WHAT DO LINE MANAGERS IN A LARGE-SCALE TRANSFORMATION NEED TO PERFORM WELL IN THEIR ROLE?

A case study of a R&D department during an agile transformation

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Abstract

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Purpose:	The purpose of this study is to explore the line managers' needs to perform well in their role in a large-scale transformation, from an individual level. Furthermore, the aim is to understand how the identified needs can be explained from a theoretical perspective.
Theory:	The theoretical framework chosen to study this phenomenon is built on two different theories, the ability, motivation, opportunity (AMO)-model and the General Change Theory (GCT). The AMO-model is used to analyse the identified needs of the line managers and to demonstrate in which areas the discovered needs for a good performance lie, from a closer perspective. The GCT has been applied in order to explain the underlying reasons for the identified needs. Furthermore, both theoretical perspectives will be combined to examine which needs appear in which stage of the change process.
Method:	For the methodology a qualitative case study of the Research and Development department during an agile transformation has been chosen and 14 in-depth semi-structured interviews were conducted.
Result:	Results of the study are that the line managers show to have needs that are shaped by ability, motivation and opportunity, when it comes to perform of their role well in the transformation. Most of the identified needs are visible in form of unmet needs, resulting in frustrations. The identified needs could furthermore be explained by the different phases of the line managers in the change process, whereby in the initial stages there seem to be more needs, especially for information and support, meaning that they are influenced by ability and motivational factors. Line managers in the advanced stages communicate to have more needs concerning their opportunity, such as for practical help and they seem overall more optimistic about the transformation and their role. However, patterns could also be found specifically connected to the agility, such as different perceptions of line managers that work with software only or also with other areas.

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AMO   Ability, Motivation, Opportunity

ART(s)   Agile Release Train(s)

AT   Agile Transformation

GCT   General Change Theory

HR   Human Resource

HRBP(s)   Human Resource Business Partner(s)

HRM   Human Resource Management

i.e.   in other words

LM(s)   Line Manager(s)

P&Q   Product and Quality

R&D   Research and Development

SAFe   Scaled Agile Framework

1. Introduction

1.1.   Background and motivation of the study

The chosen topic is concerned with the needs of the line managers (LMs) in a large organisational change and strives to examine and explain their arising needs in order to perform well, from an individual perspective. The purpose of the study is to understand what the LMs need for a good performance in their role during this transformation, according to their perception. Furthermore, an underlying explanation of the identified needs is aimed to be provided with the following paper. For understanding the LMs´ needs in a change situation the example of a large-scale agile transformation (AT) in the Research and Development (R&D) department has been chosen.

Needs can generally be defined as psychological drivers and researchers in the field of psychological theory see needs as one of the most essential aspects when it comes to humans´ behaviour and motivation (Maslow, 1954; Stoyanov, 2017). Scholars explain that need fulfilment leads to an increased individual well-being and can affect their performance positively (Baard, Deci & Ryan, 2006; Jeeyoon, Yukyoum & Daehwan, 2017). On the contrary, unmet needs are said to result in frustrations and hostility (Miller, 2004). Therefore, it is crucial to regard the needs of the LMs for a good performance.

The importance of the LMs in an organisation has been stated, specifically in the recent times when the Human Resource (HR) devolution has taken place in many organisations and LMs have taken over more responsibilities from the HR professionals, as in the company of our case study (Boxall & Purcell, 2016; Op de Beeck, Wynen & Hondeghem, 2016). The LMs are often the ones providing knowledge and guidance with their professional expertise, enacting and implementing Human Resource Management (HRM) on a daily basis and they are furthermore responsible to lead the change and act as change agents in organisational transformations. Many LMs are moreover said to be rather resistant towards change, making it crucial to particularly perceive their needs (Heery & Noon, 2017; Lines, Sullivan, Smithwick & Mischung, 2015).

Looking at individual performance theories, it becomes apparent that the needs concerning the different factors influencing the performance are crucial to be understood and met (Boxall &

Purcell, 2016). This goes in line with motivational theories, stating that if a good individual's motivation is given, their job performance will be positively influenced (Boxall & Purcell, 2016; Khurana & Joshi, 2017; Vroom, 1964). We see the understanding and fulfilment of existing needs as crucial for the LMs´ motivation and we are therefore confident that our study will be beneficial for their individual job performance. Going further, the LMs' individual job performance can be argued to be connected to the outcomes of their subordinate employees and the general organisational performance, indicating that a good performance of the LMs can have a positive impact on the overall firm performance. These various aspects together make it highly valuable to perceive the LMs´ needs for performing their role well during this change – predominantly from an individual perspective and additionally for the overall performance of the organisation (Boxall & Purcell, 2016; Kilroy & Dundon, 2015).

Moreover, the concept of agile working methods has been discussed in recent times more frequently, both, scientifically but also by practitioners, showing the relevance of our chosen example for a large organisational transformation (Javdani Gandomani & Ziaei Nafchi, 2016; Turetken, Stojanov & Trienekens, 2017). Agility has been defined by researchers in many different ways but generally it stands for the ability to successfully respond proactively and to adapt to the changes and uncertainties that occur in the external environment in a responsible way (Appelbaum, Calla, Desautels & Hasan, 2017; Jari & Labaf, 2013; Nafei, 2016). In connection with agility, also the terms Kaizen and lean management have been mentioned increasingly often. These concepts have the purpose of minimizing the "waste" of resources and working time and include the striving for continuous improvement, going in line with agile working methods. In our perception, this trend will further continue and thus bring changes for numerous companies and the LMs working there. Hence, we see challenges for many LMs, as they have to improve continuously as well as lead and enact these changes (Erdogan, Quesada-Pineda & Bond, 2017; Kumar, Dhingra & Singh, 2017; Sterling & Boxall, 2013).

Furthermore, the findings shall help the different LMs to cope with challenges that can come along with all big transformations, as for instance change resistances and anxieties (Javdani Gandomani & Ziaei Nafchi, 2016; Paasivaara, Behm, Lassenius & Hallikainen, 2018; Turetken, et al., 2017). The maturity and stage in the change process of the LMs will be regarded to evaluate whether the progress in the change has an impact on their needs and to understand potential underlying reasons for the LMs' perceptions and needs.

Especially in the area of software engineering, agility has been used and discussed to an increasing extent, however, in the hardware- and other engineering fields, agile ways of working have not been as commonly applied and discussed (Dikert, Paasivaara & Lassenius, 2016). It is therefore specifically interesting to regard a company in the automotive industry that includes also other fields than software engineering only. We believe that this fact can intensify the needs arising from a typical change situation even further, for instance when not understanding the implications for their own future work (Hobbs & Petit, 2017).

The focus of the study is set on the LMs' needs in a large, multinational company in the automotive industry, since this sector is currently experiencing a situation of many changes, such as the globalisation, governmental regulations as well as the digitalisation and continuous technological advances (Broy, 2006; Schulze, MacDuffie & Täube, 2015). This fast-changing environment forces many organisations to invent business models, which enable them to respond quickly and efficiently to changes occurring in the external environment. Due to this, many companies introduce agile and lean ways of working, making this case highly relevant also for other organisations and their line management that undertake similar large-scale changes (Joroff, Porter, Feinberg & Kukla, 2003; Paasivaara et al., 2018; Turetken et al., 2017). Moreover, multinational and large companies are shaped by more complex structures and processes and show slow implementations of organisational changes, making this situation more challenging for the LMs, which can lead to new and unfulfilled needs (Boxall & Purcell, 2016; Dikert et al., 2016).

The R&D department has been chosen, as the lack of skilled labour in this area forces organisational members to act quickly in order to stay as competitive, efficient and effective as possible, creating challenges for the line management per se. Additionally, in our assumption, the LMs working in R&D, tend to have more technical- than management-oriented backgrounds, making it even more challenging to lead a change and to perform well, not only in their technical role but also in their people related tasks (Hobbs & Petit, 2017; Jacobson, Spence & Seidewitz, 2016).

Last but not least, also our personal interest in the theme has contributed to select this specific topic. Both of us authors have had previous contact with large companies in the automotive industry as well as with the chosen research area due to previous work experience and university

studies. Therefore, our aim to contribute with our findings and to create value for the scientific community and practitioners in this area has evolved and builds the basis for our thesis.

1.2. Purpose of the study and research problem

The following master thesis aims to examine the needs that LMs have to perform their role well, in a large organisational change, from their individual perspective. Our specific case study is a hence a case of "needs in organisational change" and regards more precisely the LMs' needs. To be more clear and precise, the following research question has been chosen: "What do line managers in a large-scale transformation need to perform well in their role?".

Throughout the study, the LMs' needs are examined and discussed with special regards to the ability, motivation and opportunity (AMO) factors, in order to understand in which areas, the identified needs of the LMs lie and how they can be explained. Also, the different stages of the change process according to the General Change Theory (GCT), that might be an explanation for the different needs, are looked at. To the extent of our research question, we will answer the following sub-questions:

(1) Can the identified needs be analysed according to the ability, motivation and opportunity?
(2) What can be underlying reasons for the identified needs?
(3) How can the needs of the line managers be explained from a change theoretical perspective?

1.3. Disposition of the thesis

In order to be able to answer the research question to its whole extent, the thesis will follow a structure that consist of seven overall parts, where each part includes several sub-chapters. This paper begins by introducing the research problem, its purpose and its contextual domain, in terms of company and industry. In the introduction chapter also, the introduced AT and its framework will be explained. This section is followed by a presentation of previous research in order to clarify the necessity and relevance of the study and to demonstrate to which scientific and practical areas the findings will contribute. In the third part of this paper, the theoretical background and framework will be described, which is the basis for later on discussing and

analysing the found results. The succeeding chapter will present a reflection on the chosen methodology and research methods as well as on the sample, data collection process and interview process. This part will furthermore contain ethical considerations and limitations of the chosen research method. Following the methodology, the fifth chapter will concern the summary and preliminary analysis of the findings and will be divided into different categories that evolved based on patterns in the empirical data. After naming and classifying the results, part six will cover the discussion and analysis of the findings with help of the chosen theoretical framework. Based on the discussion of the outcomes, the last chapter will comprise the conclusions of the conducted study. It will also include concrete suggestions for the scientific community and for practitioners as well as limitations, which will build the closure of the thesis.

1.4. Introduction to the selected case

1.4.1. Background information of the selected company and department

As mentioned before, the selected company is a large, multinational company that is operating within the automotive industry and includes different engineering areas. The R&D department represents a crucial part of the organisation, both when it comes to the number of employees but also to the importance of the department. It is included in the umbrella function Product and Quality (P&Q) that consists of the departments R&D, purchasing and quality. The R&D department is divided into four different units: Vehicle Hardware, Vehicle Propulsion, Vehicle Software and Electronics and Complete Vehicle Engineering. In total, there are 477 LMs and about 7889 employees, including consultants, working in the overall R&D department (Internal documents, 2018).

Important to know is that the chosen organisation is organised according to the "three-legged stool"/Ulrich model, meaning that LMs have taken over more responsibilities from the HR professionals. Each of the four mentioned units of the R&D department has one to two HR Business Partners (HRBPs) and one superior HR manager, which support the units with complex and expertise HR questions. The HR managers furthermore summarise and communicate strategic business requirements to the HR centres of expertise. For the various operational HR services, there are the so-called HR delivery hubs available for the line management. Additionally, there is a newly established team named "change support team"

operating, which aims to facilitate and support all kind of change situations in the P&Q function.

