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The implications of an increasingly dynamic business environment on change management requirements in German organisations

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Abstract

Under today's circumstances, conventional change management approaches, which are mostly based on stability and controllability, seem to be reaching their limits. Even the near future is quite unpredictable, the dynamics in the business environment are high and change cycles are becoming shorter. Against this background, the paper aims to define the requirements for change management in a dynamic business environment. For this purpose, an online survey with employees in Germany was conducted. 321 valid data sets of respondents from mainly hierarchical and agile organisations in various industries were obtained. The gained data was primarily evaluated quantitatively with the methods of frequency and correlation analysis to test the previously-formulated hypotheses. The results show that employees perceive that change management itself needs to evolve fundamentally to continue to have a significant impact. According to the research, successful handling of organisational change in a dynamic business environment primarily requires a high degree of transparency and open communication, an appropriate culture and mindset as well as holistic collaboration. Among other factors, high speed and flexibility in the change management approach also play an important role. In this context, experimentation and step-by-step adaptation are furthermore crucial.

Keywords: Change management, agile change management, dynamics, complexity, VUCA-World

JEL codes: M21, M54, M59

1. Introduction

Many well-known and widely-used change management approaches are based on concepts of stability and control. However, today's reality looks very different from the past (Worley, Mohrman, 2014; Trost, 2019). The business environment is highly dynamic and complex, while the future is quite unpredictable. In this context, conventional change management approaches often reach their limits and companies find it difficult to manage change successfully (Jick, Sturtevant, 2017; Le Grand, Deneckere, 2019). At the same time, fast adaptation and further development are becoming increasingly important to achieve success under the rapidly-changing conditions in the business environment and hold one's own against the competition in the long term (Worley, Mohrman, 2014; Leopold, Kaltenecker, 2015). However, there is an obvious lack of approaches to how change management can be successful in a dynamic business environment. To solve this problem, it is first necessary to answer the question of what the requirements for change management look like in times of high dynamics. To begin with, this question was examined in the course of a qualitative literature analysis according to Mayring (2015). In the next step, an online survey with employees in Germany was conducted to verify and supplement the first results. Accordingly, the hitherto purely theory-based investigation can be supplemented with practical data and the qualitative research can be supported by quantitative data. The online survey conducted and the results obtained are the main content of this research paper.

2. Theoretical Framework

lick and Sturtevant (2017) claim that the forces for change impel organisations to transform and develop new solutions. At the same time, the authors note that change management has hardly been subject to its own improvement to date, which is "a bit ironically because the very field itself has admirably been dedicated to helping others to change" (Jick, Sturtevant, 2017, p. 35). According to the authors, it is now time for change management to "look in the mirror" (Jick, Sturtevant, 2017, p. 35) and start to reposition itself. Today's business environment is highly complex, uncertain, volatile, and ambiguous. Many parameters change simultaneously and the possibility of planning has been significantly reduced. According to Wimmer and Von Ameln (2019), today's companies are exposed to the growth of volatility in their relevant environments. The variety and number of change initiatives have increased enormously over recent years (Leopold, Kaltenecker, 2015). Following Deloitte, the past decade has been marked by serious changes, whose speed could only be described as exponential (Volini, et al., 2020). Bain & Company claims: "Today, change is a journey to the unknown" (Hultman, Lesesne, 2019). Boston Consulting Group further states: "In business today, change isn't merely constant; it's exponential in pace and scope" (Mingardon, et. al., 2018). According to Worley and Mohrman (2014), "environmental change is no longer a series of disruptions spaced by periods of relative calm" (Worley, Mohrman, 2014, p. 216). In fact, "the leap in complexity, connectivity, interdependency, and speed, compared to 20 or 30 years ago, has created an environment that is radically different [...]" (Worley, Mohrman, 2014, p. 214). This is why the change management of the past can hardly be compared to today's challenges of organisations. Challenges have rather also increased for change management (Wimmer, 2011). Conventional methods are now limited and a variety of

