


Fig 2. Rating of company culture regarding the company's digital maturity (Kane et al., 2016)

RESEARCH PROJECT

What has not been sufficiently investigated are the challenges leader of different hierarchical levels face in practice. And whether these challenges consider with the findings of the SLOAN Management Review and Deloitte study. As well as how these challenges can be solved by virtual leadership during a time in which remote work is the new standard. However, leadership and leadership behavior must be considered in the context of the respective corporate culture and the respective team. The graph below shows this interplay. On the outermost level, it shows the external influences, societal and structural changes that affect the organization. At the macro level, it shows the corporate culture and its values. On the meso level, the graph shows the leadership and leadership competencies required to, in turn, lead a team, which is shown in the following graph on the micro level. Through the respective leadership behavior, which is influenced and determined by the external influences and the macro level, the leader has an impact on the team. In this way, he or she influences the cooperation within the team.

Digital maturity, previously researched in collaboration between Deloitte and the SLOAN Management Review, is an aspect that influences corporate culture and collaboration within an organization. The level of the digital maturity indicates how digitally a company operates. It also provides information on how employees collaborate within a company. This is evaluated on a five-level Likert scale taking the following six level (Fig 2 “Rating of company culture regarding the company's digital maturity”) into account: agility, risk appetite, decision making, leader structure, passion for word and work style.

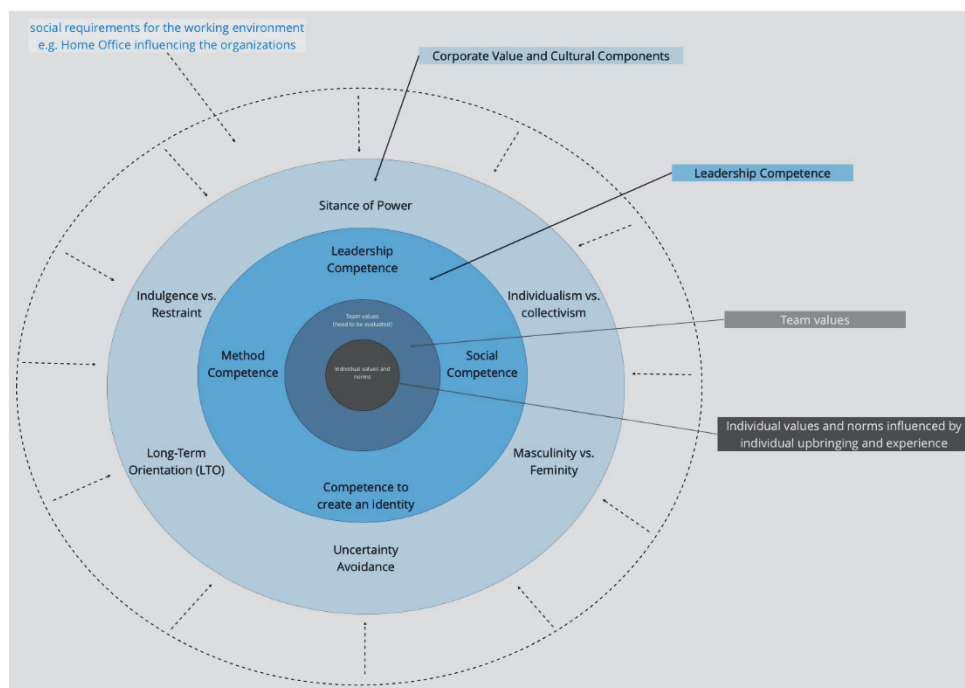


Fig. 3 Dimensions of the research

SUBJECT OF RESEARCH

However, digital maturity also takes only a limited view of the complexity and interaction of different factors in practice. Factors such as uniform values, which have a significant influence on the way a company works together, are not sufficiently considered. Values, in turn, have an influence on togetherness and are thus not least a decisive factor for the prevailing culture within a company. This culture shapes the cooperation of individuals both within a team and across teams. The factor of leadership behavior is also considered as part of the digital maturity level, but this is such a central and influential factor that it also needs to be considered in more detail. Particularly against the backdrop of the influence on the individual teams and individuals and thus also on the culture of the company, the interactions prevailing here need to be examined more closely. Against this backdrop, the aim is to create a way of relating and harmonizing the theoretical framework of digital maturity, shown in figure 2 to the dimensions and the subject of this research, shown in figure 3.

METHODS

To answer the question described above, a qualitative study was conducted (according to Mayring, 2016; Mayring & Fenzl, 2019; Mayring & Gläser-Zikuda, 2008). To answer the research question, a total of 4 groups will be surveyed. Managers are interviewed with regard to their leadership style and their form of employee management against the background of digitality and remote leadership. The research questions will be investigated using a qualitative method. This method is chosen because it enables a deeper, emotional understanding of the motives and motivations behind the statements made, so that appropriate recommendations for action can be derived (Mayring & Fenzl, 2019; Nuttall et

al., 2011, S. 153). The hypotheses investigated in this thesis were derived from the theoretical basis and the current state of research. On this basis, the hypotheses are explored. For this purpose, the method of structured qualitative content analysis is used (Mayring, 2016, S. 120; *Methods of Text and Discourse Analysis*, 2000). Based on the theory, the interviews are examined and the results are assigned to the individual categories and subcategories. Subsequently, the results of the interviews are processed. It should be noted here that it is possible for new categories to be added that are not yet included in the theory. A subsequent extension of the theoretical model is thus possible.

This thesis addresses research questions related to virtual leadership behavior and how it can positively influence team performance. Thus, this work relates to a specific problem. Therefore, problem-centered interviews are conducted to investigate this issue (Braun & Clarke, 2006; Mayring, 2016, S. 67–72; Murphy, 2002). This form of interview ensures that all the aspects listed (digital maturity, corporate culture, values and leadership behavior) are considered. These are considered on the basis of the guiding questions developed from them. At the same time, the problem-centered interview should give people the opportunity to contribute their own aspects that have not yet been considered in the guiding questions. A guideline was developed for the interview, which was tested and validated through a pre-test as part of this research. A questionnaire was developed and is presented in full in Appendix 1.

On the one hand, this questionnaire contains the dimensions of digitality, which thus optimally complement the digital maturity approach. It also looks at the dimensions of team performance and collaboration, as well as cultural dimensions that are closely related to collaboration. The questionnaire is completed by the dimension of leadership behavior.