To summarise, the LMs are expected to take over many HRM related tasks themselves but most of them still have technical tasks and decisions included in their role. They are moreover responsible to work strategically, lead their employees and to manage changes occurring in their unit, making their role quite complex (Hällstén, 2008; Internal documents, 2018).

1.4.2. The introduced agile framework

There is a variety of frameworks that organisations can use in order to become more agile and lean. The selected company has been using the so-called Scaled Agile Framework (SAFe), which is intended for large-scale AT and will be described briefly in the following section to understand the background of the study to the fullest extent (Dikert et al., 2016; Paasivaara et al., 2018). SAFe is a framework introduced by the company Scaled Agile, Inc. and should provide organisations with definitions of different working methods as well as with new role descriptions to work more agile. In contrast to the traditional "waterfall organisation", agility should lead to a faster, stepwise and more frequent improvement rather than to focus on a planned process with pre-defined periods. More frequent feedback loops and testing should enable organisations to discover mistakes and developments not meeting the market demands faster, in order to correct them and respond to new market needs quicker (Internal documents, 2018; Scaled Agile, Inc., 2018).

Generally, there are four different levels defined in the SAFe, however, as we focus on the LMs, the following paragraph will mainly focus on the team level, which they are embedded in. Organisational members are supposed to work in empowered and cross-functional teams that consist of one product owner, one scrum master and several developers. Several empowered teams together form an Agile Release Train (ART) and several ARTs build a solution train, also named product stream. The overall goal of the trains is to deliver joint customer value and to continuously improve, even cross-functionally (Dikert et al., 2016; Internal documents, 2018; Paasivaara et al., 2018; Scaled Agile, Inc., 2018).

The working ways according to SAFe are supposed to change in the way that the teams should work in different cadences, as shown in figure 1 below. Each iteration is approximately one to

four weeks long, with a planning meeting to start each frequency. During this period, the team members plan and briefly present their tasks and responsibilities daily. Towards the end of each sequence, a sprint demo is taking place, in which the team demonstrates the development of this sequence. Once the cadence is over, there is a review of what went well and what to improve for the next period. Essential and quite new roles on the team level would be the scrum master role and the product owner role. The product owner will be the one deciding what the scrum team will work on and how to prioritize the different tasks, meaning that this role will require mostly technical expertise. This to-do list of tasks and priorities is entitled *backlog*, for which the product owner will be responsible, however, the empowered team members can decide themselves what they will pick from the list to work on. The scrum master will be the person facilitating the work on the different tasks and will guide the team in how to work in the best and agile way. This role moreover includes the responsibility for the team's deliveries (Internal documents, 2018). As the traditional LM role will not exist anymore, according to SAFe, the LMs will have to decide for one part of their role - technical tasks or HR responsibilities. This can, from our point of view, lead to intensified needs of the LMs in the transformation and further to discomfort and frustrations.

Concluding, the case of an AT has been chosen due to the fact that this implies a tremendous reorganisation concerning different levels and parties and might entail a cultural change. Therefore, making it a good example for a large-scale change that will result in new arising needs of the LMs (Dikert et al., 2016). Furthermore, there emerge many new aspects that LMs have to learn about and to adapt to, which can intensify needs arising from an organisational transformation in general. Therefore, we are confident that the selected example of an AT is adequate for our study (Scaled Agile, Inc., 2018).
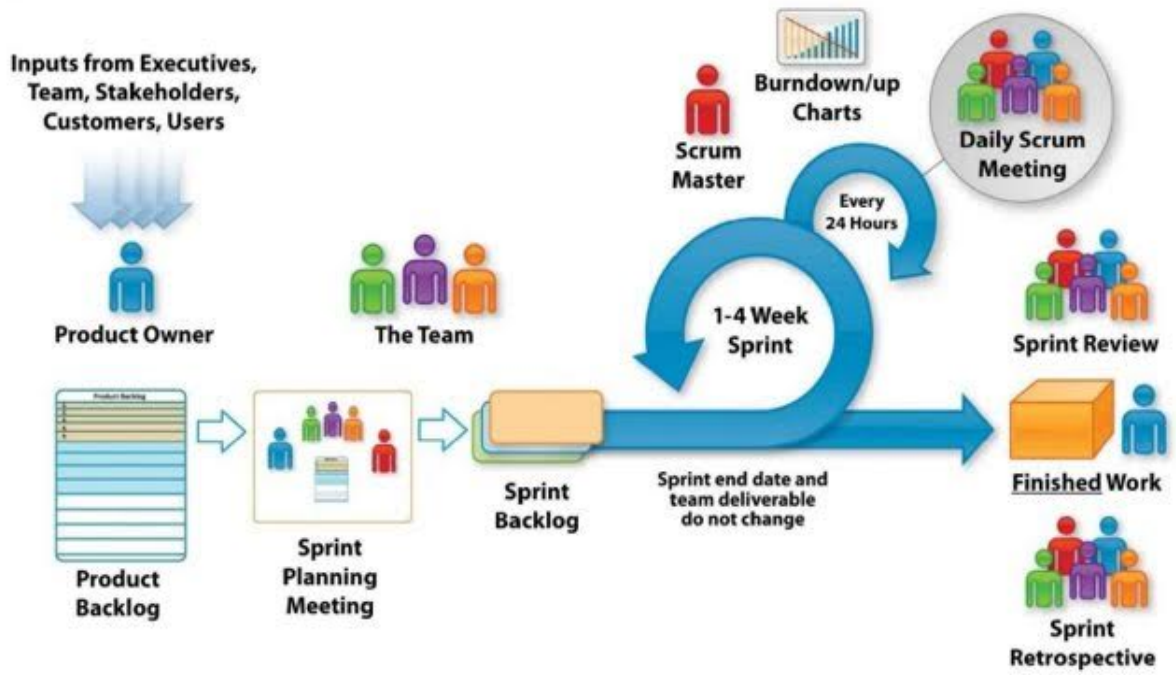
Figure 1) The scrum cadences (Internal documents, 2018)

2. Previous research

When conducting the literature review, it becomes apparent that there is a variety of studies in the selected research area, making it necessary to define our own, unexplored niche. The following literature review will examine how the chosen topic is connected to previous studies and in what way it will contribute to existing research in the same field.

2.1. The critical role of Line Managers

Firstly, there are several studies that highlight the importance of the LMs' role, particularly when it comes to HRM and people management responsibilities, from different perspectives. It is stated by many researchers that the LMs of an organisation play a critical role, since they are the ones implementing HR practices and perform many HRM related tasks. Hence, the LMs can shape the character of HRM significantly, showing the importance of understanding the LMs' needs for successful HRM and, to argue further, for the overall firm performance (Boxall & Purcell, 2016; Op de Beeck et al., 2016; Perry & Kulik, 2008; Sikora & Ferris, 2014). Moreover, also the importance of the line management in strategic tasks and as leading a change situation has been argued for, demonstrating that the LMs have a central role in an organisation (Boxall & Purcell, 2016; Heery & Noon, 2017; Lines et al., 2015). The mentioned studies focus, however, on the importance of the LMs' and their performance, primarily in regard to HRM, but neglect to regard their needs. This demonstrates the relevance and importance of our particular study, especially during a large-scale organisational change.

The stated importance of the LMs' role is strongly connected to literature and research regarding the so-called HR devolution, which is stating that nowadays many companies are allocating former HR professionals' tasks to the LMs, making the LMs even more important for employee outcomes, commitment and performance indicators (Op de Beeck et al., 2016; Perry & Kulik 2008; Sanders & Frenkel, 2011). This makes it highly relevant to regard the LMs' needs for performing well in their role in an organisational transformation, which makes the work for LMs even more complex (McGuire, Stoner & Mylona, 2008).

Our study will hence be a contribution to the literature by showing concrete needs for a good performance.

2.2.   AMO Theory/Performance of the line

Empirical studies have furthermore analysed performance influencers, both for the LMs in particular but also in general. Noticeable is that previous studies look at the performance regarding the LMs´ tasks separately but do not focus on the overall role. We acknowledge studies that defend that the LMs' HRM performance depends on their AMO to execute HRM practices. This shows a quite similar approach to our study; however, this research focuses only on the HRM tasks of the LMs (Bos-Nehles, Van Riemsdijk, & Looise, 2013; Van Waeyenberg & Decramer, 2018).

Moreover, prior studies highlight the connection between AMO factors and the overall organisational performance as well as the performance of the organisations' employees and provide different results. A study by Marin-Garcia and Martinez Tomas (2016) for instance states that the AMO-model can show a relationship between HRM and performance. However, this paper acknowledges that also other factors such as the context and individual characteristics can influence the performance. In addition, a study conducted by Demortier, Delobber and El Akremi (2014) claims to not be able to prove a correlation of AMO factors and performance. On the opposite, other researchers demonstrate that AMO can have an impact on employee learning and job quality and hence, the overall workplace outcomes (Sterling & Boxall, 2013). Due to these contradicting findings, it is from our interest to test if the AMO-model can be applied for our study.

2.3.   Organisational change and its implications

As we strive to regard the LMs´ needs in a change situation, it is crucial to look at earlier research regarding organisational change and change management. Previous studies indicate that organisational transformations, in general, have an impact on employees' emotions, behaviours and attitude which can either be perceived as negative or positive. Morano (1997), as an example, outlines negative implications from changes situations, such as stress, anger and depression of organisational members.

This is supported by Alas (2015) and Schein (2017), who describe dissatisfactions and resistances, particularly in the beginning period in every organisational change. Naghibi and

Baban (2011) also affirm that these change resistances, in particular of the LMs´ subordinate employees, are challenging when managing a change, since the managers have to overcome them to successfully lead the transformation.

In order to avoid the mentioned negative sides of this process, it is stated to be important that there is a good communication between HR professionals and LMs and their employees (Groves, 2006; Schein, 2017; Vakola & Nikolaou, 2005). Other researchers found that the mind-set and current conditions can have an impact on the perception and attitude towards change. Groves (2006) for instance, reveals that leaders with a visionary mind-set and high emotional skills are more positive towards organisational changes. This is aligned with a study by Vakola and Nikolaou (2005), indicating that individuals that experience occupational stressors and have negative attitudes are less committed and acceptant to change. Due to these aspects, we see it as highly relevant to perceive the LMs´ needs and feelings.

Moreover, researchers argue that LMs play a central role when it comes to organisational changes. The article by Lundmark, Hasson, von Thiele Schwarz, Hasson and Tafvelin (2017), as an example, describes that LMs are the ones responsible for enacting change plans and implementing the transformation. The authors also say that the LMs have to translate the intentions into concrete actions and to communicate them to their employees. According to Schein (2017) and Boxall and Purcell (2016), LMs are additionally accountable for motivating other organisational members for the change. This goes in line with a study by Petrou, Demerouti and Schaufeli (2018), arguing that the way that LMs act during an organisational transformation affects the behaviour of their employees. Hence, it is from our interest to particularly regard their needs in this transformation.

2.4. Agility and agile transformations

Since a large-scale AT has been chosen as an example of an organisational change, it is essential to regard previous research in this area. Generally, the concept of organisational agility has been examined more frequently throughout the last years by researchers but also in practice. Scholars claim that the concept is used by companies to stay competitive, flexible and efficient, especially in fast-changing environments such as engineering-rich areas (Pantouvakis & Karakasnaki, 2018; Worley & Lawler III, 2010). Many companies are currently undertaking an

AT but there has only been little research of concrete cases introducing a large-scale agility, making our study unique and highly relevant (Dikert et al., 2016).