external factors are causing us to rethink former approaches and assumptions to change (Le Grand, Deneckere, 2019; Jick, Sturtevant, 2017). An examination of current challenges in internal change management at Commerzbank and Deutsche Bahn by Steinberg and Pfarr (2019) shows that new approaches to change management are emerging and other competencies for change managers and change consultants are required. New complex changes are apparently not solvable with old tools and ways of thinking, as also Boston Consulting Group clearly states (Backx, et. al., 2019). Conventionally, change tended to be described as extensive and of strategic importance. It was a matter of moving from an old stable state to a new one (Trost, 2019). Study results of Higgs and Rowland (2005) show that change approaches that assume complexity have a positive relationship to success, whereas in particular, a directive change approach is ineffective in most contexts. The authors therefore assume that the reason why so many change processes have failed may be that mainly formal, programmatic change approaches are used. According to Higgs and Rowland (2005), leaders who see change not as a one-off event that can be managed, but as a continuous process taking place around them at all times, are therefore more likely to handle change successfully. Opinions among authors differ as to how the mentioned changes influence, transform or even completely question change management. Many authors stress the current importance of change management even more. "In today's world, change is the rule rather than the exception. Professional management of this change should be on the agenda of every successful organisation" (Leopold, Kaltenecker, 2015, p. 99). Another example is that in a recent publication, the consultancy PwC predicts that the importance of the transformation and change management function will increase from 72% in 2019 to 86% in 2025 (Bruch, et. al., 2019). On the other hand, a few authors even speak of the death of change management in this context, or at least of the death of its conventional forms (among others: Worley, Mohrman, 2014). However, there seems to be a broad consensus at least on the fact that companies, like Worley and Mohrman (2014) suggest, have to somehow "[...] effectively adapt and co-evolve with a rapidly changing environment [...]" (Worley, Mohrman, 2014, p. 214) in order to survive and that the actual meaning as well as understanding of change management are fundamentally changing (Trost, 2019; Steinberg, Pfarr, 2019; Jick, Sturtevant, 2017). Moreover, many would probably agree with Boston Consulting Group that "Organizations absolutely must do a better job of managing change [...]" (Keenan, et. al., 2012). Alternatively, as Jick and Sturtevant (2017) put it: "[...] the world seems to be demanding more of Change Management than is routinely delivered" (Jick, Sturtevant, 2017, p. 66). It was already 2005 when By (2005) claimed that knowledge about organisational change management should be expanded and success factors for managing change should be identified due to the low success rates of change initiatives and a shortage of empirical research. Little has changed in this respect so far. In fact, the situation has rather worsened as change today is not only even faster but also more radical than it has been in the past. In a recent publication, the consultancy PwC shows that the level of maturity of the preparation for most Human Resources functions of the future is quite modest (compare Bruch, et. al., 2019). This applies in particular to transformation and change management. Following the study, only 25 % of the Human Resources Managers consider themselves as well prepared for future challenges in this area. According to PwC, this shows that there is enormous pressure to act. It is necessary "[...] to close [...] blatant gaps in the shortest possible time [...]" (Bruch, et. al., 2019, p. 8, translated by the author). While Higgs and Rowland (2005) also emphasise that there remains limited research on what leads to successful change, the authors believe that further research should not aim to look for a

descriptive theory but rather suggest some simple guidelines and broad general direction for successful change.

3. Methodology and Data

Based on the situation and challenges outlined above, the research aims to answer the following research question: What are the requirements for change management in a dynamic business environment?

In order to answer this question, an online survey was conducted. The following hypotheses, which were derived from the examined literature, should be tested:

- **Hypothesis 1**: Feeling overwhelmed by the speed of change correlates with the requirement for change management to also provide stability and security.
- **Hypothesis 2**: The dynamics of the business environment correlate with the requirement of continuous, incremental development of change initiatives.
- **Hypothesis 3**: The dynamics of the business environment correlate with the requirement of fast and flexible adaptation of change initiatives.
- **Hypothesis 4**: The dynamics of the business environment correlate with the requirement that changes must be initiated and promoted by the employees themselves to a greater extent.
- **Hypothesis 5**: The role of digitalisation in companies correlates with the requirement to increasingly use digital methods in change management.

The questionnaire was carried out via an online platform. The target group for the survey were employees in Germany. As the topic of organisational change affects everyone in an organisation, there was no need to limit the survey to change management experts. The structure of the questionnaire was divided into different parts. In the beginning, background information on the research project and its objectives, as well as general information on data protection, the anonymity of the data obtained, and the voluntary nature of participation, were given. Subsequently, questions asked for sociographic data of the respondents as well as data on the organisation for which they work. In the following, questions regarding organisational change, change management and, ultimately, agile change management in particular were queried. There were mostly several possible answers, one of which had to be selected. For scaling questions, a fivepoint Likert scale was usually used. The response options here range from strong agreement to strong rejection of a given statement, for example. A few questions also offered the possibility of free-text input to allow the respondents to express their thoughts, give explanations or make individual additions. As reliability is essential for quantitative research, the question about what is an appropriate sample size for the survey is inevitable. The exact size of the basic population and the degree of its homogeneity cannot be precisely determined in the present case. According to Destatis (2020), the Federal Statistical Office in Germany, there were about 41 million employees in Germany in 2020. The quality of a sample is measured by the accuracy with which the actual value of a full data collection is determined. Depending on the sampling error, the necessary sample size can be calculated to achieve results that are as representative as possible. In the case at hand, a confidence level of 95% and a confidence interval of 5.5 results in a required sample size of 317, which gives a good indication. However, the calculation assumes that a random sample of the total population is existing. If this is not the case, one cannot fully rely on the confidence interval. The sample size was calculated using the following formula:

$$Ss = \frac{Z^2 * (p) * (1-p)}{c^2}$$

$$Percentage picking a choice, in decimal form (0.5 used for sample size needed)$$

