

Lilla Fésüs

Critical Success Factors for Implementing Self-Organization

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Alpen-Adria-Universität Klagenfurt

Co-Supervisor

Prof. (FH) Mag. Dr. Ursula Liebhart

Alpen-Adria-Universität Klagenfurt

Institut für Organisation, Personal und Dienstleistungsmanagement

Evaluator

Ao.Univ.-Prof. Mag. Dr. Gernot Mödritscher

Alpen-Adria-Universität Klagenfurt

Institut für Unternehmensführung

Klagenfurt, July 2022

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Abstract

English

The practice of transforming a conventional, hierarchical organization into self-organization has grown in recent years, as it helps businesses to overcome modern-day challenges by enabling them to act agile in response to problems, such as the rapidly turning market, the volatile, uncertain, complex, ambiguous (VUCA) world, or the pandemic of the coronavirus disease 2019. Nonetheless, self-organization is often introduced without any organizational adjustments, which leads to reverting to hierarchical forms either formally or informally, and the concept consequently fails to deliver its promises. However, the system is often not to blame, but rather how it was introduced and implemented. Since there are many ways to transform to self-organization, rather than providing standardized instructions, this Master's thesis reveals the critical success factors for implementing self-organization that can serve as a guideline for organizations in their search for the most suitable way to transform.

The objects of the investigation are consequently transformation processes, where a whole company shifts to self-organization, and businesses with isolated self-organized teams were outside the scope of this thesis. The study extends prior research by focusing on the transformation process, deriving a theoretical foundation from the extant literature, comparing the hypothetical list of success factors to recent practical examples, and consequently adjusting it to the latest state-of-the-art. As a result, outdated items were removed, new ones were added, and additional research areas were revealed. Furthermore, the multiple-case, comparative study design using secondary document analysis helped to determine the explicit knowledge about the subject and prevent incorrect hypotheses, models, and parts of the derived framework from being transferred to another more exhaustive study. Accordingly, a list of recommendations for further research was derived.

Deutsch

Die Transformation von einer konventionellen, hierarchischen Organisation hin zu einer selbstorganisierten Struktur hat in den letzten Jahren stark an Bedeutung gewonnen. Diese Organisationsform sollte erwartungsgemäß Unternehmen dabei helfen, die Herausforderungen der heutigen Zeit zu bewältigen und agil auf Probleme zu reagieren, wie beispielsweise den sich schnell wandelnden Markt, die VUCA-Welt oder die COVID-Pandemie. Leider erfolgt die Einführung von Selbstorganisation oftmals ohne organisatorische Anpassungen. Das hat zur Folge, dass Unternehmen ab einem gewissen Zeitpunkt bewusst oder unbewusst wieder zu hierarchischen Organisationsformen zurückkehren und das Konzept folglich nicht halten kann, was es verspricht. Dafür ist jedoch nicht das Konzept verantwortlich, sondern die Art und Weise, wie es eingeführt und umgesetzt wurde. Da die Umsetzung auf verschiedene Arten möglich ist, war das Ziel dieser Masterarbeit nicht die Erstellung einer Schritt-für-Schritt-Anleitung, sondern das Aufzeigen wesentlicher Erfolgsfaktoren, welche Organisationen in weiterer Folge als Richtlinie dienen können.

Gegenstand der nachfolgenden Untersuchung sind Transformationsprozesse, bei denen ein ganzes Unternehmen auf Selbstorganisation umgestellt wurde, während Unternehmen mit nur einigen vereinzelt selbstorganisierten Teams nicht berücksichtigt wurden. Die Studie erweitert die bisherige Forschung insofern, als dass sie sich auf den eigentlichen Transformationsprozess konzentriert, eine theoretische Grundlage aus der vorhandenen Literatur ableitet, die hypothetische Liste der Erfolgsfaktoren mit aktuellen Praxisbeispielen vergleicht und letztendlich an den aktuellen Stand der Forschung anpasst. Es wurden veraltete Punkte entfernt, neue Aspekte hinzugefügt sowie zusätzliche Forschungsbereiche aufgedeckt. Darüber hinaus trug die vergleichende Fallstudie – bestehend aus mehreren Fällen und einer Sekundärdokumentenanalyse – dazu bei, explizites Wissen über das Thema zu ermitteln. Gleichzeitig sollte mit dieser Methode im Vorfeld die Übertragung von falschen Hypothesen, Modellen sowie Teilen des abgeleiteten theoretischen Rahmens auf andere, umfassendere Studien verhindert werden. Entsprechend wurde zusätzlich eine Liste von Empfehlungen für die weitere Forschung abgeleitet.

Table of contents

1	Introduction	1
1.1	Topic and Context	1
1.2	Relevance and Importance	1
1.3	Focus and Scope	2
1.4	Questions and Objectives	2
2	Literature Review	3
2.1	Trends: What does self-organization intend to solve?	3
2.1.1	VUCA World	3
2.1.2	4D Model	4
2.1.3	Hierarchy	5
2.2	Definition: What is Self-organization?	6
2.2.1	Socio-technical Theory	6
2.2.2	Authority and Autonomy	7
2.2.3	Definition of a Self-organized Organization.....	9
2.3	Predictions: Why is Self-organization the Answer?	10
2.4	Restrictions: What Prevents Organizations from Shifting to Self-organization?	11
2.4.1	Bureaucracy.....	11
2.4.2	Resistance from Within.....	11
2.4.3	Necessity and Appropriateness.....	12
2.5	Preconditions: What Do Organizations Need to Shift to Self-organization?	13
2.5.1	Organizational Level.....	13
2.5.2	Team Level	17
2.5.3	Individual Level	21
2.5.4	Leadership Level	27
2.6	Pitfalls: How Can Self-organization Fail?	29
2.6.1	Fail Factors	29
2.6.2	Way of Introduction.....	30
2.7	Limitations: What are the Disadvantages of Self-organization?	31
3	Methodology	33

4	Results	41
4.1	Case Report for DB Systel GmbH	41
4.2	Case Report for Gini GmbH	46
4.3	Case Report for Nexlore AG	54
5	Discussion	59
6	Conclusion	75
7	Bibliography	79
7.1	Case Database for DB Systel GmbH	87
7.2	Case Database for Gini GmbH	88
7.3	Case Database for Nexlore AG	89

List of figures

Figure 1. Overview of practical examples on how to build psychological safety.	20
Figure 2. Relations between motivation, purpose, and values	26
Figure 3. Procedure heuristics for the development of case studies.....	35
Figure 4. Four types of case study designs	37
Figure 5. Team transformation phase at DB Systel with corresponding quality gates and roles..	43
Figure 6. Organizational structure of Gini	48
Figure 7. Timeline of the transformation at Nexlore.....	55

List of tables

Table 1. Factors that influence the appropriateness of self-organization in contrast to managerial hierarchy	13
Table 2. Overview of the requirements and their characteristics on the individual level	22
Table 3. Adaptation of the three fundamental quality criteria of scientific research for case studies	34
Table 4. List of cases chosen for the case study	36
Table 5. Critical success factors for implementing self-organization derived from the literature review	40
Table 6. Comparison of theoretical success factors to practical examples on organizational level	61
Table 7. Comparison of theoretical success factors to practical examples on team level	65
Table 8. Comparison of theoretical success factors to practical examples on individual level	67
Table 9. Comparison of theoretical success factors to practical examples on leadership level ...	69
Table 10. Comparison of theoretical success factors to practical examples overall the transformation.....	73
Table 11. Critical success factors for implementing self-organization.....	77

List of abbreviations

CEO	...	Chief Executive Officer
IT	...	Information Technology
VUCA	...	volatile, uncertain, complex, ambiguous

1 Introduction

1.1 Topic and Context

In a world marked by constant change, businesses are challenged to act. The rapidly changing market; the volatile, uncertain, complex, ambiguous (VUCA) world; and the pandemic of the coronavirus disease 2019 demand agility and call for new trends in the management and development of teams. Self-organization promises to solve the problem of handling changing environmental demands while balancing reliability and adaptability. It helps organizations achieve strategic and cultural stability while supporting their employees to adapt to the environment and independently shape their work and development.¹ Furthermore, self-organization leads to higher product quality, productivity, and effectiveness, as well as decreased absenteeism and fluctuation.²

Despite declaring self-organization fundamental and attaching great importance to self-organized teams in any agile methodology, the agile software development framework Scrum, for instance, fails to provide clear guidelines for it.³ As with many other methods, tools, and practices, self-organization is often introduced without organizational adjustments: instructions; clear guidelines; or the necessary framework conditions, such as changes in the management board,⁴ corporate culture, communication, structures and processes, or working and learning conditions.⁵ It is therefore not surprising that organizations fail to establish self-organization and that the concept consequently fails to deliver its promises. The differing research results on whether self-managing teams are more effective than traditional ones make the concept of self-organization dubious.⁶ However, the system is often not to blame, but rather how it was introduced and implemented.⁷

1.2 Relevance and Importance

Although discussions about the advantages and drawbacks of self-organization have dominated research in recent years, few empirical studies have focused on the success factors before and during the transformation.⁸ Further research is needed to determine which factors positively or negatively influence the transition and how they impact employees' capabilities to execute the change.⁹ As with all management theories, there is no standardized instruction for the systematic development of self-organization in corporations, and many ways exist to do so.¹⁰ In essence, since the utilization of self-organization has grown in recent years, a study on the critical success factors of deploying such structures is relevant and useful to interested organizations.¹¹

¹ cf. Graf (2019), p. 4; Bernstein et al. (2016), p. 40; Balkema/Molleman (1999), p. 135

² cf. Manz/Neck (1995), p. 7

³ cf. Hoda (2011), Abstract section

⁴ cf. Romme (2015), p. 3

⁵ cf. Graf (2019), p. 4

⁶ cf. Weerheim et al. (2019), p. 115

⁷ cf. Salem et al. (1992), p. 31

⁸ cf. Bischof (2019), p. 69

⁹ cf. Weerheim et al. (2019), p. 116

¹⁰ cf. Manz/Sims, Jr. (2001), Leadership for the 21st Century section, para. 2

¹¹ cf. Weerheim et al. (2019), p. 114

1.3 Focus and Scope

This thesis extends prior research on the effectiveness of self-organization by focusing on the transformation process, revealing the critical factors for implementing self-organization, demonstrating them empirically, supporting them with study results, and proposing valuable recommendations. The work structures the success factors into three consecutive levels proposed by Bischof (i.e., the organizational, team, and individual levels) and extends it with one relevant to all—the leadership level.

Self-organization terminology is diverse in the extant literature, and researchers use the terms “self-organized,” “self-managed,” “self-directing,” “self-regulating,” “autonomous,” “emergent,” and “holacratic” interchangeably. This thesis uses the term “self-organization” to discuss the topic. Furthermore, the objects of investigation are transformation processes, where a whole company shifted to self-organization, and businesses with isolated self-organized teams are out of scope.

1.4 Questions and Objectives

Pleasing all parties during an organizational change process is unrealistic, but considering several aspects can decrease employee resignation directly related to the transformation while ensuring low employee turnover and high employee satisfaction afterwards. While this thesis critically addresses the subject of self-organization by investigating its purpose, relevance, and promises, the core objective is to answer the following research question:

[RQ1] What are the critical success factors before, during, and after transforming a conventional, hierarchical organization into a self-organization?

To answer the research question and to examine the problem from various perspectives, the following sub-questions are additionally considered:

[SQ1] What prevents organizations from shifting to self-organization?

[SQ2] What do organizations need to successfully implement and shift to self-organization?

[SQ3] What pitfalls should organizations avoid?

[SQ4] What limitations does self-organization have that companies should consider prior to the transformation?

2 Literature Review

2.1 Trends: What does self-organization intend to solve?

2.1.1 VUCA World

The acronym VUCA is widely used to refer to a volatile, uncertain, complex, and ambiguous environment in which managers and employees today must maintain sustainable businesses.¹² This contradiction requires a fundamental change in the business ecosystem, but to derive recommended actions, understanding the VUCA characteristics is essential. One way to define these closely related terms without using one in the definition of the other is to use negative definitions; to define what the term does not characterize.

Volatility refers to permanent changes. More precisely, volatility involves unpredictable situations where information is available (i.e., no uncertainty) that does not necessarily involve a complex structure (i.e., no complexity) and where the outcome can be foretold (i.e., no ambiguity). The ideal way to respond to volatility is **agility**;¹³ businesses must constantly reinvent themselves and bring new products and services to market.¹⁴

Uncertainty implies a lack of understanding about whether or not a particular event is significant enough to be considered a relevant cause rather than about the event's effect (no ambiguity). An uncertain situation is not necessarily volatile (i.e., occurring fast and in varied magnitude) and does not have to include complexity. Since the root cause of uncertainty is a lack of information, the solution is as simple as gathering **information**.¹⁵

Complexity involves many interrelated aspects and requires significant effort to gather, assimilate, and comprehend all relevant information. Once again, a complex situation is not volatile, uncertain, or ambiguous. In fact, the previously recommended actions may be counterproductive in a complex environment. For example, stockpiling resources to remain agile and handle volatile events is meaningless if a company cannot handle the complexity and allocate them correctly. Similarly, developing new information networks, which a corporation should do in uncertain times, risks information overload, forcing enterprises to “freeze” and make no decisions. Therefore, the only reasonable response to complexity is **simplicity**; companies address external complexity by making the internal processes and structure simpler.¹⁶

Lastly, **ambiguity** refers to the unknown effect of a cause. There is no need to expect an unpredictable change (i.e., no volatility) or an overwhelming number of interrelated pieces (i.e., no complexity). It differs from an uncertain situation, where, with the help of sufficient information, one can predict what will happen, resulting in a valid concept of cause and effect. Since scant historical precedent exists to predict the effects in ambiguous situations, the only appropriate reaction is intelligent **experimentation**; companies must establish an environment that invites creativity, open-mindedness, and fun in risk-taking.¹⁷

¹² cf. Manz/Neck (1995), p. 7; Barber (1992), p. 8

¹³ cf. Stutz et al. (2021), p. 111; Bennett/Lemoine (2014), p. 313 f.

¹⁴ cf. Stutz et al. (2021), p. 111; Moeller/Fink (2020), p. 213

¹⁵ cf. Bennett/Lemoine (2014), p. 314

¹⁶ cf. Bennett/Lemoine (2014), p. 315

¹⁷ cf. Bennett/Lemoine (2014), p. 316

2.1.2 4D Model

Another model that helps to examine the problems that self-organization addresses and hence to derive requirements are the 4D trends by Liebhart et al.—digitalization, diversity, dynamization, and democratization¹⁸—which call for new and long-term approaches in the workplace.¹⁹

Due to **digitalization**, many industries expect considerable shifts in value chains and business models. In addition, evolving technological capabilities constantly reshape the competition, which can be an opportunity or pose a significant threat if organizations cannot adapt to the new environmental conditions with the required agility.²⁰ Still, digitalization offers the opportunity to face the challenge of the constantly changing world by accelerating and becoming efficient, increasing quality while lowering costs, and fully utilizing intellectual capital.²¹

As a result of globalization, the world contains greater **diversity**, and the job market is increasing rapidly.²² This demographic development makes it necessary and possible to harness personal characteristics and skills by creating a productive and appreciative working environment.²³

Under the premise that the only constant is change, **dynamization** refers to a high level of organizational adaptability with the freedom to respond quickly to changing requirements.²⁴ Under such circumstances, employees may be required to react faster than managerial controls allow.²⁵ Some claim that hierarchy slows down decision making with too much bureaucracy and thus impedes innovation.²⁶ The required flexibility is therefore claimed to be reached through a shift from vertical-hierarchical organizations to flat organizations, where employees' ability to work independently is increasingly important.²⁷ Furthermore, employees must be able to break away from familiar structures, question traditional ways of thinking, and dare to break new ground.²⁸

The aspect of **democratization** casts light on employees' requirements regarding their work life. They face multiple challenges: new technologies, a dynamic and interconnected work environment, increased psychosocial stress,²⁷ and an infinite variety of factors and options to consider when making decisions.²⁹ Companies must respond to these challenges and equip their employees with the appropriate competencies.³⁰ Meanwhile, the meaning of work-life balance transforms: it no longer refers to balancing stressful work with sufficient leisure activities, but rather to greater self-determination and autonomy while pursuing meaningful work.³¹ Employees seek to make a difference, be part of something greater than themselves, and know how they can contribute.³² In this context, co-determination and co-creation are among the fundamental factors for well-being.³³

¹⁸ cf. Liebhart et al. (2019), p. 1

¹⁹ cf. Basler et al. (2021), p. 66

²⁰ cf. Stutz et al. (2021), p. 111; Liebhart et al. (2019), p. 3; Freibichler et al. (2017), p. 84

²¹ cf. Liebhart et al. (2019), p. 3; Castka et al. (2001), p. 123

²² cf. Heidbrink/Jenewein (2008), p. 317

²³ cf. Liebhart et al. (2019), p. 4

²⁴ cf. Moeller/Fink (2020), p. 215

²⁵ cf. Lee/Edmondson (2017), p. 37

²⁶ cf. Rey et al. (2019), p. 75

²⁷ cf. Majkovic et al. (2020), p. 3

²⁸ cf. Graf (2019), p. 15

²⁹ cf. Moeller/Fink (2020), p. 212

³⁰ cf. Alfes/Bich (2017) as cited in Majkovic et al. (2020), p. 3

³¹ cf. Aebi (2019), p. 318; Furtner/Baldegger (2013), p. 228; Manz/Sims, Jr. (1991), p. 19; see also Majkovic et al. (2020), p. 3

³² cf. Brim/Asplund (2009), No news is good news section, para. 5

³³ cf. Aebi (2019), p. 320

As a result, work and companies became places for personal importance and fulfillment (i.e., personal meaning).³⁴ Organizations must therefore provide purpose through a clear and engaging orientation to remain capable and attract talent.³⁵

2.1.3 Hierarchy

Ultimately, self-organization attempts to solve the problems of hierarchies. In this context, it is vital to clarify that the “problem isn’t that hierarchies have somehow become illegitimate, but that *they are slow and the world has become fast* [emphasis added].”³⁶ Hierarchical systems are prone to responsibility scattering and ineffective communication and decision-making processes, and they cannot adjust to changing situations as fast as required.³⁷ The strength of a hierarchical structure (i.e., to ensure reliable execution of known tasks) becomes its weakness, especially when problems span across functional boundaries.³⁸ Layers of hierarchy and manager positions add overhead from the cost perspective, as well: the expenses of management rise both in absolute and relative terms as the organization grows, and eliminating these levels can save money.³⁹

Furthermore, managers rarely have all the necessary expertise to address the complex problems in the modern world. Instead, individuals at all levels of the organization must work together. Commands “from above” are therefore less likely to result in the “right” outcomes.³⁸ Additionally, as power and influence increase in a typical management hierarchy, so does the distance to the reality on the ground, leading to the most influential executives being furthest from the concrete problem. A traditional hierarchical management structure therefore slows down the process by adding approval layers and increases the risk of **destructive decisions**.⁴⁰ Flat hierarchies are evidently the only sustainable organizational forms in the VUCA world.⁴¹

At this point, however, disproving the **misconception that self-organization means no hierarchy** is vital. On the contrary, hierarchies are deeply rooted not only in modern organizations but also in society, and even if titles disappear, human dynamics will not.⁴² Self-organization does not eliminate differences in status, and hierarchies naturally form even in title-less work environments⁴³ because “authority being decentralized throughout an organization does not mean authority is equalized.”⁴⁴ Power distribution in self-organized teams is based on the team members’ situational assessment and the individuals’ knowledge concerning the problem currently being solved. For example, despite lacking formal authority in their new role, a senior manager may maintain an informal influence over their expertise area.⁴³ Nevertheless, if formal authority is distributed consistently throughout the organization, these temporary hierarchies will not represent a defined authority relationship that permits one individual to exercise control over another’s autonomy.⁴⁵ In effect, mechanisms other than firm hierarchy and formal authority must be institutionalized to

³⁴ cf. Lee/Edmondson (2017), p. 37; Wong (1989), p. 517

³⁵ cf. Moeller/Fink (2020), p. 212; Wütrich (2011), p. 212

³⁶ cf. Satell (2015), p. 3

³⁷ cf. Zaugg (2017), p. 211

³⁸ cf. Lee/Edmondson (2017), p. 37

³⁹ cf. Hamel (2011), p. 50; see also Monarth (2014), p. 3

⁴⁰ cf. Hamel (2011), p. 50

⁴¹ cf. Müller (2020), p. 30

⁴² cf. Müller (2020), p. 30; Monarth (2014), p. 4

⁴³ cf. Simanek (2020), p. 320; Bernstein et al. (2016), p. 46

⁴⁴ Lee/Edmondson (2017), p. 49

⁴⁵ cf. Lee/Edmondson (2017), p. 49

ensure fairness, trust, and transparency. Otherwise, gaps in responsibilities (e.g., deciding on employee performance ratings) will free up space for bureaucracy, and organizations will instinctively convert back to hierarchies.⁴⁶

The implementation in practice differs significantly. The Morning Star Company—a California-based food processing firm and early adopter of self-organization—has, for instance, no formal authority but many informal ones: how much influence one has in a given situation depends on the individual's competence and willingness to help. Authority is therefore built bottom-up by demonstrating expertise, supporting others, and contributing value.⁴⁷ On the contrary, the pyramid-shaped leadership system of Zappos.com Inc.—an online retail company and a demonstrative case for incorporating the holacracy model's circular framework—, is not devoid of formal authority. The so-called “lead links” are in charge of evaluating their staff using a strictly established point system. Since this given number of points determines which jobs their employees fill and whether they stay on the job, the lead link's position involves more decision-making power than their employees.⁴⁸ Between these two extremes lies the organizational structure of Buurtzorg Nederland—a Dutch home-care organization with its own self-organization model—with no official team management instances; instead, team members take turns executing management activities, ensuring that no permanent tasks exist from which formal authority can emerge.⁴⁸

2.2 Definition: What is Self-organization?

2.2.1 Socio-technical Theory

Before discussing the unique characteristics and definition of self-organization, a brief look at its history helps to find the underlying theories and narrow the object of investigation. Trist and Bamforth first mentioned the concept of self-organization in 1951, having conducted a study for the London Tavistock Institute and observed a team of coal miners working autonomously and significantly increasing production.⁴⁹ Their work also laid the foundation for the **socio-technical theory** that reveals the natural and psychological powers behind self-organization and its relevance. The theory claims that every organization consists of two components: the technical part covers the equipment and methods needed to turn materials into goods or services; the social part includes the psychological and social needs of the workers essential to connect people to technology and one another. Once this premise is understood, the goal should be to design a work environment that satisfies these aspects, requiring changes in both the technology, (e.g., equipment or processes) and the social structure (e.g., roles or connections). In other words, “the primary aim is to design a work structure that is responsive to the task requirements of the technology and the social and psychological needs of employees: a structure that is both productive and humanly satisfying.”⁵⁰

⁴⁶ cf. Müller (2020), p. 35; Monarth (2014), p. 4

⁴⁷ cf. Hamel (2011), p. 59

⁴⁸ cf. Müller (2020), p. 31 ff.

⁴⁹ cf. Weerheim et al. (2019), p. 114; Lee/Edmondson (2017), p. 42; Bernstein et al. (2016), p. 41; Hoda (2011), p. 25

⁵⁰ Cummings (1978), p. 626

Demonstrably, the socio-technical theory restricts the possible organizational forms that could satisfy its premise. It argues strongly against hierarchical and bureaucratic structures due to their unsuitability in dynamic and uncertain working environments, as they stifle a group's autonomy and flexibility, preventing it from self-regulating.⁵¹ The new organization defined by the socio-technical theory is also comparable to an *organism*, consisting of a set of interacting subsystems that can quickly adapt and survive in a changing environment.⁵² On the contrary, bureaucratic organizations are akin to *machines*, in which every individual part is precisely engineered and controlled to work effectively in stable environments.⁵³

2.2.2 Authority and Autonomy

A more precise definition was required to answer the research question. Because the terminology of self-organization is somewhat diverse in the extant literature, it is key to lay out a common foundation for this research that represents and aids in answering the research question. While some argue that words' subtle differences matter,⁵⁴ this study focuses on finding a fitting description and deriving the differentiating features. A review of the extant literature on self-organization extended with research on agile software development revealed two fundamental aspects as the differentiators of any self-organization: **authority** and **autonomy**. The following definitions underpin the relevance of these aspects:

*“Furthermore, a **higher degree of decision-making autonomy** [emphasis added], more task variety and a changed role of supervision characterises a self-managing team.”⁵⁵*

*“A self-organised team is recognised as a self-regulated, semi-autonomous small group of employees whose members determine, plan and manage their day-to-day activities and duties **under reduced or no supervision** [emphasis added].”⁵⁶*

*“In a self-organized team, individuals take accountability for managing their own workload, shift work among themselves based on need and best fit, and take responsibility for team effectiveness. Team members have **considerable leeway** [emphasis added] in how they deliver results, they are self-disciplined in their accountability for those results, and they work within a flexible framework.”⁵⁷*

⁵¹ cf. Cummings (1978), p. 627 and 631

⁵² cf. Morgan (2006), p. 43 and 65; see also Bernstein et al. (2016), p. 42

⁵³ cf. Morgan (2006), p. 18 and 33; see also Bernstein et al. (2016), p. 42

⁵⁴ cf. Anderson/McMillan (2003), p. 33

⁵⁵ Weerheim et al. (2019), p. 114 f.

⁵⁶ Parker et al. (2015), p. 112

⁵⁷ Highsmith (2007), p. 64 ff.