Previous research has not only focused on the potential benefits of organisational agility, such as the mentioned efficiency and flexibility, but has also mentioned challenges regarding this concept. Those can for instance be problems of learning new ways of interaction and to define their own and their employees' future role. The study by Dikert et al. (2016) indicates that general challenges from a change situation can be identified such as resistances and unwillingness to change. Furthermore, the authors say that agility is quite complex, creating the challenge for the need of more training and education. The complexity can also lead to the misunderstanding of the agile concepts and hence to wrong developments and implementations. Also, the autonomous and cross-functional teams are named to be challenging, as this requires a complete new mind-set and way of working. As previously stated, organisational agility has mostly been discussed and applied in smaller organisations that have their focus on software development. Large-scale AT are far more complex and bring along new and bigger challenges for the organisation in question and their line management, emphasising that there can be new and intensified needs arising based on these challenges (Dikert et al., 2016). Therefore, our study covers an unexplored and relevant angle.

Prior studies have mainly focused on quantitative data that provided insights of general challenges and success factors of the transformation towards agility but not many researchers looked at qualitative findings in this field. We acknowledge case studies in the same research field, as for instance the case study for the large-AT in Ericsson and the above cited article by Dikert et al. (2016), as they found quite similar outcomes. However, these regard different parties within the organisation and focus on software development. These studies do not specifically look at arising needs from the transformation for the LMs, emphasising the importance and uniqueness of our study (Dikert et al., 2016; Paasivaara et al., 2018).

3. Theory

In order to be able to answer the chosen research question to the full extent, there will be a total of two different theories used to build a theoretical framework for the analysis. First of all, the AMO-model will be used to examine how the LMs´ needs for a good performance are influenced by the AMO factors and what concrete needs are. In combination with this, the General Change Theory by Lewin (1947) and Schein (2017) will be applied in order to understand the underlying origin and background of the LMs' needs. Moreover, it will be looked at if the identified needs in regard to AMO are dependent on the change stages according to the GCT.

For the study an abductive approach has been chosen, meaning that the theories were preliminarily chosen but adapted and confirmed after the empirical data has been collected.

3.1.   AMO-model

One perspective to look at the work performance is the AMO-model, which regards the antecedents of the individual performance, from a behavioural perspective (Boxall & Purcell, 2016; Vroom, 1964). As the focus of the study is to examine what the LMs need on an individual level in order to be able to perform well in their role, we believe that this model is adequate for our analysis.

Performance can be defined as the individual behaviour related with the fulfilment of expected, specific and established role requirements in organisations (Campbell, 1990; Cummings & Schwab, 1973). This framework states that the employee's performance is established by the interrelation of three domains: the individual's *ability* (A), *motivation* (M) and *opportunity* (O) to perform their job. We believe that through changes of former ways of working, the AMO of LMs to perform their role might be influenced, making it necessary to perceive their needs. During the abductive process of defining our theoretical framework, we could moreover find patterns, confirming this assumption and leading to our final decision of applying the AMO-model.

To be more precise, the individual's ability to perform is related to the necessary knowledge, skills and competences to execute the job; the motivation is determined by the individual's level of eagerness in performing the job, i.e., to what extent the employee feels engaged or forced to perform the work tasks; and, the opportunity is determined when taking into consideration the structure of the organisation and its work environment (Appelbaum, Bailey, Berg & Kalleberg, 2000; Bos-Nehles et al., 2013; Boxall & Purcell, 2016).

If the individual lacks one of these three dimensions, the individual performance will be negatively affected (Bos-Nehles et al., 2013; Boxall & Purcell, 2016; Siemsen, Roth, & Balasubramanian, 2008). It is therefore crucial to perceive the LMs' needs and perceptions and later discuss them in relation to the AMO-factors.

3.2.   General Change Theory

The wider theoretical perspective, which will be used to better understand the LMs' needs and their underlying reasons, will be the General Change Theory by Lewin (1947) and Schein (2017). This theoretical approach has been chosen since it can explain individuals' needs in different stages of an organisational change process, as taking place in our case. Therefore, we see this theoretical perspective as adequate to analyse the origin of the LMs' needs during this transformation.

According to the GCT, there are three different phases of changes and learning in an organisation. Stage one is the *unfreezing stage*, which is shaped by disconfirmation, the creation of survival anxiety and guilt. There can be different uncertainties and anxieties arising, such as the so-called survival anxiety, which is the anxiety of negative consequences if the individual or group does not change. Also, the learning anxiety takes place in this phase, meaning that an individual is anxious about not being able to learn new things without trade-offs in group belonging or self-esteem. Learning anxiety can generally be caused by one of the following concerns: loss of power, status and position through the learning of new things, loss from temporary incompetence and the punishment for it, loss of personal identity and the loss of group membership. These anxieties are the basis for the potential resistance of change and bring according to Coghlan (1998) the following answers with them: denying, dodging and lastly bargaining. In order to overcome these resistances, managers have to create a psychological

safety for the subordinate employees in this unfreezing stage (Schein, 2017). Based on these conditions and characteristics, we assume that this change stage is highly challenging and important for the LMs, creating specific needs to cope with this situation and their role in the transformation. This is the initial stage in a change process and creates especially needs for security, safety, information and motivation, both for the management and their employees (Lewin, 1947; Schein, 2017).

After the unfreezing phase, there comes the *restructuring stage*, which consists of the learning of new concepts and standards after the unlearning period and requires a behavioural change of the concerned individuals. This phase includes the identification and intimation with role models in the organisation as well as the search for solutions and learning through trial-and-error (Lewin, 1947; Schein, 2017). (Line) managers act as role models in this stage, demonstrating the desired behaviours. We hence believe that in this phase of the change the need of support for the learning process is evolving and managers as well as subordinate employees will be in need of role models acting in the intended way. Also support and knowledge about how to act as a role model can be arising needs for the LMs in this stage, shown in our abductive investigation (Lewin 1947; Schein, 2017).

The third and last phase of a change is the *refreezing stage*, in which the new concepts, standards and meanings are internalised. This stage is the actual enactment of the new working ways for managers and employees and in this period the incorporation into self-concepts and finding of the identity is taking place as well as the building of relationships (Lewin 1947; Schein, 2017). In this phase, there are less needs arising for LMs and their employees. However, from our perspective the line management's needs can concern trust and opportunities to perform their role according to the new concepts. During the abductive process this could be confirmed.

Generally, there can be a variety of change theories found and the GCT goes very much in line with most of them, such as with the Kübler-Roß theory. This theory was initially describing the general grieving process but is nowadays often applied when it comes to organisational changes and states that a change consists of the following stages: denial, anger, bargaining, depression and acceptance. The theoretical approach is hence a bit more detailed than the described stages by Lewin (1947) and Schein (2017), but both include the same elements (Morano, 1997). The interviews with the different LMs allowed us to see patterns of their needs in different change

steps, which fit into the less detailed change theory of Lewin (1947) very well, strengthening our choice for this theoretical approach.

Based on this perspective, we will also regard our closer theory, the AMO-model, from a change theoretical perspective and will make use of the combination of the theories in our analysis and discussion. With respect to the chosen theoretical framework, it is noticeable that there are no previous studies, connecting AMO to the GCT. However, we share the assumption that the needs regarding the ability, motivation and opportunity for a good performance can be shaped and explained by the different stages of a change process, according to the GCT, which will be further tested later in the study (Lewin, 1947; Schein, 2017).

4. Method

4.1.   Methodology

The aim with this study is to explore and identify potential patterns among LMs' needs that may arise during a large-scale organisational transformation. Therefore, a qualitative single case study of the R&D department during an AT with an abductive approach was selected as a research method. This means that the AMO-model and the GCT were preliminarily chosen before the data collection has taken place and have been tested and confirmed afterwards (Ritchie, Lewis, McNaughton Nicholls & Ormston, 2014). According to Creswell (2013), a case study is a qualitative research method from exploratory nature that intends to understand a specific phenomenon and hence, an extensive data collection process through the access of interviews, documents and reports is needed. Ritchie et al. (2014) and Yin (2014) complement this view by stating that a case study is of relevance when the phenomenon in focus is examined within a specific context and different individual perspectives on the topic are taken into consideration in order to provide an in-depth and holistic analysis of the topic. Therefore, we believe that this choice provided us with a comprehensive and accurate understanding of the organisational and industry context and respective boundaries that the phenomena is exposed to.

4.2.   Case selection

In order to be able to study a phenomenon like this and to prove its relevance, both from a theoretical and practical perspective, we would need an organisation that was going through a change process, that is big enough to provide sufficient and relevant data and was operating within a significant industry. The case organisation and the R&D department in focus for this study not only match the previous requirements as it also has the particularity of being a manufacturing company that incorporates both a software and hardware components in its products. This can intensify the needs from a general organisational transformation even more. As previously stated, the selected case has recently introduced a new agile framework which will impact the whole organisation and their ways of working. Therefore, we are confident that it would be even more interesting to direct the study to the LMs of the R&D department and

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their needs, since they are key players in the organisation and this change. It is moreover interesting to investigate if the needs can be explained by the AMO-model and the GCT.

In addition, the selected case seems suitable for us, not only because of our personal interest on the topic and specific organisation but also due to the fact that one of the authors of this study is currently working at the organisation, which facilitated the access in general.

The first contact was made with the Senior HR Director and HR Manager of the R&D department who informed us about the current AT. They acknowledge that the introduction of the SAFe brought many challenges and they were keen to address them in the best way possible, therefore, they shared the interest that we should conduct a study that focuses on the LMs in a situation of change.

4.3. Participant selection

Creswell (2013) states the importance of selecting participants who have experience or are close to the phenomenon that is being studied and therefore can provide crucial and vigorous insights. For our study, a total of five gatekeepers and 14 LMs were selected through snowball- and purposeful sampling strategies, respectively. Creswell (2013) also argues that selecting participants through *snowball sampling strategy* may increase the quality on the sample, since it facilitates the process of finding the right people for the study. Moreover, Bryman (2012) claims that by choosing participants with a "purpose" will provide the researchers with an extensive understanding of themes, which are central to the research problem. All of the LMs were informed about the project in a first place by their superior managers and the ones who were chosen for this project, are the ones who first volunteered to participate.

Our key informants are all HR personnel, namely, two HR Managers for different units within the R&D department, two HR Business Partners and the Change Manager. They were part of this project to provide us with important background information regarding the department structure, the specific AT and its present and future implications when it comes to daily routines and roles, the different change levels that each unit is experiencing and some progresses or challenges that are already encountered. The fact that they have different roles and assist different units within the R&D department makes them key elements in our study by contributing with different views, while at the same time avoiding excessive dependence on

them, allowing an independent and reflective thinking process – aspects that researchers should take into consideration when interviewing gatekeepers (Yin, 2014).

Interviewee	Function	Main responsibilities
1	HR Manager	Supports the management teams for one unit at the R&D department
2	HR Manager	Supports the management team for one unit at the R&D department
3	HRBP	Supports around 55 managers and 1400 employees at the R&D department
4	HRBP	Supports around 55 managers and 1400 employees at the R&D department
5	Change Manager	Strategically manages the Change Support Team, change workshops and act as a coach and as a training facilitator/trainer

Table 1) Unit of analysis – Key informants

The LMs were mainly selected taking into consideration elements as the *unit* they belong to – if they work more closely with only software, only hardware or a combination of both – and the *change stage* that the unit is at the moment – which can differ between not started, initial or advanced stage. In addition, there was a clear *gender* and *age* distribution on the sample and it was noticeable that the LMs have different *team sizes* – categorised as small team is if the manager in question has up to 14 employees as direct reports, medium team in the case of between 15 and 19 employees and, large team when having a team with 20 or more employees. Therefore, we believe that the diversity present on our sample builds an appropriate and reliable sample that represents and symbolizes relevant aspects of this investigation, making it possible to identify the full range of elements that influence the study (Creswell, 2013; Ritchie et al., 2014).