$$Confidence interval, in decimal form (e.g. 0.055 = ± 5.5)$$

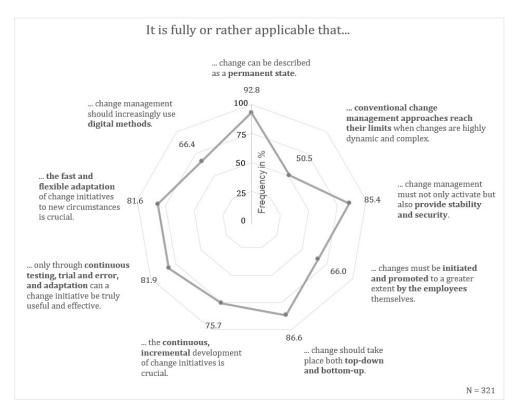
There were 784 clicks on the online questionnaire. Finally, 321 respondents completed the questionnaire, 145 of them are male and 173 female (3 people answered the question about their gender with "diverse" or did not want to give any information). While 4.7% of the respondents are under 25 and 1.6% are over 64 years, the majority (93.7%) are between 25 and 64 years, most of them between 25 and 34 years. 72.6% of the respondents do not have a management position in the company they work, compared with 27.4% who do. 76.3% of respondents work in a hierarchical organisation (e.g. matrix organisation, line organisation, etc.), whereas 17.4% work in an agile organisation. 6.3% of participants stated that they work in other forms of organisations and usually named a mixture of agile and hierarchical. The industry sectors in which the respondents work are mixed (36.4% mechanical engineering/ automotive; 13.6% consulting; 7.9% electronics/ IT; 6.3% energy/utilities/pharmaceutical/health; 6.3% retail/consumer/transport/ logistics; 6.0% media/ telecommunications; 6.0% banks/ insurance; 4.8% public administration; 12.7% others). The online survey was distributed through posts on professional social platforms, such as LinkedIn or Xing, as well as via private and professional contacts. Those who received the universal link to the survey this way consequently had to actively decide to participate. The sample of the online survey must therefore be seen as a convenience sample. This means that the composition of the sample is not controlled. Hence, statements on hypotheses and correlations can be made, but it cannot inevitably be assumed that the sample is a representative image of the basic population and that the results can be directly transferred to it. The data collected was primarily evaluated regarding the frequency of certain characteristics and the correlation between different variables. The aim here was to also verify or falsify the previously formulated hypotheses. The answers gained in the online survey were thus mainly evaluated quantitatively with descriptive and inference statistics. In detail with the methods of frequency and correlation analysis. The statistics programme 'IBM SPSS Statistics' (compare IBM Corp., 2020) was primarily used to perform the statistical evaluation. In addition, the statistical software 'R' (compare R Core Team, 2021) was used, as it offers further advantages, particularly regarding the analysis of correlations. The few open questions with free-text answer possibilities were furthermore evaluated by a qualitative content analysis according to Mayring (2015). In this process, relevant aspects of the data material were extracted and summarised by forming different categories. Likewise, Kučerová, Skýpalová and Blašková (2015) used the method of examining data dependencies for the coded answers of the questionnaire survey. In the context of the statistical analysis the variables and the corresponding answer possibilities (values) were coded in the course of the evaluation (e.g. variable CM02_11: Transparency, possible values: 1 = Fully applicable, 2 = Rather applicable, 3 = Partially applicable, etc.). The data is scaled nominally (e.g. gender: 1 = Male, 2 = Female, 3 = Diverse) or ordinally (e.g. age: 1 = Less than 25 years, 2 = 25 - 34 years, 3 = 35 - 44 years, etc.). This means that it is possible to make statements about whether data are equal or unequal or additionally express a ranking between the values of the variable. Possible correlations were examined with a polychoric correlation. For Likert items up to a maximum of seven values that belong to an artificially polytomised characteristic, this is a suitable method. The significance of the correlations was checked using the chi-square test. Accordingly, statements can finally be made about correlations of different variables, but not about the direction of the correlation. Possible causalities would have to be tested separately in a follow-up study (Martens 2003; Eid, Gollwitzer and Schmitt, 2017). To make a statement about the strength of the relation of the variables, the classification after Cohen (2013) was used. The underlying result data set of the survey including the coding guideline and survey questions can be found in the corresponding SPSS and R files uploaded in Harvard Dataverse (compare Grocholski, 2021).