The questionnaire is specially designed for interviewing managers. Managers of different hierarchical levels in companies are the target group or research subjects of this research project. In order to approach the research project in an unbiased manner and to achieve the broadest possible selection of different managers in terms of their age and management experience, we explicitly refrain from specifying the research subject in more detail. This is the only way to create a certain degree of comparability.

CURRENT STATE OF THE RESEARCH

The rating scale developed and published by Deloitte and the SLOAN Management Review was supplemented by the following 4 dimensions (see table 2 “Thematic expansion of SLOAN Management & Deloitte”) stated underneath the dimension of “Digital Maturity”. These dimensions were expanded in the present empirical research to include „leadership“, „social competence“, „culture and values“ and „methodological competencies“. Since this scale only looks at a selected part of indicators and does not sufficiently consider the essential component of corporate culture, this was further developed as part of this research and is shown in the following table 2. It was supplemented by dimensions that describe a corporate culture shaped by values. In order to reflect all levels found in the chart, the following dimensions were added to the evaluation form: leadership, social competence, culture and values, and methodological competence.

These dimensions contain further categories. By evaluating these categories and classifying the company's own environment, it is not only possible to obtain an assessment of the company's level of digital maturity. It also gives an impression of the respective corporate culture because it is examined and evaluated in relation to the defined dimensions and criteria. On the one hand, this evaluation form helps to make an initial preselection and categorization of the leader in the equivalent company.

Deloitte & SLOAN Management Review	Digital Maturity Agility Risk-taking Decision-making Leadership structure Enthusiasm and passion for work Way of working
Extension of criteria according to Diana Schröder	Leadership Empowerment and self-organization Vision Motivation Cross-functional thinking
	Social competence Empathy / reaction to employees concerns Communication Moderation Conflict resolution
	Culture and Values Trust Appreciation Transparency Reflection Error culture Openess (criticism and readiness for conflict) Responsibility (Willingness to perform, reflection, quality) Solution orientation
	Methodological competencies Identify changes Questioning the status quo Openess to new ideas Giving space

Table 2: Thematic expansion of SLOAN Management & Deloitte (own illustration according to Kane et al., 2016)

DEVELOPMENT OF A CLASSIFICATION OF COMPANY PROFILES

In order to be able to create a corresponding comparability between companies in terms of their level of digital maturity, a categorization and allocation of corporate structures in relation to the maturity level of the company is required. Following Henry Mintzberg, who examined decision-making systems and the distribution of strategy and power in companies in 1985, four company typologies were developed as part of the present work. Mintzberg examined the distribution of power in companies and developed a total of 6 types of decentralized power shown in the following chart (fig. 4 „Six types of decentralized”).

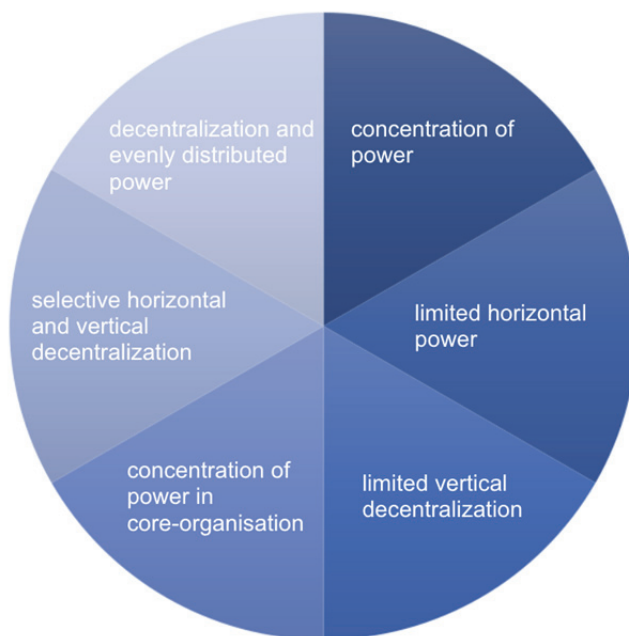


Fig. 4: Six types of decentralized power
(own illustration according to Mintzberg & McHugh, 1985)

Mintzberg placed the distribution of power in organizations in relation to the size of the company (Mintzberg, 1989). The larger the company, the more likely it is that power will have to be distributed. Mintzberg distinguishes between horizontal and vertical decentralization. Vertical decentralization describes the delegation of formal power from the top down, whereas horizontal decentralization describes the distribution of power (formal and informal power) to operational units. Type 1 according to Mintzberg's theories, however, is the opposite of decentralization of power. In fact, type 1 describes the concentration of power and influence at the strategic top – i.e., a centralization of power - at the top of the company. Type 2 is what Mintzberg calls limited horizontal decentralization. Here, power is distributed horizontally to the technostructure in addition to the strategic top. Mintzberg also describes this type as „professional bureaucracy“. In addition, there is type 3 - the limited vertical decentralization of power within a company. Here, power is distributed to the middle line in addition to the strategic top and the technostructure. Type 4 concentrates power in the operational core of an organization. Here, power is explicitly not distributed among different management levels. In Type 5, on the other hand, selective horizontal and vertical decentralization is evident in terms of the distribution of power. This means that power is distributed to the various levels other than the operational core. Type 6 completes the decision-making systems according to Mintzberg. Here, power is decentralized and, above all, distributed evenly throughout the entire organization. (Mintzberg, 2013; Mintzberg & McHugh, 1985; Mintzberg & Mintzberg, 2011) In addition, Mintzberg has examined other factors (shown in the following table 3) that influence the structures within companies. It distinguishes a total of 15 factors, which he assigns to four groups - age and size, technical systems, environment and power. These factors influence the configuration of an organization. In other words, the structure and the



interaction and thus the work and the performance, effectiveness and efficiency of a company.