Interviewee	Function	Unit	Educational Background	Team size	Change stage at the unit
1	LM	Not only Software	Engineering	Medium	Initial
2	LM	Not only Software	Engineering	Small	Not started
3	LM	Software	Engineering	Medium	Advanced

4	LM	Not only Software	Engineering	Medium	Initial
5	LM	Not only Software	Engineering	Large	Not started
6	LM	Not only Software	Engineering	Small	Initial
7	LM	Not only Software	Engineering	Large	Initial
8	LM	Not only Software	Engineering	Large	Not started
9	LM	Software	Engineering	Small	Advanced
10	LM	Software	Engineering	Small	Advanced
11	LM	Software	Engineering	Small	Initial
12	LM	Software	Engineering	Large	Initial
13	LM	Software	Engineering	Small	Advanced
14	LM	Not only Software	Engineering	Large	Initial

Table 2) Unit of analysis – Line Managers

4.4.   Data collection

Our primary data was collected through 14 in-depth face-to-face semi-structured interviews with LMs as well as with five additional interviews with the previously mentioned gatekeepers during a period of three weeks. Yin (2014) argues that interviews are one of the most important sources of information in a case study. Moreover, Rubin and Rubin (2012) state that in-depth interviews allow researchers to "see the world" through the respondents' point of view, exploring with detail their experiences, beliefs and feelings. In addition, Ritchie et al. (2014) defend that having face-to-face interviews allows a stronger relationship between the researcher and interviewee and enables the researcher to account non-verbal communication, making us confident that this type of data collection is the most adequate one for our purpose.

The data was furthermore gathered over field notes, internal documents and behavioural observations regarding body language, voice and emphasis in their articulations during the interviews. Moreover, we were able to record 13 of the held interviews with the LMs and they were further transcribed.

In order to be able to formulate the interview-guide, not only the interviews with our key informants were very important as also the analysis of secondary data such as internal documents and workshops regarding the agile framework as well as scientific papers.

4.5.   Interview process

The duration of all interviews varied between 45 to 60 minutes and each LM was interviewed individually by both researchers. The interviews were held in English and all conducted in different meeting rooms, at the company, depending on where the manager was located in order to facilitate the managers´ attendance and comfort. The meeting rooms were private and quiet, allowing an environment of concentration and confidentiality without external disturbances (Ritchie et al., 2014).

The interview process and interview-guide (Appendices 1 and 2) were structured and divided into four main phases, according to the interview stages suggested by Ritchie et al. (2014): (1) *introduction*: presentation of the parties involved in the interview (researchers and participant) and, overview of the research, its purpose and goals; (2) *beginning of the interview*: open questions concerning the interviewee´s background and some contextual aspects; (3) *during the interview*: central part of the interview where we directed our questions to the change or agile framework, managers feelings and perceptions with the aim of obtaining a coverage in depth of the topic; (4) *ending the interview*: future recommendations and suggestions and aspects concerning the next step and how the information will be further treated and used were also discussed. Since we conducted semi-structured interviews, we adapted the interview-guide according to the LM and key informant being interviewed, complementing the discussion with follow-up questions, with the aim of covering the phenomena to its greatest extent (Ritchie et al., 2014).

The participants that requested, received the interview-guide in advance, however we always provided one printed copy of the interview-guide for all interviewees during the interview.

4.6.   Data analysis

The gathered data was firstly reviewed and organised according to the interview transcripts; further field notes and initial thoughts were added to make sure that we included the entire data. Anonymous codes were given to the interview transcript in order to avoid prejudices from our part when analysing the data, making it as objective as possible.

All of the interviews have been transcribed and were then further analysed and coded, according to different themes and categories (Creswell, 2013). For the analysis we were inspired by Grounded Theory which consists of breaking down the data and developing analytical categories and codes to analyse it (Charmaz, 2014; Ritchie et al., 2014). We first looked for different patterns and then defined various codes and categories for the identified similarities.

The codes have been divided into two main categories: the concrete identified needs and the discovered underlying reasons for the needs. For analysing how the needs are influenced and where they lie, the AMO-model will be used. To examine potential underlying reasons the GCT will be applied. Furthermore, sub-categories have been defined to provide even better insights and details in the empirical findings. By applying these theoretical approaches, it has been tested if the theoretical framework is adequate to analyse the data, showing that the selected perspectives are sufficient to investigate the empirical findings but included some limitations, which will be covered below.

4.7.   Validity and Reliability

According to Ritchie et al. (2014), validity and reliability are connected with the strength and credibility of the research findings and therefore, are key concepts when discussing generalisations.

Validity suggests the degree of precision and correctness of the research outcomes when it comes to the process of collecting data and subsequent analysis (Ritchie et al., 2014). To secure the validity among our collected data, 13 interviews were recorded and later transcribed. While one of the authors transcribed one interview, the other reviewed the written transcription while at the same time listening to the record, in order to guarantee that nothing was missing in the transcribed empirical data. Another way to increase the validity of a qualitative study is through

triangulation since it allows distinctive interpretations on the same phenomenon (Patton, 2002; Ritchie et al., 2014). Triangulation implies the use of different techniques to guarantee a superior level of legitimacy among the empirical findings. For this paper we use *triangulation of sources* by comparing different interviews and field notes; *triangulation through multiple analysis* where both researchers first reviewed and analysed individually all interview transcripts and then compared and discussed the results and further *theory triangulation* when analysing the data from an AMO-model and GCT, which will be regarded later in this paper (Denzin, 1978; Ritchie et al., 2014). Therefore, we are confident that our empirical findings possess a high degree of validity.

Reliability is concerned to the "replicability" of the research outcomes, i.e., if the findings of the study would be the same if the study was replicated and it depends on the likelihood of the main features of the primary data to reoccur and the veracity with which they have been categorised (Ritchie et al., 2014). Different scholars have distinctive views when it comes to the reliability of qualitative research. Lincoln and Guba (1985) state that the idea of reproducing a qualitative study is irrational due to the complexity of the contextual environment and the phenomena itself. However, Seale (1999) and Ritchie et al. (2014) for instance, believe that reliability and reproduction can be accomplished if the researchers are transparent to the practices used for the achieved outcomes. Since our study refers overall to a change process, we believe that regardless of the industrial context, many of the findings will be common to big transformations, as for example the need for more detailed and clear communication and information regarding the change. Furthermore, we consider that some of the challenges and needs experienced by the LMs, especially those who are in the initial phases of a change, will be similar to other managers working in the same stage of a large organisational transformation.

4.8.   Ethical considerations

When it comes to qualitative research, there are some ethical considerations that overall are important to consider (Creswell, 2013; Ritchie et al., 2014; Yin, 2014). We started the process by preparing ourselves for unexpected and challenging situations in order to prevent and hopefully avoid ethical disappointments.

The study should be meaningful and the participation on it should always be voluntary, i.e., not exposing the interviewees to conflicting situations or unjustifiable demands. During the entire process we always adapted to the location of the managers, in order to avoid unnecessary and uncomfortable dislocations and time pressures. Furthermore, attention was paid to the physical environment of the meeting room, in order to make sure that the LMs felt free to express themselves (Creswell, 2013; Ritchie et al., 2014; Yin, 2014).

Moreover, we as researchers have the obligation to respect the participants' privacy and anonymity during the entire process – including access to data, interviews, data recording and storage. During the beginning of all interviews, we informed the managers about the goals and purpose of the research, how they contribute to the study and which the main development stages are. We addressed privacy and confidentially protection aspects regarding the shared information and data storage, providing always a confidentiality agreement. Moreover, we always asked the managers if we were allowed to record the interviews and made our transcripts available and accessible for the interviewees (Creswell, 2013; Ritchie et al., 2014; Yin, 2014).

Since one of the authors is currently working at the company, we also informed the managers about this in the beginning of the interviews. Even though this situation could have contributed to some managers feeling uncomfortable and mistrusted, we did not feel that this had any impact on the outcomes of the study. Also, during the interview process, we assured that the interview-guide was clear and not misleading, clarifying potential misunderstandings (Creswell, 2013; Ritchie et al., 2014; Yin, 2014).

Lastly, another aspect that we took into consideration is the fact that there were always two interviewers and one interviewee. We always informed the interviewees about each interviewer´s role – while one "leading" the interview, the other was mainly taking notes, assisting the leading interviewer with follow-up questions, if needed – to avoid that the managers felt uncomfortable with this "disproportion" (Creswell, 2013; Ritchie et al., 2014; Yin, 2014).

4.9. Limitations

In general, all studies and research methods have their own advantages and limitations. Yin (2014) acknowledges some common limitations when it comes to the choice of case studies as

a research method. One traditional concern is related with the accuracy of the study due to the possible lack of systematic procedures and/or influence on the results and conclusions. We believe that we overcome this limitation by using semi-structured interviews and by asking open questions, giving the opportunity for the interviewee to think and reflect upon his/her answer beforehand.

Another limitation, associated with qualitative studies is related with the inability to draw general conclusions from the outcomes (Yin, 2014). However, we believe that our study will facilitate and guide other LMs during a change process and especially, in an AT.

Another fact pointed out by Creswell (2013) and Ritchie et al. (2014) would be the sample size. The R&D department has a total of 477 managers and only 14 were part of this project. The aim was to conduct a total of 20 interviews but unfortunately, we were only able to conduct 14 interviews in total. However, after the tenth interview we could already identify strong patterns in the respondents' answers, which did not make it necessary to conduct more interviews, minimizing the limitations in regard to this point.

Despite all aspects previously mentioned, we believe that we overcome most of the limitations and are able to draw the intended conclusions. Furthermore, we are confident that the managers we interviewed, felt comfortable and safe throughout the entire process, sharing this way their truthful thoughts and opinions and therefore we were able to find the outcomes that we did. Moreover, we are overall confident that the choice of our research strategies decreases the general limitations of a case study to a great extent.

5. Empirical results

The following chapter will include a descriptive summary of the empirical findings through the transcriptions of the interviews and the observed field notes. With our codes and classifications, we already undertake a preliminary interpretation of the findings; as mentioned before we see for instance frustrations as an indicator for unmet needs. The coded data will be further discussed in the analysis chapter with the help of the chosen theoretical framework. This part is structured according to the overall research question and the chosen sub-questions and will show patterns that are found in the empirical data. To guarantee the anonymity and confidentiality throughout the entire thesis and among all participants, anonymous codes for the interviewees are taken, which are described more detailed in the table above. The findings are not only based on patterns and similarities in the responses but also on observations during the interviews as well as contradictions and comparisons of the different answers.

5.1.   Identified needs

In this section, the different identified needs of the LMs in the transformation are presented, based on patterns and observations in the collected empirical data. Many of the needs can be identified through the dissatisfaction or frustration resulting from unfulfilled needs of the LMs. Also patterns of satisfaction due to fulfilled needs can be discovered. Different categories are created to make the needs better understandable and to explain the patterns in a systematic and detailed way.

5.1.1. Understanding the purpose of the change

In the first place, it becomes apparent that most of the managers do not seem to understand the reason for the intended changes. Many would like to get an explanation of why this specific framework has been chosen as the way to go. An example can be given by interviewee 5:

"I don't get any answers. I feel that it's such a big decision without explaining why. (...) What is the purpose?"