*“Self-organization refers to **autonomous decision making** [emphasis added] within a unit with respect to both the transactions (output) it wants to realize and the way it organizes its transformation processes to achieve these transactions.”⁵⁸*

*“[Self-managing teams] have the **autonomy** [emphasis added] to make decisions that are traditionally the responsibilities of supervisors and managers. In addition to their jobs, employees must coordinate their work and manage their internal coordination.”⁵⁹*

*“[Autonomous work groups] are teams of employees who typically perform highly related or interdependent jobs, who are identified and identifiable as a social unit in an organization, and who are given **significant authority and responsibility** [emphasis added] for many aspects of their work, such as planning, scheduling, assigning tasks to members, and making decisions with economic consequences (usually up to a specific limited value).”⁶⁰*

*“The central principle behind self-managing teams is **that the teams themselves, rather than managers, take responsibility for their work** [emphasis added], monitor their own performance, and alter their performance strategies as needed to solve problems and adapt to changing conditions.”⁶¹*

*“Usually, a self-managing team is responsible for completing a specific, well-defined job function, whether in production or service industries. The team’s members are cross-trained to perform any task the work requires and also **have the authority and responsibility to make the essential decisions** [emphasis added] necessary to complete the function. [...] Along with performing their work functions, members of a self-managing team set their own work schedules, order the materials they need, and do the necessary coordination with other groups.”⁶²*

*“Work designs based on self-managed teams tend to give workers **a high degree of autonomy** [emphasis added] and control over their immediate behavior.”⁶³*

*“A work group allocated an overall task and given discretion over how the work is to be done. These groups are ‘self-regulating’ and **work without direct supervision** [emphasis added].”⁶⁴*

⁵⁸ Balkema/Molleman (1999), p. 135

⁵⁹ Alper et al. (1998), p. 34

⁶⁰ Guzzo/Dickson (1996), p. 324

⁶¹ Wageman (1997), p. 49

⁶² Barker (1993), p. 7 f.

⁶³ Manz et al. (1990), p. 15

⁶⁴ Buchanan (1987) as cited in Salem et al. (1992), p. 24

*“A group possesses a self-organizing capability when it exhibits three conditions: **autonomy** [emphasis added], self-transcendence, and cross-fertilization.”⁶⁵*

To conclude, self-organization differs from its bureaucratic predecessors by requiring a decentralized, participative, and democratic control system. The underlying theory behind this shift in the locus of control is called **concertive control**. It explains how the transition of the authority from a management body to the employees can work: control is exerted through “new collaboratively created, value-laden premises (manifest as ideas, norms, and rules)”⁶⁶ that reflect the organizational core values and are enforced by peers.⁶⁷ Furthermore, concertive control consists of three influencing factors. First, *task differentiation* defines how autonomous and self-completing a group's job is. Second, *boundary control* represents how employees can affect the processes within a given task environment. Third, *task control* describes the ability of employees to govern their behavior to turn raw resources into completed goods.⁶⁸ The latter two components are notably similar to the socio-technical theory, which reinforces the validity and relevance of both theories. Moreover, task control is further enhanced by several characteristics of self-organization, namely the autonomy to determine how a task is conducted; the flexibility to respond to the job and environmental demands and to allow employees to adjust their performance in response to emergent situations; and finally group performance feedback, which is fundamental to goal-oriented behavior.⁶⁹

2.2.3 Definition of a Self-organized Organization

The aforementioned definitions focus on single units (e.g., teams or groups) and not on whole organizations as would be required to answer this study's research question. The definition must therefore be scaled and adjusted to apply to whole companies and organizations. Nevertheless, the fundamental role of authority remains. One approach to extending the definition would be in the context of the holacracy concept. The word was invented based on the term “holarchy,” which Arthur Koestler first used in his book, “The Ghost in the Machine.” It describes an entity in which all parts are connected and cooperate to create an autonomous whole.⁷⁰ This definition strongly resembles the *organism* metaphor and could also be phrased as “order and action patterns of hierarchy-free and network-like forms of organization.”⁷¹ A more precise definition is attained by following the authority concept and extending it with the concertive control theory: “self-managing organizations (SMOs) [are] those that radically decentralize authority in a formal and systematic way throughout the organization.”⁷² Ultimately, self-organization eliminates “the hierarchical reporting relationship between manager and subordinate”⁷² and equips each employee with well-defined decision rights.⁷³

⁶⁵ Takeuchi/Nonaka (1986), p. 139

⁶⁶ Barker (1993), p. 6

⁶⁷ Larson/Tompkins (2005), p. 3

⁶⁸ cf. Cummings (1978), p. 627

⁶⁹ cf. Cummings (1978), p. 627 f.

⁷⁰ cf. Robertson (2016), p. 38; see also Monarth (2014), p. 2

⁷¹ cf. Basler et al. (2021), p. 66 f.

⁷² Lee/Edmondson (2017), p. 39

⁷³ cf. Lee/Edmondson (2017), p. 39

2.3 Predictions: Why is Self-organization the Answer?

Before concluding that self-organization solves all problems of the modern work environment, it is advisable to analyze the connection between the characteristics of self-organization and their effects. Flexibility is one of the most vital parameters for an organization to remain competitive (see Section 2.1). Whether and how self-organization can help a company become or stay agile must therefore be addressed.

Prior research has confirmed that the reduction or elimination of management hierarchy generally results in **better decision making**. The communication path is shortened since the decisions are closer to the actual work, whereby less information is lost along the way, and the “red tape” disappears.⁷⁴ Consequently, **organizations become more flexible** as employees can act more quickly and respond to the emerging needs in the market rather than following orders.⁷⁵ Moreover, the proximity to the external world and its requirements **improves creativity**. Firsthand observations of the customers’ problems and their needs encourages solution- and customer-oriented work, which stimulates creative and innovative problem solving and leads to **improved product quality and customer satisfaction**.⁷⁶ Lastly, the time saved on bureaucracy can be used in production, which **increases employee and team productivity**.⁷⁷ These factors lead to greater chances for the organization’s survival.⁷⁸

Another aspect of self-organization that supports businesses to stay in the market is knowledge sharing. This vital organizational learning removes silos and eliminates concentrated knowledge ownership around single individuals, allowing employees to become well-rounded and consequently **increasing the organization’s adaptability**.⁷⁹ Moreover, employees with well-developed self-organization skills can remain qualified and high-performing in the long term.⁸⁰ Furthermore, from the employee perspective, a transition to self-organization is an opportunity to develop professionally and personally and use their new skills and knowledge outside of work.⁸¹ Higher perceived self-efficacy, involvement in important decisions, and improved social interactions **positively impact job satisfaction and organizational commitment**, which results in **less turnover and absenteeism**.⁸²

⁷⁴ cf. Schlumpf (2020), p. 323; Bischof (2019), p. 65; Bernstein et al. (2016), p. 46

⁷⁵ cf. Schlumpf (2020), p. 323; Bernstein et al. (2016), p. 44 and 47; see also Majkovic et al. (2020), p. 11; Balkema/Molleman (1999), p. 135

⁷⁶ cf. Schlumpf (2020), p. 323; Srivastava/Jain (2017), p. 296; DiLiello/Houghton (2006), p. 326; Alper et al. (1998), p. 34; see also Majkovic et al. (2020), p. 11; Weerheim et al. (2019), p. 113; Manz/Neck (1995), p. 7

⁷⁷ cf. Srivastava/Jain (2017), p. 296; Bernstein et al. (2016), p. 41; Furtner/Baldegger (2013), p. 212; Wageman (1997), p. 49; Manz/Neck (1995), p. 7; see also Majkovic et al. (2020), p. 11; Politis (2006), p. 203; Salem et al. (1992), p. 27 f.

⁷⁸ cf. Bischof (2019), p. 68

⁷⁹ cf. Bernstein et al. (2016), p. 45; Wageman (1997), p. 49; see also Furtner/Baldegger (2013), p. 211

⁸⁰ cf. Graf (2019), p. 13

⁸¹ cf. Schlumpf (2020), p. 323

⁸² cf. Bernstein et al. (2016), p. 45; Furtner/Baldegger (2013), p. 211; Hamel (2011), p. 57; Dolbier et al. (2001), p. 482; Wageman (1997), p. 49; Manz/Neck (1995), p. 7; see also Majkovic et al. (2020), p. 11; Weerheim et al. (2019), p. 113; Politis (2006), p. 203; Alper et al. (1998), p. 34; Salem et al. (1992), p. 27 f.

2.4 Restrictions: What Prevents Organizations from Shifting to Self-organization?

2.4.1 Bureaucracy

It is essential to examine why self-organization is not more widespread if it seems to answer the modern world's problems. One way to answer the question is an approach similar to a definition by negation: "Why is *bureaucracy* [emphasis added] so difficult to eradicate?"⁸³ First, it predominates business corporations, which suggests that it is **universal** (i.e., necessary and unavoidable).⁸⁴ Second, although bureaucracy and hierarchy feel outdated and an increasing number of people wish to build a next-level organization, **no clear instructions** exist on how to do so.⁸⁵ However, this argument cuts both ways: no business would be significant if there were blueprints because they would achieve the same result. Standard plans can be dangerous because no two businesses are the same; what works for one organization may not work for another.⁸⁶ Third, a change requires **significant** mental, psychological, and moral **effort** and courage to release old beliefs and attempt a new way of thinking, which cannot be forced onto anyone.⁸⁷ Another frequently mentioned factor that can prevent organizations from implementing self-organization is that it was still **new and experimental** at the time of several studies.⁸⁸ However, numerous long-term examples of successful businesses have proven that self-organization is worthwhile.⁸⁹

Nevertheless, the primary reason is probably "that problems cannot be solved with the same level of consciousness that created them in the first place."⁹⁰ Laloux's **stages of consciousness** can help us answer this question. Based on his theory, psychological progress and the level of human consciousness influence how people organize themselves and shape organizations (i.e., social collaborations). Without delving more profoundly into the subject, a shift to the next level is triggered if the current level of consciousness is insufficient to solve a significant life challenge. If a person is yet to confront a challenge, they cannot be made to evolve.⁹¹

2.4.2 Resistance from Within

Based on the previous argument, self-organization is **not for everyone**.⁹² Especially people at the level of consciousness where **power** dominates will not be able to cope with the sudden disappearance of status, dominance, and competition. Moreover, other aspects of self-organization can jeopardize one's identity, such as no longer being a specialist (i.e., by hoarding and keeping information and knowledge for oneself) and thus losing the feeling of being unique and indispensable.⁹³ Similarly, when position and rank disappears, it dissatisfies the psychological need for power and influence, which is considered essential for survival at this level of consciousness.⁹⁴ People act more defensively when their status is at stake, and some employees may naturally

⁸³ Hamel/Zanini (2016), p. 3

⁸⁴ cf. Hamel/Zanini (2016), p. 3; Laloux (2014), p. 35

⁸⁵ cf. Hamel/Zanini (2016), p. 3; Laloux (2014), p. 4

⁸⁶ cf. Schüller/Steffen (2021), p. 20

⁸⁷ cf. Laloux (2014), p. 39

⁸⁸ cf. Parker et al. (2015), p. 124; Romme (2015), p. 3

⁸⁹ cf. Laloux (2014), p. 138

⁹⁰ Laloux (2014), p. 5

⁹¹ cf. Laloux (2014), p. 39

⁹² cf. Bernstein et al. (2016), p. 40; Hamel (2011), p. 57 f.

⁹³ cf. Balkema/Molleman (1999), p. 137

⁹⁴ cf. Pfeffer (2013), p. 275; Gruenfeld/Tiedens (2010), p. 1265

gravitate toward a perceived leader with the desire to receive their admiration and respect. When there is no manager to provide feedback or appreciation, the efforts to climb up the ranks will go unnoticed, diminishing the individual's competitive spirit.⁹⁵ Lastly, effective self-management is challenging and demands highly developed interpersonal skills and greater psychological development, which ultimately bend human organizations toward hierarchy because it is cognitively easier when someone else defines the work.⁹⁶

Combining the need for self-organization with the fact that individuals cannot be forced to evolve to the next level of consciousness on which they could cope with these new ways of working, the key is to create an environment that encourages further development. Only when surrounded by peers from a higher level of consciousness and a safe setting to investigate inner conflicts are chances of taking the leap more likely.⁹⁷ However, never before in human history has there been a population with so many diverse mindsets living side by side. Therefore, a working environment that unites employees from at least five working generations (i.e. Babyboomers [1946-1964], Generation X [1965-1979], Generation Y [1980-1995], Generation Z [1996-2009], Generation Alpha [2010-]⁹⁸) must consider various demands regarding workers' identity, engagement, and need for appreciation and to incorporate the various factors in the new decentralized and self-organized organization.⁹⁹

The changes in power dynamics affect **middle and lower-level management** most, resulting in resistance, which is a significant factor in organizations that remain adverse to self-organization. When management believes that employees cannot manage themselves, they see security in the traditional, hierarchical chains of command, which may seem to be the only way to ensure efficiency and reduce risks.¹⁰⁰ To change this perception, management must understand that self-organization is designed to assist businesses in achieving their objectives and not hindering them.¹⁰¹ Furthermore, since self-organization reduces hierarchy, middle and lower-level managers fear that they could lose their jobs or have a drastically modified role.¹⁰² Because "they fear losing prestige, being overlooked and bypassed,"¹⁰³ they resist the change or avoid initializing the transformation.¹⁰⁴

2.4.3 Necessity and Appropriateness

In addition, self-organization is **not suitable for every organization**.¹⁰⁵ Since the need for flexibility is so widespread and universal, managers introduce self-organization unquestioned, regardless of many influencing factors.¹⁰⁶ Before considering the introduction of self-organization, it is therefore vital for companies to analyze its potential in any situation and evaluate its need.¹⁰⁷ The extant

⁹⁵ cf. Parker et al. (2015), p. 122; Monarth (2014), p. 3; see also Hamel/Zanini (2016), p. 3; Robertson (2016), p. 167 f.; Hamel (2011), p. 58

⁹⁶ cf. Lee/Edmondson (2017), p. 52; Zaugg (2017), p. 212

⁹⁷ cf. Laloux (2014), p. 40

⁹⁸ cf. Mangelsdorf (2019), p. 13; McCrindle (2018), p. 2

⁹⁹ cf. Zaugg (2017), p. 208; van der Zwaan/Molleman (1998), p. 315

¹⁰⁰ cf. Parker et al. (2015), p. 112 f.; Balkema/Molleman (1999), p. 137

¹⁰¹ cf. Salem et al. (1992), p. 29

¹⁰² cf. Balkema/Molleman (1999), p. 137

¹⁰³ Salem et al. (1992), p. 29

¹⁰⁴ cf. Salem et al. (1992), p. 27

¹⁰⁵ cf. Parker et al. (2015), p. 122

¹⁰⁶ cf. van der Zwaan/Molleman (1998), p. 301

¹⁰⁷ cf. Balkema/Molleman (1999), p. 137; van der Zwaan/Molleman (1998), p. 314

literature offers several guiding questions and parameters that help to determine whether self-organization is suitable in a given scenario. Table 1 provides an overview of factors with examples of when they favor self-organization or the managerial hierarchy.

Managerial hierarchy	Self-organization	References
Highly urgent situation ¹⁰⁸	Low level of urgency	Furtner/Baldegger (2013), p. 203 Pearce/Manz (2005), p. 135
Low level of employee commitment required	High level of employee commitment required	Furtner/Baldegger (2013), p. 203 Pearce/Manz (2005), p. 136
Stable external conditions ¹⁰⁹	Dynamic external conditions	Lee/Edmondson (2017), p. 36 Morgan (2006), p. 27
Constant market demand	Uncertain market demand	van der Zwaan/Molleman (1998), p. 309 and 314
Low level of need for creativity and innovation	High level of need for creativity and innovation	Furtner/Baldegger (2013), p. 203 Pearce/Manz (2005), p. 136
Stable production systems with low operational uncertainties	Complex production systems with unpredictable (customer) requirements	Furtner/Baldegger (2013), p. 203 Balkema/Molleman (1999), p. 137 van der Zwaan/Molleman (1998), p. 309 and 314 Bertrand et al., 1990 as cited in van der Zwaan/Molleman (1998), p. 309
Simple, standardized, repetitive, low-level activities	Complex and hyper-variable tasks with a high level of interdependence	Pearce/Manz (2005), p. 136 ff. Batt, 1999 as cited in Parker et al. (2015) Balkema/Molleman (1999), p. 138 Morgan (2006), p. 27 van der Zwaan/Molleman (1998), p. 309 and 314

Table 1. Factors that influence the appropriateness of self-organization in contrast to managerial hierarchy¹¹⁰

2.5 Preconditions: What Do Organizations Need to Shift to Self-organization?

2.5.1 Organizational Level

The first stage in any large-scale organizational change plan must be establishing the essential **change management**. While delving into the subject of change management in greater depth goes beyond the scope of this thesis, the extant literature frequently mentioned four success factors from Neumann:¹¹¹

¹⁰⁸ as in no time for developing employees' capability for self-organization

¹⁰⁹ for example, based on the political—economic—social—technology—legal—environment analysis

¹¹⁰ Source: author

¹¹¹ cf. Neumann (2007), p. 242

- Support by the management¹¹²
- Balance between ambition and possibilities¹¹³
- Making the “why” for the change comprehensible¹¹⁴
- Adjusting the pace of change to the current organization (see Section 2.6.2)

Managerial support refers to the leaders standing fully behind the change, on the one hand, and providing the required **resources** (i.e., first and foremost, time), on the other.¹¹⁵ While the transformation takes time, employees also need sufficient time to understand the new principles and practice the new forms of collaboration, decision making, conflict management, and leadership. Since time is a finite resource, the management’s primary goal must be to enable employees to take time away from their operational responsibilities and invest it in learning¹¹⁶ that is supported by coaching throughout the transformation.¹¹⁷ Further resources that help the change are money,¹¹⁸ information, competencies,¹¹⁹ and supervision.¹²⁰ Providing these resources and the success of self-organization are tightly coupled. For example, if the management fails to allocate resources to underperforming teams, they may demoralize teams and prevent them from adopting self-management.¹²¹ Furthermore, it is recommended not to view self-organization as another management tool, but rather as a strategic goal.¹²² Only the mission and vision of the organization aligning with the change can ensure that the context and necessity of the transformation are reasonable and appealing to everyone in the organization, which is critical to avoid doubt, lack of understanding, and resistance.¹²³

Self-organization does not mean arbitrary freedom. On the contrary, the reduction of the hierarchy must be carefully planned by considering under what conditions self-organization can and should occur.¹²⁴ Organizations must create **strategic, structural, and cultural framework conditions** that maximize the employees’ autonomy and allow them to shape the organization and participate in decision making extensively.¹²⁵ Before transforming a conventional, hierarchical organization into a self-organized one, it is essential to address the following fundamental questions:

- How does the environment look that provides individuals the highest degree of autonomy possible, allowing employees to work with dedication, creativity, and passion?¹²⁶
- Which structures must be eliminated or transformed to enable self-organized units to establish and retain their functional structures?¹²⁷

¹¹² cf. Basler et al. (2021), p. 69; Majkovic et al. (2020), p. 25 f.; Laloux (2014), p. 237 ff.; Furtner/Baldegger (2013), p. 229; Castka et al. (2001), p. 127; Salem et al. (1992), p. 28

¹¹³ cf. ten Have et al. (2015) as cited in Weerheim et al. (2019), p. 117

¹¹⁴ cf. Alferts/Bich (2017), p. 304

¹¹⁵ cf. Majkovic et al. (2020), p. 25; Schlumpf (2020), p. 323; Weerheim et al. (2019), p. 120 and 122; Parker et al. (2015), p. 122; Salem et al. (1992), p. 28 ff.

¹¹⁶ cf. Schröder/Oestereich (2019), p. 46; see also Salem et al. (1992), p. 28 ff.

¹¹⁷ cf. Weerheim et al. (2019), p. 119; see also Schlumpf (2020), p. 323; Parker et al. (2015), p. 122

¹¹⁸ cf. Weerheim et al. (2019), p. 122

¹¹⁹ cf. Schlumpf (2020), p. 322; see also Sharp et al. (2003), p. 669

¹²⁰ cf. Parker et al. (2015), p. 122; see also Furtner/Baldegger (2013), p. 229

¹²¹ cf. Wageman (1997), p. 56

¹²² cf. Schlumpf (2020), p. 323

¹²³ cf. Weerheim et al. (2019), p. 119 and 123

¹²⁴ cf. Schlumpf (2020), p. 322

¹²⁵ cf. Graf (2019), p. 4; Zaugg (2017), p. 210 f.

¹²⁶ cf. Wütrich (2011), p. 214 ff.

¹²⁷ cf. Schlumpf (2020), p. 322; Furtner/Baldegger (2013), p. 229

- What can and cannot be resolved within the boundaries of a self-organized unit and under what circumstances?¹²⁸
- Which decisions remain with the owners, management, or other layers of management?¹²⁸

The environment must encourage learning and experimenting, as only within such safe surroundings can employees courageously engage in a process with an unpredictable end.¹²⁹ Further organizational conditions (e.g., culture, communication, leadership, processes, or working and learning conditions) may support or hinder the new structures.¹³⁰ It is therefore essential to consider these factors beforehand and define clear guidelines so employees can execute their work efficiently. In sum, the new culture should be “based on empowerment, shared vision, creativity, participation, learning ability, trust, and shared consensus.”¹³¹

Ready-to-use frameworks provide guidelines for the self-organizing process, preventing it from getting derailed (e.g., holacracy and the Results-Only Work Environment). Holacracy.org defines the former as “a management practice that [...] transforms outdated command hierarchies into agile, self-organizing networks.”¹³² The Results-Only Work Environment refers to a workplace where only the outcome matters, and everything else is the employees’ responsibility.¹³³

Without a well-defined framework and transparent rules, self-organization may eventually end in chaos, and the company is likely revert to hierarchical forms of work, either formally or informally. To prevent falling back into bureaucracy and to institutionalize the new ways of working, a **formal system** of rules and processes is therefore required.¹³⁴ A formal system has several advantages. First, it manifests the decentralized authority rather than spreading it through informal agreements, which can quickly become ambiguous and unclear.¹³⁵ Second, unless new rules help cope with the sudden disappearance of managerial structure, the new flat organization can informally revert due to humans’ cognitive and social preferences to preserve hierarchy.¹³⁶ Third, it helps eliminate questions about the transformed leadership functions, such as incentives, rewards, and sanctions, and therefore reduces insecurities about the change or resistance prior to transition.¹³⁷ Finally, when new employees are accustomed to a firm hierarchy, written ways of working can aid onboarding by explaining and revealing how the system works and indoctrinating them to self-organization, even if it might take longer.¹³⁸

In practice, a team charter could serve as such a formal system. This instrument can provide the proper amount of instruction to employees without limiting their autonomy and freedom. For example, it can define ways of communication, make values and culture visible, or support learning and discovering new practices. However, a team charter is only helpful if evaluated regularly, maintained up to date, and integrated into daily work.¹³⁹

¹²⁸ cf. Schröder/Oestereich (2019), p. 48

¹²⁹ cf. Graf (2019), p. 4; Wütrich (2011), p. 218; see also Majkovic et al. (2020), p. 25; Furtner/Baldegger (2013), p. 230

¹³⁰ cf. Graf (2019), p. 4; see also Lübbers/Johannsen (2019), p. 68

¹³¹ Castka et al. (2001), p. 128

¹³² <https://www.holacracy.org/> (accessed on: 28.11.2021)

¹³³ cf. Wütrich (2011), p. 214

¹³⁴ Moeller/Fink (2020), p. 215; Müller (2020), p. 36; Lee/Edmondson (2017), p. 48

¹³⁵ cf. Lee/Edmondson (2017), p. 48

¹³⁶ cf. Lee/Edmondson (2017), p. 48; Pfeffer (2013), p. 271 f.; Gruenfeld/Tiedens (2010), p. 1262 ff.

¹³⁷ cf. Schlumpf (2020), p. 322

¹³⁸ cf. Lee/Edmondson (2017), p. 48; Hamel (2011), p. 58

¹³⁹ cf. Marek (2017), p. 241 ff.

Nonetheless, there is a fine line between the excessive definition of formal rules and processes and the “minimum specs”¹⁴⁰. The challenge is to find a balance between anarchy and over-centralization because excessive definition of how the organization should run discourages employees from managing or making decisions.¹⁴¹ The following definition for minimum specification can serve as a guideline:

“define as little as possible how a team should perform tasks, but provide just enough directives to ensure that its members are able to perform the tasks properly while still allowing for their own contribution. The upper management defines only the critical factors, and the group members get as much autonomy as they can handle, according to their knowledge and experience.”¹⁴²

A central part of the formal system is a clear **role and task definition** for every employee.¹⁴³ This is significant in hierarchy-free organizations because it is difficult to determine who is responsible for what without the typical chain of command.¹⁴⁴ Roles encourage self-reflection and self-control and assist employees in completing their daily tasks without difficulty, orienting within the resources, and locating the appropriate people to solve an issue. Furthermore, they can also be used as team-building or management tools; a well-defined role system can help clarify power dynamics, resolve conflicts, establish collaborative guidelines, and bring forth individual strength. Moreover, it is easier to understand and assess the group from the outside based on given roles and to devise interventions if the team design is inadequate.¹⁴⁵

However, self-organization involves not only defining but also redesigning roles. It is controversial to expect autonomy and more responsibility from an employee while failing to provide the necessary tasks and functions. The new roles should therefore be defined to encourage employees to learn the skills and information required to complete the tasks for which they are accountable.¹⁴⁶ A fitting way to design a role system in a self-organized manner is job crafting, the process of physical and cognitive adjustments people apply to shape their jobs to make it more engaging and meaningful while maintaining their core mission.¹⁴⁷ The Morning Star Company follows a similar approach: after employees create a personal mission statement outlining how they will support the company’s goal, they must negotiate with other employees who can help them achieve their goals by writing a colleague letter of understanding (CLOU; pronounced “clue”). These agreements ultimately form the operating plan for the current year.¹⁴⁸

¹⁴⁰ Morgan (2006), p. 110

¹⁴¹ cf. Wütrich (2011), p. 217; Morgan (2006), p. 111

¹⁴² Balkema/Molleman (1999), p. 135

¹⁴³ cf. Basler et al. (2021), p. 70; Majkovic et al. (2020), p. 18 and 25; Schlumpf (2020), p. 323; Bischof (2019), p. 65; Robbins/Finley (2000), p. 16 f.