Category	Factor
Age and Size	1. The older an organization is, the more formally it is structured
	2. The larger an organization is, the more formal its behavior is
	3. The larger an organization is, the more differentiated the work tasks are
	4. The larger an organization, the larger the average size of the departments
Technical Systems	5. The more technical apparatuses determine the work, the more formalized is the behavior
	6. The more complex technical systems are, the more sophisticated the organizational structures are
	7. The automation of an operational core transforms a bureaucratic administrative structure into an organic one
Environment	8. The more dynamic the environment in which an organization finds itself, the more organic it will look
	9. The more complex an environment, the more decentralized the organization will be to deal with it
	10. The more diverse an organization's markets are, the greater will be the propensity to structure them by market
	11. Hostile environments force organizations to centralize temporarily
	12. Imbalances in the environment encourage organizations to selectively decentralize and adapt organizationally
Power	13. The more an organization is determined from the outside, for example by the supervisory board, the more centralized it will be
	14. Power claims of organizational members create overly centralized structures
	15. Management "fashions" influence structure, even when it is inappropriate

Table 3: Situational factors influencing organizational structures (own illustration according to Mintzberg, 1989)

Mintzberg's approach, which relates the distribution of power to situational factors, can be adapted and continued in terms of content. In relation to the subject matter and the object of this empirical research, Mintzberg's approach must be supplemented by the factors of digital maturity. In his research, Mintzberg examines the distribution of power within companies (Burns & Stalker, 1994; Mintzberg, 1989, 1991b; Orantek, 2014; Reeser, 1969). This distribution of power goes hand in hand with leadership responsibility. Here, the connection to the current research paper is clearly recognizable. Because in the current era, a new skillset of leadership abilities is essential. Especially against the backdrop of employee leadership in the digital age, where teams and employees are not tied to a specific location. These leadership skills, which are required against the background of remote leadership, are linked to the traditional approach of Mintzberg (Mintzberg, 1991a; Mintzberg & McHugh, 1985). The digital maturity approach, which considers and evaluates not only the management structure but also the culture of a company, thus optimally complements Mintzberg's approach. Mintzberg's approach only has a strategic perspective on the distribution of power and thus management within an organization. In addition, the corporate culture and leadership behavior can once again be brought into a factual context in this way. This connects the levels of corporate culture and values with the level of leadership competence. (Hoffmann & Roock, 2018; Lang & Scherber, 2018; Maurer & Schulze, 2012; Mintzberg, 1989; Prodoehl, 2019; Scherber & Lang, 2015) Based

on the findings and the contextual relationship, companies can be evaluated in terms of the dimensions of leadership, leadership culture, and corporate culture against the backdrop of digital maturity. On this basis, company typologies can be derived that not only provide information about the digital maturity level of a company but also about the culture and the prevailing management culture. Only in this way it is possible to reconcile the different dimensions of this research work and to evaluate the companies accordingly.

This approach therefore combines the complexity of previous research into leadership and the distribution of power in companies on the one hand and the level of digital maturity on the other. It also succeeds in combining the complexity of these approaches and abstracting them to a minimum of criteria and dimensions relevant for this research.

Considering these dimensions, companies can be assigned to one of the four developed company typologies (shown in the following table 4). These typologies can also be seen as company profiles:

Innovative Company
agile company strong will for continuous change realized strategy
Chaotic Company
means with the tendency to agility will for continuous change planned strategy
Micromanaging company
means with the tendendency to tradition needing conviction to change / doesn't see the advantage in change only disadvantages at first emergent strategy
System compliant company
traditional company characterized by hierarchical structures no to little willingness to change Unrealized strategy

Table 4: Company Typologies to characterize companies according to their grade of digital maturity (own illustration according to Mintzberg, 1989)

The first type of company is the „innovative company“. This type is characterized by the fact that agile values and principles, such as openness, tolerance and diversity, are firmly anchored in the corporate culture. As a result, they also influence the actions of every individual in such an organization. It should be emphasized that this form of values is reflected both in the individual behavior of the individual and in the leadership behavior at the management level. This influences the entire culture of a company. Self-commitment, i.e., the constant willingness to commit to a goal and to contribute to the joint achievement of the goal, is also a basic attitude that is particularly recognizable in agile teams. In such teams in agile organizations, one thing above all is recognizable – the constant will to change and to optimize existing structures and processes. In addition, they are characterized by openness and the courage to try out new things as well as to communicate their own



ideas and points of view transparently and openly. These values shape the interaction within a team and thus also within an organization. Since a great deal of responsibility is assigned to each individual employee in the agile environment and is assumed, parallels to Mintzberg's typologies can be recognized here (types 5 and 6). These types are characterized above all by the fact that power and responsibility are distributed and power is decentralized.

The second type of company can be defined as the „chaotic company“. In this type of company, agility and the willingness to change are fundamentally present. Here, there is a fundamental tendency and readiness for agility. Agile values and standards are understood in principle, but it is difficult to integrate and implement them in daily activities and actions. The company is undergoing a structural change with regards to internal collaboration. However, agile values are understood and must be integrated and firmly anchored in daily activities. Since the company is in a state of upheaval, but the trend is more toward the agile company, companies of this type are often perceived as chaotic, since they are in an organizational upheaval. This is also expressed in the fact that employees are increasingly given more responsibility and there is an increasing decentralization of power. Here, a reference can be made to Mintzberg types 4 and 5. Responsibility is increasingly being transferred to individuals rather than to different management levels. In practice, this type may resemble a typical start-up company. However, it should be emphasized that it does not have to be exclusively a start-up company. More traditional companies that are undergoing a change to a corporate culture that resembles that of a start-up can also fall under this category.

The third type, the „micromanaging company“, is a company with a strong tendency toward traditional behavior. The crucial difference to type 4 is, that this type of company has already recognized the need for change. Companies of this type therefore tend to be traditional, but they have already taken the first steps toward digital transformation and a higher level of digital maturity. Nevertheless, especially here a traditional distribution of power can still be found here in particular. Classic hierarchies in terms of management are evident as well. The management of employees is very narrow here. Employees are given little responsibility and are told very directly what must and must not be done. The interaction in such companies and the relationship between employees and superiors is often perceived as hierarchical and condescending. It is particularly noticeable in such companies that changes are initially perceived as negative and a great deal of convincing has to be done here to show employees and, above all, managers the advantages of a change and to convince them of this.

The fourth type is the „system compliant company“. Companies of this type are traditional companies with hierarchical structures. In contrast to type 3 it can be emphasized, that companies of this type do not yet see the sense of a digital change towards a higher digital maturity at this point in time. Power is very centralized and distributed among only a few management levels. System compliant companies are characterized by less focus on a long-term strategy. These companies are currently traditional companies because the will to change does not exist there and a strategic realignment of the company is ruled out. Here we can see the connection to Mintzberg's types 1 and 2. These types are characterized above all by the fact that power is either centralized, held by just one person, or distributed horizontally to a limited extent.

These company types help to assess and evaluate companies in terms of their culture and the leadership culture that prevails there. It provides information about the dimensions

of the corporate culture, the management structure and working methods within the company in relation to agility and the digital maturity level of the company.

The following figure relates the described aspects of the four identified company typologies to the previously described level of digital maturity of companies, supplemented by the dimensions of corporate and management culture. This connection in terms of content can be represented in the following four-field matrix (Fig. 3) of company types which has been developed within the present research paper.