However, we also received some rather positive responses from some of the LMs who seem to understand the purpose of the transformation.

When the need of understanding the purpose is fulfilled, the LMs appear to be rather positive towards the whole change, such as in the case of Interviewee 13:

"I feel that it is very good to have this mix of competences together to deliver. It is really important for the effectiveness and cost wise. For my group it is really good because instead of just doing tests, they will now be involved in the development and understand why they are doing the tests. So, it is good for everybody."

5.1.2. Information about concrete implications of the change

Moreover, it is noticeable that most of the respondents do not understand what exactly will change in this transformation, when it comes to their role, their subordinate employees and the organisation of their team. The patterns show frustrations from the LMs of not having the wished information and hence, we see them as unfulfilled needs that are important to regard. These needs will be regarded in detail in the following sub-chapters.

5.1.2.1. Information and motivation about own future role

One very apparent topic is the need for information and understanding of the LMs' own role in and after this organisational transformation. Most of the respondents seem rather concerned about their future role and lack detailed information to get an understanding about what they will do in the future. This is perceived rather negatively, implicating a need for clearer and more concrete information of the LMs' role in the new ways of working. Interviewee 7 shows a good example, arguing that one of the challenges with the transformation is that they do not understand the implications for their own role. Even though this manager appeared overall rather positive towards the change, the wish for more information is visible:

"To gather everybody and the whole group is a challenge. And to understand ´my role´ in it: So, what is a line manager supposed to do in this agile framework?"

In congruence, many of the LMs also show a lack of motivation to change their current role and tasks. We hence also see a need to receive motivation and incentives for their future role and to reduce fears. As a very good example, interviewee 5 explains that there are unanswered questions about their future responsibilities and that there is a lack of interest to perform the prospective role in the way that they understand it:

"I haven't been given a good explanation of what is the role of the line manager in the SAFe organisation. I asked that in my education and they say ´yeah yeah, the line manager will work with working environment, education, recruitment - that kind of stuff´. That is not appealing for me."

This goes in line with the quotation from interviewee 14 where the respondent says that managers like the current mix of tasks and are not sure about their future role:

"I heard when working in the agile way, I don't really know if that is true but, line managers will work 100% with personnel and then we have product owners that are more on the technical side. For me, as it is today, I love the mix, it is perfect for me and if I had to choose a side, oooh, that would be a big problem."

We can also identify patterns of LMs who are rather optimistic about the changes for their own role. Nevertheless, also in these cases it is apparent that there is a need for many LMs to get more incentives and information about implications for their function, as described by the LM in interview 3:

"My hope is that with the transformation, we will push the product responsibility to the product owners so that the team manager focuses more on the people related side (...). But I think a lot of line managers have been recruited because they are quite skilled on the technology side (...) and I think a lot of them would be fantastic Product Owners, but I don't think that everyone sees that."

5.1.2.2. Information about the implications for subordinate employees

Furthermore, more information about what will change for the LMs' subordinate employees is requested. This need we base on the fact that some of the interviewed LMs claim that they do not understand the implications for their employees. A good example can be found in the responses of Interviewee 11 and 6, as it is stated that they would like to understand the implication for their teams better and to connect to the implications of the changes in the overall organisation.

"I had someone people coming to me that said ´Oh some of your team members are included in my scrum team´. And that is the only information I get. And when I don't see the complete

picture, I don't understand what I should do with my other team members then."

(Interviewee 11)

"It could be clearer where we are heading and when. I mean we have a lot of knowledge about the SAFe and you can always read more about that but how it will affect our teams in vehicle hardware that I think we could have more information about." (Interviewee 6)

Moreover, some of the managers describe that they get many questions from their subordinate employees about their future role, creating a perceived situation of "helplessness" for the LMs from our experience. Interviewee 4, for instance, emphasises the conflict of not understanding what will change for their subordinate employees on the one hand, but to be responsible to explain it to them on the other hand:

"It is not easy to explain this to your employees when you don't understand it yourself. At least I would like to be able to respond some questions that pop up and not always say: 'We have to take this tomorrow as well'."

5.1.3. Feeling of preparedness

In addition, there is a perceived lack of information when it comes to the overall plan and what will generally change in the organisation, resulting in a feeling of unpreparedness for many. Different interviewees state that they do not understand the complete picture about the transformation and that they lack a clear path, showing an unfulfilled need. As the respondents describe this situation as "tricky", "hard" and "not feeling prepared", we see this area as very important:

"No, I am not prepared at all because I don't understand what this transformation is."

(Interviewee 5)

"What I think is tricky in this organisation is that I really do not understand how they are thinking about the complete puzzle?" (Interviewee 11)

This is confirmed by another manager, describing a situation of confusion and frustration due to the perceived lack of an overall change plan:

"They are going out and say, 'maybe sometime during this year or sometime during the summer we go agile' but we don't know how we going to do it and everybody is confused."

(Interviewee 14)

Also, from the interpretation of the interviewees´ body language, feelings such as "disparity" and "lost" can be noticed, emphasising that the need for preparedness is perceived as rather strong.

In contrast, another manager seems rather positive about the organisational transformation but also communicates the wish for more information about a change plan, showing that this need is visible, regardless if optimistic or pessimistic about the change:

"Of course, I would like to have more information and if we could have a road map for the implementation at the company. I mean (…) there is a lot of info, I know, but it is hard to see the clear path now how we will transform. And I guess that it is good in a way that not everything is decided yet and that we can be able to be part of this transformation, but I think it works both ways." (Interviewee 6)

5.1.4. Feeling of being valued and involved

Feelings of frustration and dissatisfaction concerning the way of how information is communicated when it comes to this transformation are also quite evident among the interviewed managers. The LMs state that they were informed through a general email that was sent out by the top management, which is seen as rather impersonal and negative and results in the feeling of not being valued, indicating a need in this area:

"The information came actually from the top management to everybody through email: 'Now it is time to go this way! ' (...). We knew that something was going on, but we didn't know what was exactly going to happen and it showed to be much bigger than it was said in the beginning. I think that the top management absolutely needs to have another way of communicating!" (Interviewee 7)

Another manager claims that they got the information through other sources, such as unions and their managers but would like to be more involved in the decision-making, especially when it comes to their teams:

"I have mostly got it from the unions because I am very much involved in the unions. But I have got a very little information from my own organisation and from my managers and the managers above." (Interviewee 11)

While making these statements, we could perceive a deep frustration and irritation from the respondents, based on their gestures, voice and emphasis in their replies.

Some of the managers moreover feel like not being treated honestly by the higher management, as they do not believe that the introduced pilot projects are pilots only. Due to that the LMs seem rather frustrated, we see this as another indicator for the need of being valued:

"This is the biggest change ever, because now we are talking about managers not having the technical responsibilities anymore. We are totally reorganising (...). Where will the decision be made? I don't feel that this is a pilot. This is the way it is going to be." (Interviewee 5)

On the other hand, LMs that feel important and included appear much more positive, showing the positive impact when this need is fulfilled, as indicated by Interviewee 3:

"Yes, I have been involved in the decision-making. We said we need to define how we work with software (...) and then we started deciding to work agile and that was a decision made together with my colleagues. (...) I am quite optimistic about implementing some form of change."

5.1.5. Increased trust and mandate

Another area that appears to be perceived as hindering to perform their role, both now and in the transformation, is the lack of sufficient decision-making power and trust in the organisation. We can hence identify a need for an increased mandate and more trust specifically in the organisational transformation, as highlighted for instance in interview 4:

"I have too little mandate today (...). For me it is now extremely important that the company is brave enough to let go more mandate in this transformation. You have to take the opportunity now of implementing trust and that you can only do by giving mandate (...). You need to give the team, the developers mandate, they should be possible to be as autonomous as possible."

This is also confirmed by Interviewee 12, who specifically asks for more trust to reduce time-consuming activities:

"We should be dare to skip the attendance recorders (stämpelklocka), they are not coherent with a modern way of working. To get rid of this, that could be a signal in the transformation, that would create trust. We should be able to trust our employees."

5.1.6. Support and psychological safety

Many of the interviewed LMs describe a feeling of "being lost" or "being alone" in this transformation and perceive that as rather negative and frustrating, as indicated by interviewee 14:

"I am feeling quite alone in this work. I mean coming out and say ´We go agile! ´ but, without telling how we should do it and just saying ´You have to figure it out yourself´ that is not the way to do it."

Furthermore, managers feel that the lack of communication from the top management fosters an environment of uncertainty, distrust and anxiety emphasising the need for psychological safety in this change situation:

"I am not a negative person, I am very positive, but we are risking so much in this transformation. (...) I have never seen such a big change without the top management saying: ´Listen, this is the right way to do´, they are silent! And those who are experienced are more silent than others and that makes me very afraid, because we cannot risk our deliveries that we have in the future." (Interviewee 5)

Some LMs also mention the need for help or hands-on support that would help them a lot in their perception, as stated by LM 9, who wishes more guidance and support on a daily basis, especially from people with experience in the relevant field.

"If the pedagogic part of the SAFe could be better it would help a lot. (...) If we maybe even had people out in the different departments helping and coaching, I think that would make life easier for everyone. I don't say that we should be taken away the responsibility to learn ourselves but sometimes we need support." (Interviewee 12)

Another LM in addition describes the negative feelings when not having the needed support, confirming this need:

"It is very much anxiety and a lot of negativity that is going on in the company right now because everybody is not feeling safe, everything is changing. There are a lot of people talking negatively and it affects everybody else, so everybody is just sinking down right now I feel." (Interviewee 7)

We also received some responses in which LMs describe the fulfilled need of support and psychological safety by having a concrete contact person. This fulfilled need results in our experience in optimism and motivation for the transformation:

"We have a really good support with a lot of coaches and so on, so I think that it is going to succeed actually." (Interviewee 9)

5.1.7. Improved skills, education and training opportunities to lead the transformation

We could moreover discover that most of the LMs do not feel highly skilled, even though all of them seem rather motivated to be a good manager and leader and to educate themselves. In general, but also particularly in this situation of change, some of the interviewed managers feel that they would like to have more and better education in the fields of leadership and management.

"I consider myself as being good at handling people, but I still haven't had any leadership programs and I am still waiting for it. (…) Now I am kind of relying on my colleagues who have gone through it, but I feel I am lacking the toolbox sometimes." (Interviewee 10)

"Yes, a change management course is also very good to have, absolutely. I am assigned to a SAFe course, called Agile leadership but a change education would be helpful as well."
(Interviewee 4)

Furthermore, it is mentioned several times that especially SAFe and agile educations are needed in order to understand the concepts better and to be able to lead their subordinate employees

through this change, according to their perception. However, also here some unfulfilled needs are evident in form of complaints and shown dissatisfactions, as in interview 11:

"I think that it was not very good that all the courses are only in English. I think that when you go in such a big new change in the company, you really need to have these kinds of classes in Swedish. And also: make it simple. I could take the information because I had this foundation from before. But it could be more linked to what it is in for us at the company."

As many managers mention and complain about the insufficiency of the SAFe and agile courses, we see that as a highly urgent and important need.

5.1.8. Better working conditions in current situation

Other important needs that can be identified through the conducted interviews are resulting from the current work situation of the LMs in question. Even though some of these identified needs are not resulting from the transformation itself, they, however, have an impact on the LMs' needs in this change situation. We assume when there are needs for better working conditions now, these needs will be even stronger during the transformation, as this time is shaped by even more challenges for the LMs.