4. Research Results

4.1. Main outcomes of the online survey

The respondents were asked to assess the organisational environment of the company they work for, as well as current and future demands on their company. The following picture emerged: Only 13.6% of the respondents consider the business environment of the company in which they work as very stable and 28.8% as rather stable. Most of them think it is in principle very or rather dynamic. The competitive situation is considered highly or rather competitive by 78.7% of the respondents. The current requirements for the company are assessed as very complex by 46.2% of those surveyed and as rather complex by 45.5%. Only 8.3% assess the current requirements as rather or very trivial. Furthermore, 76.4 % of those surveyed estimate future demands on the organisation as very or rather ambiguous/uncertain. 78.8% of the respondents say they are confronted with change very often or often. When asked how the handling of those changes by the organisation is generally perceived, most of the respondents (39.3%) answer that it depends on the situation. 34.6% think that the handling of change is very well or rather good. The remaining 26.2% say rather bad or very bad. Looking at the assessment of the handling of change by the organisation depending on the job level, it is noticeable that managers describe the approach to a much higher percentage as very well or rather good than respondents without a management position (48.2% vs. 30.2%). In contrast, 28.9% of those who do not hold a management position say that the handling of change is very bad or rather bad, while only 17.6% of managers do so. Considering the topic in dependence on the organisational form, it is noticeable that employees from agile organisations describe the handling of change by the company at a much higher percentage as very well or rather good than employees from hierarchical organisations (58.5% to 29.7%). The survey also asked how the respondents came to their assessment of the organisation's handling of change. Of respondents who rated the handling of change by the organisation as rather good or very well, flexibility and speed, as well as high transparency and open communication are mentioned most frequently. Looking at the answers of the respondents who evaluated the handling of changes as very bad or rather bad, a coherent picture emerges. It can be seen that, here again the topics of flexibility and speed as well as transparency and communication are very decisive, and their absence leads to a poor assessment of the handling of change. Overall, it is noticeable that the relevant topics are quite mirror. Only providing security and stability as well as continuity/ sustainability are not mentioned as reasons for a good handling of change, but the lack of these as a reason for a bad handling. On the other hand, experimenting and continuous adaptation are cited as a reason for a good handling of change, but the absence of these topics is not mentioned as a reason for a bad handling of change. Other aspects mentioned in connection with the organisation's handling of change include strong competencies at the management level, a corresponding culture/ mindset, holistic participation/cooperation, experimentation/adaptation, a common goal/clear vision or the use of digital methods. Besides these aspects, 43.0% of the respondents state that they often or very often have the freedom to initiate changes in their working environment themselves. In the context of another question, 62.3% of the respondents, on the other hand, state that changes are often or very often initiated by senior management. Among the respondents without a management position, only 36.0% state that they can initiate changes themselves very often or often. Considering the form of organisation in this context, it is recognisable that 66.0% of the respondents from agile organisations often or very often have the freedom to initiate changes themselves, whereas only 37.9% from hierarchical organisations do so. However, 85.7% of the respondents say that it is very easy or rather easy for them to deal with changes in whose decisions and development they have been involved and 74.5% would like to be very strong or rather strong involved in changes. After more general questions on the topic of change, the respondents were explicitly asked about the topic of change management and its changes. The respondent's level of agreement with the various statements can be seen in Figure 1 below.

Figure 1: Respondents' assessments of changes in change management (illustration based on the results of the online survey)



Looking at some of the statements presented in Figure 1 in further detail, it can be said that respondents working in agile enterprises more often fully or rather agree with the

statement that, conventional change management approaches reach their limits when changes are highly dynamic and complex than respondents working in hierarchical organisations. Furthermore, respondents working in agile organisations more often fully or rather agree with the statement that changes must be initiated and promoted to a greater extent by the employees themselves, than respondents working in hierarchical organisations. While 80.6% of the respondents working in traditional hierarchical forms of organisation continue to say that fast and flexible adaptation of change initiatives to new circumstances is important, 90.6% of the respondents from agile organisations do so. The number of total agreement (answer = fully applicable) differs even more between agile and hierarchical organisations (62.3% versus 33.2%). The questionnaire asked what it takes to successfully handle organisational change in a dynamic business environment. The analysis of the free-text answers in the context of the qualitative text analysis according to Mayring (2015) resulted in different categories shown in Table 1.

Table 1: Requirements for successful change management in a dynamic business environment (illustration based on the results of the online survey)

Category	Core statement
High transparency	A high level of transparency is required regarding the
and open	ongoing change initiatives. Precise, frequent and dynamic
communication	horizontal communication and open dialogue are important.
	Progress and successes should be made visible to all.
Appropriate culture/	Openness and understanding for change should be anchored
mindset	in the corporate culture and the mindset of employees. Also
	important are a positive climate towards change, awareness
	of the importance, commitment, motivation, engagement,
	understanding, honesty, trust, respect as well as a positive
	culture of mistakes and learning.
Holistic participation/	Not only the management should be responsible for leading
cooperation	change, but also the employees. It is about the co-creation of
	change over different areas and levels, both in strategy
	setting, as well as in implementation. In this context, e.g.
	bottom-up design possibilities, cooperative approaches or
	the self-responsible development of initiatives in individual
	project groups play an important role.
Strong competencies	Instead of having change done to the employees, the
at the management	management should motivate the employees to take
level	personal responsibility for initiating change. They must
	empower them, give guidance and provide the necessary
	tools to drive change. Commitment by the management is
	important, as well as necessary competencies and an
	appropriate attitude of leadership (openness to change,
	authenticity, trust, empathy, empowerment, ability to reflect,
	active driving forward and living of change, etc.).
Common goal/	The meaningfulness of change is important. In this context, a
clear strategy	common goal, strong vision and clear strategy are necessary.
	These should be in line with the company's goals/ strategies.
	However, neither the goal nor the strategy to achieve it is