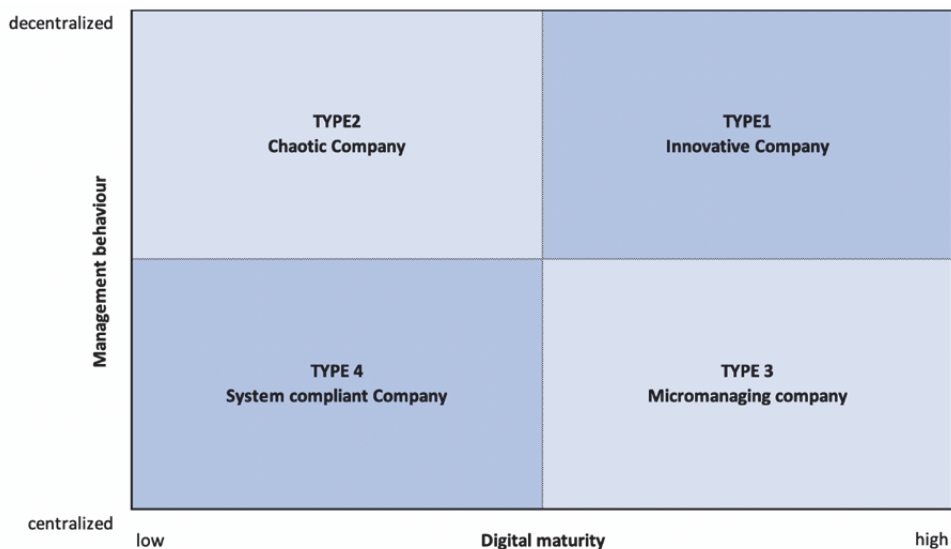


Fig. 5: Matrix of company profiles in relation to leadership behavior and digital maturity (own illustration)

However, in relation to this actual research, it allows us to go beyond that to appraise and classify targeted contacts such as leaders and managers of different hierarchical levels for the present research project. The goal is to interview experts with corresponding leadership responsibilities from companies in all four identified typologies. Therefore, in the context of this research, the interview can be seen as the first level of validation. The questionnaire provides an initial indicator of the respective corporate culture of a company, so that assignment to one of the four corporate typologies (table 3) is possible. Hereby, interview participants can be selected for the corresponding target group. In this way, on the one hand, comparisons within a target group, i.e. a type of company, are possible. Furthermore, comparisons can also be made between the different types of company. This means that companies of one profile or type can be compared with each other. These comparisons can be made in terms of digital maturity, culture, values and leadership behavior. But beyond that, comparisons are also possible for all company types. In addition, not only comparisons of the same companies of one type or profile can be made. Companies of one type can also be compared with companies of another type.

RESEARCH PROJECT

What has not been sufficiently investigated are the challenges leader of different hierarchical levels face in practice. And whether these challenges consider with the findings of the SLOAN Management Review and Deloitte study. As well as how these challenges can be solved by virtual leadership during a time in which remote work is the new standard. However, leadership and leadership behavior must be considered in the context of the respective corporate culture and the respective team. The graph below shows this interplay. On the outermost level, it shows the external influences, societal and structural changes that affect the organization. At the macro level, it shows the corporate culture and its values. On the meso level, the graph shows the leadership and leadership competencies required to, in turn, lead a team, which is shown in the following graph on the micro level. Through the respective leadership behavior, which is influenced and determined by the external influences and the macro level, the leader has an impact on the team. In this way, he or she influences the cooperation within the team.

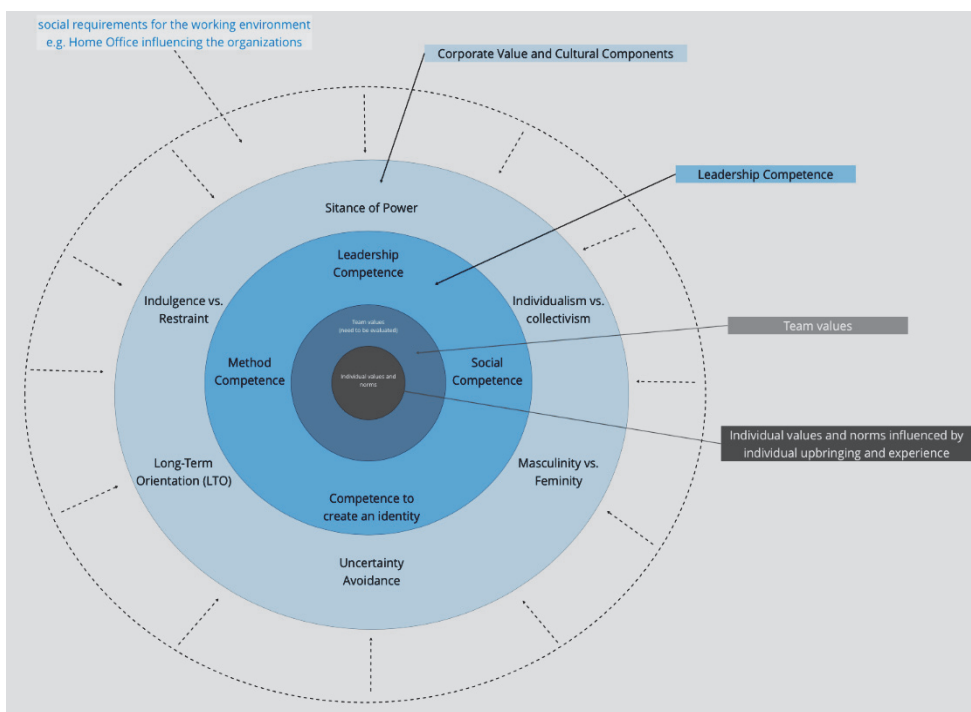


Fig. 6. Dimensions of the research (own illustration)

Digital maturity, previously researched in collaboration between Deloitte and the SLOAN Management Review, is an aspect that influences corporate culture and collaboration within an organization. The level of the digital maturity indicates how digitally a company operates. It also provides information on how employees collaborate within a company. This is evaluated on a five-level Likert scale taking the following six level (Fig 2 “Rating of company culture regarding the company’s digital maturity”) into account: agility, risk appetite, decision making, leader structure, passion for word and work style.

RESEARCH QUESTIONS

In order to be able to conduct qualitative research in a specific manner, it is essential to define one or more research questions that reflect the core of the investigation. Both the question and the applied methods for the later evaluation and analysis of the research results are based on the five postulates of qualitative research according to Philipp Mayring. According to Mayring's first postulate, the human being, as the research subject, is the object of human science research and is at the center of it with his or her individual attitudes and motives.