5.1.8.1. *Less workload and smaller team sizes*

The most outstanding patterns can be found in the LMs' statements about their workload and the team size of their subordinate teams. It becomes apparent that most of the managers feel currently overloaded and perceive that they have to manage too many employees, resulting in frustrations and needs to change these conditions. The perceived overload moreover results in many cases in the perceived lack of time to understand and educate themselves for the organisational transformation:

"I would say that the trickiest thing today is to find really the balance and up until now it has never been a forty-hour job, never ever, it is always definitely more. (…) I do still think that the teams are too big, I mean 17 is a lot. I think normally, if you ask HR, they say it should be like in the old military, maximum 10-12." (Interviewee 4)

"Yes, I lack the time to analyse the changes. Fundamental things need to be thought of before we start the pilot. And a pilot should also be the time, when we can stop and say ´this was not working´." (Interviewee 5)

On the other hand, we could identify that when fulfilling the needs for a perceived good workload and an adequate team size, the LMs feel very positive and able to cope and understand the change better:

"I think the workload is okay now. In the management position I have now, it is not too many people reporting to me. I have good possibilities to be manager for them, to lead them and to coach them (...). I am right now dedicated to understand and to inform and to get knowledge about the agile transformation." (Interviewee 6)

5.1.8.2. Reducing "time wasting" components

In addition, a pattern in regard to frustrations and dissatisfactions about perceived time-wasting components in the LMs' current work situation can be found. Many of the interviewees name the wish for less administrative tasks, systems and meetings, leading to our conclusion that there is a need to reduce these elements in their daily work:

"We do a lot of administration – things that don't add value, neither to me nor to my employees." (Interviewee 7)

"Unfortunately, I spend a lot of time in meetings, which is an unfortunate situation (…). I would like to be able to observe and see more and to be together with my team and see what the team does." (Interviewee 3)

5.2.   Underlying reasons for the identified needs

When looking at the identified needs, we invented codes to cluster the findings further. This part also includes a preliminary analysis of the empirical data. We see patterns when it comes to the different stages in the change and the organisational unit, leading to our classifications.

5.2.1. Needs according to the different stages in the change process

During the data collection phase, it is apparent, that not all of the LMs are currently in the same stage in the organisational transformation. This is demonstrated more detailed in the table above in the section "methodology". We see a pattern in the answers of LMs in the different phases: (1) *not started*; (2) *initial stage* and (3) *advanced stage*. It is noticeable that none of the respondents is really "done" with the transformation yet. However, all of the interviewees have at least heard about agility and that the organisation will undertake an AT, according to SAFe.

5.2.1.1. Not started

To start with, some respondents state that they did not start the transformation yet. In this stage, it is apparent that mostly the need for understanding and information has evolved. LMs say to know about agility but see problems and challenges arising, as for example:

"I am familiar with agile, I never practiced it, but I have been on the basic courses and we discussed a lot in my management team about it (...). I think it is very important to have a common understanding of what to do and to build expectations (…). I see some huge challenges to implement this." (Interviewee 5)

"Yeah, I heard about agility! They will change everything (…). I think it will take place in the future mostly. I don't know if I am ready, they are changing all the time. To be honest I cannot understand how they can do it in this big organisation." (Interviewee 2)

5.2.1.2. Initial stage

The second identified stage can be referred to as "initial stage", meaning that the LMs in this step have already started with some agile ways of working or have at least implemented some pilots in their groups. The patterns in this phase go, from our experience, very much in line with the first stage, "not started". The interviewed LMs usually seem to have the need for information and understanding the change and the overall plan to feel more prepared. They tend to use a lot of rhetorical questions and highlight that they do not really know what happens, as for instance in our first interview:

"Right now, we are changing into SAFe and product streams, so we are in the middle of it. We started three weeks ago. We are familiar with agile, but this will mean a lot of changes and we don't know how it will look in half a year. We don't know, we will not follow the engineering part, or maybe we will have to follow them, but our change might not look exactly the same, I don´t know."

5.2.1.3. Advanced stage

The third identified stage can be called "advanced stage", since managers in this phase have been working according to agile for some while. We see a pattern that LMs in this stage seem more positive than LMs in the first two phases, indicating that the stage in the change process is an underlying explanation for upcoming needs. Nevertheless, also in the advanced phase of the change, some of the above mentioned identified needs, such as the need for better skills and the need for better working conditions, can be discovered.

To demonstrate a rather positive point of view in this phase, interviewee 9 can be taken as an example:

"Of course, I am familiar with agility. The whole company is going in this way and my team has been working in this way already. Part of this was already introduced in April last year. There are a lot of changes and challenges (...) but I think that is good and I think that everyone is quite happy about it."

5.2.2. Other patterns found

One other similarity, which does not go in one of the previously mentioned categories, is the organisational unit of the LMs. Managers that work exclusively with software components appear generally more positive and less change resistant than the ones not focusing only on software:

"Why do we need to destroy something that already works for hardware? What is the purpose? The concept needs more adaptation to hardware!" (Interviewee 5)

6. Discussion

To summarise the findings before analysing them, it is noticeable that the LMs express the desire for more information regarding the organisational transformation and its future implications, not only for their own role but also for the subordinate employees. They share the perception of the lack of clear guidance and support throughout the change process – especially from the top management. Together with the perceived absence of concrete examples when it comes to the adaptation of the new framework to their daily work, this makes them feel anxious, confused, afraid and lost. Furthermore, all managers seem eager to enhance their leadership knowledge and change competences to feel more confident when managing their teams, particularly in this change situation. Moreover, the wish for improving the working conditions is common to all. They urge the need for decreasing the workload, respective team size and time-consuming aspects of their quotidian. Some even mention the ambition for having increased mandate and trust delegated to them and their teams, both now and in this change.

The following part will be dedicated to the analysis of the described empirical findings with help of the chosen theoretical framework and is divided into two main sections. In the first part, the identified needs of the LMs to perform their role well in the organisational transformation will mainly be analysed with help of our closer theory, the AMO-model. The second section focuses on examining and discussing the identified needs from the perspective of the GCT, including the different stages in a change process. In these sections, we furthermore combine both theoretical perspectives. Important to regard is that the LMs' role in our case study, as well as according to different literature, is divided into three different aspects: being personnel responsible, having technical responsibilities and functioning as a change agent, as mentioned before. Both of the described theories will help analysing the needs for their overall role, however, sometimes only needs for one specific part of their role can be found and analysed.

6.1.   Analysis of the identified needs according to the AMO-model

According to the AMO theory, the individual performance of the LMs is influenced by the factors ability, motivation and opportunity and this section will demonstrate how the needs are shaped by these factors. From the empirical findings it becomes evident that there are needs

existing that are impacted by all of the mentioned AMO aspects, which will be discussed more detailed in the following paragraphs.

6.1.1. Needs from the ability to perform their role in the transformation

The LMs' *ability* to perform their role well in their perception is related to the necessary knowledge, skills and competences to execute the job (Boxall & Purcell, 2016).

Many of the interviewed LMs describe a lack of functional education and training regarding leadership and management in general but also when it comes to change management and to the introduced agile structure. Due to noticeable frustrations in this field, it becomes apparent that there is a perceived lack of ability to perform their role in this organisational transformation.

Looking at our patterns, it is noticeable that LMs in the initial stages as well as from other functions than software only, seem to have a stronger need for the understanding of the framework. We acknowledge that agility is intended for software companies, which can be one of the reasons why managers working with hardware have more difficulties in comprehending the change (Dikert et al., 2016). Hence, the need for ability through understanding the background of the change can be a pattern in all organisational transformations, but it is particularly intense when introducing agile ways of working from our experience.

When the need for a good ability is not fulfilled, the LMs show an increased need of education and therefore, they do not feel that they have sufficient skills that enable them to lead their employees, especially during a transformation. This goes in line with the identified needs for change management educations, reinforcing that needs shaped by the lack of ability, are perceived as rather strong. If those needs are not fulfilled, LMs have the perception of not being able to be a good leader in this change process to cope with the change situation in general.

In addition, the need for a better understanding, skills and information of the transformation´s background can be categorised as a need coming from the LMs´ ability. Many of the LMs state to not understand the framework as well as the implications coming along with it. Furthermore, they specifically name the need of getting more and better education to be able to explain the concept to their employees better. According to their perception, this would support them to perform their leading role better in this transformation.

This goes in line with the needs for receiving more information regarding the LMs' own future role and the consequences for their employees. Without having this information and knowledge about the implications of the organisational transformation, the LMs feel unable to perform their leadership and change agent role in the transformation. Furthermore, they have the perception of not being able to answer questions of their subordinate employees, urging the need for a better information.

All in all, the explicitly formulated wishes and the noticed frustrations in regard to the mentioned themes show that the needs for the ability to perform their role well in the transformation are quite strong. The identified needs including more and better education, trainings, skills and information regarding leadership, change management and agility we see as resulting from the lack of ability. When the LMs feel able to perform their role well, they show less needs for information and training and vice-versa. On the other hand, we can also notice that if the needs are met, the LMs feel more able to perform their role, if not, their ability to perform is negatively affected, according to their perception.

6.1.2. Needs from the motivation to perform their role in the transformation

The next regarded factor is the *motivation*, which is determined by the LMs' level of eagerness in performing the job (Boxall & Purcell, 2016). Also, here we can find several patterns, showing motivational aspects for the LMs' needs for a good performance in this transformation process.

There are two sub-categories, which are strongly connected to the factor motivation influencing their overall performance: the motivation for the change itself and the motivation for their future role, which will be described more detailed below.

Several frustrations and hence unfulfilled needs can be found regarding the information and motivation for the LMs' future role. Many of them feel motivated to perform their current role, however, we can find a pattern that the LMs do not seem motivated for their potential future roles. This lack of motivation results in the need for understanding and valuing their prospective role and has a direct impact on the motivation to perform their role in the transformation. When not understanding the implications for their upcoming role and especially when not feeling motivated for it, the LMs do not seem eager to lead the change and act as a change agent, which

is a great part of their role. Furthermore, the lack of motivation to change their tasks will have a negative impact on performing their overall role, once the agility is fully implemented. This implies problems and challenges for the future, regarding the motivation to perform their overall role in the agile environment. These concerns seem to result not only from any organisational change but are moreover particular for an AT. This emerges from the fact that the LMs´ role will be split, meaning that they have to decide for one part of their role, even though they express to like the mix of the tasks they currently have.

In contrast, the LMs that describe to be motivated to change their role, are perceived to be very motivated for the change and to be an active change agent and leader through this transformation. However, here a lack of motivation for the current tasks and responsibilities can be identified, indicating that also in these cases the motivation for the performance of their overall roll is deficient.

In addition, we identify needs for understanding the purpose and the preparedness for the organisational transformation, which we see as needs that are influenced by the motivational factor. When LMs do not express to be motivated for the change, they show to have a rather strong need to understand the need and to feel prepared for the change. This lack of motivation has a negative impact on being a change agent and leader in this transformation as well as on their overall role performance. The managers that describe to understand the purpose of the change and seem to be motivated for it, are also motivated to lead their employees through the change, from our perception. The same goes for the feeling of psychological safety and support: when the motivation for the change seems to be rather good, the LMs do not express a strong need for feeling safe and supported. Moreover, the feeling of being lost and unprepared goes in line with the discouragement. From our experience this has a negative impact on the overall motivation to perform their role.