	carved in stone. They should rather be understood as moving
	and evolving along the way.
High flexibility/ speed	Flexible approaches and processes as well as a high speed of change are crucial (e.g. through short decision-making channels or flat hierarchies). However, this should not contradict a certain amount of planning, preparation and
	forward-thinking. A balance should be found here.
Experimenting/ adapting	Change management should take place on an experimental basis. Fast and flexible adaptation to current circumstances as well as continuous feedback and learning are crucial. A certain hands-on mentality is also important. Changes should be actively approached and implemented. Words must be followed by actions.
Providing security/ stability	In a world of growing insecurity, change management should not only activate but also help to provide stability, security and orientation (e.g. in terms of framework conditions, structures, environments, teams) to avoid excessive demands, uncertainty and chaos. Furthermore, increasing the resilience of the employees and the organisation is important.
Continuity/ sustainability	Organisational change is seen as an ongoing process. Change management should thus concentrate less on the consideration of individual change projects, but rather on the anchoring of a continuous and long-lasting ability to change. Different, parallel change activities need to be coordinated and aligned.
Stepwise, iterative approach	Long-term change concepts no longer work. The focus should lie on a short-cyclical, iterative approach and rapid effectiveness of initiatives. Development and implementation of change ideally take place in many small steps.
Sufficient resources and professional guidance/ support	Sufficient resources (e.g. time, budget, capacity, expertise) are a prerequisite for successful change. Even if the responsibility of the individual increases and change becomes more part of everyone's job, a professional accompaniment/ support of change activities by internal or external experts is important.
Use of digital methods	Digital tools can support change management by making it more personal and interactive. Common goals and progress can be evaluated and communicated in real time. Feedback can be given immediately and an overall view is possible.

As the topic of agile change management shall be explored as a next research step, the survey concluded with an outlook on the topic of agile change management, in particular its current use and relevance. In this context, the following findings were made: 8.1% of the respondents say that their company's change management is currently agile. In contrast, 49.2% say that it is not or rather not agile. The number of those who fully agree that change management in their company is agile differs significantly between

respondents from agile and hierarchical organisations (30.2% vs. 4.3%). Therefore, it is obvious that agile change management is currently quite rare in hierarchical organisations. Among other things, this could be related to the fact that the components of agile change management, may rely on agile structures or an agile mindset, which is especially found in agile organisations. The importance of the topic of agile change management is generally rated very high by the respondents as 79.4% say that agile change management is essential or rather essential in a dynamic business environment.

4.2. Verification of the hypotheses

In addition to the analysis conducted so far, a review of the previously-formulated hypotheses was carried out. As previously mentioned, a polychoric correlation was used for this purpose. Since the application of such assumes that normally distributed metric characteristics lie behind the manifest measured values which cannot be completely guaranteed for the characteristics examined here, Spearman's Rho and Kendall's Tau (compare Eid, Gollwitzer and Schmitt, 2017) were also used as comparative. However, in each case the values were quite similar to those of the polychoric correlation (compare R file uploaded at Harvard Dataverse, Grocholski, 2021). For all hypotheses tested, the following conditions of the chi-square test were checked:

- 1. There are two, at least nominally scaled variables.
- 2. The sample (N) is greater than 60 in every case, therefore no correction factor is necessary.
- 3. The individual measurements are independent.
- 4. Each cell of the expected cross-table has at least five observations or at most 20% have fewer than five observations.

Condition 1 is fulfilled for all hypotheses, as the variables are considered to be ordinal. Condition 2 is also satisfied. The respective sample size is shown separately in the course of testing the individual hypotheses. As can be seen from the study design, independent measurements are assumed, therefore condition 3 is met as well. The remaining condition (condition 4) is dealt with separately below.

<u>Hypothesis 1</u>: Feeling overwhelmed by the speed of change correlates with the requirement for change management to also provide stability and security.

Only 7.2% of those surveyed very often or often feel overloaded with the speed of change. Furthermore, only around a quarter of those surveyed say that they very often or often wish for more security and stability. However, 85.4% of the respondents fully or rather agree with the statement that change management in a dynamic environment must not only have an activating effect but must also ensure security and stability (compare Figure 1). A statistical correlation between the two variables "feeling overwhelmed" (OV04_03) and "the need to provide stability and security" (CM02_04) was tested (H0: Feeling overwhelmed by the speed of change does not correlate with the requirement for change management to provide stability and security, H1: Feeling overwhelmed by the speed of change correlates with the requirement for change management to provide stability and security). To fulfil condition 4 (compare above), the expressions 3, 4 and 5 of "the need to provide stability and security" were combined into one category. The same applies to the variable "feeling overwhelmed" in the expressions 4 and 5. 1 of 12 values are consequently smaller than 5 (approx. 8% < 20%), which means that this condition is

satisfied. Finally, H0 is retained. Feeling overwhelmed by the speed of change does not correlate significantly with the requirement for change management to provide stability and security ($r_pol = -0.021$, $X^2(6) = 2.157$, p = 0.905, N = 321, compare R file uploaded at Harvard Dataverse, Grocholski, 2021).