Following this and in relation to the basics presented in the theory part of this paper, five central research questions of this human science investigation can be defined as follows:

1. How can the dimensions of high-performing interdisciplinary teams be positively influenced by leadership behavior virtually?
2. How does digital leadership influence corporate culture and vice versa?
3. How does the virtual collaboration of high-performing teams influence the corporate culture of companies?
4. Which leadership characteristics of virtual leadership can influence the dimensions of high-performing teams?
5. What factors influence the performance of teams and bring them to high-performance in an existing organization and its corporate culture?

RESEARCH DESIGN

In order to answer the questions described above, the qualitative study will be conducted according to Mayring (2016). To answer the research questions, 5 interview participants from a total of four groups will be surveyed. These four groups represent the four identified company typologies to the previously described level of digital maturity of companies, supplemented by the dimensions of corporate and management culture (DEVELOPMENT OF A CLASSIFICATION OF COMPANY PROFILES) These groups are formed according to their digital maturity level based on the previously defined four company typologies - the innovative company, the chaotic company, the micromanaging company and the system compliant company. In order to be able to assign the interviewees to the groups and to evaluate and interpret the qualitative research results of the interviews in a structured manner, the interview participants also completed and evaluated a previously prepared evaluation sheet. The evaluation sheet contains the aforementioned dimensions of digital maturity, supplemented by the dimensions of social competence, culture and values, and methodological competence. For each dimension, four to eight characteristics were defined to describe the dimension. Behavioral anchors were defined for each of these characteristics, which can then be rated and assessed by the interview participants on a 5-point Likert scale. The research questions will be investigated using a qualitative method. This method is chosen because it allows for an in-depth, emotional understanding of motives and motivations for the statements made, and thus appropriate recommendations for action can be derived (Nuttall, Shankar, Beverland (2011), p.153). This research paper focuses exclusively on the study of group four, the system compliant company. The other three types will be examined and described as part of the author's dissertation. This in turn will then also allow for a comparison of the four typologies with each other.

PRESENTATION OF THE INTERVIEWEES

The group of interview participants was a very heterogeneous group of executives. A total of three male and two female executives were represented. The interview participants in this group had an average age of 46. When selecting the interview participants, care was taken to ensure that executives from different management hierarchies were also interviewed. In total, three participants belonged to the higher management of the companies and two participants to middle management. Diversity was also considered regarding to management experience of all Interviewees. In this regard, two of the interview participants had less than five years of leadership experience and three of the interviewees had more than five years of leadership experience. The following table gives an overview of the participants

Identifier	Gender	Age	Management Hierarchie	Years of Experience
D1	M	39	Middle	3
D2	F	56	High	15
D3	F	41	High	7
D4	M	54	High	13
D5	M	38	Middle	2

Table 5: Interview Participants group 4 (own illustration)

All five leaders had a different focus in terms of content and different professional expertise.

METHOD OF EVALUATION

According to Mayring's third postulate, the central objective of qualitative research is to open up a selected object of investigation with the help of one's own interpretation of the research results, since the results of the surveys are not completely transparent. Due to the non- transparency and the hereby missing objectivity and reliability, a qualitative evaluation, analysis and interpretation of the results must take place.

In the context of the research of this thesis, the methodology of Grounded Theory was chosen, because the procedural principles and working principles formulated in this theory have a high degree of generality. This facilitates the applicability of the theory to the research subject matter contained in this thesis. By means of grounded theory, a representation of the researched data to practice is only possible.

Since several dimensions of the influenceability of leadership behavior are examined in this research work this causes a certain complexity. Due to the given complexity of the subject matter, an open hypothesis finding should be given.

However, the hypotheses are not identified until after the qualitative survey has been conducted and evaluated, so there is no need to falsify previously formulated hypotheses. This is possible due to the applicability of grounded theory according to Charmaz (Charmaz, 2014).

The evaluation of the qualitatively collected data is to be carried out by coding. For this purpose, the interview recordings are evaluated individually and coded in three steps.

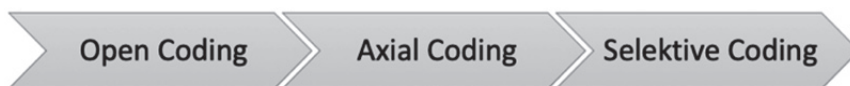


Fig. 7. A Three-step coding process (adapted from Hussy, Schreier, Echterhoff, 2013)

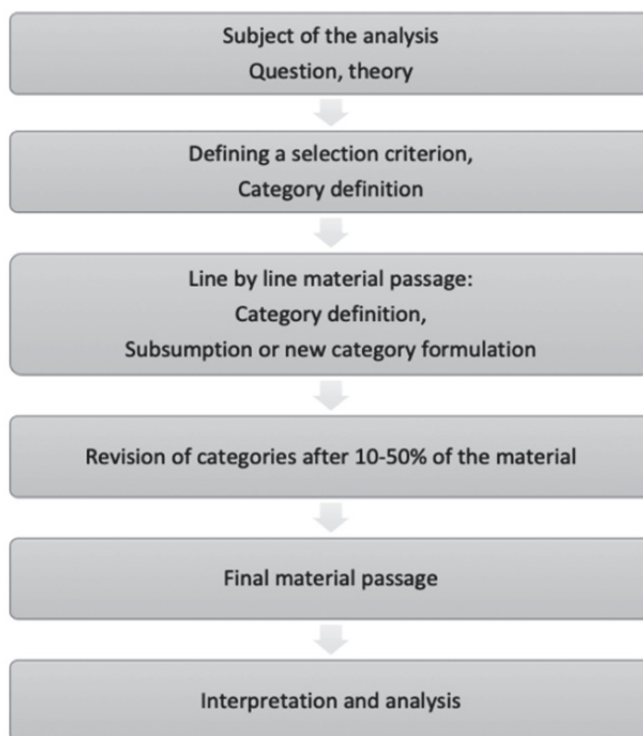
At the beginning, the documented and written down records are worked through line by line and central conceptualizations expressed by the interviewees are recorded. The open coding is therefore very close to the data.

This is followed by axial coding, whereby an abstraction of the open coding takes place. This means that the previously recorded open codes are summarized into a generic term, so that categories can be identified from this, which once again structure the data material.

In the context of selective coding, the individual categories are related to each other so that theories can be formed (Hussy, Schreier, Echterhoff, 2013).