¹⁴⁴ cf. Romme (2015), p. 4

¹⁴⁵ cf. Schlumpf (2020), p. 324

¹⁴⁶ cf. Salem et al. (1992), p. 30

¹⁴⁷ cf. Dutton/Wrzesniewski (2020), para. 1; Wrzesniewski/Dutton (2001), p. 180; see also Salem et al. (1992), p. 28 ff.

¹⁴⁸ cf. Hamel (2011), p. 52

2.5.2 Team Level

To build a self-organized unit, it is essential to give tasks designed to be done by several people working together, rather than by (a group of) individuals.¹⁴⁹ Within this **task design**, the division of work must be straightforward, and team members must be confident in their ability to do their duties.¹⁵⁰ Furthermore, team performance targets must align with the underlying organizational goals.¹⁵¹ Additionally, calling a group of people a team does not make them work together by default. Only if they are convinced that their goals align and they need each other to reach their targets will they lay the foundation for teamwork and effective group decision making, which is especially crucial in self-organization.¹⁵² Therefore, defining the **team's mission, vision, and goals** is critical. An engaging and clear direction helps every team member to understand why the team exists and what it is attempting to achieve. Employees who understand where the journey is going will move there on their own.¹⁵³

A practical example of management by objective is a team performance mandate that specifies the goal but not the way. Within flat hierarchies and self-organization, the mandate must be based on trust between equal partners, and the team must have sufficient freedom of action to achieve its goals. These mandates enhance organizational transparency and sense-making by making performance visible and measurable. Nevertheless, developing and maintaining a team performance mandate takes time, and it can limit team performance to the agreed-upon items, rejecting additional performance or spontaneous collegial help beyond the scope.¹⁵⁴

However, matching employees is as important because an excellent task design and goals require the appropriate **team design**. Effective team design is situational and must be adjusted in all cases; however, Wagemann offers an overview of factors that influence self-organization through team design:

- “1. *Clear, engaging direction*
2. *Task interdependence*
3. *Authority to manage the work*
4. *Performance goals*
5. *Skill diversity of team members*
6. *Demographic diversity of team members*
7. *Team size*
8. *Length of time the team has had stable membership*
9. *Group rewards*
10. *Information resources*
11. *Availability of training*
12. *Basic material resources*”¹⁵⁵

¹⁴⁹ cf. Wageman (1997), p. 55; see also Marek (2017), p. 241

¹⁵⁰ cf. Weerheim et al. (2019), p. 119; see also Majkovic et al. (2020), p. 19

¹⁵¹ cf. Wageman (1997), p. 57; see also Majkovic et al. (2020), p. 18 and 25

¹⁵² cf. Alper et al. (1998), p. 35 and 45 f.

¹⁵³ cf. Majkovic et al. (2020), p. 18 and 25 f.; Rickards/Moger (2017), Figure 1.3; Zaugg (2017), p. 209; Parker et al. (2015), p. 115; Sharp et al. (2003), p. 669 f.; Castka et al. (2001), p. 127; Robbins/Finley (2000), p. 16 f.; Wageman (1997), p. 54 f.; see also Katzenbach/Smith (1993), p. 53 f.; Kets de Vries (1993), p. 71 f.

¹⁵⁴ cf. Marek (2020), p. 268 ff.

¹⁵⁵ Wageman (1997), p. 53; see also cf. Katzenbach/Smith (1993), p. 47 ff.

The proper team design is fundamental in members maintaining strong relationships, increasing motivation and commitment, and consequently enhancing self-organization within the unit.¹⁵⁶ Moreover, a well-designed team shows more receptivity to coaching and enabling self-organization than a struggling, poorly designed team.¹⁵⁷

Whether effective team design results in a better **culture** or culture is crucial for the team design, most self-organized teams share certain characteristics (e.g., appreciation, focus on strengths and potentials, personal responsibility, self-efficacy, resilience, positive corporate identity, reflection, peer-to-peer moments, openness, giving feedback, and positive error culture).¹⁵⁸ These characteristics contribute to higher team confidence, in which team members believe that with combined resources and mutual trust they can implement their ideas. This team confidence also means that people know that their efforts will be appreciated and reciprocated since they want others to perform successfully and expect others to want them to act effectively, as well.¹⁵⁹

Moreover, the existing literature emphasized **trust**.¹⁶⁰ The lack of trust in other team members' job competencies, interpersonal skills, motives, and intentions represses information and resource exchange and distorts communication. This hostile atmosphere results in stress, lower morale, and decreased productivity.¹⁶¹ Furthermore, trust is particularly essential in geographically distributed teams. Not only are they likely to struggle with language, time zones, or cultures, but also their self-organization will depend on trust and particular leadership qualities to overcome problems and positively impact project performance.¹⁶²

The psychological phenomenon of **altruism**—"a desire to benefit someone else for his or her sake rather than one's own"¹⁶³—casts another light on teamwork that traditional managers should consider. Although it contradicts the economic view, people want to act selflessly. If employees were to behave exclusively opportunistically, all organizational forms would collapse.¹⁶⁴ Moreover, despite the assumption that everything humans do is aimed at their own advantage, experiments with functional magnetic resonance imaging have proven that generosity, and hence altruistic decisions, are directly related to happiness.¹⁶⁵ This altruistic psychological need and its proper deployment and support may be fundamental and essential in a self-organized culture.

As a result, the proper culture can promote **strategic thinking** that is more crucial in self-organized units than in manager-led teams. Every employee is challenged to engage with their environment, link their work to external conditions and trends, and detect problems early, which results in developing original solutions and adapting to new ways of work. This way of thinking may be challenging to teams, particularly for members with more responsibilities than they previously had.¹⁶⁶ However, everyone can be encouraged to do so with the following cultural values:

¹⁵⁶ cf. Weerheim et al. (2019), p. 120 and 123; see also Majkovic et al. (2020), p. 19; Robbins/Finley (2000), p. 16 f.

¹⁵⁷ cf. Wageman (1997), p. 53

¹⁵⁸ cf. Majkovic et al. (2020), p. 18 and 25; Aebi (2019), p. 319; Weerheim et al. (2019), p. 120; Rickards/Moger (2017), Figure 1.3; Robbins/Finley (2000), p. 16 f.

¹⁵⁹ cf. Alper et al. (1998), p. 37

¹⁶⁰ cf. Majkovic et al. (2020), p. 18 f. and 25; Robbins/Finley (2000), p. 16 f.; see also Parker et al. (2015), p. 115; Kets de Vries (1993), p. 69-67

¹⁶¹ cf. Alper et al. (1998), p. 36 and 48

¹⁶² cf. Srivastava/Jain (2017), p. 296

¹⁶³ Batson (2010), Introduction section, para. 2

¹⁶⁴ cf. Wütrich (2011), p. 216

¹⁶⁵ cf. Park et al. (2017), p. 1; Batson (2010), Introduction section, para. 2

¹⁶⁶ cf. Wageman (1997), p. 57

- “(1) experiment with new ways to work more effectively,
 (2) seek best practices from other teams and other parts of the organization,
 (3) take action to solve problems without waiting for direction, and
 (4) discuss differences in what each member has to contribute to the work”¹⁶⁷*

The aforementioned preconditions (e.g., task design and team confidence, the mutual expectation of trust, and the highly cooperative goals) are fundamental for superior **conflict management**, which helps group members to resolve conflicts, constructively discuss their opposing views, share perspectives, and make effective decisions.¹⁶⁸ According to Senge “great teams are not characterized by an absence of conflict,”¹⁶⁹ but rather that they can learn from challenges.¹⁷⁰ Nevertheless, conflict management is often implemented in different forms and depths and therefore criticized for not being fully self-organized in regard to disciplining someone abusing their freedom or consistently underperforming.¹⁷¹ For example, in the case of Zappos.com Inc. or Buurtzorg Nederland, self-organized conflict management is limited to the first stage, followed by a multi-stage process with chief executives making the final decision to ensure quick solutions and avoid stalemates.¹⁷²

The organizational learning from Senge raises further topics regarding **information** and **knowledge sharing** and, ultimately, power. In hierarchical organizations, managers exercise the role of communication interface by receiving and filtering information from upper and lower hierarchical levels and determining what information to pass on, which influences decision making.¹⁷³ Because information is power,¹⁷⁴ in a self-organized organization or unit, one individual may conceal information from others to retain control over knowledge for personal gain.¹⁷⁵ However, only a high degree of information sharing can lead to organizational learning and collective intelligence, and it is vital in self-organization to support this aspiration.¹⁷⁶

Finally, all the previously mentioned aspects rely on **psychological safety**, which is defined as:

“a climate in which people are comfortable expressing and being themselves. More specifically, when people have psychological safety at work, they feel comfortable sharing concerns and mistakes without fear of embarrassment or retribution. They are confident that they can speak up and won’t be humiliated, ignored, or blamed. They know they can ask questions when they are unsure about something. They tend to trust and respect their colleagues.”¹⁷⁷

In addition to the proper task design, psychological safety creates an open, demanding, and collaborative environment where setting ambitious goals and working together to achieve them is natural.¹⁷⁸ In their quest to build the ideal team, Google LLC—a multinational technology company

¹⁶⁷ Wageman (1997), p. 57

¹⁶⁸ cf. Alper et al. (1998), p. 33 f., 36 and 38; see also Majkovic et al. (2020), p. 18 and 19; Kets de Vries (1993), p. 71

¹⁶⁹ Senge (2006), p. 232

¹⁷⁰ cf. Rickards/Moger (2017), Figure 1.3

¹⁷¹ cf. Hamel (2011), p. 55

¹⁷² cf. Müller (2020), p. 34

¹⁷³ cf. Müller (2020), p. 33; Scott/Davis (2007), p. 206

¹⁷⁴ cf. Simanek (2020), p. 318

¹⁷⁵ cf. Parker et al. (2015), p. 122

¹⁷⁶ cf. Wütrich (2011), p. 217; see also Majkovic et al. (2020), p. 25; Robbins/Finley (2000), p. 16 f.

¹⁷⁷ Edmondson (2019), p. xvi

¹⁷⁸ cf. Edmondson (2019), p. 18

specialized in internet-related services and products—realized that combining “matching” personalities had less impact on performance than psychological safety¹⁷⁹ because, in such an environment, both introverted and extroverted people would express their concerns and offer ideas.¹⁸⁰ Likewise, the characteristics of the culture, such as openness and giving feedback, will only appear if employees feel psychologically safe in the workplace (i.e., not feeling interpersonal fear but accepting risks and addressing them openly).¹⁸¹ Moreover, psychological safety is a complementary concept to trust. While trust is a characteristic of a one-on-one relationship and is an expectation of whether the other party can be counted on, psychological safety is experienced on a group level by not worrying about the immediate consequences of an action.¹⁸⁰ Successful conflict management can also be tracked back to psychological safety, which does not refer to being polite to each other all the time, but rather to allowing fruitful disagreement and the open interchange of ideas.¹⁸² Additionally, knowledge sharing can only thrive if employees feel comfortable sharing their expertise at work, be it worries, questions, mistakes, or ideas.¹⁸³ Figure 1 offers an overview of practical strategies for leaders to build and uphold psychological safety in any workplace. To measure psychological safety, Edmondson recommends using a questionnaire with a seven-point Likert scale for the following statements:

- “1. If you make a mistake on this team, it is often held against you.
2. Members of this team are able to bring up problems and tough issues.
3. People in this team sometimes reject others for being different.
4. It is safe to take a risk on this team.
5. It is difficult to ask other members of this team for help.
6. No one on this team would deliberately act in a way that undermines my efforts.
7. Working with members of this team, my unique skills and talents are valued and utilized.”¹⁸⁴

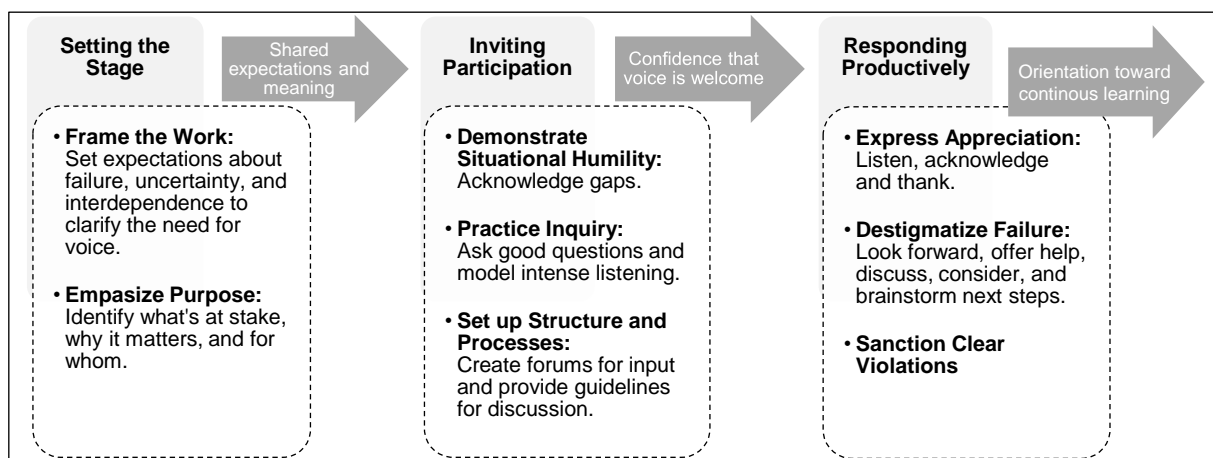


Figure 1. Overview of practical examples on how to build psychological safety.¹⁸⁵

¹⁷⁹ Duhigg (2016), para. 19 f. and 33

¹⁸⁰ cf. Edmondson (2019), p. 16 f.

¹⁸¹ cf. Edmondson (2019), p. xv and xviii

¹⁸² cf. Edmondson (2019), p. xiv

¹⁸³ cf. Edmondson (2019), p. 14

¹⁸⁴ Edmondson (2019), p. 20

¹⁸⁵ Source: based on Edmondson (2019), p. 159

2.5.3 Individual Level

In addition to the aforementioned organizational requirements, several preconditions are expected from individuals working in a self-organized unit. Employees' personality and mindset significantly impact self-organization, and only those with specific qualities and skills can fit into and actively engage in such a culture.¹⁸⁶ Table 2 summarizes the review of the extant literature on the individual-level requirements and groups them into three main categories based on the domain model of competencies proposed by Hogan and Warrenfeltz: professional-organizational, interpersonal, and intrapersonal skills.¹⁸⁷

	Competency	Characteristics	References
Professional-organizational skills	Qualifications	<ul style="list-style-type: none"> Related to the particular job Learning abilities 	Majkovic et al. (2020), p. 13 Schlumpf (2020), p. 326 Lübbers/Johannsen (2019), p. 68 Alferts/Bich (2017), p. 304 Castka et al. (2001), p. 129 Balkema/Molleman (1999), p. 137
	Analytical and statistical thinking	<ul style="list-style-type: none"> Competencies of being able to structure Complex content 	Majkovic et al. (2020), p. 13 and 18 Castka et al. (2001), p. 129
	Entrepreneurial thinking	<ul style="list-style-type: none"> Anticipating and understanding relevant changes Planning, organizing, coordinating Conducting meetings with proper record keeping Communication skills Quality assurance 	Stutz et al. (2021), p. 112 Bischof (2019), p. 64 and 66 Rickards/Moger (2017), Figure 1.3 Sharp et al. (2003), p. 669 f. Castka et al. (2001), p. 129
	Reliability	<ul style="list-style-type: none"> Taking responsibility Being accountable within the respective role 	Basler et al. (2021), p. 70 Majkovic et al. (2020), p. 13 Bischof (2019), p. 66

¹⁸⁶ cf. Basler et al. (2021), p. 69; Schlumpf (2020), p. 326

¹⁸⁷ cf. Hogan/Warrenfeltz (2003), p. 78

Interpersonal skills	Problem solving	<ul style="list-style-type: none"> • Solution orientation • Ability to deal with conflict • Listening, understanding, and being willing to reach a consensus • Patience • Empathy 	Majkovic et al. (2020), p. 13 and 18 Schlumpf (2020), p. 326 Castka et al. (2001), p. 129
	Self-reflection	<ul style="list-style-type: none"> • Self-awareness • Reflection of personal strengths and weaknesses 	Stutz et al. (2021), p. 112 Majkovic et al. (2020), p. 13 Schlumpf (2020), p. 326 Bischof (2019), p. 66
Intrapersonal skills	Self-confidence	<ul style="list-style-type: none"> • Willingness to leave one's comfort zone • Openness to new experiences 	Stutz et al. (2021), p. 112 Majkovic et al. (2020), p. 13, 18 and 19 Robbins/Finley (2000), p. 16 f.
	Creativity	Influenced by <ul style="list-style-type: none"> • Internal locus of control • Intrinsic motivation • Autonomy 	Castka et al. (2001), p. 129 DiLiello/Houghton (2006), p. 323 and 327

Table 2. Overview of the requirements and their characteristics on the individual level¹⁸⁸

Working in a self-organization must also fit employees' needs and attitudes.¹⁸⁹ For example, while people who prefer task variety and autonomous decision making would intrinsically thrive in a self-organization, others who are extrinsically motivated by financial rewards may be hesitant unless the higher share of responsibility comes with a pay rise.¹⁹⁰ Nevertheless, with sensitization and coaching, a better (intrinsic) fit is achievable.¹⁹¹ However, the success of these measures depends greatly on the individual's **learning ability**. Employees must not only maintain a continuous level of current technical knowledge, but also learn and adapt to the new organizational form while applying what they have learned into practice.¹⁹² Despite having a long history of hierarchical decision making reinforced by a working environment predicated on individual accomplishment, employees must unlearn old behaviors to incorporate the new way of working.¹⁹³ However, previous studies have shown that a person's learning capacity is limited. As a result, many individuals, especially the elderly, cannot take on new occupations, let alone more

¹⁸⁸ Source: author

¹⁸⁹ cf. Weerheim et al. (2019), p. 120

¹⁹⁰ cf. Balkema/Molleman (1999), p. 137

¹⁹¹ cf. Basler et al. (2021), p. 68

¹⁹² cf. van der Zwaan/Molleman (1998), p. 310 f.

¹⁹³ cf. Bernstein et al. (2016), p. 46; Wageman (1997), p. 50; see also Aebi (2019), p. 320

demanding positions than those they have worked in for decades.¹⁹⁴ Moreover, this capability is not only limited by time—where besides age, the amount of time a task has been conducted plays a role—but also differs individually based on the individual's extroverted or introverted personality traits.¹⁹⁵

The requirements on the individual level could also be expressed by the term **self-leadership**, which includes several preconditions from Table 2. Self-leadership plays a significant role for both leaders and managed employees, and it refers to a goal-oriented process of influencing oneself.¹⁹⁶ The following three qualities characterize team members who genuinely manage themselves:

- “• *They take personal responsibility for the outcome of their team's work.*
- *They monitor their work performance, actively seeking data about how well they are performing.*
- *They alter their performance strategies as needed, creating suitable solutions to work problems.*”¹⁹⁷

While self-leadership is positively related to better-perceived health status and improved psychological functioning (e.g., resilience, optimism, or trust), it requires a great deal of responsibility and decision-making power, and it must be learned.¹⁹⁸ Therefore, setting goals for oneself, observing and controlling the achievement of goals, positively orienting thoughts knowing the meaning and purpose of one's activity, and self-reward are critical elements of self-management.¹⁹⁹ In addition, Manz and Sims, Jr. provide two self-leadership strategies: behavior-focused strategies help individuals better organize and direct their own work, and cognitive-focused strategies help with self-leadership practices.²⁰⁰

Another frequently mentioned parameter is **motivation**.²⁰¹ However, it is debatable whether motivation is a requirement or a result. Although a more in-depth study of psychology is beyond the scope of this thesis, it is necessary to examine the topic of motivation to judge and correctly answer the research question. The hypothesis that “people are always motivated”²⁰² challenges the assumption that motivation is a precondition: how can it be a precondition for self-organization if it is universally given? This statement is based on the self-determination theory from Deci and Ryan, which set a cornerstone in the research on motivation comprised of six mini-theories on people's natural growth inclinations and psychological requirements.²⁰³ They identify three basic psychological needs fundamental for self-motivation, self-determination, high-quality performance, and wellness from the perspective of work organizations:²⁰⁴ competence, autonomy, and relatedness.²⁰⁵ The following definitions are essential to discuss their relevance further:

¹⁹⁴ cf. van der Zwaan/Molleman (1998), p. 309

¹⁹⁵ cf. van der Zwaan/Molleman (1998), p. 311

¹⁹⁶ cf. Furtner/Baldegger (2013), p. 5; see also Majkovic et al. (2020), p. 19 and 25

¹⁹⁷ cf. Wageman (1997), p. 51

¹⁹⁸ cf. Bischof (2019), p. 69; Dolbier et al. (2001), p. 469

¹⁹⁹ cf. Bischof (2019), p. 68; Furtner/Baldegger (2013), p. 236

²⁰⁰ cf. Manz/Sims, Jr. (1991), p. 23 f.

²⁰¹ cf. Bischof (2019), p. 66; Furtner/Baldegger (2013), p. 202 and 236; DiLiello/Houghton (2006), p. 323

²⁰² Fowler (2014), p. 2

²⁰³ cf. Deci/Ryan (2000), p. 68

²⁰⁴ cf. Deci et al. (2017), p. 19

²⁰⁵ cf. Deci/Ryan (2000), p. 68

“Competence is our need to feel effective at meeting every-day challenges and opportunities. It is demonstrating skill over time. It is feeling a sense of growth and flourishing.”²⁰⁶

“Autonomy is our human need to perceive we have choices. It is our need to feel that what we are doing is of our own volition. It is our perception that we are the source of our actions.”²⁰⁷

“Relatedness is our need to care about and be cared about by others. It is our need to feel connected to others without concerns about ulterior motives. It is our need to feel that we are contributing to something greater than ourselves.”²⁰⁸

The need for competency is underpinned by studies listed for qualification in Table 2 and was further discussed in this chapter as a learning ability and in Section 2.5.1 as an aspect of organizational learning and providing resources. However, autonomy and relatedness lead to more profound philosophical and psychological questions that significantly alter the discussion course.

Rotter’s internal locus theory underpins autonomy from a different psychological aspect. It distinguishes between the internal locus of control, which occurs when people believe their outcomes are primarily a result of their actions, and external locus of control, which occurs when people believe they have little to no control over what happens to them and that rewards are more likely to be a result of external factors.²⁰⁹ A parallel can be drawn between this distinction and the differentiation between internal and external motivation, resulting in the two theories mutually reinforcing each other. Another supporting argument is the minimal critical specification that enhances autonomy and self-determination, resulting in a greater sense of ownership and pride in one’s work (see Section 2.5.1). If team members see a direct link between their work and the final results, they will be encouraged to self-manage.²¹⁰ Autonomy is therefore a critical success factor in establishing self-organization.²¹¹

In addition, relatedness, especially the last part of the definition about being part of something greater, leads to the extensive topic of **purpose**. The work of the Austrian psychiatrist and logotherapist Viktor Frankl is foundational in this field. It is essential to outline the two meanings of the term “purpose” to understand its relevance to self-organization. The search for purpose typically begins with the question, “Why?”, which contains two objectives. On the one hand, it refers to the chain of causes (i.e., the deterministic sequence of processes), and on the other, to meaning and intention.²¹² The question, “Why does it rain?”, can address physical requirements, such as “What conditions are necessary for rain to form?”, as well as usefulness, such as “What is the function of rain?”. The former comes from searching for a causal deterministic explanation; the latter induces

²⁰⁶ Fowler (2014), p. 42

²⁰⁷ Fowler (2014), p. 33

²⁰⁸ Fowler (2014), p. 37

²⁰⁹ cf. Rotter (1966), p. 1

²¹⁰ cf. Alper et al. (1998), p. 34; see also Majkovic et al. (2020), p. 18; Rickards/Moger (2017), Figure 1.3; Dolbier et al. (2001), p. 483

²¹¹ cf. Wütrich (2011), p. 213; Wageman (1997), p. 56 f.

²¹² cf. Spaemann/Löw (1982) as cited in Längle (2007), p. 436

a finalistic²¹³ answer.²¹⁴ In the context of self-organization, it implies two preconditions: employees must understand why they are doing what they are doing (i.e., causal deterministic), and this definition must provide orientation and objectives (i.e., finalistic).

The understanding and definition of purpose vary individually and situationally.²¹⁵ Nonetheless, an individual experiences purpose when they execute an action that realizes **values** that are important to them.²¹⁶ This assumption introduces yet another extensive psychological topic that must be limited and focused on the definition of value: "values are (a) concepts or beliefs, (b) about desirable end states or behaviors, (c) that transcend specific situations, (d) guide selection or evaluation of behavior and events, and (e) are ordered by relative importance."²¹⁷ Furthermore, "values are cognitive representations of three types of universal human requirements: biologically based needs of the organism, social interactional requirements for interpersonal coordination, and social institutional demands for group welfare and survival."²¹⁷ Consequently, "values could be derived from the universal human requirements reflected in needs (organism), social motives (interaction), and social institutional demands."²¹⁷

It follows that in the case of self-organization, the work must align with the team members' goals and values because employees consciously and unconsciously check whether their personal values are in harmony with the company's values. The extensive congruence of individual and collective values is essential for total commitment and intrinsic motivation.²¹⁸ The transitive relationship between aligning team and individual to the organization induces the individual to align with the team: the greater the fit, the more performant the team and the organization.²¹⁹ Motivation, purpose, and value can thus be put in a relationship, proving that although motivation is an essential part of the picture, it is a byproduct (see Figure 1). The pivotal point is purpose.