<u>Hypothesis 2</u>: The dynamics of the business environment correlate with the requirement of continuous, incremental development of change initiatives.

57.7% of the respondents consider the business environment of the company in which they work to be very or rather dynamic. The respondents from agile companies even estimate them as very or rather dynamic to 75.5%. Figure 1 showed that 75.7% of the respondents fully or rather agree that the continuous, incremental development of change initiatives is critical. Furthermore, 81.6% of the respondents think that the following statement is fully or rather applicable: only through continuous testing, trial and error and adaptation can a change initiative be truly useful and effective. The correlation between the variables "dynamics of the business environment" (UU06) and "the need to develop change initiatives continuously and incrementally" (CM02_07) was analysed (H0: The dynamics of the business environment do not correlate with the requirement of continuous, incremental development of change initiatives, H1: The dynamics of the business environment correlate with the requirement of continuous, incremental development of change initiatives). To meet condition 4 (compare above), the expressions 4 and 5 of "the need to develop change initiatives continuously and incrementally" were combined into one category. Thus, 2 of 16 values are smaller than 5 (12.5% < 20%). Finally, H0 is rejected and H1 is accepted $(r_pol = -0.140, X^2(9) = 26.9, p = 0.015, N = 316,$ compare R file uploaded at Harvard Dataverse, Grocholski, 2021). According to Cohen (2013), there is a weak effect here.

<u>Hypothesis 3</u>: The dynamics of the business environment correlate with the requirement of fast and flexible adaptation of change initiatives.

34.6% of the respondents fully agree and 47.0% rather agree that fast and flexible adaptation of change initiatives to new circumstances is crucial. The respondents from agile organisations agree even more with the latter statement than respondents working in hierarchical organisations. Of those surveyed who consider the business environment to be very or rather dynamic, 85.5% fully or rather agree that the fast and flexible adaptation of change initiatives to new circumstances is crucial. Those, who, on the other hand, assess the business environment of the company in which they work as very stable or rather stable, make this statement to 11.7% less. A statistical correlation between the two variables "dynamics of the business environment" (UU06) and "the need to adapt change initiatives fast and flexible" (CM02_09) was tested (H0: The dynamics of the business environment do not correlate with the requirement of fast and flexible adaptation of change initiatives, H1: The dynamics of the business environment correlate with the requirement of fast and flexible adaptation of change initiatives). In order to satisfy condition 4 (compare above), the expressions 3, 4 and 5 of "the need to adapt change initiatives fast and flexible" were combined into one category. Thus, 0 of 12 values are smaller than 5 (0% < 20%). Finally, H0 is rejected and H1 is accepted. The dynamics of the business environment correlate significantly with the requirement of fast and flexible adaptation of change initiatives (r_pol = -0.314, $X^2(6) = 29.927$, p < 0.001, N = 316, compare R file uploaded at Harvard Dataverse, Grocholski, 2021). According to Cohen (2013), there is a medium effect here. Consequently, the more dynamic the business environment, the more change initiatives have to be adapted fast and flexible (or vice versa).

<u>Hypothesis 4</u>: The dynamics of the business environment correlate with the requirement that changes must be initiated and promoted by the employees themselves to a greater extent.

Only 20.6% of the respondents say that it is very easy or rather easy to deal with changes that were decided and developed solely by senior management. Furthermore, 74.5% of the respondents would like to be very strong or rather strong involved in changes. Figure 1 showed that 86.6% of the respondents agree that change should take place both topdown and bottom-up (48.6% fully applicable, 38.0% rather applicable). The figure also showed that 66.0% of respondents think that it is fully or rather applicable that changes must be initiated and promoted to a greater extent by the employees. The respondents working in agile enterprises even more often fully or rather agree with this statement, than the respondents working in hierarchical organisations (+ 9.8%). The correlation between the variables "dynamics of the business environment" (UU06) and "the need for changes to be initiated and promoted by employees" (CM02_05) was analysed (H0: The dynamics of the business environment do not correlate with the requirement that changes must be initiated and promoted by the employees themselves to a greater extent, H1: The dynamics of the business environment correlate with the requirement that changes must be initiated and promoted by the employees themselves to a greater extent). In order to fulfil condition 4 (compare above), the expressions 4 and 5 of "the need for changes to be initiated and promoted by employees" were combined into one category. 3 of 16 values are consequently smaller than 5 (18.75% < 20%), which means that this condition is satisfied. Finally, H0 is rejected and H1 is accepted. The dynamics of the business environment correlate significantly with the requirement that changes must be initiated and promoted by the employees themselves to a greater extent $(r_pol = 0.188, X^{2}(9) = 24.479, p = 0.004, N = 316, compare R file uploaded at Harvard Dataverse,$ Grocholski, 2021). According to Cohen (2013), there is a weak effect here. Consequently, the more dynamic the business environment, the more changes have to be initiated and promoted by the employees themselves (or vice versa).