For a simplification of the assignment of text components to possible categories, Mayring's process model of category formation is used.

For this purpose, the categorization dimension and the level of abstraction in which an evaluation is to take place must be defined. Then the material is worked through line by line as soon as text passages are found that fit a categorization dimension, a category is developed. This category is then given a name. As soon as further text passages, which fit to this category, were identified, these are likewise provided with the respective category designation. Subsequently, a categorization guide can be developed from this, which summarizes the interview content categorically into content foci. In this way, a set of categories on a particular topic can be created, which can be interpreted in relation to the research question and theory. In addition, there can be a quantitative evaluation in which, for example, the frequency of the categories is recorded and measured (Mayring, 2016).



**Fig. 8. Process model of inductive category formation
(own illustration based on Mayring 2016).**

CATEGORIZATION GUIDE

The hypotheses investigated in this thesis were derived from the theoretical basis and the current state of research (CURRENT STATE OF RESEARCH). The definitions of the individual categories were also given. On this basis, the hypotheses were explored. For this purpose, the method of structured qualitative content analysis was used (Mayring, 2016, p. 120). Based on the theory, the interviews were examined and the results were assigned to the individual subcategories and supercategories. Subsequently, the results are processed. It should be noted here that it is possible for new categories to be added that are not yet included in the theory. A subsequent extension of the theoretical model is thus possible.

Based on the theory, it was possible to form upper and subcategories (Hussy et al. 2013, pp. 255-259). By using content analysis, it is possible to systematically examine the text against this background and to illuminate the meaning of the individual categories and the effects of these. Assignment in this case is based on the approach of content coding units (Hussy et al. 2013, pp. 255-259). Thereby, the utterances of the interviewed persons are assigned to the individual subcategories and thus to the subcategories. The following table shows an abstract of the created coding.

Color	Top category	Subcategory	further description	Code (Example)	Rating (example)	Document name
	Leadership	Empowerment and self-organization		Within my career level, I can make a lot of decisions. But outside of that, we always have to back up with the next higher career level.	0	Transkr. Person D5
	Leadership	Vision		Leadership is setting the lead and supporting them in their development, sharing experiences, being a guide.	++	Transkr. Person D2
	Leadership	Motivation		Demonstrate positive perspectives that trigger motivation and place involvement in the overall context.	+	Transkr. Person D3
	Leadership	Cross-functional thinking		I think it's a shame that many in the company don't engage with expertise of colleagues. Expertise is often questioned and one is predominantly busy fighting for and justifying one's own opinion and expertise as an expert in a field.	++	Transkr. Person D3
	Methodological competencies	Identify changes		I see the challenges but I just have no idea and no idea how to make it better. I lack the impulses that are timely from experts and others.	-	Transkr. Person D1
	Methodological competencies	Questioning status quo		We try to improve, but we are also often just too much in the daily doing and don't take enough time for it.	--	Transkr. Person D1
	Methodological competencies	Openness to new ideas		Listening and also allowing counterarguments	0	Transkr. Person D3
	Methodological competencies	Giving space		I coach and support them and they learn a lot from me.	0	Transkr. Person D2

Fig. 9. Illustration of the coding using the example of the categories „Leadership and Social competence“ (own illustration).

In order to be able to evaluate the impact of the upper categories and subcategories taken from theory on employer attractiveness, the statements of the interviewed persons were evaluated. If a subcategory was presented as the most important or very important aspect in a statement, it was given a rating of (++). If it was considered important, the statement received a rating of (+). If an aspect was classified in the medium range, it was given a rating of (o). If an aspect was rated as unimportant, it received a rating of (-), and if it was rated as least important, it received a rating of (--).

RESEARCH FINDINGS

The present results refer exclusively to company type four the "system compliant company". The results show that the digital maturity level of company type four is not very pronounced. The digital maturity level of the type has only achieved a value of 69 on a scale of 200. The corporate culture is also very weak in this company type - the culture achieved a value of 117 out of a possible 300 points. Social competence achieved a total score of 53 out of a possible 100 points. Leadership behavior is just above this with a value of 54 out of a possible total of 100 points. Methodological competence is the most pronounced in this type of company, with a value of 68 out of a possible 100 points.

The evaluation of the research results confirms that there is still a great deal of potential in the area of digitization that is not yet being exploited. Figure 6 below shows a comparison of the results for all survey dimensions (Digital Maturity, Leadership, Social Competence, Culture and Values and Methodological Competence).

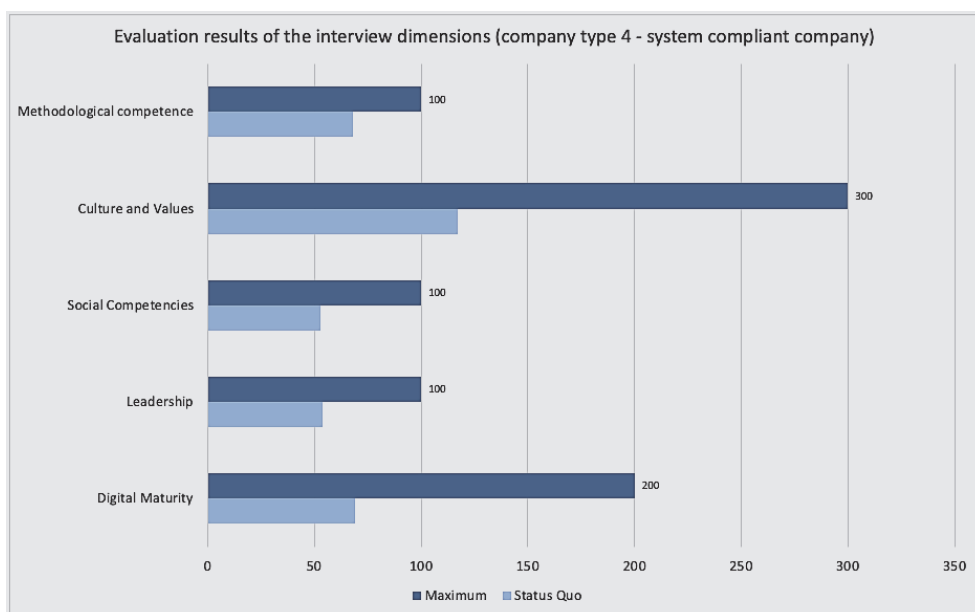


Fig. 10. Evaluation results company type 4 (system compliant company) (own illustration).