Purpose became a significant factor in the wake of increasingly dynamic markets, complex decision-making situations and changing employee demands.²²⁰ The trend of purpose-driven organizations is therefore reasonable because merely flat structures are insufficient to gain the agility the dynamic markets require. Indeed, a strong sense of mission is common in successful examples of highly flexible businesses.²²¹ They tap into the need for purpose fulfillment and seek to provide a framework for both business activities and individuals to flourish in the ideal way. They create a link between meaning and goals; place a conscious emphasis on commitment and developing their employees' potential; and provide flexibility, opportunity to change things, and co-determination rights to their employees.²²² Within such conditions, employees see their job as a "calling," where work has a subjective meaning and significance, serving a greater whole with which the worker identifies.²²³

²¹³ Finalism is a doctrine or belief that all events are determined by their purposes or goals - <https://www.dictionary.com/browse/finalism> (accessed on: 04.01.2022)

²¹⁴ cf. Längle (2007), p. 436 f.

²¹⁵ cf. Frankl (1981) as cited in Ahrendt/Nikolaus (2020), p. 218

²¹⁶ cf. Frankl (1992) as cited in Busse (2019), p. 131

²¹⁷ Schwartz/Bilsky (1987), p. 551

²¹⁸ cf. Aebi (2019), p. 318; Zaugg (2017), p. 210

²¹⁹ cf. Adair (2011), "Three interlocking needs" section, para. 8; see also Sharp et al. (2003), p. 669 f.; Robbins/Finley (2000), p. 16 f.; Kets de Vries (1993), p. 72 f.

²²⁰ cf. Rödel (2020), p. 241; see also Lübbers/Johannsen (2019), p. 68

²²¹ cf. Rey et al. (2019), p. 76

²²² cf. Rödel (2020), p. 242

²²³ cf. Blickhan (2017), p. 101; Wrzesniewski et al. (1997), p. 22

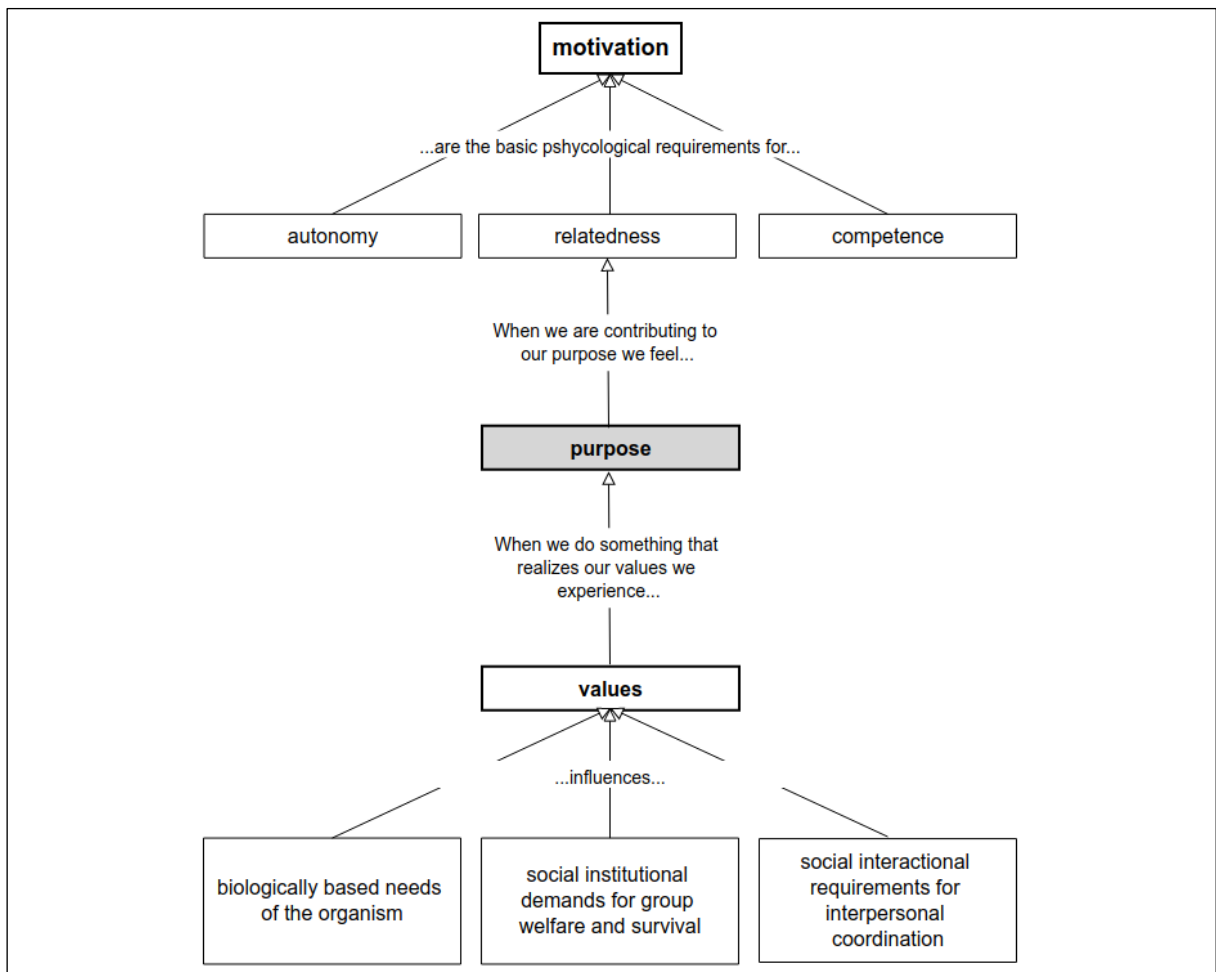


Figure 2. Relations between motivation, purpose, and values²²⁴

Purpose drive is created by giving purpose a particular weight in developing self-organization. Focus on orientation and alignment rather than planning and control is necessary.²²⁵ Although holacracy is not the only way to establish this drive in practice, it emphasizes giving everyone a sense of meaning by orienting the circles toward the reason for the organization's existence.²²⁶ Companies with a successful implementation of self-organization prove that the secret to success is not only eliminating hierarchies but also "combining alternative structures with an overarching sense of purpose."²²⁷ To conclude,

*"when individuals understand the worth and purpose of their jobs, feel ownership and autonomy in carrying them out, and receive clear feedback and supports, they are likely to become more autonomously motivated and reliably perform better, learn better, and be better adjusted."*²²⁸

²²⁴ Source: author

²²⁵ cf. Moeller/Fink (2020), p. 215; see also Majkovic et al. (2020), p. 26

²²⁶ cf. Bischof (2019), p. 65; Satell (2015), p. 3

²²⁷ Rey et al. (2019), p. 76

²²⁸ cf. Deci et al. (2017), p. 20

2.5.4 Leadership Level

In addition to the organizational, team, and individual levels, another level is required to successfully implement self-organization. The leadership level encompasses every level and presents additional requirements for each of them. For example, leadership on the organizational level refers to standing behind the change and providing the necessary resources. On the team level, one must consider emergent leaders—who hold no formal authority, but who the team naturally follows.²²⁹ Self-leadership is essential on the individual level.

It is a **misconception** that self-organization does **not require management**. On the contrary, leadership is present and fundamental in self-organization.²³⁰ Leadership must be present to some extent, even if it is a responsible self-leadership rather than an institutionalized, hierarchical one. The simple command, “organize yourselves,” will cause a leadership void, overwhelming employees with organizational issues because despite having no formal manager role, self-organization is not free from managerial tasks.²³¹ Instead, overseeing organizational goals, providing resources, planning projects, working on organizational structures, and providing feedback must be “formally distributed to individuals in a way that is not permanent, unbounded, or vested in hierarchical rank.”²³² Organizations and management do not need to reinvent themselves; they only need to evolve and take on new forms, which those affected can shape autonomously.²³³

In addition to this future-oriented perspective on keeping and planning leadership after the transition, it is also essential to pay attention to the leaders and managers prior to the change. Middle management often tries to jeopardize the aspirations of implementing self-organization, making their essential role of influencing the success of the transformation more critical (see Section 2.4.2).²³⁴ To align them with the goal, those who were previously in managerial positions require special attention because transitioning from a hierarchical management structure to a decentralized model significantly impacts them.²³⁵ In this regard, the following questions help to elaborate on the requirements of existing and future leaders:

- What will their role look like in the new structure?²³⁶
- “How to lead groups that are supposed to be self-led, and how to control self-control?”²³⁷
- What changes do they need to make to succeed in self-organization?²³⁸
- Which social skills and competencies are foundational for a leader in self-organization?
- Given the absence of a typical corporate ladder, how can they make sense of this transition in terms of professional advancement?²³⁸

The first is to clarify how **the leader’s role** looks in self-organization. Since the lower-level supervisory activities are delegated to the employees, the prior managers’ role would be reduced

²²⁹ cf. Wolff et al. (2002), p. 506

²³⁰ cf. Basler et al. (2021), p. 69 f.; Bernstein et al. (2016), p. 48; see also Robbins/Finley (2000), p. 16 f.

²³¹ cf. Lee/Edmondson (2017), p. 46; Schlumpf (2020), p. 326; Schröder/Oestereich (2019), p. 45

²³² Lee/Edmondson (2017), p. 46; see also cf. Menzel (2015), p. 7

²³³ cf. Schlumpf (2020), p. 322 f.; Zaugg (2017), p. 208

²³⁴ cf. van der Zwaan/Molleman (1998), p. 315; Wageman (1997), p. 60; Salem et al. (1992), p. 28

²³⁵ cf. Lee/Edmondson (2017), p. 51; Bernstein et al. (2016), p. 48

²³⁶ cf. Lee/Edmondson (2017), p. 51

²³⁷ Balkema/Molleman (1999), p. 137

²³⁸ cf. Lee/Edmondson (2017), p. 51; see also Parker et al. (2015), p. 115

to only a few managerial tasks.²³⁹ Additionally, they must become facilitators who enable rather than direct or control. Managers are no longer required to solve the problems themselves or to plan, organize, direct, and monitor. Instead, the new generation of leaders must inspire teams to develop and implement their solutions.²⁴⁰ As a result, the role shifts to a supportive coaching one; they must provide stability and orientation for the team and teach them how to handle uncertainty by being a reliable communication partner and appreciative feedback provider for employees.²⁴¹ Among others, their main task is leadership for self-leadership,²⁴² which consists of

- providing incentives and other signals that the team is in charge of its management²⁴³
- encouraging teams to engage in self-observation, self-evaluation, and self-reinforcement²⁴⁴
- increasing the team's problem-solving capabilities²⁴⁵
- encouraging problem-solving in groups.²⁴⁶

This leadership style, called Superleadership, focuses less on the leader and more on distributing power evenly between leader and follower and developing the necessary self-leadership skills.²⁴⁷ Therefore, "the most appropriate leader [...] who can lead others to lead themselves"²⁴⁸ accurately describes the new generation of leaders required for self-organization. How can one become a Superleader? Manz and Sims, Jr. proposed seven steps to Superleadership:

1. *Becoming a self-leader*
2. *Modeling self-leadership*
3. *Encouraging self-set goals*
4. *Create positive thought patterns*
5. *Develop self-leadership through reward and constructive reprimand*
6. *Promote self-leadership through teamwork*
7. *Facilitate a self-leadership culture.*²⁴⁹

Nevertheless, other leadership styles are also effective in self-organization, including shifting to a coach or mentor role understanding, incorporating nudge management by creating framework conditions that enable people to behave unconsciously more optimally, or leading through intelligent questions can help leaders succeed in the new environment.²⁵⁰ However, applying only one leadership style is not sufficient because the circumstances define leadership. Situational leadership is the underlying theory stating that a particular leadership practice can be effective in one situation but ineffective in another.²⁵¹ Likewise, the leader's role varies and depends on the team's development stage.²⁵² Consequently, leaders must master several leadership styles.

²³⁹ cf. van der Zwaan/Molleman (1998), p. 307

²⁴⁰ cf. Weerheim et al. (2019), p. 114 f.; Salem et al. (1992), p. 26; see also Laloux (2014), p. 32; Manz et al. (1990), p. 113; Manz/Sims, Jr. (1987), p. 114

²⁴¹ cf. Weerheim et al. (2019), p. 121; Alferts/Bich (2017), p. 304

²⁴² cf. Schlumpf (2020), p. 323

²⁴³ cf. Wageman (1997), p. 58; see also Majkovic et al. (2020), p. 25

²⁴⁴ cf. Manz/Sims, Jr. (1987), p. 113 and 106 ff.

²⁴⁵ cf. Wageman (1997), p. 58

²⁴⁶ cf. Manz/Sims, Jr. (1987), p. 114

²⁴⁷ cf. Furtner/Baldegger (2013), p. 193 and 195; Manz/Sims, Jr. (1991), p. 22 f.

²⁴⁸ Manz/Sims, Jr. (1991), p. 18

²⁴⁹ cf. Manz/Sims, Jr. (1991), p. 23 ff.

²⁵⁰ cf. Freibichler et al. (2017), p. 85; Zaugg (2017), p. 211; Wütrich (2011), p. 217

²⁵¹ cf. Furtner/Baldegger (2013), p. 200 f.

²⁵² cf. Wageman (1997), p. 60

If the leader's strength is measured by their ability to enable others by empowering their internal locus of control rather than by their ability to influence others' will, they need to acquire certain **social skills and competencies**. In reference to research on emergent leadership, the most crucial trait is emotional intelligence. More precisely, empathy serves as a foundation for trust, perspective-taking, analytical thinking, and pattern recognition. These skills effectively support proficiency in group task coordination and hence in supporting and developing others.²⁵³

Additionally, leaders must have excellent communication skills.²⁵⁴ First, communication is vital prior to the transition. The quality and tone used to announce the new requirements significantly impact how well the change will be accepted. It is the responsibility of the management board, in particular the middle and lower levels, to guarantee that staff comprehends, accepts, embraces, and successfully applies the new system.²⁵⁵ Otherwise, employees may feel lost and confused, leading to skepticism.²⁵⁶ Nevertheless, communication is essential in self-organization. Since it defines interpersonal working relationships, communication significantly influences organizational culture, collaboration, conflict management, and results.²⁵⁷

2.6 Pitfalls: How Can Self-organization Fail?

2.6.1 Fail Factors

An unsuccessful transition to self-organization does not necessarily signify that the problem lies within the concept, but rather in how it was implemented; or perhaps certain parts of it require adjustment.²⁵⁸ Imposing a ready-made solution to an organization is more likely to fail than developing or adjusting one's own form in a protected space of trial and error.²⁵⁹ Furthermore, if the organization, teams, or employees do not fulfill the required prerequisites, self-organization will not "stick" for long.²⁶⁰ In addition to fulfilling the success factors, organizations should also avoid the following fail factors.

First, if **self-organization is not managed**, several issues may derail the effort, such as unresolved interpersonal conflicts, non-performers, and over-performers. Focusing on identifying and developing talent, combined with ushering out inappropriate people, establishing organizational norms, nurturing interpersonal relationships, properly distributing rewards, and resolving disagreements can therefore help institutionalize and maintain self-organization in the long term.²⁶¹

Second, **authority not being radically decentralized** can lead to distrusting and disregarding the ideology. If executives and directors remove themselves from the equation and maintain their discretionary powers, employees will rightfully question the purpose of the change and use it as an excuse (e.g., "Why should I not get away with it?"). In contrast, self-organization should entail a significant redistribution of power and authority across the company.²⁶²

²⁵³ cf. Wolff et al. (2002), p. 518 f.

²⁵⁴ cf. Alferts/Bich (2017), p. 305 f.; see also Majkovic et al. (2020), p. 19

²⁵⁵ cf. Alferts/Bich (2017), p. 305; see also Majkovic et al. (2020), p. 26

²⁵⁶ cf. Weerheim et al. (2019), p. 119

²⁵⁷ cf. Basler et al. (2021), p. 68; Schlumpf (2020), p. 326

²⁵⁸ cf. Salem et al. (1992), p. 31

²⁵⁹ cf. Schüller/Steffen (2021), p. 20

²⁶⁰ cf. Lübbers/Johannsen (2019), p. 67

²⁶¹ cf. Alferts/Bich (2017), p. 304; Hout (1999), p. 164

²⁶² see also Lee/Edmondson (2017), p. 50; Romme (2015), p. 5

Lastly, companies often overlook the necessity to adapt the **reward system** to reflect the new working and employment conditions.²⁶³ Finding the optimal balance is not easy, however. For instance, Zappos.com Inc. experimented with a compensation model based on acquiring or applying one's skill badges, but its complexity was discouraging.²⁶⁴ Another possible solution would be group pay or team rewards, where the available compensations are distributed equally among team members.²⁶⁵ A step further would be peer-based or self-set salaries.²⁶⁶ These approaches require insight into the company's finances, which is also an effective practice to enable self-organized teams.²⁶⁷ Even so, new reward systems may fail if they incentivize employees to carry out the work for which they are the most qualified, thus favoring the traditional ways of task distribution, building up silos, and withholding information and knowledge.²⁶⁸

2.6.2 Way of Introduction

While researchers were coherent in regard to most topics, the topic of adjusting the pace of change to the current organization is divisive. Arguments exist for both radical and incremental approaches, as well as whether the change should be initialized from the top-down or bottom-up. The following paragraph summarizes the arguments to help decide which approach is more likely to foster success in a given scenario.

The following three aspects characterize a **radical approach**: 1) how much authority was decentralized, 2) the scope of the decentralization, and 3) whether a formal and systematic way was chosen to decentralize authority. The advantage of the radical approach is that it prevents one of the aforementioned fail factors from occurring—leaving the higher levels of management intact. It eliminates the manager-subordinate authority relationship across the organization, not exclusively on the front lines.²⁶⁹ Additionally, Robertson—the founder of holacracy—strictly recommends adopting the system entirely, underlining the reasoning with the legitimate question, “Who chooses which pieces?”²⁷⁰

However, an **incremental approach** better suits organizations, especially large corporations, when they cannot introduce all parts of it at once. For example, starting with the less-challenging tasks and working up to the more difficult ones can help avoid an overload by focusing on the next step rather than an overwhelming ideal target state.²⁷¹ Moreover, with small, incremental steps, the organization can remain agile, better react to learnings, and change course more frequently.²⁷² Nevertheless, an incremental approach does not preclude the same outcome as at the end of a radical shift: if the authority is entirely decentralized in the whole organization using a formal and systematic way, then an incremental approach for reaching this goal is preferred.

²⁶³ cf. van der Zwaan/Molleman (1998), p. 308 and 315; Wageman (1997), p. 56 and 60; see also Robbins/Finley (2000), p. 16 f.

²⁶⁴ cf. Bernstein et al. (2016), p. 46

²⁶⁵ cf. Wageman (1997), p. 56; see also Laloux (2014), p. 131 f.

²⁶⁶ Laloux (2014), p. 129 f.

²⁶⁷ cf. Weerheim et al. (2019), p. 119

²⁶⁸ cf. van der Zwaan/Molleman (1998), p. 308

²⁶⁹ cf. Lee/Edmondson (2017), p. 43 and 45 f.

²⁷⁰ Robertson (2016), p. 146

²⁷¹ cf. Lübbers/Johannsen (2019), p. 67; Bernstein et al. (2016), p. 49; Balkema/Molleman (1999), p. 135; see also Schlumpf (2020), p. 323

²⁷² cf. Schröder/Oestereich (2019), p. 48

Another dimension of the transition is whether it is **top-down** or **bottom-up**. Using authoritarian measures to introduce a management model intended to enhance the self-determination and authority of each employee is inherently contradictory.²⁷³ For example, a hit-and-run approach initialized by a Chief Executive Officer (CEO) casts light on the misalignment between the idea of decentralized authority and the arbitrary use of absolute authority²⁷⁴ (and is likely the main reason behind Zappos.com Inc.'s failure to adopt holacracy).²⁷⁵ Multiple examples show that the implementation process must be holacratic, incorporate employee input, and ensure that everyone knows and accepts the changes—as opposed to a top-down directive.²⁷⁶ In conclusion, “organizational development and re-design can only be authentic and effective when the process itself shows the same features as the final state.”²⁷⁷ Nevertheless, a top-down approach may also be beneficial, especially in the case of resistant middle management since it is important to start with the people who stand to lose the most in the new system.²⁷⁸

2.7 Limitations: What are the Disadvantages of Self-organization?

Lastly, it is important to discuss the limitations of self-organization and hence provide a foundation for deciding whether and how to introduce it. First, completely distributed authority without a management board may not be permitted for **legal reasons**, as formal management structures are for not only implying hierarchical ranking, but also defining responsibilities in liability cases or signing authorities.²⁷⁹ Generally, a need for **explanation and a well-defined interface** exists when there is contact with external organizational parties or stakeholders.²⁸⁰

However, the more significant issues primarily occur at the beginning while getting accustomed to self-organization, whereas the new organizational form can hinder completing the work because people may **struggle with self-leadership**: how to prioritize, focus their attention, or simply navigate in the new role landscape.²⁸¹ Fitting with this dilemma is the question of how **strategy** (i.e., the overall course of an organization) can be upheld within self-organization. For instance, holacracy redefines strategic planning by transforming the conventional “predict-and-control mind-set,”²⁸² in which setting a strategy means deciding on the proper goals and how to reach them beforehand, into dynamic steering, which emphasizes constant adjustments based on feedback while focusing on the organization's purpose.²⁸³ In practice, holacracy recommends defining strategy by one rule of thumb: “Emphasize X, even over Y,” where both X and Y represent a positive aspect.²⁸⁴ Nevertheless, this dynamic approach is not suitable for every type of business: when the stakes are high or a considerable amount of money must be invested to generate profit later and the strategy must be stable.²⁸⁵ In addition, relying entirely on market feedback can be

²⁷³ cf. Hamel/Zanini (2016), p. 4

²⁷⁴ cf. Romme (2015), p. 5

²⁷⁵ see e.g. Groth (2020); Reingold (2016); Gelles (2015)

²⁷⁶ cf. Romme (2015), p. 5; see also Bernstein et al. (2016), p. 40

²⁷⁷ van Beinum (1993) as cited in van der Zwaan/Molleman (1998), p. 308

²⁷⁸ cf. Basler et al. (2021), p. 68

²⁷⁹ cf. Müller (2020), p. 31

²⁸⁰ cf. Bischof (2019), p. 67; see also Majkovic et al. (2020), p. 26

²⁸¹ cf. Bernstein et al. (2016), p. 45; see also Majkovic et al. (2020), p. 12

²⁸² Robertson (2016), p. 128

²⁸³ cf. Robertson (2016), p. 127 ff.

²⁸⁴ cf. Robertson (2016), p. 132

²⁸⁵ cf. Bernstein et al. (2016), p. 46

counterproductive, as it “doesn’t always know what it wants.”²⁸⁶ In such cases, top-down guidance is therefore more beneficial than self-organized units focusing on a limited area.²⁸⁷ Bringing those self-organized units to see the big picture, proactively seek advice from other experts, and develop a strategy together would bring the advantages of the traditional hierarchies with top-down strategy management into self-organization.

Another major limitation is **groupthink** (i.e., the tendency for individuals within a group to agree with one another). In fact, there are two decision-making pitfalls in self-organization. First, not all members will utilize their authority and voices to participate in finding the ideal solution.²⁸⁸ Second, the cohesive team design of self-organization is likely to enhance the internal pressures toward conformity, which ultimately restricts constructive critical thinking and results in dysfunctional decision making.²⁸⁹ The following warning signals can help to monitor and diagnose teams for groupthink tendencies:

- “• *direct social pressure placed on a member who argues against the group’s shared beliefs*
- *members’ self-censorship of their own thoughts or concerns that deviate from the group consensus*
- *an illusion of the groups’ invulnerability to failure*
- *a shared illusion of unanimity*
- *the emergence of self-appointed mind guards that screen out information from outside the group that does not agree with the general group consensus*
- *collective efforts to rationalize decisions*
- *stereotyped views of enemy or competing leaders as weak or incompetent*
- *an unquestioned belief in the group’s inherent morality.”²⁹⁰*

In addition, intense peer pressure, as observed in self-organization, increases the chances of **burnout**.²⁹¹ Additionally, some people may be uncomfortable with totalitarian responsibility sharing and constant participation in decision making, resulting in exhaustion and inner resignation. Lastly, studies have reported that high commitment and motivation correlate to a higher amount of reported burnout.²⁹² Finally, **hiring** new employees will remain challenging as long as self-organization represents the exception rather than the mainstream. The complex role systems and the specific requirements for personality and skills for newcomers complicate the hiring process, even if the process and decision are entirely left to the team.²⁹³

²⁸⁶ Bernstein et al. (2016), p. 47

²⁸⁷ cf. Bernstein et al. (2016), p. 48

²⁸⁸ cf. Bernstein et al. (2016), p. 46

²⁸⁹ cf. Manz/Neck (1995), p. 7 f.