<u>Hypothesis 5</u>: The role of digitalisation in companies correlates with the requirement to increasingly use digital methods in change management.

40.8% of the respondents say that digitalisation plays a rather major role in their organisation, while 44.2% even claim that it plays a very major role. Furthermore, 66.4% of those surveyed fully or rather agree that change management should increasingly use digital methods, 29.3% partially agree (compare Figure 1). Of those respondents who say that digitalisation plays a very important role in their companies, 71.1% fully or rather agree that change management should increasingly use digital methods. Of those who say that digitalisation plays only a very small role in their company, only 25.0% make this statement (-46,1%). A statistical correlation between the two variables "the role of digitalisation in the company" (UU05_01) and "the need to increasingly use digital methods in change management" (CM02_10) was tested (H0: The role of digitalisation in companies does not correlate with the requirement to increasingly use digital methods in change management, H1: The role of digitalisation in companies correlates with the requirement to increasingly use digital methods in change management). In order to meet condition 4 (compare above), the expressions 1,2 and 3 of "the role of digitalisation in the company" were combined into one category. The same applies to the variable "the need

to increasingly use digital methods in change management" in the expressions 4 and 5. Due to the category formations, the correlation could not be proven to be significantly different from zero. 1 of 12 values is smaller than 5 (approx. 8% < 20%,), which means that this requirement is fulfilled. However, H0 is ultimately retained (r_pol = -0.195, X^2 (6) = 8.463, p = 0.206, N = 321, compare R file uploaded at Harvard Dataverse, Grocholski, 2021). Although a correlation with a weak effect according to Cohen (2013) could be shown, no significant correlation could be proven.

4.3. Summary of the results

The following key statements can be derived from the survey results:

- The environment of companies is mostly assessed as relatively dynamic, competitive and complex, as well as rather uncertain and ambiguous concerning the future.
- The way organisations handle change is assessed very differently. However, managers
 consider it to be good at a significantly higher percentage than non-managers. The
 same applies to employees from agile organisations compared to those from
 hierarchical organisations.
- Flexibility and speed, as well as high transparency and open communication are most relevant in connection with the assessment of the organisation's handling of change by the employees.
- Over 60% of respondents say that change is often or very often initiated by senior management. Only just over one third of the employees without management responsibility often have the opportunity to initiate changes in their working environment themselves. In this context, clear differences between agile and hierarchical organisations can be seen. However, most employees find it easier to deal with changes in which they have been involved in decision-making and development. In the course of examining Hypothesis 4, it could furthermore be proven that the dynamics of the business environment correlate significantly with the requirement that changes must be initiated and promoted by the employees themselves to a greater extent.
- Employees perceive that change management needs to change. For example, there is strong agreement with the statements that change can be described as a permanent state, that change management must not only be activating but also provide stability and security, and that change should take place both top-down and bottom-up. The need for rapid and flexible adaptation of change initiatives as well as continuous testing also received strong agreement. In testing Hypothesis 3, it was shown that the dynamics of the business environment correlate significantly with the requirement of fast and flexible adaptation of change initiatives. Hypothesis 2 has furthermore proven a statistically significant correlation between the dynamics of the business environment and the requirement of continuous, incremental development of change initiatives.
- Successfully handling organisational change in a dynamic business environment requires primarily a high degree of transparency and open communication, as well as an appropriate culture/ mindset and holistic collaboration. Among other things, high speed and flexibility in the change management approach, as well as experimentation and step-by-step adaptation, also play an important role.

• The use of agile change management approaches is currently rather rare, especially in hierarchical organisations. However, the importance of the topic of agile change management is generally rated very highly.