If we take a closer look at the individual dimensions of the research work, each of these dimensions can be presented individually. The first dimension is „Digital Maturity“. This is the least pronounced dimension of company type 4. Within this dimension, it can be noted that the competence of „decision making“ is the most pronounced with a value of 16. This

means that, according to the research participants' own assessments, decisions are predominantly data-driven. This clear characteristic can also be attributed to very clearly defined competence profiles and management hierarchies. These hierarchical levels mean that decision-making authority and responsibility are decentralized and distributed among several heads. The characteristics that are weakest in this company type in the digital maturity dimension are agility, risk-taking, and management structure. All three characteristics scored a value of 10 among the five participants. The item „Enthusiasm and Passion for work“ achieved a value of 11 and is thus also not very strong. This means that the respondents cannot have very much fun and passion for their work. The reasons for this can be very varied and are possibly attributable to cultural factors in the corporate culture. However, in order to be able to derive clear trends on this, further research and the evaluation of research results from other types of companies is required. The last point in this dimension is „Way of Working“ - here, too, only a value of 12 was achieved, which is still very far away from a possible 20 points. This value can also be interpreted as very typical for this type of company. Due to clearly defined management hierarchies, the way of working here is very independent and silo-like. This means that everyone is responsible for their assigned field of action. Here, too, interactions with cultural dimensions could arise, but these need to be explored further. Figure 7 below shows the consolidated research results and characteristics of the „digital maturity“ dimension of company type 4.

Characteristics of the subcategories "Digital Maturity" (company Type 4)



Fig. 11. Characteristics of subcategories „Digital Maturity” of company type 4 (system compliant company) (own illustration).

The next dimension of the survey is the „leadership“ dimension. A total of four characteristics could be identified for this dimension: empowerment, vision, motivation and cross-functional thinking. For each of the mentioned character styles, a total of 25 points

could be achieved by five research participants of company type 4. The results of this dimension show that vision is the weakest with a total score of 12, so it is striking that a vision is not present or known by the research participants. Above all, visionary thinking and a strategy are particularly significant with regard to the digital orientation of companies. That this value is therefore not very pronounced in a very traditional company is hardly surprising. Nevertheless, this is a very essential and success-decisive point in order to develop from a system-compliant company into a more agile and high-growth organization. The other three characteristics are assessed very evenly here and each received a value of 14. Figure 8 below once again presents the results graphically.

Characteristics of the subcategories "Leadership" (company Type 4)

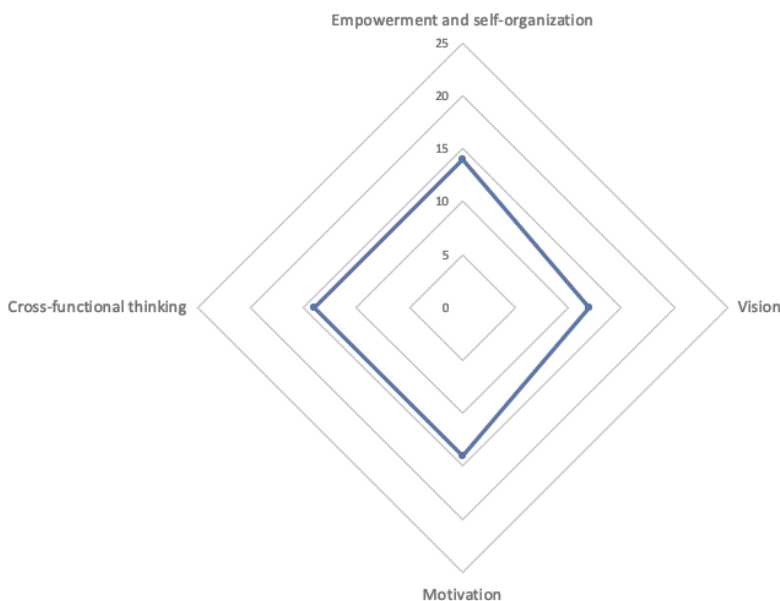


Fig. 12. Characteristics of subcategories „Leadership” of company type 4 (system compliant company) (own illustration).

The third dimension of the survey is "social competence", and a total of four subcategories can be identified for this dimension: empathy, communication, moderation and conflict resolution. Each of these subcategories can achieve a maximum score of 25 points. In this dimension, the two subcategories communication and moderation are rated worst. They each achieve a score of only 10 points in total. However, the fact that both of these values are similarly weak shows that there is agreement among the research participants here. All of those involved stated during the interviews that personal ties in particular had suffered enormously as a result of remote working. All of the managers interviewed stated that they find it difficult to establish a close, trusting bond with their employees remotely. The weak value of moderation can also be attributed to the fact that the way meetings are held in a professional context has changed significantly. They require much more preparation and moderation in order to be able to hold constructive discussions

and bring about decisions. Three out of a total of five respondents stated that they are currently overburdened with this way of conducting and holding meetings and that they lack support in this regard. The most pronounced subcategory is "conflict resolution" with a total value of 17, which shows that the executives surveyed are very keen to identify existing and potential conflicts at an early stage and to address them openly. The "empathy" subcategory is also strong, but slightly lower than the previous subcategory, with a value of 16 overall. This value is also consistent with the interview results, which indicate that a certain sensitivity is required to address employees' individual concerns, especially during periods of remote working. The pandemic in particular overwhelmed many and fueled fears. Working predominantly alone in the home office meant that many employees lacked daily interaction with colleagues. Figure 9 below shows the results of the „Social Competence“ dimension once again in a graphic.

Characteristics of the subcategories "Social Competence" (company Type 4)

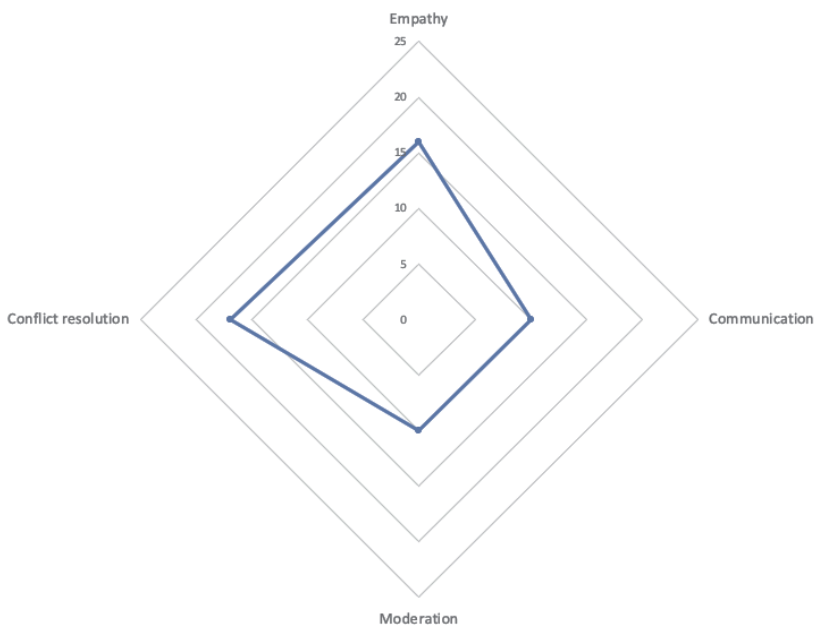


Fig. 13. Characteristics of subcategories „Social competence“ of company type 4 (system compliant company) (own illustration).