²⁹⁰ Manz/Neck (1995), p. 8

²⁹¹ cf. Lee/Edmondson (2017), p. 51; Salem et al. (1992), p. 27

²⁹² cf. Salmela-Aro/Nurmi (2004), p. 486

²⁹³ cf. Bernstein et al. (2016), p. 46; Salem et al. (1992), p. 30; see also Majkovic et al. (2020), p. 25

3 Methodology

Although the literature review delivered a significant number of success factors, their relevance and significance can only be proven by placing them in the context of practical examples. A goal-oriented methodology is accordingly chosen for the present work. The careful evaluation of research methods as part of planning the research design resulted in choosing a **case study** approach. While there is dissent on the classification of case studies, this disagreement is not thought to have a significant effect on the results. For the sake of completeness, however, it is noteworthy that some researchers have argued that since case studies allow the use of different empirical data collection methods (i.e., both qualitative and quantitative), they are a methodological research approach rather than a method in a strict sense.²⁹⁴ Others classify case studies as a qualitative methodology.²⁹⁵ The appropriateness of the case study approach for this Master's thesis is founded on research about the questions this method aims to answer. The definition of a case study delivers the first answer:²⁹⁶

“A case study is an empirical inquiry that investigates a contemporary phenomenon (the ‘case’) in depth and within its real-world context, especially when the boundaries between phenomenon and context may not be clearly evident.”²⁹⁷

“A case study inquiry copes with the technically distinctive situation in which there will be many more variables of interest than data points, and as one result relies on multiple sources of evidence, with data needing to converge in a triangulating fashion, and as another result benefits from the prior development of theoretical proposition to guide data collection and analysis.”²⁹⁸

First, the successful transition to self-organization cannot be measured in a laboratory environment, as testing the effect of each dependent and independent factor in a quantitative manner would result in immense complexity. Second, the real-world context is indispensable in this case, and the variables of interest would likely exceed the data points. Lastly, a case study can be used to generate hypotheses²⁹⁹ or, as in this case, to test a hypothesis and apply it in an advanced state of research.³⁰⁰

Although the case study method promises research-relevant knowledge about practice, it is somewhat controversial in terms of scientific methodology.³⁰¹ Moreover, not every description of a real-world phenomenon is appropriate for a scientific case study. As a result, a systematic research methodology that includes a theoretical embedding of the case study is essential to distinguish this scientific paper from an unscientific journalistic report. Hence, if the methodological prerequisites for case studies are satisfied, they stand equal to other research methodologies (e.g., experiments,

²⁹⁴ cf. Lamker (2014), p. i and 3; Zaugg (2006), p. 3 and 8

²⁹⁵ cf. Lamnek/Krell (2016), p. 15; Mayring (2016), p. 41 ff.; Bortz/Döring (2015), p. 110; Blatter et al. (2007), p. 34 f.; Merriam 1988, as cited in Zaugg (2006), p. 8

²⁹⁶ see also cf. Zaugg (2006), p. 4; Lamker (2014), p. 7

²⁹⁷ Yin (2014), p. 16

²⁹⁸ Yin (2014), p. 17

²⁹⁹ cf. Eisenhardt (1989), p. 535; see also Zaugg (2006), p. 12; Specht et al. (2004), p. 541

³⁰⁰ cf. Flyvbjerg (2011), p. 301 f.; Borchardt/Göthlich (2007), p. 35 f.

³⁰¹ cf. Specht et al. (2004), p. 541

surveys, or analysis of archive materials).³⁰² Table 3 provides a detailed description of how to adapt the three fundamental quality criteria of scientific research—objectivity, reliability, and validity—to case studies.

	Definition	Adaptation for case studies
Objectivity	A test is objective if different test users reach the same results with the same persons or test objects (i.e., an objective test is independent of the test user). ³⁰³	“The case study contains no greater bias toward verification of the researcher’s preconceived notions than other methods of inquiry.” ³⁰⁴
Reliability	The reliability of a test characterizes the degree of accuracy with which the tested characteristic is measured (i.e., whether a test produces the same results when performed repeatedly). ³⁰⁵	Excessive documentation and use of a case study protocol. ³⁰⁶
Validity	Validity indicates whether a test measures what it is supposed to measure. ³⁰⁷	Use multiple sources of evidence to reach <i>construct validity</i> . ³⁰⁸ Do pattern matching, explanation building, and logic models while addressing opposing views to reach <i>internal validity</i> . ³⁰⁸ Use replication logic in multiple-case studies to reach <i>external validity</i> . ³⁰⁸

Table 3. Adaptation of the three fundamental quality criteria of scientific research for case studies³⁰⁹

Additionally, Specht et al. recommend the following requirements, which can be applied to complement the aforementioned ones:

- Placement of the case study in the cognition process
- Documentation of which epistemological steps are covered
- Detailed description of the initial situation
- Reflection on the starting assumptions of the primary literature
- Explanation of own starting assumptions to limit self-bias
- Explanation of one's self-concept
- Development of possible test variables for the case study questions³¹⁰

³⁰² cf. Lamker (2014), p. 2; Yin (2014), p. 28; Specht et al. (2004), p. 550

³⁰³ cf. Bortz/Döring (2015), p. 195

³⁰⁴ Flyvbjerg (2011), p. 311

³⁰⁵ cf. Bortz/Döring (2015), p. 196

³⁰⁶ cf. Yin (2014), p. 45; Specht et al. (2004), p. 550

³⁰⁷ cf. Bortz/Döring (2015), p. 200

³⁰⁸ cf. Yin (2014), p. 45

³⁰⁹ Source: author

³¹⁰ cf. Specht et al. (2004), p. 550 f.

A detailed description of the research design follows to comply with the criteria and ensure this work's scientific appropriateness. Figure 3 illustrates the applied procedure heuristic; since the process is not linear, one can (re-)visit previous or next steps if the gathered information and the learning effect after one step requires.³¹¹

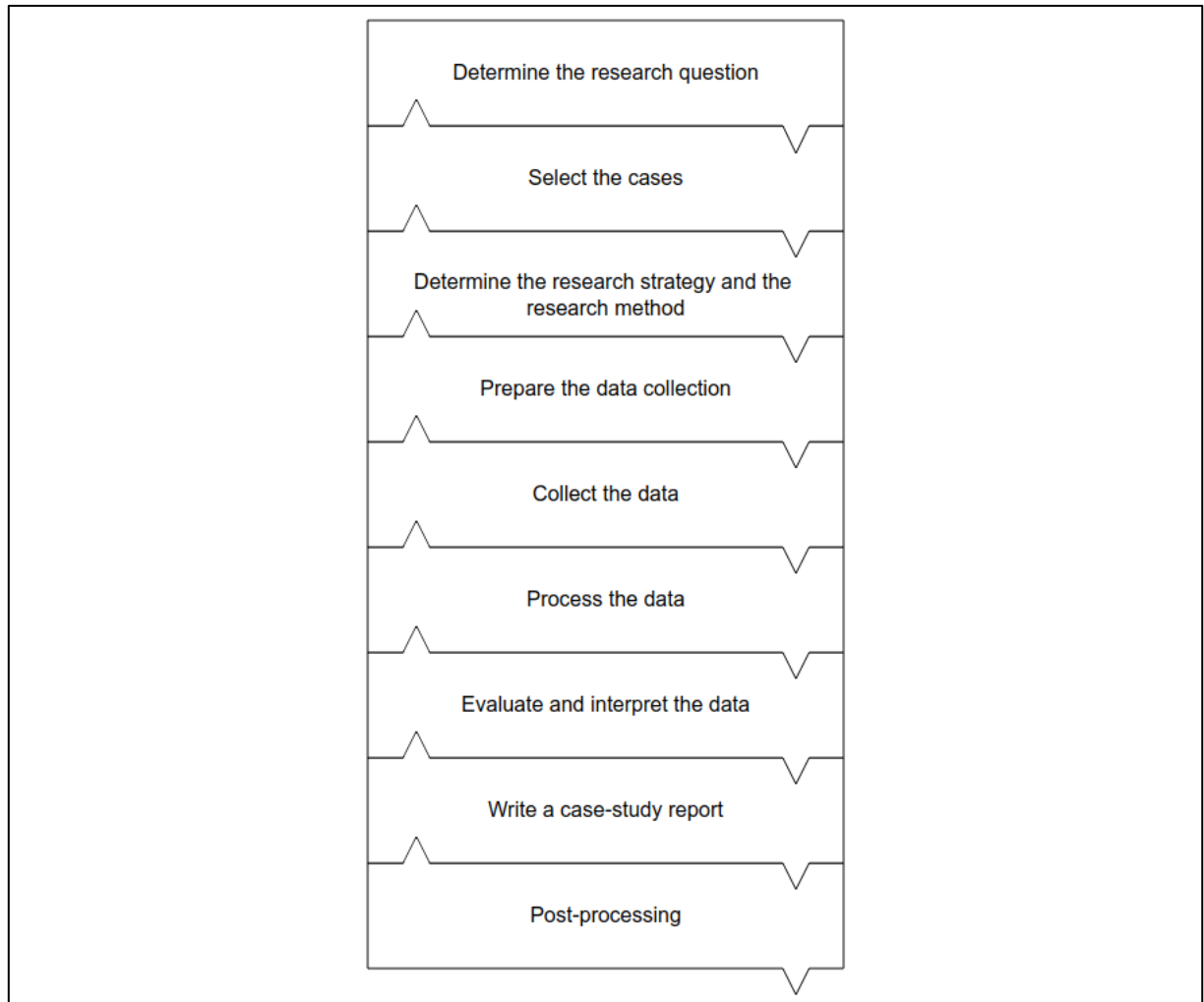


Figure 3. Procedure heuristics for the development of case studies³¹²

Research question: What are the critical success factors before, during, and after transforming a conventional, hierarchical organization into a self-organization?

Case selection: The objects of investigation of this Master's thesis are transformation processes, where a whole company shifted to self-organization; businesses with isolated self-organized teams are beyond the scope of this study. Consequently, the case definition reads as follows: organizations that have completed the holistic transformation to self-organization within the last 2.5 years, (i.e., after June 1, 2019). The case selection does not have to obey a random principle as in quantitative research. Instead, case studies, especially comparative ones, follow a replication logic. Further cases are selected either because they correspond to the first analyzed case or they obtain different results which are nevertheless predictable from the theoretical findings.³¹³

³¹¹ cf. Zaugg (2006), p. 15

³¹² Source: based on cf. Zaugg (2006), p. 15

³¹³ cf. Borchardt/Göthlich (2007), p. 37

Using Google's search engine and combinations of the search terms "self-organization," "examples," "transformation," "transforming," "our journey," "way," and "site:blog" or "site:jobs," in both English and German, led to a list of potential companies. In addition, consultant firms provided further examples on their reference pages and use cases from literature review sources were added. The first round resulted in 30 potential organizations:

- | | | |
|-----------------------------|---------------------------------------|---------------------------------|
| 1. Allsafe GmbH & Co. KG | 11. La Poste Suisse SA | 21. Semco S.A. |
| 2. Ashoka Deutschland gGmbH | 12. Lidl GmbH & Co. KG | 22. Siemens AG |
| 3. betterplace lab gGmbH | 13. Mindvalley Inc. | 23. SoftwareMill SA |
| 4. Buffer Inc. | 14. Mittwald CM Service GmbH & Co. KG | 24. Swarovski Crystal Online AG |
| 5. DB Systel GmbH | 15. mycs GmbH | 25. tbd* (The Changer GmbH) |
| 6. Fitzii Inc. | 16. Nexlore AG | 26. Tooploox Sp. z o.o. |
| 7. FSM AG | 17. Novotel France (Accor SA) | 27. The Whidbey Institute |
| 8. Gini GmbH | 18. ONTEC AG | 28. Ymere |
| 9. Haufe-umantis AG | 19. oose Innovative Informatik eG | 29. Carl Zeiss AG |
| 10. Itacs GmbH | 20. Scandio GmbH | 30. Zühlke Engineering GmbH |

In the second phase, each company was individually evaluated to determine whether it fulfilled the requirements of 1) transforming the whole organization, 2) having finished the transformation in the last 2.5 years, and 3) providing sufficient qualitative documentation about the experience. Finally, three organizations fulfilled the case definition and were chosen for the case study (see Table 4).

Organization	Industry	Location	Business size ³¹⁴	Timespan
DB Systel GmbH	Information technology (IT) (Transport and mobility)	DE	Large ³¹⁵	2015–2021
Gini GmbH	IT (Bank and insurance)	DE	Small ³¹⁶	2017–2021
Nexlore AG	IT	CH	Medium-sized ³¹⁷	2017–2019

Table 4. List of cases chosen for the case study³¹⁸

As mentioned previously, the heuristic procedure for developing case studies is not linear. After the case selection, it would be reasonable to modify the research question because there is a recognizable pattern in the case selection: the companies are predominantly from the German-speaking IT industry in Central Europe. One reason could be the widespread usage of agile software development frameworks in the IT sector (e.g., Scrum, which greatly emphasizes self-organized teams), and shifting to such an organizational structure was rational. Another reason could be the instinctive usage of information technologies within this industry, resulting in many digital publications that facilitated finding these cases. Nevertheless, the experiences from the IT

³¹⁴ <https://www.wko.at/service/zahlen-daten-fakten/KMU-definition.html> (accessed on: 06.07.2022)

³¹⁵ Sturm/Schneider (2021), 01:21

³¹⁶ <https://www.kununu.com/de/gini> (accessed on: 06.07.2022)

³¹⁷ Aebersold (2019a), para. 1, <https://www.kununu.com/ch/nexlore> (accessed on: 06.07.2022)

³¹⁸ Source: author

industry could verify or falsify the fundamental theory, serving as a gatekeeper of further research in other industries and contexts. Finally, the choice of these cases fulfills the parameter of direct comparability.³¹⁹

Research strategy and research method: In addition to the influencing relationship between the research question and the case selection, there is a close relationship between the case selection and the research strategy and method. Considering Yin's four case study designs, this work follows a holistic multiple-case design (see Figure 4). The individual contexts are the organizations, whereas the cases are their transformation processes. Multiple-case studies are preferred because, on the one hand, they soften the critique against an invalid generalization of a single-case study and, on the other hand, they strongly support the arguments with a significant amount of interpretable, primary material for an analysis, making the results more persuasive, reliable, and powerful.³²⁰ In addition, a multiple-case study can serve the purpose of a holistic comparison. The advantage of a comparative case study over a single case study is that the findings obtained can be critically examined through similarities and differences between the cases.³²¹ While the same question is investigated in different companies, the researcher is more strongly encouraged to question their results than in the case of a single case.³²²

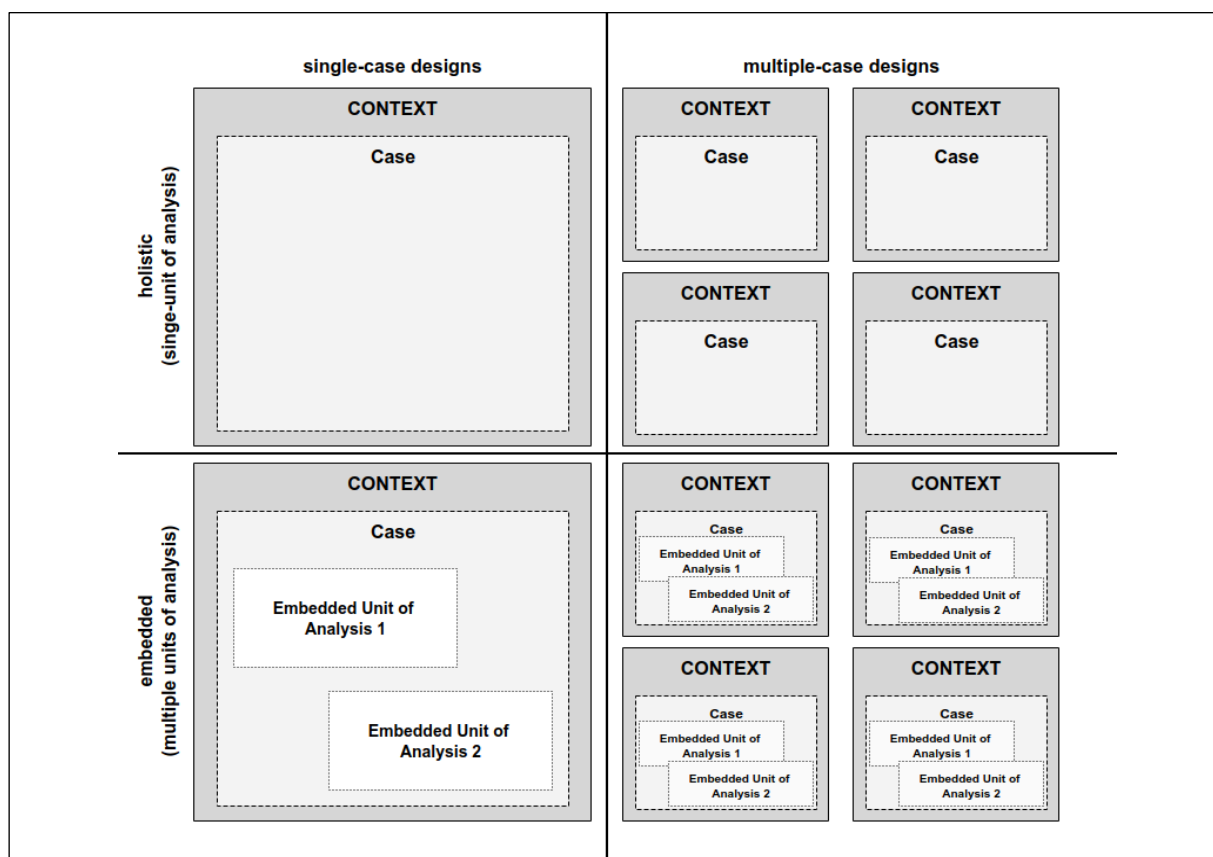


Figure 4. Four types of case study designs³²³

³¹⁹ cf. Yin (2014), p. 57 f.; see also Borchardt/Göthlich (2007), p. 43

³²⁰ cf. Yin (2014), p. 64; Borchardt/Göthlich (2007), p. 36 f.; Specht et al. (2004), p. 543

³²¹ cf. Borchardt/Göthlich (2007), p. 36 f.

³²² cf. Specht et al. (2004), p. 543

³²³ Source: Yin (2014), p. 50 (slightly modified)

Data collection: Case studies are a complex and open-ended research approach with no restriction to a particular data collection method. The essential methods are interviewing, observation, and content analysis, which are often used in a mixed-method research design.³²⁴ In this Master's thesis, a document study was applied to determine the explicit knowledge about the subject. A document study saves resources by not gathering data that is already known through primary surveys. Instead, the primary research is based on information collected in systematic secondary research.³²⁵ Examining the obtained information in the context of this case study should prevent faulty hypotheses, models, and pieces of the derived framework from the literature review from being transferred to another, more exhaustive study.³²⁶ The sources for a document study are primarily publicly accessible "official" information found on the internet, in newspapers or magazines, or from the company (e.g., internal documents).³²⁷ This choice of methodology influenced the case selection, as well, as the availability and quality of the documentation became an additional criterion of the case definition. After finally defining the cases, more thorough research therefore followed to collect the case study documents listed in the subchapters of the bibliography, which also serves as the first part of the case study database.³²⁸

Data processing: The result of the data processing follows in the form of a narrative compilation in Chapter 4.

Evaluation and interpretation: Chapter 5 presents a discussion of the results, including verifying the correctness of the fundamental theory and answering the research question. Although one of the least established elements of conducting case studies is examining the collected data, having an overall analytic strategy can help to determine what to seek during data collection.³²⁹ Since, in the case of this thesis, the research question, the literature review, and a preliminary hypothesis were underpinned by a theoretical proposition about the critical success factors for implementing self-organization, it stands to reason that "relying on theoretical propositions" is the most suitable of Yin's four analytic strategies.³³⁰ Finally, pattern matching and explanation building were used from the five analytic techniques to further analyze the collected data. In the case of the former, using pattern matching in this descriptive case study is valid because the predicted patterns were defined prior to data collection.³³¹ The success factors derived from the literature review were used as a fundamental theory to be proven or disproved by the practical cases (see Table 5). In addition, the explanation building is in narrative form and led to recommendations for future research.³³²

³²⁴ cf. Borchardt/Göthlich (2007), p. 33 and 37

³²⁵ cf. Zaugg (2006), p. 19

³²⁶ cf. Specht et al. (2004), p. 543

³²⁷ cf. Yin (2014), p. 106 f.; Zaugg (2006), p. 20

³²⁸ cf. Yin (2014), p. 125 f.

³²⁹ cf. Yin (2014), p. 133 f.

³³⁰ cf. Yin (2014), p. 136

³³¹ cf. Yin (2014), p. 143

³³² cf. Yin (2014), p. 147 f.

Organizational level
<ul style="list-style-type: none"> • Change management <ul style="list-style-type: none"> ◦ Support by the management ◦ Provide required resources (<i>time, money, information, competencies, coaching, and supervision</i>) ◦ Balance between ambition and possibilities ◦ Adjust the pace of change ◦ Proclaim self-organization a strategic goal • Framework conditions <ul style="list-style-type: none"> ◦ Environment ◦ Structures and processes ◦ Boundaries of self-organization ◦ Scope of decision making by the owners or highest management board • Formal system <ul style="list-style-type: none"> ◦ Minimum specs ◦ Documentation • Roles <ul style="list-style-type: none"> ◦ Redesign ◦ Assist employees in completing their daily tasks ◦ Support conflict management
Team level
<ul style="list-style-type: none"> • Task design <ul style="list-style-type: none"> ◦ Done by several people ◦ Straightforward division of work ◦ Sufficient competencies and abilities • Team's mission, vision, and goals <ul style="list-style-type: none"> ◦ Reason why the team exists and what it is attempting to accomplish ◦ Align with the underlying organizational goals • Team design <ul style="list-style-type: none"> ◦ Skill diversity of team members ◦ Demographic diversity of team members ◦ Team size ◦ Group rewards • Strategic thinking <ul style="list-style-type: none"> ◦ Experiment with new methods ◦ Seek best practices from others ◦ Take action to solve problems without waiting for direction ◦ Discuss differences in what each member has to contribute to the work • Culture <ul style="list-style-type: none"> ◦ Trust ◦ Altruism • Conflict management • Information and knowledge sharing • Psychological safety

Individual level
<ul style="list-style-type: none"> • Skills, personality, and mindset <ul style="list-style-type: none"> ◦ Professional-organizational skills (<i>learning abilities, analytical and statistical thinking, entrepreneurial thinking, reliability</i>) ◦ interpersonal skills (<i>problem solving</i>) ◦ intrapersonal skills (<i>self-reflection, self-confidence, creativity</i>) • Purpose • Self-leadership
Leadership level
<ul style="list-style-type: none"> • New role definition <ul style="list-style-type: none"> ◦ Facilitator and coach ◦ Enable rather than direct ◦ Situational leadership • Social skills and competencies <ul style="list-style-type: none"> ◦ Emotional intelligence, especially empathy ◦ Communication skills
Overall
<ul style="list-style-type: none"> • Resistance from within <ul style="list-style-type: none"> ◦ People defending their status ◦ People wanting to be unique and indispensable • Necessity and appropriateness • Pitfalls <ul style="list-style-type: none"> ◦ Self-organization is not managed ◦ Authority is not radically decentralized ◦ Reward system is not adapted ◦ (Wrong) way of introduction • Limitations <ul style="list-style-type: none"> ◦ Legal reasons ◦ Explanation and well-defined interface to the outer world ◦ Struggle with self-leadership ◦ Strategy ◦ Groupthink ◦ Burnout through peer pressure ◦ Hiring

Table 5. Critical success factors for implementing self-organization derived from the literature review³³³

³³³ Source: author

4 Results

4.1 Case Report for DB Systel GmbH

The DB Systel GmbH is a fully owned subsidiary of Deutsche Bahn with approximately 5,500 employees and a billion euros in revenue. More than 600 self-organized teams maintain over 900 mission-critical applications for the railroad company.³³⁴ Until 2014, DB Systel was the sole IT provider of the Deutsche Bahn, operating the whole IT infrastructure with its own data center. However, when the concern announced its digitalization roadmap, DB Systel was deliberately canceled in the plans, as the parent company did not trust them to accompany the group into digitalization. This drastic experience forced them to consider what changes would be necessary to **become the driving partner for digitalization within the corporation**.³³⁵

To make the future of DB Systel viable, the management conducted a series of strategy workshops in 2015. As a result, several initiatives (e.g., customer centricity, innovation-revolution, image, and management and culture) were established under the name "Code Future."³³⁶ Its approach to these workshops differed from the former one: rather than distributing the work to task forces or defining it in a management retreat, the company wanted to **involve everyone**. There is a difference between managers deciding on a change versus hundreds of employees living it.³³⁷ Moreover, numerous varying perspectives make inclusion inevitable, especially in digitalization. As a result, business managers and division heads sat with employees at the conference table, making critical strategic decisions together for the first time. Due to the unusual setup requiring employees to suddenly talk to management at eye level, they chose employees based on two criteria for these first strategy workshops: being known for thinking boldly ahead and not fearing contacts with upper hierarchy levels.³³⁸ Additionally, this was a helpful first practice for the management to learn how to let go and rely on the commitment and engagement of the employees.³³⁹

The defined initiatives were then shared with the entire organization with a call to participate and help define the content and results. During the change process's peak, approximately 600 of the then 3,300 employees were actively involved. It proved not only the willingness of the employees to participate in the company's future, but also that they had a say in the change—on which the management placed a major emphasis.³⁴⁰ To stimulate action and motivate the initiative's participants to progress, they defined reachable goals that were tracked and presented quarterly.³⁴¹ Their process was optimally **balanced between** the powerful **bottom-up** movement and the necessary **top-down** corporate control, as what emerged from the initiatives (bottom-up) ultimately had to be accepted by the management (top-down).³⁴²

³³⁴ cf. Sturm/Schneider (2021), 01:23

³³⁵ cf. Sturm/Schneider (2021), 02:04; Jumpertz (2019), p. 38

³³⁶ cf. Dubbel (2021), p. 4; Jumpertz (2019), p. 39; Reuter (2017), para. 3

³³⁷ cf. LeadershipGarage Team (2022), Veränderung beginnt im Kopf section, para. 6; Jumpertz (2019), p. 38

³³⁸ cf. Jumpertz (2019), p. 38 f.