5. Discussion

Gergs, Lakeit and Linke (2018) state that the speed of change has increased enormously over the last ten years. According to the study results, the respondents actually feel this as well. The majority of respondents of the online survey perceive their business environment as very dynamic, competitive and complex. Most of the respondents are often or even very often confronted with change. The respondents' assessment of how their organisations deal with change varies greatly depending on the situation. However, it is noticeable that respondents from agile organisations describe the handling of change by the organisation as rather good or very well significantly more often than respondents who work in hierarchical organisations. It is debatable whether this relates to the fact that new ventures and start-ups undergo change and innovation more frequently due to their need to tackle resource scarcity and align their internal acquired resources to the external conditions, as Ghezzi and Cavallo (2020) claim. According to Ghezzi, Cortimiglia and Frank (2015), dynamic contexts and innovation are most common among start-ups that operate in an uncertain and dynamic digital environment, where the influence of digital technologies accelerates the pace of change and leads to significant transformations. According to the consultancy Deloitte, quick and flexible adaptation to changing business needs is easier for medium-sized companies and start-ups. For large companies in particular, however, this represents a major challenge. These companies find it particularly difficult to respond to changing demands with conventional contingency models, rigid change strategies and communication plans, especially in agile environments (Spelman, Fish, Webb, 2015). According to the research, the reasons for the good handling of change are often a high degree of flexibility, transparency and open communication as well as strong capabilities at the management level. For example, holistic participation and cooperation as well as an appropriate culture/mindset are also mentioned. Furthermore, Hashemi and Ghajari (2014) have focused on the relationship between leadership effectiveness and certain attributes of the EFQM model. Together with Bolboli and Reiche (2014), they have suggested that the corporate culture requirements should be integrated. Dubey (2016) has recommended using the agile business excellence model, which can enable identifying various areas for improvement, including the role of leadership in developing a service-oriented culture, competitive positioning, customer orientation, employee involvement, problem-solving, goal clarification and others. Peus, et. al. (2009) say that change is often met with resistance. This is a typical issue in conventional approaches to change. In their study, the authors examine what exactly leads to resistance and how it can be avoided. In their findings, they emphasise the enormous importance of communication and an inspiring vision. These aspects were also reflected in the results of the present research. Furthermore, Peus, et. al. (2009) speak of combining transformational vertical and shared leadership with the participation of employees. The results of the online survey show that only about onethird of the respondents who do not have a management position currently often or very often have the freedom to initiate changes themselves. Most of the respondents who state that they can often or very often initiate changes themselves work in agile organisations.

However, the respondents find it significantly easier to deal with changes in whose decision-making and/ or development they were involved in. Birkinshaw (2018) also state with the approach to give employees the right balance of oversight and autonomy. In the case study of ING in the Netherlands, he submits a quarterly business review process adapted from Google LLC and Netflix Inc. In terms of why employees use different job crafting strategies, Stojanová and Lietavcová (2018), Niessen, Weseler and Kostova (2016), and Bindl, et. al. (2019) have argued that for motivation to work performance, individual needs serve as internal drivers. More than 90% of the respondents rather or fully agree that change is a permanent state today. 51% furthermore rather or fully agree that conventional change management approaches have reached their limits in times of high dynamics and complexity. 42% continue to say that this is partly true. Again, it is striking that respondents from agile organisations are significantly more likely to agree that conventional approaches are reaching their limits than respondents from hierarchical organisations. In Harvard Business Review, Jensen Clayton (2021) also speaks about the fact that traditional change management, which is characterised by heavy, lengthy processes, is not sufficient, especially against the background of the Covid-19 crisis. The author emphasises the importance of fast, agile and virtual change management. Regarding the latter aspect, it should also be said that the relevance of digital methods in change management also came to light in the study. However, even though the topic of digitalisation plays a very important role among the respondents of the online survey, the extent of the importance of digital aspects in change management seemed to be less pronounced than other factors in the study.

6. Conclusions

Today, change is not only faster but also more radical than it has been in the past. Moreover, many parameters change simultaneously and the possibility of planning has been significantly reduced. These are only a few of the many points that show that the concept of change itself is changing and that change is increasingly manifesting itself differently than it used to do. Change management in organisations has not been unaffected by these circumstances. In today's complex and unstable business environment, conventional change management approaches are often reaching their limits. Change management, as a discipline that normally supports other areas in their effort to transform, must itself embrace a shift and fundamentally evolve to still have a significant impact. What is crucial in this context and what exactly are the requirements for change management in today's dynamic business environment was examined using an online survey among employees in Germany. The requirements for change management in a dynamic business environment, which were explored in the context of the study, are the following: High transparency and open communication, appropriate culture/ mindset, holistic participation/ cooperation, strong competencies at the management level, common goal/ clear strategy, high flexibility/ speed, experimenting/ adapting, providing security/ stability, continuity/ sustainability, stepwise, iterative approach, sufficient resources and professional guidance/support, use of digital methods. The question about the requirements for change management in times of high dynamics has been answered so far. However, given that the sample of the survey must be seen as a convenience sample, it cannot inevitably be assumed that the results can be directly transferred to the basic population. Limitations of the study must also be acknowledged concerning the sample size of the online survey. Although this was scientifically determinized and considered to be sufficient in this context, a larger sample size would be even better in terms of reliability. The results should therefore be expanded and verified by further studies based on an even broader data set. The findings of the research often showed marked differences between agile and hierarchical organisations. Furthermore, the importance of the topic of agile change management was rated very highly in the survey. As the term agile change management is also used with increasing frequency in scientific literature and professional circles, it is open to determine whether agile change management can enable the successful handling of changes in a dynamic business environment.

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