Another pattern is the need for the feeling of being involved and valued, which can also be explained by the motivation aspect. LMs that seem less motivated show a lack of the feeling of involvement and being valued, indicating a need. In contrast, managers that appear more motivated in all aspects of their (future) role state that the need for inclusion and importance is met, emphasising our assumption.

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To sum it up, all of the interviewed LMs state to be rather motivated for performing their current role. The LMs who seem furthermore motivated for the change and their prospective role appear also motivated to function as a change agent and actively lead the change as well as to perform their future role. In contrast, managers not understanding the purpose of the transformation and not being willed to change are not perceived to be motivated for their change agent role and neither for their future role. These various aspects together make the factor motivation quite complex.

6.1.3. Needs from the opportunity to perform their role in the transformation

The last and very crucial patterns concern the area of the *opportunity*, which is determined when taking into consideration the structure of the organisation and its work environment (Boxall & Purcell, 2016).

One of the needs that can be explained by the LMs´ opportunity to perform their role, is the support during the transformation. The explicit wish for support, from the higher management and from specific contact persons, shows that LMs see an increased opportunity to perform their role during the change, once this need is fulfilled. This goes in line with the positive responses from LMs, which have experienced good support, indicating a good opportunity to perform their different parts of their role in the transformation.

Moreover, the needs regarding the current working conditions have to be looked at. The urgent need for reduced team sizes and less workload shows a lack of opportunity to perform their role in all aspects, when it comes to managing their employees, focusing on technical responsibilities and leading the change. Many managers claim that they have to make trade-offs in some areas and to not have the time to educate themselves about the change. Furthermore, the wish for less time-wasting components demonstrates a need shaped by the opportunity, as this is hindering the LMs to focus on their actual role in their perception. This goes in line with the need for increased mandate and trust, which has been explicitly expressed by several of the interviewees.

The needs in the area of opportunity are perceived by all different interviewees, however, LMs that entered the change already seem to have even stronger needs to get the opportunity to perform all their parts of their role. This indicates that opportunity is an important factor for

their perceived performance, both in the current role, when leading the change, and in regard to their future role.

6.2. Analysis of the identified needs according to the General Change Theory

The identified needs according to the AMO-model can furthermore be regarded from a wider perspective, in order to understand the underlying reasons for the evolvement. For this study, the GCT has been chosen as we strive to analyse the LMs' needs in the different phases of a change process: the *unfreezing stage*, the *restructuring stage* and lastly, the *refreezing stage*.

6.2.1. Needs in the first stage of the change process – the unfreezing stage

When comparing the answers of the different LMs, it becomes apparent that there are needs arising that can be classified as being in the first of Lewin's (1947) change stages, the so-called *unfreezing stage*. Looking at our empirical data, we define the "not started" and the "initial" stage, as we called them, as being congruent to the unfreezing stage. As Lewin (1947) and Schein (2017) describe in their theory, this phase is shaped by anxiety and disconfirmation of the organisational members. This goes in line with our findings in the responses of managers that have not started the change yet or that have just started. LMs in this stage show an urgent need for information about the change in all possible ways. Most of the interviewed LMs appear very concerned, anxious and uncertain in this stage, especially about their own future role. They show a need for information about implications for their role and their team but also for the change in the overall organisation. This can be connected to the different anxieties described by Lewin (1947) and Schein (2017), as they explain phenomena such as the anxiety of losing power and status and of negative consequences when not changing in the intended way. Furthermore, the needs of safety and security that are mentioned in this phase, go in line with our identified needs for support and psychological safety as well as the need for the feeling of preparedness and understanding the implications of the change. Also, the fact that the LMs ask many questions in this phase and express a feeling of being alone confirms the mentioned disconfirmations by Lewin (1947), emphasising that various of the needs can be explained by the first stage of the change process.

The concept of learning anxiety described by Lewin (1947) and Schein (2017) can moreover be found in our patterns when regarding the need of better skills and knowledge for the

background, framework and overall change plan. Some of the LMs in this stage explicitly request more and better educations and information material in order to educate themselves about the new concepts. This would reduce the anxiety of not being able to learn about the new ways of working fast enough, in our perception.

In addition, the need for understanding the change purpose is visible in our findings in the beginning stages of the organisational transformation. This indicates the need for the motivation and information for the change, which is also explained by Lewin (1947) and Schein (2017) in the unfreezing stage. Also, the responses of LMs reveal that many of their subordinate employees' behaviours and reactions are shaped by change resistances. Moreover, the arising need of change management educations emphasises that the needs of the LMs can be explained by the phase in the change.

All in all, when comparing the answers from managers in our first two defined stages, we can see many aspects of anxieties and change resistances, leading to our conclusion that these stages can be classified as Lewin's (1947) and Schein's (2017) unfreezing stage. Therefore, the needs for information, safety and support can be explained by the early stage in the transformation and resulting anxieties and concerns in this phase. When connecting to the AMO-model it is thus noticeable that the needs are mainly shaped by the factors ability and motivation.

6.2.2. Needs in the second stage of the change process – the restructuring stage

With regards to our findings, LMs in the "advanced" stage can fit in the *restructuring stage*, according to Lewin (1947) and Schein (2017). In this second phase, new ways of working are learned and there are fewer needs visible than in the first stage. Furthermore, the needs resulting from concerns and anxieties, such as the need for information and understanding the purpose of the transformation, decrease in this phase, confirming the GCT.

We can find many concerns and anxieties in this phase, however not as evident as in the unfreezing stage, endorsing that the needs of the LMs depend on the different phases in a change process. Moreover, in this stage the interviewed LMs seem more optimistic even though there is still a need for information. Also, the wish for the feeling of importance can be discovered, as many of the LMs state that they would like to be more included in the decision-making of

how the change will affect their teams. It seems like most of the LMs in this stage are currently starting to work with the new ways of working and hence, most needs concern questions from trying the concepts. This strengthens our assumption that the discovered needs in this stage go in line with the GCT by Lewin (1947) and Schein (2017). When comparing the findings with the AMO-model it becomes apparent that also the LMs´ needs in this stage, seem to concern the factors ability and motivation, predominantly.

6.2.3. Needs in the third stage of the change process – the refreezing stage

The last explained change stage by Lewin (1947) and Schein (2017) regards the *refreezing stage* in which new concepts and meanings are internalised. Generally, the organisation of our case study did not implement agility completely, meaning that all of the interviewed LMs are still in the change process and rather in one of the first two stages. However, we can see a pattern, showing that the further the change process has come, the less anxious and resistant the LMs seem. This means that managers, which operate with some new ways of working since more than one year, started internalising them. The main needs in this later phase concern general working conditions rather than needs regarding the change or framework. This is another confirmation that the GCT can be applied when explaining the identified patterns in the needs, as they follow mostly the described characteristics of the different change stages by Lewin (1947) and Schein (2017). When looking at the findings from the AMO-perspective, it seems that the ability and motivational aspect play a decreased role. In contrast, the opportunity factor appears to have a bigger impact on the needs. Nevertheless, also in the refreezing phase, some of the above mentioned identified needs, such as the need for better skills can be discovered, showing an ability aspect.

6.3.   Concluding words about the analysis

All in all, it is possible to see that all of the AMO factors have an impact on the LMs´ needs and that the findings can be classified according to the model. On the other hand, we acknowledge that the unmet needs can also influence the AMO elements. Furthermore, the GCT can be used to explain the different needs to a large extent. However, when analysing the empirical data with help of the chosen theoretical frameworks, some limitations become apparent.

Looking at the AMO-model, it is possible to classify and explain all identified needs regarding ability, motivation and opportunity, however, it appears that some of the needs do not seem to perfectly fit into all factors – especially in the area of motivation. It is rather difficult to perceive if the LMs are mostly unmotivated about the change and their future role, due to described anxieties, or if the motivation regards the performance of their current role. We hence believe that the motivational part should be extended when it comes to change situations. In addition, it is difficult to define whether the needs can be explained by the AMO theory uniquely or if the unfulfilled needs might have an impact on the AMO factors, making this matter quite complex. However, when complementing the AMO-model with the GCT, we are confident that the overall theoretical framework works well.

Moreover, support seems to play a significant role, which can be regarded as a factor concerning the opportunity. Nevertheless, a sub-category of support in this model could be beneficial to understand its critical impact on performance even better. Lastly, our paper regards the individual perspective of the interviewed LMs. This means that even if all their expressed needs are fulfilled, it is not guaranteed that they will perform well, as it only indicates their perception on performance and its influencers.

Regarding the GCT, the identified needs of the LMs in the different change phases go in line with the chosen framework and can hence confirm the theory. However, we need to consider that we do not have empirical findings from many LMs that are in a very advanced change stage or are even done with the entire implementation. This makes it difficult to draw conclusions about the needs in the refreezing stage. Furthermore, we could not only find patterns concerning the different phases in the change process but also based on the different organisational areas in which the LMs are working, such as software only and not software only. Our patterns show that LMs working with software purely appear overall more positive and understanding than those concerned with other areas. These differences show quite similar results as the phase in the change when it comes to anxieties, concerns and change resistance. Thus, we cannot assure that our findings can only be explained by the GCT, since they could also result or be intensified through particularities of an AT. Also, the fact that the LMs´ role will change drastically is specific for an AT, meaning that it is not ensured that the need for understanding the prospective role is solely coming along with the change stage (Internal documents, 2018). Furthermore, we are aware that all of the interviewees have a technical background, which could be the reason

for the common need of getting more education in the fields of leadership and change management. Nevertheless, the strong patterns in the stages in the change allow us to see the GCT theory as highly relevant and valid to explain the outcomes. We acknowledge that an AT in particular can intensify the needs, however, we could not discover needs that do not go in line with the GCT.

Lastly, we have to limit our analysis and the theoretical framework, as there can also be other categories of needs, influencers and underlying explanations defined. Examples would be the institutional context or the personal characteristics of the LMs, which can have an impact on their needs and perceived performance and cannot be shown by the chosen theoretical framework (Marin-Garcia & Martinez Tomas, 2016). Concluding, we acknowledge the limitations of the selected theories but see the framework built on the two complementing theories as highly relevant for the purpose of our study, as it explains and analyses the outcomes to a very big extent.

7. Conclusion

The following chapter builds the conclusion of our research and includes the summary and the demonstration of the fulfilment of the conducted study. After summarising the paper in this section, the contributions that are provided with this paper are presented, both, for practitioners but also for the scientific community. In addition, suggestions for future research, existing limitations and implications as well as concrete recommendations are given to conclude the study.

7.1. Summary of the study and fulfilment of the research purpose

As described in the introduction chapter, the purpose of this study has been to examine the LMs' needs to perform well when being in a large-scale organisational transformation. The study has aimed to identify and describe the LMs' needs for a perceived good performance in this change situation and to further analyse and explain these discovered needs from a theoretical perspective. For the methodology a qualitative case study has been chosen in order to perceive the feelings and needs of the LMs best. The findings have been examined according to the AMO-model in order to understand where exactly the identified needs lie and how they can be explained. Moreover, the GCT has been applied to analyse and explain the underlying reasons for the discovered needs based on the different stages in the process and could provide reasonable explanations for the outcomes.

First of all, the study shows that the identified needs of the LMs to perform well could be described and examined by the AMO-model. During the analysis of the findings, it has become apparent that there are needs arising, when it comes to the LMs' ability, motivation and opportunity to perform their role well in this transformation. Mostly, it becomes visible that many LMs do not feel that they can achieve a good performance, due to many unmet needs in all of the three areas, leading to many frustrations among them. In contrast, when the LMs feel that the needs concerning AMO are met, at least to some extent, they overall seem rather confident to perform well.