³³⁹ cf. Joester (2018), para. 3

³⁴⁰ cf. König (2020a), Veränderungsprogramm Bottom-Up section; see also Jumpertz (2019), p. 39 and 41

³⁴¹ cf. AWS Executive Insights (2020), "Fahrwechsel von oben" section, para. 3

³⁴² cf. Joester (2018), para. 4; Reuter (2017), para. 6

Nonetheless, the **management** knew it was essential to be **at the forefront of the movement**, show a presence, and adequately counter doubts that arose. Furthermore, especially in this time of uncertainty, **extensive communication** was vital, even if it meant admitting mistakes or insecurities. Equally important, they actively involved the stakeholders (e.g., the works council, various committees, and the customers) to not only minimize the risks, but also turn them into fellow campaigners for the future.³⁴³ In addition, DB Systel was convinced that the transformation would take **time** because, on the one hand, building the new structure with so many employees cannot be achieved overnight, and on the other hand, not all people are capable of working in a new way immediately and would need **support** to learn to work in a self-organized and agile way.³⁴⁴ The transformation was therefore widely assisted, for example, by providing a **safe environment** that encourages learning and experimenting accompanied by an agile instructor who introduced the teams to the depths of agile working and supported them in developing their own work processes and standards.³⁴⁵

After DB Systel decided to eliminate the traditional pyramid hierarchy and its associated line management, the idea was to establish cross-functional teams that would later be able to work in a **network organization** and independently operate a whole application independently. The company believed that first bringing individual experts from different departments into **cross-functional teams** and then considering how to bundle the processes was the most suitable way to reach this goal.³⁴⁶ These newly formed teams were added to a new organigram that revealed whether several teams worked in the same business area or had the same customers and could thus be grouped in a broader unit.³⁴⁷ Eventually, each team was meant to work as a small company managing their business from their customer, through implementation, to maintenance. Nevertheless, over 90 supporting teams occasionally help these small companies in their daily work by freeing up time but not removing responsibility. For example, they ensure a smooth and consistent trainee-hiring process.³⁴⁸ However, DB Systel consistently attempts to balance freedom and set guardrails.³⁴⁹

The core bottom-up principle was also kept in the **team development process**.³⁵⁰ Employees could decide based on their interests with whom they wanted to team, and they were allowed to define the new team's mission (i.e., maintaining an existing product or starting a new innovative project).³⁵¹ Early adopters built the network structure parallel to the previous hierarchical one. While the snowball effect of colleagues telling others about their new ways of working and making them curious about the change worked, the new structure was far from being completed after four years. The management eventually set a deadline for everyone to create or join one of the new teams by November 30, 2019 and to finish the transformation by June 2021.³⁵²

³⁴³ cf. AWS Executive Insights (2020), "Fahrwechsel von oben" section, para. 2; Joester (2018), para. 13 f.; see also Reuter (2017), "Betriebsrat" section, para. 2

³⁴⁴ cf. König (2020b), para. 2; Jumpertz (2019), p. 41; DB Systel (2017), "Herausforderungen" section, para. 1

³⁴⁵ cf. Jumpertz (2019), p. 42; DB Systel (2017), "Herausforderungen" section, para. 1; see also Sturm/Schneider (2021), 28:27

³⁴⁶ cf. Sturm/Schneider (2021), 04:35

³⁴⁷ cf. König (2020b), para. 3; Sturm/Schneider (2021), 09:38; see also mgm-Redaktion (2019), para. 9

³⁴⁸ cf. Sturm/Schneider (2021), 01:23, 07:34, 08:27 and 11:00

³⁴⁹ cf. Jumpertz (2019), p. 41

³⁵⁰ cf. Sturm/Schneider (2021), 09:38

³⁵¹ cf. Jumpertz (2019), p. 40

³⁵² cf. Sturm/Schneider (2021), 03:11; Jumpertz (2019), p. 41; Reuter (2017), para. 5

Although the team's foundation was left to the employees, its development process was closely supervised. First, teams were to have at least five but not more than nine members, and they had to have all the necessary competencies to work on a specific task for the customer in a self-organized manner.³⁵³ Each team then had to pass through a **transformation phase consisting of three quality gates** that used predefined criteria to determine whether the team had reached the desired level of maturity.³⁵⁴ Figure 5 summarizes the transformation process, including the relevant main and supporting roles in each phase.

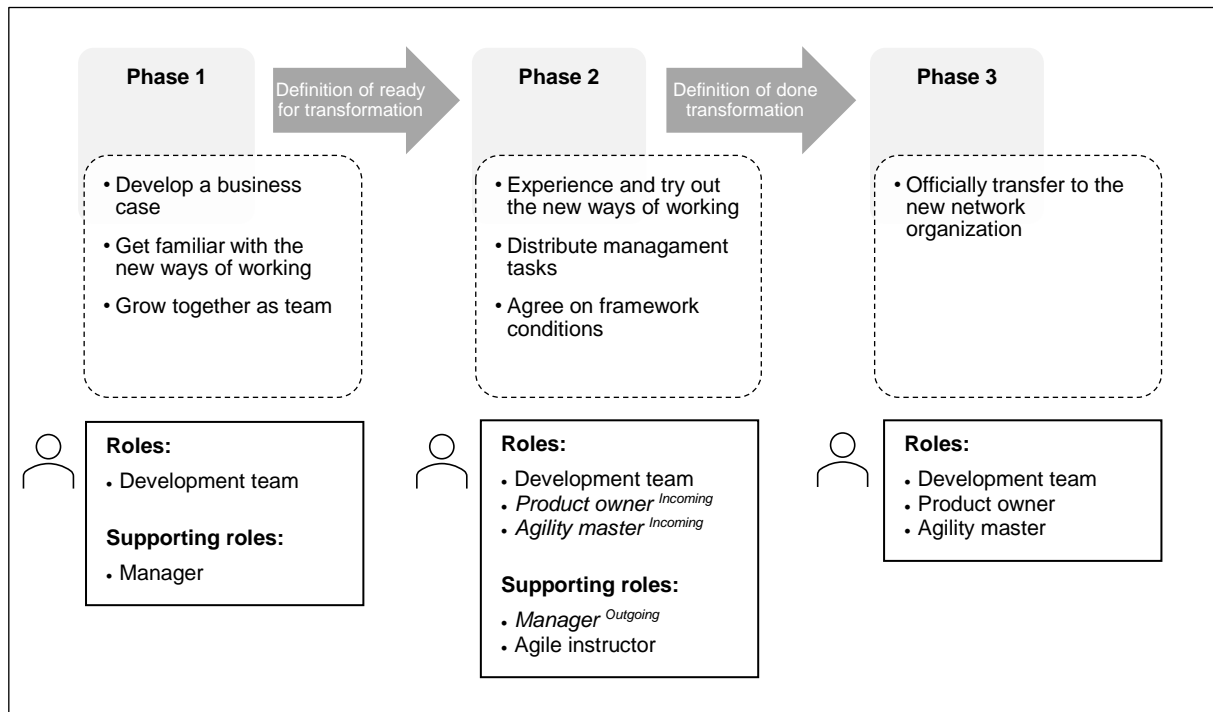


Figure 5. Team transformation phase at DB Systel with corresponding quality gates and roles³⁵⁵

In **Phase 1**, in addition to growing together as a team, the focus was on developing a business case to present to a central transformation team. The business idea had to be economically viable for at least one DB Systel customer, ensuring the alignment of the team with the underlying organizational goals.³⁵³ In this phase, the team still had a (disciplinary) manager who helped close legacy issues and projects and let the team become familiar with agile methods and principles.³⁵⁶ If the team passed the quality gate (i.e., *definition of ready for transformation*), they were allowed to distance themselves from the former structure and start working self-organized.³⁵⁷ **Phase 2** was an “as-if” mode where teams could experiment with the new ways of working. An agile instructor coached them, giving them further training in agile methods and assisting in self-organization.³⁵⁸ Although they faced strict acceptance criteria at the end of the phase, they could prepare themselves in this trial-and-error environment. For instance, the team dismissed the manager and divided their role among the members.³⁵⁸ Due to the absence of a disciplinary manager, team structures and power distribution sorted themselves anew, and an active redesign of the feedback

³⁵³ cf. Jumpertz (2019), p. 41 f.; see also Sturm/Schneider (2021), 11:36

³⁵⁴ cf. König (2020b), para. 2; Jumpertz (2019), p. 42

³⁵⁵ Source: author

³⁵⁶ cf. Reuter (2017), “Transformation” section, para. 3 f.

³⁵⁷ cf. König (2020b), para. 2; Jumpertz (2019), p. 42; Reuter (2017), “Transformation” section, para. 4

³⁵⁸ cf. Reuter (2017), “Transformation” section, para. 6

and conflict culture was vital.³⁵⁹ Additionally, they had to find a consensus on how to hire new employees and handle controlling and budgeting.³⁶⁰ After passing the *definition of done transformation* quality gate, the team was officially removed from the traditional hierarchy and entered **Phase 3**: the new network organization.³⁶¹

As mentioned previously, the **role of a disciplinary manager** had to be **split up and distributed** across the new cross-functional team. As the first step, they analyzed the roles and tasks of then 220 managers and derived 110 tasks—which had previously been the responsibilities of a manager and shared with no one else—that the new self-organized team could take over.³⁶² DB Systel consequently introduced three roles: development team, product owner, and agility master. The **development team** is responsible for implementing and delivering the operational performance required for achieving the goals that they planned based on the requirements prioritized by the product owner. The **agility master** carries the traditional leadership role's people- and process-related parts: is responsible for process optimization, helps establish agile methods, ensures the development and improvement of collaboration, and may intervene as a moderator in conflicts. However, rather than being a decision maker, their main focus lies on the purposeful unfolding of self-organization and creating the necessary empowerment of the development team. Moreover, they are responsible for removing obstacles. Finally, the business part of the management responsibility lies with the **product owner**. They are responsible for everything regarding products and services, such as customer and stakeholder management, collecting and prioritizing requirements, deciding on deliverables and features, pushing product development, creating a budget, and ensuring cost-effectiveness.³⁶³ The three roles comprise one team, which collectively manages hiring, including needs assessment, call for tenders, the application process, and the final decision regarding whether the applicant is competent to help the team and whether they fit into the team socially. Depending on the team's level of maturity, a corporate manager may support the process.³⁶⁴

How **culture** played a role in the transformation is not straightforward. On the one hand, trust was mentioned as a critical factor that led to improved team cooperation because once team members had a better understanding and trusted their colleagues, it became easier and more natural for a teammate to make a decision that affected the whole team.³⁶⁵ On the other hand, others mentioned curiosity, reliability, productivity, togetherness, passion, and connectivity as the most valuable aspects of DB Systel's culture and values.³⁶⁶ In contrast, DB Systel recently stated that culture developed last.³⁶⁷

³⁵⁹ cf. Reuter (2017), "Transformation" section, para. 13

³⁶⁰ cf. Sturm/Schneider (2021), 11:36; Jumpertz (2019), p. 42

³⁶¹ cf. Sturm/Schneider (2021), 11:36; Jumpertz (2019), p. 42; Reuter (2017), "Transformation" section, para. 7

³⁶² cf. LeadershipGarage Team (2022), Selbstorganisation, Freiheit und Eigenverantwortung section, para. 5; Sturm/Schneider (2021), 06:38

³⁶³ cf. LeadershipGarage Team (2022), Selbstorganisation, Freiheit und Eigenverantwortung section, para. 6; Sturm/Schneider (2021), 05:29; Jumpertz (2019), p. 42 and 43; DB Systel (2017), Augenhöhe section, para. 6; Reuter (2017), "Transformation" section, para. 11; DB Systel (n.d.), "Neue Struktur" section

³⁶⁴ cf. Sturm/Schneider (2021), 07:34, 20:33 and 21:16; Jumpertz (2019), p. 42

³⁶⁵ cf. Sturm/Schneider (2021), 18:44; Joester (2018), para. 10

³⁶⁶ cf. LeadershipGarage Team (2022), para. 12; Joester (2018), para. 11

³⁶⁷ cf. Sturm/Schneider (2021), 25:55

Coupled with the transformation process, it was essential to consider the **future of the former managers**, as well. While DB Systel knew that self-organized teams continue to need leadership, they distributed the responsibility that had rested on the shoulders of a single omnipotent manager among the three roles.³⁶⁸ As a result, the company expected its former managers to reflect on what role would suit them in the new structure and helped them to reorientate with additional training if necessary.³⁶⁹ Leadership looked different now: it was a service to the employees. The former managerial role (i.e., to tell employees what to do) transformed into a supporting role that aimed to help the employee grow because now they were creating the real value for the customer.³⁷⁰ Still, leaders were essential to give the organization orientation, create freedom, and enable collaboration—in short, to shape the company's evolution.³⁷¹ Since many former managers saw themselves either as an agility master or a product owner, DB Systel had to ensure that they would not revert to the former pattern and maintain their prior role under a new label.³⁷² At DB Systel, the team consequently elects their agility masters and makes suggestions for the product owner because the latter must be approved top-down by the corporate management. Moreover, they can also take these roles away, for example, if the chemistry between the agility master and the team is not functional.³⁷³ Another reassurance was that former managers were typically not working with the same employees who had been in their departments, which required the managers to adapt to new circumstances.³⁷²

Nonetheless, the transformation was challenging for the managers. During the transition phase, many were still the head of a traditional department with approximately 60 employees and, simultaneously, the agility master of a unit that combined several teams.³⁷² Additionally, letting go of status, salary, or reputation was difficult, especially in a society where a holacracy advocate is less admired than a strategy department head.³⁷⁴ One manager consequently left the company to take a managerial position after helping drive the transformation and complete the process.³⁷⁵

The **elimination of the performance-based compensation system** meant further challenges because DB Systel is part of the Deutsche Bahn concern, where the typical evaluation model is based on the number of subordinates and budget responsibility.³⁷⁶ DB Systel needed to develop new assessment logic (i.e., competence paths instead of career paths) for its new ways of working and thus ensure that they fit into Deutsche Bahns's corporate structure.³⁷⁷ Nevertheless, DB Systel will not be entirely hierarchy-free as long as there is no legal form for such companies.³⁷⁸ On the one hand, they maintain the desired network organization internally; on the other, they serve traditional structures.³⁷⁹ Educating their partners is therefore vital, as is clarifying with whom they need to speak or if they can still access their contact person.³⁸⁰

³⁶⁸ cf. Sturm/Schneider (2021), 07:14; Jumpertz (2019), p. 42

³⁶⁹ cf. Jumpertz (2019), p. 44; Reuter (2017), Die DB Systel in der Transformation section, para. 13

³⁷⁰ cf. Sturm/Schneider (2021), 11:08; Jumpertz (2019), p. 44

³⁷¹ cf. Joester (2018), para. 8

³⁷² cf. Jumpertz (2019), p. 43

³⁷³ cf. Jumpertz (2019), p. 44; Reuter (2017), Die DB Systel in der Transformation section, para. 6

³⁷⁴ cf. Fuchs (2019), Neue Wege auf alten Schienen section, para. 6; Jumpertz (2019), p. 44

³⁷⁵ cf. Fuchs (2019), Neue Wege auf alten Schienen section, para. 7

³⁷⁶ cf. Jumpertz (2019), p. 39; Jumpertz (2019), p. 44

³⁷⁷ cf. Reuter (2017), "Zurück auf Los" section, para. 2

³⁷⁸ cf. Fuchs (2019), Neue Wege auf alten Schienen section, para. 8

³⁷⁹ cf. Joester (2018), para. 4

³⁸⁰ cf. Sturm/Schneider (2021), 27:39

DB Systel finished the transformation in 2021 and reported (partly new) **limitations**. First, contrary to common belief, they admitted that self-organization is a strict system because performance comes to the fore due to transparency.³⁸¹ Second, although employees want to self-organize, they are, especially at the beginning, insecure about taking responsibility, and they instead try to pass the task to the product owner.³⁸² Finally, once the network structure is in place and teams have found their partners to bring a product to market, it does not change, and the well-known silo formation from the former system remains.³⁸³ In addition, when the common identity within the small units becomes strong, teams would draw too much attention to themselves, losing sight of and interaction with the other teams.³⁸⁴

4.2 Case Report for Gini GmbH

Gini GmbH was founded in 2011 by three co-founders and grew rapidly to a team of 40 with the support of several investors. The rapid development demanded an elaborate strategy for building and managing the company's culture, which now differed vastly from the original flexible start-up. Based on the investors' recommendations, who were primarily concerned about the company's survival, and following the advice of experts and management coaches, the founders chose to follow conventional management theories. Consequently, Gini was initially built around a **strict managerial hierarchy** with many mechanisms to control and direct employees.³⁸⁵ To compensate for the rigid system—and to implement something from the original idea of creating not only an effective culture but also a fun one—they tried to incorporate parts of a start-up culture. For instance, they offered uncensored Q&A sessions with the founders, used agile methods in product development, and conducted bi-weekly retrospectives to learn from their mistakes. Furthermore, they offered benefits to ensure a strong culture, such as a three-day offsite team building workshop in the mountains, a fancy office with a foosball table and game room, and after-work activities such as movie nights and weekly team cookouts.³⁸⁶

Nevertheless, Gini **faced severe problems**, including declining team morale. Friction between teams and improper communication slowed the company's output.³⁸⁷ Highly specialized technical teams were inefficient because any complex project required a narrow collaboration among several teams, resulting in high dependencies and ineffective approval hierarchies. As a result, despite providing all the tools these teams needed, they often missed deadlines, and the projects could not be delivered on time. The teams were thus drifting apart, as they blamed others for delays while communication degraded and reduced to asynchronous email chains. In addition, unclear responsibilities led to conflicts between teams and their managers, and employees did not feel empowered to make decisions independently. As a result, frustration replaced the happiness that had been Gini's greatest driver.³⁸⁸

³⁸¹ cf. Sturm/Schneider (2021), 23:00

³⁸² cf. Sturm/Schneider (2021), 25:14

³⁸³ cf. Sturm/Schneider (2021), 21:59

³⁸⁴ cf. Jumpertz (2019), p. 44

³⁸⁵ cf. Ruz (2021), "Creating magic" section, para. 2 f.; Gini (2017b), Wachstumsschmerzen section, para. 1

³⁸⁶ cf. Gini (2017b), "Dilemma" section, para. 1

³⁸⁷ cf. Ruz (2021), Growing pains section, para. 1; Gini (2017b), "Dilemma" section, para. 2 f.

³⁸⁸ cf. Ruz (2021), Growing pains section, para. 1 and Rebuilding Gini section, para. 1 ff.; Gini (2017b), "Dilemma" section, para. 2 f.

The founders therefore sought ways to create an environment where intrinsically motivated employees care deeply about each other and the team's success and where the job does not feel like a personal career ladder but an exciting mission.³⁸⁹ First, they addressed the inefficient team structure by experimenting with various organizational forms, such as matrix or role-based approaches. Another early attempt was to shift from a traditional hierarchical organization to a grassroots democracy in the expectation that this would give everyone the authority they needed to make difficult decisions and operate without strict supervision. However, the possibility of overruling the founders resulted in instability and insecurity regarding the strategic course they had planned. While these reforms were introduced with positive intentions, the team grew fatigued by the rapid changes.³⁹⁰ Meanwhile, the investors and advisors suggested that the management would have to become more serious, allow less freedom, and further strengthen the classical hierarchical structure.³⁹¹ Finally, a blog post by Tony Hsieh—CEO of Zappos.com Inc.—, and the book "Reinventing Organizations" by Frederic Laloux offered them a lifeline.³⁹² They realized that if team members would take ownership of their projects and work directly with people who could help them achieve their goals, they would deliver the requirements on time. To accomplish that, they would need to eliminate their structure with its technical divisions and create autonomous teams. Ultimately, this idea relieved the change-fatigued organization because employees believed this endeavor could succeed.³⁹³

The journey began with **making the company's values visible** and incorporating them into everyday life. Trust and transparency served as a core that helped Gini dismantle hierarchical pyramids, transform functional silos into small and cross-functional cells, and decentralize decision making.³⁹⁴ Although the idea of eliminating hierarchy was regarded with suspicion, involving everyone in the decision-making process proved effective, especially in regard to the desired effect of people changing their behavior, as the involvement simultaneously created engagement.³⁹⁵ In addition, the transparent, collaborative decision-making process made resistance visible and therefore easier to address and overcome.³⁹⁶

Part of the proper environment was **supporting employees in learning to self-manage**, rather than assuming it would happen automatically. Gini intentionally provided a safe learning environment where employees could observe, experiment, and learn how to manage themselves and practice the concept of shared responsibility. It not only provided communication training, leadership development, and practice- or pilot groups, but also realized that getting accustomed to this new way of working would take time.³⁹⁷ Each employee therefore had a yearly standardized learning budget to spend on individual development and growth.³⁹⁸

³⁸⁹ cf. Gini (2017b), "Bewunderung" section, para. 3

³⁹⁰ cf. Ruz (2021), Building a roadmap section, para. 2 f. and 8 f., and Rebuilding Gini section, para. 4

³⁹¹ cf. Ruz (2021), Rebuilding Gini section, para. 4; Gini (2017b), "Dilemma" section, para. 2 f.

³⁹² cf. Gini (2017b), "Ein Blogartikel" section, para. 1

³⁹³ cf. Ruz (2021), Rebuilding Gini section, para. 8 f.

³⁹⁴ cf. Gini (2017b), "Ein langer Weg" section, para. 1

³⁹⁵ cf. Gini (2017a), Langsame Entscheidungsfindung section, para. 1

³⁹⁶ cf. Gini (2017a), Widerstand section

³⁹⁷ cf. Taylor (2022), "Unsere Herausforderungen" section, para. 3 and 8; Taylor (2021), Erwartungen sind keine Regeln section, para. 2

³⁹⁸ cf. Gini (2018b), Autonomie section, para. 4

Since self-organization did not take shape on its own, it required **rules and processes**. However, these framework conditions had to be tailored to the organization and not blindly copied from another.³⁹⁹ The “Gini way” meant clearly defined shared responsibilities that would provide a framework for team members to hold each other accountable, ensure that expectations are aligned, and enable productive conversations in case of conflict. Their **network organizational structure** consists of many interrelated teams (i.e., academies, specialized faculties, a shared service center called the Consulting Specialists Institute, labs, and communities of interest called clubs).⁴⁰⁰ Figure 6 visualizes the network structure of Gini with its primary components and the distribution of employees across the organization.

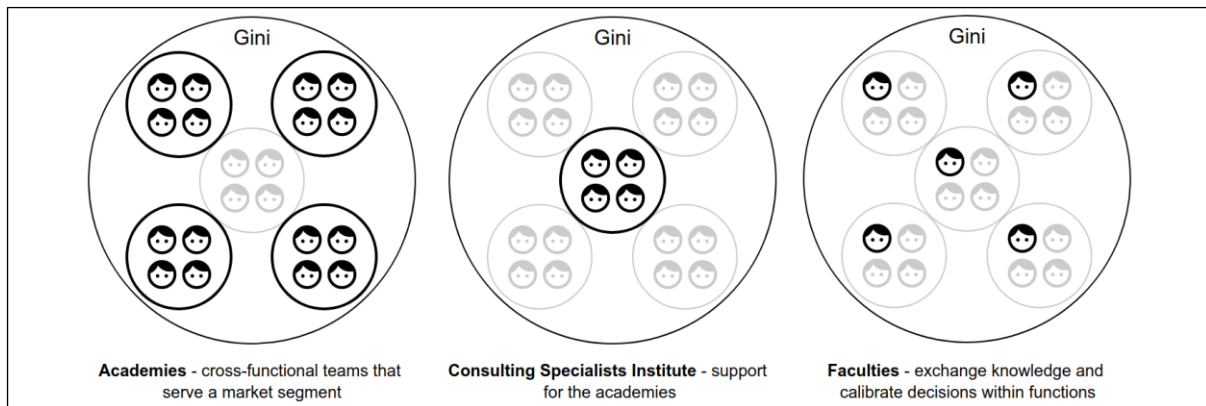


Figure 6. Organizational structure of Gini⁴⁰¹

Academies are building the primary structure as the basic unit of people. They are formed around a market segment, grouping cross-functional people who work on a shared mission. Each academy is supposed to be a miniature version of Gini (i.e., a company within a company).⁴⁰² Since they own the whole value chain within their market segment, they must have the necessary expertise to serve their sector end to end. Having all the roles from sales to account management on one team makes the consequences of each member’s actions visible and relevant to everyone.⁴⁰³ While academies are given much autonomy, they are expected to align with the overall purpose of Gini and avoid sub-optimization.⁴⁰⁴ Within the agreed-upon boundaries and the context of the company vision and product guidelines, the academies can set their quarterly objectives and key results and decide in a daily standup meeting what to do day-to-day. Although they must consider feedback from others outside the academy, such as from the strategy faculty or an agile coach. They ultimately decide by consensus in regard to what they work on and how they work.⁴⁰⁵

The instructions for starting an academy granted as much freedom as possible. Anyone could found a new academy by 1) proposing a vision based on a user need; 2) providing a business plan, for instance, in the form of a business model canvas; 3) making a rough plan for the initial investment needed for budget, time, and staff; and 4) defining checkpoints with deadlines and success criteria,

³⁹⁹ cf. Gini (2021a), "3." section, para. 2; Ruz (2021), Rebuilding Gini section, para. 7; Gini (2018a), "Ziele" section, para. 4

⁴⁰⁰ cf. Gini (2021b), p. 7; Gini (2017d), para. 2

⁴⁰¹ Source: Gini (2021b), p. 6 (slightly modified)

⁴⁰² cf. Gini (2021b), p. 6 f.; see also Gini (2017d), "Akademien – crossfunktionale Teams" section, para. 1

⁴⁰³ cf. Gini (2021b), p. 6; Gini (2017d), "Akademien sind Eigentümer" section, para. 1 and "Akademien – crossfunktionale Teams" section, para. 1

⁴⁰⁴ cf. Gini (2021b), p. 7; see also Gini (2017d), "Akademien sind Eigentümer" section, para. 3 and "Nutzerbedürfnissen" section, para. 4

⁴⁰⁵ cf. Gini (2018a), Beispiele bitte! section, para. 1 f.; Gini (2017d), "Akademien sind Eigentümer" section, para. 3; see also Gini (2017e), "mit einer Academy fortfahren" section, para. 1

by which the progress and future of the academy would be (re-)evaluated.⁴⁰⁶ A team primarily consisting of the investment committee and the strategy faculty then questioned the creation of the academy and assessed its impact on the organization. They also ensured that founding an academy was based on alignment with the company vision, feasibility, potential, and a healthy portfolio of innovations, rather than on personal preferences. Additionally, an agile coach helped during the transformation by advising on how to shift teams and form partnerships to avoid interdependencies.⁴⁰⁷ Since the organization was to be divided by user needs, the vision and its fundamental user need could not overlap with the user needs of another academy.⁴⁰⁸ In addition, segmenting the market by user needs required centering the focus on users rather than the existing solutions and products, while Gini's vision and values limited the total addressable market.⁴⁰⁹ Lastly, after consultation with the team and other concerned academies, the final decision on whether to launch the academy rested with the founding members.⁴⁰⁷

Nevertheless, some employees' field of expertise did not justify a full-time occupation in an academy. However, providing their services as coaches to several academies seemed to be the proper solution. This group became the **Consulting Specialists Institute**. While the academies still owned their whole value chain, the Consulting Specialists Institute, as a support framework, could develop recommendations for global guidelines after engaging with the academies. Avoiding an excessive size of this group and declaring in advance that they would not manage academies or force them to follow the guidelines was vital to not undermine the academies' autonomy and accidentally build a power hierarchy.⁴¹⁰ In addition to the Consulting Specialists Institute, **labs** are additional structures for more experimental endeavors staffed with specialists in the topic that develop new ideas and use testing to support or reject assumptions.⁴¹¹

Since teams were now cross-functional, employees with the same function and expertise no longer worked closely together. To ensure learning and competency development within these expert groups, Gini introduced a secondary structure of **faculties** (e.g., sales and mobile development) that would meet regularly, allowing the employees to maintain an overview of their domain and initiate, facilitate, and assess decisions across the organization.⁴¹²

From the organizational transformation perspective, the org faculty consisting of five employees drove the organizational development forward.⁴¹³ The goal of the org faculty was to balance the transformation between authoritarian and egalitarian extremes.⁴¹⁴ In concrete terms, they 1) envisioned a target picture of the organization, 2) identified gaps between the current and target state of the organization, 3) started various initiatives for organizational change, 3) facilitated the co-creation of the organization-wide guidelines, and 4) adjusted the guidelines across the organization to ensure that they are equitable.⁴¹⁵

⁴⁰⁶ cf. Gini (2017e), "neue Academy gründen" section, para. 1 f.