The penultimate dimension is the „Culture and Values“ dimension. Most of the subcategories could be evaluated for this dimension. The subcategories belonging to this dimension are: trust, appreciation, transparency, reflection, error culture, openness, responsibility and solution orientation. The subcategory with the lowest score in this dimension is reflection, with a total score of 12. The dimensions solution orientation and error culture are also weaker, each with a score of only 13. These comparatively weak scores show that the corporate culture of the type four company is characterized by a great deal of uncertainty. This uncertainty could be due to the fact that employees are afraid of making mistakes. At the same time, however, there is little reflection within the teams on

how mistakes or challenges can be solved together. One reason for this could be the strongly hierarchical management structure in these companies. The subcategory achieved a value of 14 and is therefore in the midfield. The rating of this value confirms the weakly rated subcategories of the error category, for example, and are mutually dependent. For where there is no trust, there is fear and reticence among employees. When fear prevails, people also tend to be reluctant to admit mistakes and stand by their weaknesses. The results also show that the "transparency" subcategory achieved a mean score of 15 overall. Respondents indicated that transparency is very important to them. The subcategory of "openness" achieved a score of 16 overall, indicating that openness to innovation is basically present among executives in company type four. The two most pronounced subcategories of this dimension are appreciation and responsibility, with a total value of 17. Here, too, it can be assumed that these two values are closely related. When employees experience appreciation and recognition for their work, they tend to be willing to take on more responsibility. Figure 10 below shows the research results for this dimension for company type four.

Characteristics of the subcategories "Culture and Values" (company Type 4)



Fig. 14. Characteristics of subcategories „Culture and Values” of company type 4 (system compliant company) (own illustration).

The last dimension of the interview guide and of the present research work is the dimension „methodological competence“. Subcategories can also be formed for this dimension. A total of four subcategories emerged: identifying changes, questioning status quo, openness to new ideas and giving space. The subcategory with the lowest score is

"giving space. This value is again explained by the organizational structure and the distribution of power in this type of company. This is characterized by clearly defined hierarchies and a corresponding decentralization of power. The subcategory "identifying changes" achieved a value of 16 and is therefore in the midfield. The category "questioning status quo" achieved a value of 18 and is thus the second highest in this dimension. The fact that these dimensions achieved a comparatively high value is hardly surprising, since the "openness" category already achieved a similarly high value in the "culture and values" dimension. This confirms once again that there is a certain willingness to change among managers. This statement is also consistent with the findings that two-thirds of the executives surveyed are unable to cope with implementing the innovations associated with digitization. The highest value of 20 in this dimension is in the category "openness to new ideas. This value once again confirms the statement that executives understand the meaningfulness of change and are prepared to break through existing paradigms. Figure 11 below summarizes the results of the "methodological competence" dimension.

Characteristics of the subcategories "Methodological competence" (company Type 4)

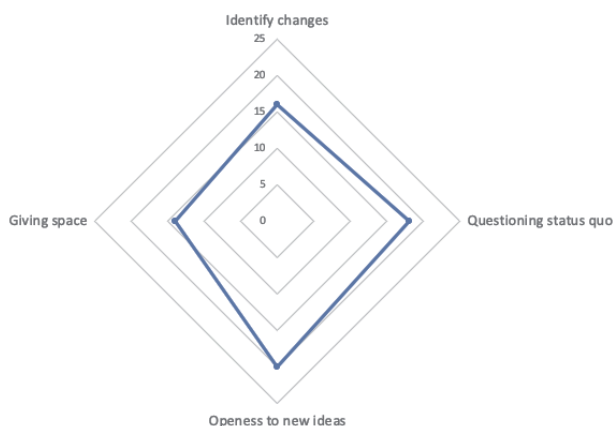


Fig. 15. Characteristics of subcategories „methodological competence” of company type 4 (system compliant company) (own illustration).

FINAL REMARKS

Based on the research findings, it can be concluded that the digital maturity approach, which was researched by Deloitte in collaboration with the SLOAN Management Review, provides only a limited view of corporate practice. This research approach includes and evaluates agility in companies, as well as the willingness to take risks and decision-making within a company. The management structure is also considered in this approach. This approach also includes two content themes that assess the way of working within a company, as well as the passion for work. These content themes were identified in this research. However, these were enriched and supplemented with additional dimensions in terms of content. They were supplemented by the topic of values and corporate culture, teams and collaboration, and leadership behavior. For this purpose, an interview guideline was developed within the scope of the present research paper to capture these content-related focal points.

The pretest validation of the interview guide conducted as part of this research contribution revealed that content categories can be formed in the evaluation that optimally complement the previous state of research and the digital maturity approach of Deloitte and SLOAN. The approach can be supplemented by the dimensions of leadership, social competence, culture and values, and methodological competencies through this research work. A breakthrough in research can be seen in the fact that company typologies and classifications can be formed on the basis of the findings obtained. These four company typologies help to classify and evaluate companies in terms of their readiness for change, their level of digital maturity, and the added dimensions of leadership behavior and corporate culture. These company typologies were related to the digital maturity approach and leadership behavior within the matrix presented. In the present research work, these content-related foci and dimensions were not only taken into consideration they were related to each other. This leads us to a holistic view and a holistic research approach that relates and unites individuals, teams within organizations, leaders, and corporate cultures. With regards to the research results achieved for the type of company, the first interactions of some dimensions and subcategories can already be identified and confirmed. Above all, the dimension "culture and values" achieves a very high ranking and is to be seen as a central and important component of the research contribution. However, it remains to be further explored how the individual categories of the other three company types are assessed. This will also enable a comparison of the company types with each other and further valuable conclusions to be drawn.

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