With regards to the LMs' ability, it has become apparent that many of the interviewed LMs would like to have more trainings and educations to increase their ability to perform their people

management and change management tasks better. When it comes to the motivation, the LMs mainly lack it for the transformation itself and for their future roles, leading to an overall decreased motivation, which is needed for a good performance in their perception. Finally, regarding the opportunity, it has become clear that many of the LMs see their current working conditions as hindering them to have a good opportunity to perform well in their role, such as too high workload and very big team sizes, in particular during this transformation. We acknowledge that the concept of support has shown to be very important and is not specifically part of the AMO-model. Nevertheless, it is possible to include support in the different factors, such as opportunity. All in all, the LMs' needs for a perceived good performance in this transformation can therefore be analysed by the AMO-model to a large extent.

The GCT has been applied to explain and examine the empirical findings from a wider perspective. The theoretical framework provides explanations for the different needs in different phases of a change and goes mostly in line with our findings. LMs in the "not started" – and the "initial" phase – seem to have more unmet needs and to require more information, support and security, in order to perform their role during the transformation, showing that the needs are mainly influenced by their ability and motivation. LMs in the advanced stage seem less anxious and more positive and mainly show to have needs in the areas of skills and working conditions to perform well in this restructuring stage, shaped by the factor opportunity. As the organisational transformation is not completely implemented in any part of the organisation, it is however difficult to draw conclusions when it comes to the refreezing stage. Nevertheless, when regarding the other patterns, we can conclude that the chosen theoretical perspective is sufficient to provide underlying reasons for the different needs.

To sum it up, the purpose of the study to identify and explain the LMs' needs to perform well during a large-scale transformation has been fulfilled as originally intended, with the mentioned limitations. The chosen theories could be used to describe and furthermore explain the findings to a large extent, demonstrating the validity of the selected theoretical framework. How the outcomes contribute to the existing knowledge of scientists and practitioners will be demonstrated more detailed in the following sub-chapter.

7.2. Contributions

First of all, the study is unique since we examine the organisational transformation from the LMs' perspective and look at their needs. LMs assume a crucial role in every organisation, especially during a transformation; their performance will have an influence not only on their subordinate employee achievements, but also on the overall organisational performance. Therefore, the uniqueness and relevance of our study lies on the fact that no previous research has focused on what we believe being the most essential player in a company: the LMs, especially when it comes to their needs in change situations. Furthermore, our research that focuses on the LMs and their needs in the AT is an extension to literature regarding agility and challenges in general. Moreover, looking at a large-scale AT with a predefined framework, has not been discussed by previous researchers making our paper contributory to other studies from the scientific community. In addition, to combine the AMO-model with the GCT is a contribution to literature regarding individual performance as well as organisational change and its implications.

Our study will also benefit practitioners that are embedded in similar complex environments as multinational companies are and that plan or are currently going through a large-scale transformation that implies a total reorganisation of processes, practices and roles in all levels, regardless of the industry. From a top management perspective, the outcomes highlight the importance of leading a change process in a responsible way by being transparent, providing clear and concise information, particularly when it comes to its purpose, aim and present or future implications. Furthermore, it helps companies – and LMs particularly – to understand what kind of challenges and needs LMs might experience during a transformation procedure and how to prepare and avoid negative consequences by meeting their needs. Moreover, our empirical findings will serve companies that have chosen to implement large-scale agile frameworks to understand their LMs´ needs, particularly the ones which incorporate software and hardware components in their daily processes. Therefore, we are confident that our study will contribute to the scientific community with new empirical findings but also for practitioners when considering the identified needs.

7.3.   Implications and recommendations resulting from the study

The outcomes of the study show different patterns, specifically of frustrations arising from unmet needs of some of the LMs, leading to several implications that are crucial to be considered for recommendations to practitioners. The research furthermore includes some limitations, as mentioned above, making it necessary to also provide relevant suggestions for future research.

7.3.1. Implications and recommendations for practitioners

It is essential to regard the different identified LMs' needs and to improve some of the unmet needs when looking at ability, motivation and opportunity. As all of the three factors together have an impact on the LMs' performance, it is crucial to meet the most important needs regarding all of them. When it comes to the ability, from our perception, it is most important to provide trainings and educations for leadership and change management in order to provide a good ability to perform their role well, during a large-scale transformation. With regards to the motivation, it seems most crucial to give an explanation of the purpose for the change and to promote the potential future role and career path in order to reduce anxieties and to guarantee a good motivation in a transformation and overall. Looking at the opportunity, most apparent become the working conditions that LMs express to struggle with. Additionally, the perceived lack of support and psychological safety show to be a major aspect, concerning the opportunity. Moreover, to understand the underlying reasons for the discovered needs, as the stage in the change process and the scope of work, is essential to meet these needs to the best extent. We therefore recommend providing most support and information for LMs in the first phases of the change process. LMs in the advanced stage showed to need more hands-on support and improved working conditions which are crucial for a good performance.

All in all, it would be best to regard all of the LMs' needs individually but since this is not possible from a resource and efficiency viewpoint, our study is beneficial to give a good insight of which needs are important to be met from their perspective. Our outcomes provide suggestions for meeting the needs in different phases of the transformation, demonstrating an advantage to be able to help the LMs perform better.

7.3.2. Limitations and suggestions for further research

Since our study has some limitations, as mentioned before, it would be interesting to make a similar study in a more advanced stage of the organisational transformation or when the new working ways have been fully implemented. On the one hand, it would be interesting to perceive the LMs´ needs after the transformation and to compare them with our results. On the other hand, as an AT implies a cultural change as stated by other researchers, it would be valuable to regard how the organisational culture has been influenced by this change (Dikert et al., 2016). Furthermore, it would be interesting to make a quantitative study to evaluate if our findings are statistically applicable for the majority of the LMs. It could moreover be beneficial to perceive the needs of all different organisational members meaning that a study regarding other parties could provide helpful insights for the researchers that would extend our paper.

Lastly, it is important not to forget that individual characteristics like personality traits and previous experiences could also influence the perceived performance and needs of the LMs and how they experience the change process and act in a transformation, as previously stated (Blumberg & Pringle, 1982; Vroom, 1964). Therefore, it would be interesting to conduct another study among the LMs in order to test if other factors and theories might have an influence.

Concluding, we acknowledge the limitations and propositions for future research, nevertheless, we can answer the research question and cover the research problem to the intended extent, making us confident to provide valuable outcomes for the scientific community and practitioners.

8. Reference list

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Appendix 1 – Interview-guide: Line Managers

This is a short version of the interview-guide for the Line Managers. For the interviews we have prepared a variety of follow-up questions of each category.

Introduction and Presentation of our Project – Personalisation

The chosen topic for our master thesis project concerns your needs to perform well in your role in the agile transformation and should help to make your life easier and better in regard to all your tasks and daily work. The following overall research question has been chosen: "What do line managers in a large-scale transformation need to perform well in their role?".

- The interview will be around 45 - 60 min, starting with some background questions before we go into detail about the specific topic. The interview will stay anonymous and all names and other directly identifying information will not be mentioned to any other party.
- Whenever you do not want to answer a question or feel uncomfortable please do not hesitate to let us know and we proceed with another question.

Introduction questions

1. Would it be all right for you if we record the interview in order to simplify the analysis of the interview please? We would only use it for the transcription and delete it directly after.
2. Can you please read and sign the confidentiality agreement with us?
3. Do you have any questions beforehand?

Background & Demographic Questions

4. Would you please introduce yourself briefly and tell us since when you have been working for the company and in general your career path?
5. What is your educational background?
6. How many people are reporting to you directly?

7. What are your main responsibilities as a LM when it comes to the technical role or the HR/people related tasks?

8. What do you like most on your position?

9. What kind of strategic tasks/responsibilities do you have?

Experience/Behaviour questions

10. Are you familiar with agile/lean ways of working in general? And that they will be introduced? (e.g. lean/self-organised teams)

11. Do you understand why they are doing this change?

12. Did you have any kind of change management course?

13. Would you like to know more about the roles in the future when introducing agility?

14. What has/will generally change in the unit with the introduction of agility?

15. How do you perceive your skills and competences to perform your role?

16. How did your leadership style has changed since the introduction of agile ways of working/How do you think it will change?

17. How do you perceive your decision-making power/autonomy?

18. How clear is it for you what you are supposed to in people related tasks/for what you are responsible (e.g. recruitment, salary setting negotiations)?

19. How do you think your daily working conditions influence how well you can perform your people management role?

20. Do you think that your daily people management decisions are always best for the long-term performance of the overall company? How?

21. How do you generally think the operational processes in relations to people management work? Can you please develop / explain? (e.g. recruitment, development, consultant management)

Feelings, impact and change questions

22. What important challenges in your environment are you experiencing currently? (is it related to the agile ways of working?)

23. How do you perceive that there is a continuous change / continuous strive for improvement in your unit?

24. How do you perceive that the unit (reporting employees) experience the introduction/change towards agile ways of working/that there is a situation of change existing currently in your unit?

25. How prepared do you feel for these changes?

26. How to you feel about the overall communication between HR and line management in R&D?

27. In what way have you been involved in the decision-making towards more agile working ways?

28. How do you perceive you are supported in this change situation?

29. How confident do you feel in making the right decision when it comes to people management?

30. What is, in your perception, slowing down processes?

31. What would you see as most important you need for the future to perform well in your role, in general in this lean/agile context?

Concluding questions

This interview is almost over. We would like to thank you again for your time and for sharing your vision and experiences about this subject with us.

32. Would you like to add something or make comments about the topics that we previously discussed?

33. Do you have any questions before we end the interview?

34. Do you have any comments on any of the questions?

35. Are you interested to receive our final report and the transcript of the interview?

Appendix 2 – Interview-guide: Key informants

This is a short version of the interview-guide for the HR professionals. For the interviews we have prepared a variety of follow-up questions of each category.

Introduction and Presentation of our Project – Personalisation

(See appendix 1)

Introduction questions

(See appendix 1)

Background & Demographic Questions

1. Could you please introduce yourself briefly and tell us since when you have been working for the company?
2. Could you briefly tell us about the company and your department?
3. Are you in contact with the line managers on a daily basis?
4. Can you give us some demographics about the line managers of the unit you support?

Experience/Behaviour questions

5. How familiar are you with the introduced agile ways of working in your unit?
6. How did you perceive the reaction from the LMs?
7. How were the LMs included/involved in the decision-making of the new agile ways of working?
8. What did you perceive as major changes for LMs?
9. How did/will you plan to introduce those new ways to the LMs?
10. How do you try to understand the LMs' current needs? (e.g. survey, evaluation of complaints etc.) and how do you work to improve?
11. How much are you involved in change management in the LMs' units?
12. How are you currently trying to enable LMs to perform their role well?
13. What kind of education does the company provide to LMs?

Feelings, impact and change questions

14. Do you perceive that the LMs feel overloaded?

15. Do you have the feeling that the LMs have the right skills, knowledge and tools to perform their role well?

16. Do you feel that the LMs are motivated to perform their tasks?

17. Do you have the perception that LMs are given the opportunity from the company to perform well? (e.g. enough time, authority, guidance etc.)

18. How flexible do you feel you can react to LMs' needs?

Conclusion questions

(See appendix 1)

Appendix 3 – Logbook

Both authors have equally contributed to all parts of this paper. Furthermore, all processes concerning the data collection for this study, including meetings, interviews and other events have been attended by both parties. Therefore, both authors spent the same amount of time and effort into this project.