⁴⁰⁷ cf. Ruz (2021), Rebuilding Gini section, para. 10; Gini (2017e), "neue Academy gründen" section, para. 4 f.

⁴⁰⁸ cf. Gini (2017d), "Nutzerbedürfnissen" section, para. 1

⁴⁰⁹ cf. Gini (2017d), "Akademien – crossfunktionale Teams" section, para. 2

⁴¹⁰ cf. Gini (2021b), p. 7; see also Gini (2017d), "Consulting Specialists Institute (CSI)" section

⁴¹¹ cf. Gini (2021b), p. 7

⁴¹² cf. Gini (2021b), p. 7; see also Gini (2017d), "Fakultäten" section

⁴¹³ cf. Gini (2017c), para. 2

⁴¹⁴ cf. Gini (2018a), "Ziele" section, para. 3

⁴¹⁵ cf. Gini (2018a), Aufgaben der Org Fakultät section, para. 1

While employees did not join a faculty voluntarily but rather based on their shared expertise and role within the organization, people with a common interest in a topic or problem (e.g., running or blogging) could organize into **clubs**. They would engage in a learning process based on their common interest and work together over an extended period to share experiences and ideas and find solutions.⁴¹⁶ However, even though clubs were instrumental in shaping Gini's culture, they did not receive the same amount of support as a faculty because the company would not have the necessary competencies to do business without the latter, but the dissolution of a club would not be mission critical.⁴¹⁷

Despite the necessity to define the rules and process, Gini constantly strove to create boundaries through a **few simple guidelines rather than many specific rules**. They believed that guidelines should allow contextual interpretation because, on the one hand, it is impracticable to consider every possible situation and exception in advance. On the other hand, it allows the emergence of locally valid solutions that may differ across the company.⁴¹⁸ Furthermore, they followed the principle of not adding a rule where trust would be sufficient, resulting in a set of clear expectations that serve as a framework for collaboration.⁴¹⁹ Additionally, standards are emergent: a practice or tool becomes a standard when enough academics have adopted it because rather than creating company-wide bureaucracies, Gini wanted to make transparent what works so others can emulate it.⁴²⁰ Finally, since their organization, culture, and collaboration require a thorough explanation to potential and new employees, they documented what differentiates the company in the form of a handbook to support both the hiring and the onboarding processes.⁴²¹

The distributed authority was additionally ensured by establishing a **new role system**. Instead of assigning strict responsibilities or tasks, employees were assigned one or multiple roles aligned to their everyday work. While they are free to shape the details within given boundaries, the roles ensure primary liabilities within the teams.⁴²² Furthermore, employees can choose in which role they want to contribute to the company's goals and success, ensuring personal and professional growth. Anyone can initiate a role change process that runs in a self-organized way by involving relevant parties.⁴²³ In case of a temporary faculty change within an academy, the academy decides based on consent. If the employee wants to temporarily assist another academy within the same faculty, the affected academics must reach a consensus. In case of a permanent faculty change, the target faculty must accept the request. Finally, the decision for an employee to join the Consulting Specialists Institute is not made solely by the group but after consultation with all affected employees, consultants, and relevant faculties.⁴²⁴

The culture created at Gini strongly relied on **trust**: "Until we are proven wrong, trusting each other is our default means of engagement."⁴²⁵ Departing from the organization as a machine metaphor, they did not want to be only a means of income but to offer purpose by creating an environment of

⁴¹⁶ cf. Gini (2021b), p. 7; see also Gini (2017d), "Clubs" section

⁴¹⁷ cf. Gini (2017d), Der Unterschied zwischen Fakultäten und Clubs section, para. 1 f.

⁴¹⁸ cf. Gini (2018a), Chaos, Bürokratie und Grenzen section, para. 2 f.

⁴¹⁹ cf. Taylor (2021), Selbstorganisation erfordert geteilte Verantwortung section, para. 9; Gini (2018a), Chaos, Bürokratie und Grenzen section, para. 5

⁴²⁰ cf. Gini (2017d), "Fakultäten" section

⁴²¹ cf. Gini (2017c), Ein Blick unter die Haube section, para. 4

⁴²² cf. Gini (2022), "Bereit für neue Strukturen" section; Taylor (2021), "Jedermanns Verantwortung" section, para. 1

⁴²³ cf. Gini (2018b), Autonomie section, para. 5

⁴²⁴ cf. Gini (2018c), para. 5

⁴²⁵ Gini (2021b), p. 6

meaning, autonomy, community, and personal growth. They realized that **psychological safety** is fundamental in this endeavor and that it must also be safe to disagree, admit mistakes, and ask challenging questions in the new environment.⁴²⁶ They therefore offered their employees training on handling conflicts and encouraged them to see the potential of a conflict rather than ending in egalitarianism and saying yes for the sake of peace.⁴²⁷ Only this way could their **conflict management model** work, as it heavily relies on individuals and self-management:

- “1. *First, the two people with a conflict sit together and try to sort it out privately.*
2. *If they can't agree on a solution, they nominate a colleague they both trust to act as a mediator. The mediator doesn't impose a decision but supports the participants in communicating to arrive at their own solution.*
3. *If mediation fails, they seek help by an external professional mediator.”⁴²⁸*

Knowledge management is ensured by exchanging within the faculties and making the academies' performance information accessible to all. This positive peer pressure ensures accountability, on the one hand, and fosters knowledge sharing in case of failure on the other. The network of academies can benefit from the struggles of a single academy, provided that they learn from mistakes and reduce the likelihood of repeating them.⁴²⁹ Nevertheless, this effect can only be reached with extensive information sharing.⁴³⁰

The new structure and team design also resulted in consequences on the **individual level**. Due to the high degree of autonomy within self-organization, entrepreneurial thinking became crucial for the company's survival. Each employee was expected to be able to view things from a holistic perspective and actively participate in business development (e.g., by addressing market opportunities).⁴³¹ They were challenged to take responsibility and initiative in pursuing purpose while remaining authentic and caring.⁴³² Still, self-organization cannot be decreed or proclaimed. Since the quality of self-organization depended on how skilled people were at managing themselves, employees needed to practice and focus on deliberately learning self-management skills.⁴³³ Furthermore, employees cannot be expected to be effective at self-reflection from the beginning but need opportunities to improve at it and consequently see its value.⁴³⁴ Relying on the assumption that everyone has the intrinsic motivation to grow and become better at what they do, Gini emphasized enabling their employees and, in exchange, expected individual growth and development from each other.⁴³⁵ At the heart of this was the conviction that a company should create happy people first and then achieve great goals with them, rather than the other way around.⁴³⁶

⁴²⁶ cf. Gini (2021b), p. 6

⁴²⁷ cf. Gini (2021a), "2." section, para. 2

⁴²⁸ Gini (2021b), p. 9

⁴²⁹ cf. Gini (2021b), p. 14; Gini (2017d), "Verwundbarkeiten der Akademien" section

⁴³⁰ cf. Taylor (2022), In welchem Zustand befinden wir uns jetzt? section, para. 5

⁴³¹ cf. Gini (2022), Bereit für unternehmerisches Denken? section; Gini (2017e), Wer macht wann Business Development? section, para. 1 f.

⁴³² cf. Gini (2021b), p. 6; Gini (2017c), Ein Blick unter die Haube section, para. 5

⁴³³ cf. Taylor (2022), "Gelingende Selbstorganisation" section, para. 1 f., "Unsere Herausforderungen" section, para. 2 and In welchem Zustand befinden wir uns jetzt? section, para. 3

⁴³⁴ cf. Taylor (2022), In welchem Zustand befinden wir uns jetzt? section, para. 5

⁴³⁵ cf. Gini (2021b), p. 10; Gini (2018b), Autonomie section, para. 2

⁴³⁶ cf. Gini (2017b), "Ein langer Weg" section, para. 3

Based on their experience during and after the transformation, Gini published a self-check in 2022 that summarizes the requirements:

- Ready to take on more (personal) responsibility, organize and lead themselves
- Motivated to participate in decision making while seeking consensus within the group
- Wants to help resolve any arising conflicts in the hopes of reaching an agreement
- Can actively represent their perspectives while also being able to take criticism
- Interested in the new ways of working and has the appropriate personality for these structures
- Wants to master the requirements for entrepreneurial thinking⁴³⁷

The lack of hierarchy also called for **reforming leadership**. Although Gini eliminated traditional hierarchy or control functions, the company has learned that strong leadership was essential and equally a success factor for effective self-organization because leadership manifests not only in controlling and instructing, but also in a supportive and facilitative function that provides guidance.⁴³⁸ They eventually defined leadership as a role that can be put on and taken off depending on competencies and skills: either an employee has specific skills and expertise that enable them to make certain decisions, or the person has a passion for an area and wants to move things forward. In either case, leadership depended heavily on circumstances and varied over time.⁴³⁹ Although academies did not have bosses with coercive power, it did not mean that everyone became equal; rather than a rigid power hierarchy, fluid hierarchies of recognition, influence, and skill emerged while peer pressure and transparency ensured accountability.⁴⁴⁰

Nonetheless, they realized that employees, regardless of their autonomy and responsibility, lacked a contact person to whom they could turn with their questions and who would support them in their personal and professional growth. Gini thus introduced a **stewarding concept**.⁴⁴¹ A steward represents a personal contact to the organization and acts as a “cultural translator.” They are not managers or supervisors who track an individual’s workload, nor are they mentors who provide technical advice.⁴⁴² Instead, they help new employees navigate the organizational structure, communicate the company’s expectations of employees, challenge them, and ensure personal and professional development while facilitating 360° feedback rounds every few months. Lastly, stewards can provide support in conflict situations, but they should not be the ones who resolve the problem.⁴⁴³ In sum, they help employees to help themselves.⁴⁴⁴

Becoming a steward is not a promotion in the traditional sense, where someone advances to management, but rather involves someone taking on a role. The precondition is not to excel in their other technical roles but to have strong people and coaching skills, be empathetic, and have a high interest in developing others.⁴⁴⁵ In this regard, it helps to be someone who can resist the urge to simply make the decision when someone asks them to make one, which is only possible if they

⁴³⁷ cf. Gini (2022)

⁴³⁸ cf. Taylor (2022), “Führung” section, para. 1; Gini (2021a), “1.” section, para. 2

⁴³⁹ cf. Gini (2022), “Bereit für neue Strukturen” section; Heckler (2020), para. 2; see also Taylor (2022), “Führung” section, para. 1

⁴⁴⁰ cf. Gini (2021b), p. 7 and 14; Taylor (2021), Selbstorganisation erfordert geteilte Verantwortung section, para. 8; see also Gini (2017d), Akademien sind Eigentümer der gesamten section, para. 4

⁴⁴¹ cf. Ecker (2021), Wieso haben wir Stewards? section, para. 2

⁴⁴² cf. Gini (2021b), p. 11; see also Ecker (2021), “Was ist ein Steward” section; Gini (2018b), Orientierung section, para. 3

⁴⁴³ cf. Ecker (2021), “Aufgaben und Verantwortlichkeiten” section, para. 1

⁴⁴⁴ cf. Ecker (2021), Wie schaut Stewarding in der Praxis aus? section, para. 1

⁴⁴⁵ cf. Gini (2021b), p. 11; Ecker (2021), Wie wird man bei Gini ein Steward? section, para. 1; Gini (2018b), Orientierung section, para. 3

trust in each individual's competence.⁴⁴⁶ Once the request to become a steward was accepted, they could begin their stewarding training, consisting of 14 sessions with an external business coach, three days of an external introductory seminar on business coaching, and two days of external "tough conversation training."⁴⁴⁷ Additionally, they introduced a **mentoring program** to reinforce the employees' professional development with technical assistance. Everyone could choose one or two mentors who serve as advisors and trainers for specific knowledge and skills. Mentors are consequently more knowledgeable and inspire others to improve in areas they want to explore.⁴⁴⁸

To follow its premise on transparency, Gini constantly reported its **negative experiences and struggles** during and after the transformation. First, the sudden autonomy was overwhelming for some employees who were not willing to make an effort to handle self-organization or take on more responsibility.⁴⁴⁹ Because this way of working is not for everyone, Gini had to invest extra effort in finding the appropriate people who showed a willingness to learn self-management and to handle a high level of autonomy.⁴⁵⁰ Second, Gini figured it required more coordination and effective communication to reach a consensus because gathering the advice, considering it, and making the decision process transparent took time, making self-organization not necessarily faster but resulting in more broadly accepted decisions.⁴⁵¹ Third, Gini realized that reducing hierarchy levels does not automatically lead to more participation, ownership, and performance, but rather to more chaos due to the lack of coordination and collaboration.⁴⁵² Finally, without senior titles or power hierarchies, it became less clear how to recognize and honor the performance of individuals and who has the mandate to do so.⁴⁵³

Regarding the **pitfalls** described in Section 2.6, Gini focused on two in particular: adapting the reward system and radically decentralizing authority. Previous salary negotiations heavily favored extroverts who were not afraid to ask for a raise.⁴⁵⁴ In addition, due to the lack of titles or the conventional career ladder to climb, high-performing employees were no longer rewarded for their performance.⁴⁵⁵ To overcome this, they introduced an **annual peer-based performance evaluation procedure for teams and individuals**. An employee's final score comprises their individual performance (60%) and their team's (40%). Employees are thus encouraged to care not only about their performance, but also to work hand-in-hand with their teammates to advance their team.⁴⁵⁶ The evaluation is divided into the categories of people, knowledge, and responsibility contribution, each supported by a questionnaire. Colleagues from the academy are responsible for the categories of people and responsibility, and peers from the same faculty evaluate each other in the areas of knowledge and responsibility.⁴⁵⁷ At the beginning of the evaluation process, employees write their top three personal achievements from the past 12 months, which serves as a basis and reminder for their peers.⁴⁵⁸ The performance evaluation committee—consisting of a

⁴⁴⁶ cf. Gini (2017a), Auf der Suche nach Erlaubnis section, para. 1

⁴⁴⁷ cf. Ecker (2021), Wie wird man bei Gini ein Steward? section, para. 1 f.

⁴⁴⁸ cf. Gini (2021b), p. 11 f.; see also Gini (2018b), Orientierung section, para. 5

⁴⁴⁹ cf. Gini (2021a), "5." section, para. 2

⁴⁵⁰ cf. Taylor (2022), "Unsere Herausforderungen" section, para. 5

⁴⁵¹ cf. Gini (2021a), "2." section, para. 2 and "4." section, para. 2; Gini (2017a), Langsame Entscheidungsfindung section, para. 1

⁴⁵² cf. Taylor (2022), para. 3

⁴⁵³ cf. Gini (2018b), Feedback section, para. 3

⁴⁵⁴ cf. Heckler (2020), para. 3

⁴⁵⁵ cf. Gini (2017c), Ein Blick unter die Haube section, para. 4

⁴⁵⁶ cf. Heckler (2020), Vorbereitungsphase section, para. 1

⁴⁵⁷ cf. Gini (2021b), p. 13

⁴⁵⁸ cf. Heckler (2020), Vorbereitungsphase section, para. 2

member of the finance team, a member of the people team, and the CEO—then collects the evaluation sheets and calculates a total score for the employee based on qualitative and quantitative data.⁴⁵⁹ The next step is to research market salaries and determine the level at which the employee currently stands. There are eight seniority levels with a minimum total entry score. Should an employee step into the next level, a performance bonus of up to 10% on the market salary is granted.⁴⁶⁰ Finally, the committee schedules one-on-one meetings with every employee, reviews their report, and asks them for feedback to improve the process for the next iteration.⁴⁶¹

Decentralized authority is ensured with decision-making guidelines that shift control to those who have the necessary information or feel the urgency to take the initiative in decision making.⁴⁶² Gini's decentralized decision making consists of mandates, consent, and the advice process.⁴⁶³ Decisions that are easily reversible or have few consequences can be made by every employee because, in this case, "asking for forgiveness after, rather than permission before" results in speed and momentum. In addition, decisions that are irreversible but have few consequences are helpful for training and learning. Finally, decisions that have significant consequences but are easily reversible are useful for experimentation.⁴⁶⁴ Nevertheless, decision making is not evenly distributed among all employees; some voices carry more weight than others due to the natural hierarchies influenced by reputation and experience. While expertise in a particular area often affects who makes a decision, it is not the only criterion. Understanding all perspectives and thoughtfully weighing options may be more critical in certain cases.⁴⁶⁵ Eventually, there is approximately 80% autonomy and 20% direction and coordination from those with a higher reputation in the team.⁴⁶⁶ However, Gini did not aim for equal distribution. Instead, the goal was participation and to empower those who feel a sense of urgency to take the initiative.⁴⁶⁵

4.3 Case Report for Nexple AG

Although Nexple AG followed agile software development principles from its beginning, its **rapid growth demanded a reorganization**. The company's unsustainability became apparent in diverse undesirable developments, such as unclear responsibilities and lack of time to fulfill the roles. The overloaded management led to bottleneck effects and slowed down the company, causing uncontrolled or bogged down company developments and the reliability concerning agreements was occasionally inadequate.⁴⁶⁷ Despite the urgency, the management did not find an out-of-the-box model that fit Nexple and realized that the company had to find its own way, the "Nexple way."⁴⁶⁸ Figure 7 illustrates the timeline of the transformation.

⁴⁵⁹ cf. Heckler (2020), para. 6 and Entscheidungsphase section, para. 1 f.

⁴⁶⁰ cf. Heckler (2020), Entscheidungsphase section, para. 3 f.

⁴⁶¹ cf. Heckler (2020), Übergabephase section, para. 1 ff.

⁴⁶² cf. Gini (2017a), para. 2

⁴⁶³ cf. Gini (2021b), p. 7 f.

⁴⁶⁴ cf. Gini (2017a), "Selbst entscheiden (2), weil es keine Gefahr darstellt," section, para. 1 ff.

⁴⁶⁵ cf. Gini (2017a), "Wer trifft die Entscheidungen" section, para. 2

⁴⁶⁶ cf. Taylor (2021), para. 3

⁴⁶⁷ cf. Aebersold (2019a), para. 5

⁴⁶⁸ cf. Aebersold (2019a), para. 7; Aebersold (2019b), Nexple braucht eine Reorganisation section, para. 1

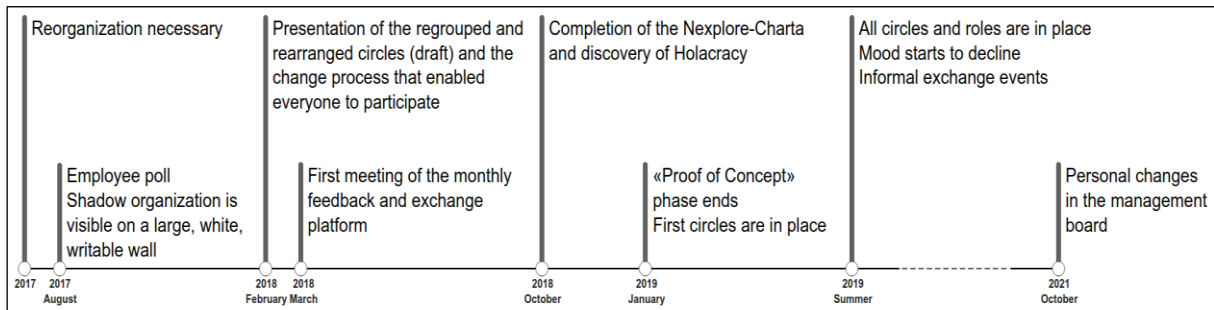


Figure 7. Timeline of the transformation at Nexple⁴⁶⁹

The “Mora” reorganization project began in August 2017 with a poll consisting of two questions about whether employees see a necessity to reorganize Nexple and whether they would help develop a suitable solution for a new organizational form.⁴⁷⁰ Due to the positive response, the management prepared a plan that was presented to the organization in February 2018 and proposed a pilot phase to test and develop new ways of working until the end of the year.⁴⁷¹ In addition, they created a feedback-and-exchange platform to resolve tension during the transformation and give space to initiatives led by promoters.⁴⁷² These monthly sessions intended to hand the reorganization over to the employees and relied on the **cooperation of everyone**.⁴⁷⁰ Nexple believed the employees directly involved could better judge what changes were more appropriate than could the management. Everyone could therefore propose a change in structure, roles, and responsibilities and equally object to an idea if it would endanger the company or set it back.⁴⁷³ The first session took place in March 2018, in which they dealt with five proposals prepared by several employees.⁴⁷⁰ They took extra care that the changes were not initialized by the former chiefs but by the actual tension bearers.⁴⁷⁴

Ideas periodically underwent improvement loops because employees raised valid objections, making the process more reliable.⁴⁷⁵ This reliability was vital because now everyone could initiate fundamental organizational changes and rearrange the responsibilities of all roles. To ensure that the desired changes are beneficial for the company—without losing momentum and motivation—Nexple decided that “trying” should take precedence over “studying,” and ideas were only discarded if their harmfulness was foreseeable. Nevertheless, this must not be confused with rash and reckless direction changes.⁴⁷⁶

The restructuring began with **making the well-functioning shadow organization visible**. The company used a large whiteboard on which all employees could draw circles to indicate with which specialist groups they work.⁴⁷⁷ The first version revealed that the organization had many inconsistencies and redundancies that had to be resolved. In the second step, supported by an external coach, they regrouped and rearranged the circles in several workshops and sessions, but

⁴⁶⁹ Source: author

⁴⁷⁰ cf. Aebersold (2019b), “was sagen die Mitarbeitenden” section, para. 3 f.

⁴⁷¹ cf. Aebersold (2019c), para. 15

⁴⁷² cf. Aebersold (2019d), para. 1

⁴⁷³ cf. Aebersold (2019c), para. 10 f.

⁴⁷⁴ cf. Aebersold (2022), para. 19

⁴⁷⁵ cf. Aebersold (2019d), para. 5

⁴⁷⁶ cf. Aebersold (2019c), para. 5 ff.

⁴⁷⁷ cf. Aebersold (2019b), Nexple braucht eine Reorganisation section, para. 2

the result was still rudimentary, with many blind spots and unclear responsibilities.⁴⁷⁸ Finally, the monthly sessions could resolve these with a combined effort. As a result, Nexple founded three groups to address requirements engineering, technical trends, and an infrastructure strategy board. They later added a market board to monitor the market development and a product manager role to oversee the product portfolio.⁴⁷⁹

Soon, the requirement for a **superordinate set of rules** supplemented with basic principles to ensure that employees can find answers to open questions was clear.⁴⁸⁰ The proposed Nexple Charta resembled the holacracy framework; the company then realized that the new organizational structure they had been working on resembled **holacracy**. With the institutionalization of the Nexple Charta, they therefore added elements from the framework, such as highly structured operational meetings for the exchange of information in a circle (i.e. tactical meetings), regulations of the assignment of system roles, and clear guidelines for the definition of the circles and roles.⁴⁸¹

With the shift to holacracy, the concerns and questions about roles disappeared. The roles were not tailored to individuals but based on the areas of responsibility and activities needed in the company, where several people could perform a role.⁴⁸² They introduced four system roles for each circle with the following brief responsibilities:

- Lead link: ensures that the circle completes its task
- Rep link: responsible for collaboration and transparency to the “parent” circle
- Secretary: responsible for documentation and meetings
- Facilitator: moderates the meetings in a neutral manner⁴⁸³

The **culture** at Nexple is characterized by psychological safety, trust, clear expectations and collective goals, and organizational learning. In addition to mutual coaching by giving feedback, sharing perspectives, and inspiring each other to explore new things, regular exchanges occur in the form of brainstorming.⁴⁸⁴ Furthermore, employees realized the importance of conscious **conflict management** because, in the new structure, no one would address a problem except the employee.⁴⁸⁵ Consequently, employees could not push an unpleasant conversation to someone else but needed to learn how to handle it themselves.⁴⁸⁵ Everything their managers did before suddenly became their responsibility, be it creating necessary organizational structures or finding their own ways if things are unclear.⁴⁸⁶ Being able to work autonomously became vital because employees no longer had tasks assigned but needed to choose the tasks they wanted to handle. From the employee’s perspective, task assignment shifted from a push to a pull strategy.⁴⁸⁷ This **self-leadership** had to be learned and trained first, and Nexple therefore provided an environment of encouragement and mentoring.⁴⁸⁸

⁴⁷⁸ cf. Aebersold (2019b), “was sagen die Mitarbeitenden” section, para. 7

⁴⁷⁹ cf. Aebersold (2019d), para. 3 and 6

⁴⁸⁰ cf. Aebersold (2019d), para. 14

⁴⁸¹ cf. Aebersold (2019e), para. 5 and 9

⁴⁸² cf. Winiger (2020a), Was ich cool finde section, para. 2

⁴⁸³ cf. Aebersold (2019e), para. 9

⁴⁸⁴ cf. Nägeli (2021), “Kann ich lernen” section, para. 4; Winiger (2020b), para. 4

⁴⁸⁵ cf. Nägeli (2021), para. 3

⁴⁸⁶ cf. Schläppi (2022), Auf der Reise section, para. 2 and 3

⁴⁸⁷ cf. Contaldi (2021), para. 18 and 33

⁴⁸⁸ cf. Schläppi (2022), Fehlende Strukturen? section, para. 2; Aebersold (2020), “1.” section

Although Nexlore restructured its organization and roles, **management did not disappear completely**. For example, a lead link's task was to moderate and organize a circle's further development, but they also remained responsible for task completion. In addition, while the company attempted to reorganize leadership by creating a coaching model with many employees signing up for the coach role, no employees volunteered to be coached.⁴⁸⁹ Furthermore, the board of directors at Nexlore remained untouched, and the responsibilities of executive managers were voluntarily delegated. They argued for the latter due to the management's legal liability: the CEO still had a personal duty and responsibility to the legislation and the board of directors.⁴⁹⁰ They knew that this decision had two sides. On the one hand, the management did not have to demote themselves from one day to the next, and they had the complete freedom to hand over their responsibilities step-by-step as soon as they had the necessary confidence in the new organizational form. On the other hand, they risked that the new organization form would not fully unfold its potential if the management was not ready to hand over its responsibilities.⁴⁹¹

The transformation of Nexlore could only succeed by avoiding **pitfalls** and focusing on eliminating **limitations**. One of their most important learnings is that such a reorganization should not be seen as a project with a fixed start and end date but rather as a fluid change.⁴⁹² Fortunately, their guiding principle, "By agile, we mean a path of ongoing change in digestible steps,"⁴⁹³ constantly encouraged them to adjust the pace of change to the organization. After discovering holacracy, they suggested not to start such a development from scratch, but rather to seek existing solutions and building blocks and only configure what was still missing for the ideal solution.⁴⁹⁴ Indeed, following holacracy too strictly almost cost Nexlore its success.

After all roles and circles were transformed and the new meetings were established, the company's overall mood started to decline. Conflicts went unsolved, while helplessness and a lack of orientation in the new system unsettled many employees. Attempts to fix problems encountered extreme complexity, in which any change would have jeopardized the unstable system. Under these circumstances, employees quickly concluded that the system was not working, and frustration, dissatisfaction, or resignation were understandable consequences. The management saw that the strictly facilitated meetings left no room for lengthy discussions, especially not on the topic of "How do I deal with this system?" or "How do I feel as an actor in it?". The answer was to introduce a series of informal exchanges to vent frustrations, obtain employees' opinions, forge mutual compromises, and recognize that they are not the only ones who feel helpless in this new system. The meetings took place in different group formations weekly in the evening, and at each exchange, solutions for minor or extensive problems were forged, while mutual understanding was promoted and employees motivated and gave each other strength. Everything that was discussed informally in these meetings eventually found its way into the organization, and the transformation has taken a leap.⁴⁹⁵

⁴⁸⁹ cf. Aebersold (2019d), para. 11 f.

⁴⁹⁰ cf. Aebersold (2019e), para. 17; Aebersold (2019d), para. 17

⁴⁹¹ cf. Aebersold (2019e), para. 21 ff.

⁴⁹² cf. Aebersold (2019c), para. 1

⁴⁹³ Aebersold (2019c), para. 2

⁴⁹⁴ cf. Aebersold (2019e), para. 3

⁴⁹⁵ cf. Aebersold (2022), para. 3, 6 f., 8 ff. and 19

To conclude, the total amount of tasks within a company is not reduced with the introduction of holacracy. More self-management and self-responsibility do not mean more capacity immediately, or from a manager's perspective, more individuals onto which responsibility can be shifted. On the contrary, shifting create tasks imbalances that call for compensation, and the overload problem will not be eliminated immediately with the introduction of self-organization. Furthermore, not everyone will want to have more responsibility or feel confident enough to lead themselves.⁴⁹⁶

Further limitations Nexlore encountered were, for instance, that holacracy does not cover topics such as personal development and reward systems and that it needed a Human Resource Management department to handle performance evaluations.⁴⁹⁷ Furthermore, despite thorough documentation of the structure, it is occasionally still unclear who can help with a particular issue, or responsibilities may not yet be defined for a new situation.⁴⁹⁸ Finally, due to these initial struggles with the new ways of working, decisions can become long and tedious. Nexlore hopes that once employees become accustomed to their roles and amount of power, the decision-making process will accelerate.⁴⁹⁹


⁴⁹⁶ cf. Aebersold (2020), para. 1, "2." section and "3." section



⁴⁹⁷ cf. Winiger (2020a), An was ich mich gewöhnen musste section, para. 2; Contaldi (2021), para. 28

⁴⁹⁸ cf. Schläppi (2022), Auf der Reise section, para. 2 f.

⁴⁹⁹ cf. Schläppi (2022), Fehlende Strukturen? section, para. 2

5 Discussion

Comparing the practical example of the cases to the theoretical foundation derived from the literature review (see Table 5) revealed the correctness, invalidity, and necessity for further research of the individual items. The following tabular visualizations illustrate the similarities and opposites, and if a success factor was not mentioned in any of the cases, question its relevance or raise the need for further (primary) research (see Table 6-10). Missing information is marked with a dash, while the  icon marks contradictory examples. A qualitative analysis and interpretation of the data follow after each level.

	Success factor	DB Systel GmbH	Gini GmbH	Nexlore AG
Change management	Support by the management	<ul style="list-style-type: none"> • Origin of the idea • Provided support and played an exemplary role throughout the transformation 	<ul style="list-style-type: none"> • Origin of the idea 	<ul style="list-style-type: none"> • Origin of the idea • Provided support throughout the transformation
	Provide required resources (<i>time, money, information, competencies, coaching, and supervision</i>)	<ul style="list-style-type: none"> • Knew that the transformation would take time • Assistance by an agile instructor 	<ul style="list-style-type: none"> • Hired an external coach to help with the reorganization • Realized that getting used to the new way of working would take time • Agile coach • Different training • Yearly standardized learning budget 	<ul style="list-style-type: none"> • Hired an external coach to help with the reorganization
	Balance between ambition and possibilities	<ul style="list-style-type: none"> • Step-by-step transformation of the teams 	-	-
	Adjust the pace of change	<ul style="list-style-type: none"> • Changed faster than the bureaucratic adjustment process of the concern would allow it 	<ul style="list-style-type: none"> • Otherwise change-fatigued organization 	<ul style="list-style-type: none"> • Ongoing change in digestible steps

	Proclaim self-organization a strategic goal	-	-	-
Framework conditions	Environment	<ul style="list-style-type: none"> • Provided a safe environment that encouraged learning and experimenting 	<ul style="list-style-type: none"> • Provided a safe environment that encouraged learning and experimenting 	<ul style="list-style-type: none"> • Proof of concept period to allow experimenting
	Structures and processes	<ul style="list-style-type: none"> • Network structure • Company within a company • Cross-functional teams managing their business case from end to end • Support teams 	<ul style="list-style-type: none"> • Network structure • Company in a company • Cross-functional teams managing their market from end to end • Academies • Faculties • Consulting Specialists Institute • Labs • Clubs 	<ul style="list-style-type: none"> • Network structure • Made the shadow organization visible • Regrouped and rearranged • Circles such as requirements engineering, technical trends, infrastructure strategy, and market development
	Boundaries of self-organization	<ul style="list-style-type: none"> • Within business case • Managing the customer, budgeting, hiring, conflict management, and feedback culture 	<ul style="list-style-type: none"> • Within the context of the company vision and product guidelines • Set objectives and key results • Decide by consent on what and how to work • Avoid sub-optimization • Consider outside feedback 	-
	Scope of decision making by the owners or highest management board	-	-	<ul style="list-style-type: none"> • Untouched • Voluntarily delegated responsibilities

Formal system	Minimum specs	<ul style="list-style-type: none"> • Only guardrails that allow the highest possible amount of freedom 	<ul style="list-style-type: none"> • Few simple guidelines rather than many specific rules • Allowed contextual interpretation • Did not add a rule where trust would be sufficient • Clear expectations • Standards are emergent 	<ul style="list-style-type: none"> • Superordinate set of rules supplemented with basic principles
	Documentation	-	<ul style="list-style-type: none"> • Handbook • Supports both hiring and onboarding processes 	<ul style="list-style-type: none"> • Nexlore Charta
Roles	Redesign	<ul style="list-style-type: none"> • Development team • Product owner • Agility master 	<ul style="list-style-type: none"> • Employees have one or multiple roles • Free to shape the details within given boundaries • Employees can choose and switch roles 	<ul style="list-style-type: none"> • Lead link • Rep link • Secretary • Facilitator
	Assist employees in completing their daily tasks	-	<ul style="list-style-type: none"> • Aligned to the employees' everyday work 	<ul style="list-style-type: none"> • Sometimes still unclear who can help with an issue • Responsibilities are missing for new situations
	Support conflict management	-	<ul style="list-style-type: none"> • Ensured primary liabilities within the teams 	-

Table 6. Comparison of theoretical success factors to practical examples on organizational level⁵⁰⁰

⁵⁰⁰ Source: author

For an analysis on the organizational level, Table 6 compares the theoretical success factors to the arguments and examples found in the cases. **Support by the management** was implicitly given because, in all three cases, the highest management level initiated the change.⁵⁰¹ They also knew that the transition would take **time**,⁵⁰² while Nexple's transformation seems to be the shortest (i.e., ending after 2.5 years in the summer of 2019), they had only reorganized their structure by that time, leaving many topics open (e.g., reward system, radical decentralization of authority, or stable role system).⁵⁰³ On the contrary, DB Systel's and Gini's transformation includes the solution to these topics,⁵⁰⁴ suggesting that Nexple still has a latent transformation phase ahead. As for hiring an **external coach**, only DB Systel did not report about one, but it seems to be a common practice.⁵⁰⁵ Furthermore, Gini's change-fatigued crew conveys the importance of finding the **right amount of change** an organization needs.⁵⁰⁶ Finally, the success factor of **proclaiming self-organization a strategic goal** could not be proven with direct references. Further research would be required to prove whether this success factor is relevant.

From the framework conditions, an **environment** that encourages learning and experimenting appeared in all three organizations,⁵⁰⁷ and a **network structure** seems to enable self-organization the most.⁵⁰⁸ However, Nexple slightly diverges in its concrete team structure, as it is the only one without explicitly cross-functional teams, but rather topic-oriented circles.⁵⁰⁹ Nevertheless, their practice of making interdependencies visible first could prove valuable in any organization that grew uncontrolled and too rapidly.⁵¹⁰ Additionally, the "company within company" structure of DB Systel and Gini seemingly defined the **boundaries of self-organization**,⁵¹¹ but it is possible that problems in this regard were not reported. They also did not report on the **scope of decision making by the owners or the management board**, and only Nexple explained that it did not change its responsibilities, partially due to legal reasons and partly due to fear.⁵¹² Nevertheless, in 2022 there were personal changes in the management board at Nexple, perhaps indicating a paradigm shift on that level, as well.⁵¹³ Interestingly, only Nexple admitted to using a predefined framework,⁵¹⁴ but both it and Gini stressed the importance of finding a way that best suits the organization and only using existing examples as an orientation.⁵¹⁵

⁵⁰¹ cf. Ruz (2021), Rebuilding Gini section, para. 8 f.; Aebersold (2019a), para. 5; Jumpertz (2019), p. 38

⁵⁰² cf. Taylor (2022), "Unsere Herausforderungen" section, para. 3; Taylor (2021), Erwartungen sind keine Regeln section, para. 2; König (2020b), para. 2; Aebersold (2019c), para. 15; Jumpertz (2019), p. 41; DB Systel (2017), "Herausforderungen" section, para. 1

⁵⁰³ cf. Aebersold (2022), para. 3; Schläppi (2022), Auf der Reise section, para. 2 f.; Contaldi (2021), para. 28; Winiger (2020a), An was ich mich gewöhnen musste section, para. 2

⁵⁰⁴ cf. Gini (2021b), p. 7 f. and 13; Jumpertz (2019), p. 39

⁵⁰⁵ cf. Ruz (2021), Rebuilding Gini section, para. 1 f.; Aebersold (2019b), "was sagen die Mitarbeitenden" section, para. 7; Gini (2017e), "neue Academy gründen" section, para. 4 f

⁵⁰⁶ cf. Ruz (2021), Rebuilding Gini section, para. 9

⁵⁰⁷ cf. Schläppi (2022), Fehlende Strukturen? section, para. 2; Taylor (2022), "Unsere Herausforderungen" section, para. 3; Sturm/Schneider (2021), 28:27; Aebersold (2020), "1." section; Jumpertz (2019), p. 42

⁵⁰⁸ cf. Aebersold (2019b), "was sagen die Mitarbeitenden" section, para. 7; Jumpertz (2019), p. 40; Gini (2017d), para. 2; Reuter (2017), para. 5

⁵⁰⁹ cf. Aebersold (2019d), para. 3 and 6

⁵¹⁰ cf. Aebersold (2019b), Nexple braucht eine Reorganisation section, para. 2

⁵¹¹ cf. Gini (2021b), p. 6 f.; Sturm/Schneider (2021), 07:34

⁵¹² cf. Aebersold (2019e), para. 17 and 21 ff.

⁵¹³ see also Winiger (2021)

⁵¹⁴ cf. Aebersold (2019e), para. 5

⁵¹⁵ cf. Ruz (2021), Rebuilding Gini section, para. 7; Aebersold (2019a), para. 7; Aebersold (2019b), Nexple braucht eine Reorganisation section, para. 1; Aebersold (2019e), para. 3; Gini (2018a), "Ziele" section, para. 4

Whether DB Systel has **documentation** of the new way of working was not explicitly reported, but all three companies followed the rule of **minimum specifications**.⁵¹⁶ Appropriate to the aforementioned aspect of custom solutions, the **redesigned roles** differ in all three cases. While at Gini, an employee can have multiple roles, DB Systel and Nexlore have a 1:1 relation.⁵¹⁷ The latter, however, seems incomplete because employees still struggle to find the relevant person to help them solve a problem, and they realize occasionally that new situations still lack responsible parties.⁵¹⁸ On the contrary, the roles at Gini **support conflict management** because they ensure primary liabilities reducing injustice accusations.⁵¹⁹ However, this success factor was missing from the other reports, leading to the question of which (other) aspects of the roles support conflict management. Table 7 continues with the comparison of success factors found in the extant literature to the practical examples found in the cases on the team level.

	Success factor	DB Systel GmbH	Gini GmbH	Nexlore AG
Task design	Done by several people	-	-	-
	Straightforward division of work	-	-	-
	Sufficient competencies and abilities	<ul style="list-style-type: none"> • Must have all necessary competencies to manage their business case from end to end 	<ul style="list-style-type: none"> • Must have all the necessary expertise to serve their market from end to end 	-
Team's mission, vision, and goals	Reason the team exists and what it is attempting to accomplish	<ul style="list-style-type: none"> • Business case defined by the team 	<ul style="list-style-type: none"> • Vision based on a user need • Business plan • Defined by the founder or team 	-
	Align with the underlying organizational goals	<ul style="list-style-type: none"> • A business idea had to be economically viable for at least one DB Systel customer 	<ul style="list-style-type: none"> • Control mechanism ensured founding an academy to be based on alignment with the company's vision 	-

⁵¹⁶ cf. Aebersold (2019d), para. 14; Jumpertz (2019), p. 41; Gini (2018a), Chaos, Bürokratie und Grenzen section, para. 2

⁵¹⁷ cf. Sturm/Schneider (2021), 05:29; Taylor (2021), "Jedermanns Verantwortung" section, para. 1; Winiger (2020a), Was ich cool finde section, para. 2

⁵¹⁸ cf. Schläppi (2022), Auf der Reise section, para. 2 f.

⁵¹⁹ cf. Gini (2022), "Bereit für neue Strukturen" section

Team design	Skill diversity of the team members	-	-	-
	Demographic diversity of team members	-	-	-
	Team size	• 5–9	-	-
	Group rewards	-	• Team's success influences individual reward	-
Strategic thinking	Experiment with new ways	-	• Possible within labs	-
	Seek best practices from others	-	<ul style="list-style-type: none"> • Exchange within faculties • Support from the Consulting Specialists Institute • Made transparent what works so others can emulate it 	-
	Take action to solve problems without waiting for direction	-	-	• No longer a boss who would do it for them
	Discuss differences in what each member has to contribute to the work	-	-	-
Culture	Characteristics	<ul style="list-style-type: none"> • Curiosity • Reliability • Productivity • Togetherness • Passion • Connectivity • Culture developed last 	<ul style="list-style-type: none"> • Transparency • Org faculty • Clubs 	• High autonomy

Culture	Trust	<ul style="list-style-type: none"> • Trust in oneself and others encouraged decision making 	<ul style="list-style-type: none"> • Trust is their default means of engagement 	-
	Altruism	-	-	-
Conflict management		<ul style="list-style-type: none"> • Responsibility of the team • Retrospectives 	<ul style="list-style-type: none"> • Training provided • Helped realize the potential of a conflict • Three-step conflict management model • Stewards can provide support 	<ul style="list-style-type: none"> • Training provided • Realized they need to address their problems • Could not push any unpleasant conversation to someone else
Information and knowledge sharing		<ul style="list-style-type: none"> • Compromised by a too strong common identity within the units 	<ul style="list-style-type: none"> • Within faculties across the organization • Transparent team performance to foster knowledge sharing in case of failure 	<ul style="list-style-type: none"> • Mutual coaching by giving feedback, sharing different perspectives, and inspiring each other to explore new things • Regular exchanges in the form of brainstorming
Psychological safety		-	<ul style="list-style-type: none"> • Safe to disagree, admit mistakes, and ask challenging questions 	<ul style="list-style-type: none"> • Not afraid to share opinions

Table 7. Comparison of theoretical success factors to practical examples on team level⁵²⁰

Practical examples regarding the **task or team design** were scarce. A possible explanation could be the implicitness of these preconditions because managing the tasks of a team alone is out of the question due to complexity, whereas working in teams without a straightforward division of work would be impossible. In addition, team members' skills and demographic diversity are probably not

⁵²⁰ Source: author

preconditions restrictive to self-organization, but rather a general challenge in any team that can even be seen as a factor rather than something one can influence. Finally, DB Systel and Gini valued a self-organized team design by letting their employees choose with whom they want to work more than a theoretically correct assignment of the team members.⁵²¹

Still, **aligning the teams with the underlying organizational goals** seems vital in self-organization, which was ensured in DB Systel and Gini by requiring a business plan prior to the foundation of any team.⁵²¹ Additionally, Gini's strategy of ensuring that teams were founded on feasibility, potential, and a healthy portfolio of innovations (i.e. versus personal preferences) may have helped DB Systel avoid teams unnecessarily working on the same topics.⁵²² Although they also controlled the submitted business plans, their strategy of letting everyone through and then regrouping and reorganizing could have this disadvantage.⁵²³

The necessity for **strategic thinking** became evident, as a Nexple employee reported that they had no alternative other than taking action to solve problems without waiting for direction because there was no longer anyone who would take on their problems.⁵²⁴ However, other aspects could not be proven because only Gini wrote about how they encourage experimenting with new methods and seeking best practices from others,⁵²⁵ but due to missing (dis)proof from the other companies, it is not evident whether it is a success factor or merely an add-on.

On the **cultural level**, only trust was mentioned in all of the three cases,⁵²⁶ while altruism or other shared parameters could not be detected. Nonetheless, psychological safety is probably the common ground of any culture, but more profound and focused research would be needed to reveal if there are any other essential and shared aspects between self-organized organizations and whether these characteristics are unique to them. Furthermore, a different approach to **conflict management** was characteristic in all cases. Since the responsibility was now within the teams, employees required additional training. Gini developed a three-step guideline to encourage self-organized conflict solving,⁵²⁷ and DB Systel utilized retrospectives to provide a routine for the teams.⁵²⁸ Finally, while **information and knowledge sharing** was enabled and present in all three companies,⁵²⁹ DB Systel additionally noticed that if the common identity within teams became strong, they would draw too much attention to themselves, losing sight and interaction with the other teams.⁵³⁰ Table 8 presents the requirements on the individual level.

⁵²¹ cf. Jumpertz (2019), p. 40 f.; Gini (2017e), "neue Academy gründen" section, para. 1 f.

⁵²² cf. Sturm/Schneider (2021), 26:18; Gini (2017e), "neue Academy gründen" section, para. 4

⁵²³ cf. Sturm/Schneider (2021), 04:35

⁵²⁴ cf. Schläppi (2022), Auf der Reise section, para. 2 f.; Nägeli (2021), para. 3

⁵²⁵ cf. Gini (2017d), "Fakultäten" section and "Verwundbarkeiten der Akademien" section

⁵²⁶ cf. Gini (2021b), p. 6; Sturm/Schneider (2021), 18:44; Winiger (2020b), para. 4; Joester (2018), para. 10

⁵²⁷ cf. Gini (2021b), p. 9

⁵²⁸ cf. Sturm/Schneider (2021), 18:44

⁵²⁹ cf. Gini (2021b), p. 7 and 14; Winiger (2020b), para. 4

⁵³⁰ cf. Jumpertz (2019), p. 44

	Success factor	DB Systel GmbH	Gini GmbH	Nexplore AG
Skills, personality, and mindset	Professional organizational skills (learning abilities, analytical and statistical thinking, entrepreneurial thinking, reliability)	-	<ul style="list-style-type: none"> Must participate in business development 	-
	Interpersonal skills (problem-solving)	-	-	-
	Intrapersonal skills (self-reflection, self-confidence, creativity)	-	<ul style="list-style-type: none"> Self-reflection must be learned 	-
Purpose		-	<ul style="list-style-type: none"> Create an environment of meaning, autonomy, community, and personal growth Employees must take responsibility and initiative in pursuing purpose 	-
Self-leadership		<ul style="list-style-type: none"> Had to be learned Provided training 	<ul style="list-style-type: none"> Supporting employees in learning to self-manage 	<ul style="list-style-type: none"> Working autonomously became vital because employees no longer had the tasks assigned but needed to choose the tasks they wanted to handle Had to be learned Provided training

Table 8. Comparison of theoretical success factors to practical examples on individual level⁵³¹⁵³¹ Source: author

While only Gini mentioned entrepreneurial thinking explicitly,⁵³² the “company within a company” structure could also suggest it is necessary at DB Systel.⁵³³ However, their role design for the product owner weakens its relevance on the individual level and makes it a requirement only for that role.⁵³⁴ Furthermore, no mention of other **professional-organizational skills** could again indicate that they are not exclusively required for self-organization; by contrast, the circumstance of all cases coming from the IT sector could distort the assumption because learning abilities or analytical and statistical thinking are probably nevertheless essential in this industry. In addition, the lack of mentioning **interpersonal skills** might be due to its interdependency with the conflict management success factor, where the requirements on the individual level may already be implicitly covered. Nonetheless, field research could reveal if self-organized teams are genuinely better at conflict management and which interpersonal skills make a difference.

Finally, the experiences of Gini revealed that while **self-reflection** is indeed essential, it cannot be expected from employees initially but must be learned.⁵³⁵ Similarly, **self-leadership** is not necessarily highly developed, but employees must become accustomed to it due to the sudden changes in the ways of working.⁵³⁶ These success factors should consequently be rephrased into providing support and training for self-reflection and self-leadership. Lastly, the topic of **purpose** did not receive as much attention as expected, suggesting that the connection between purpose-driven and self-organized organizations is not yet widespread. Further investigation could reveal whether the organizations in question did or will focus on purpose and what effect it would have on the long-term success of self-organization. Table 9 counterchecks the assumed requirements on the leadership level.

	Success factor	DB Systel GmbH	Gini GmbH	Nexplore AG
New role definition	Facilitator and coach	<ul style="list-style-type: none"> Supporting role aimed at helping the employee grow Service to the employees Give the organization orientation 	<ul style="list-style-type: none"> Personal contact with the organization “Cultural translator” A supportive and facilitative function that provides guidance 	<ul style="list-style-type: none"> Institutionalization of a coaching model failed

⁵³² cf. Gini (2022), Bereit für unternehmerisches Denken? section; Gini (2017e), Wer macht wann Business Development? section, para. 1 f.

⁵³³ cf. Sturm/Schneider (2021), 07:34

⁵³⁴ cf. Jumpertz (2019), p. 42

⁵³⁵ cf. Taylor (2022), In welchem Zustand befinden wir uns jetzt? section, para. 5

⁵³⁶ cf. Schläppi (2022), Fehlende Strukturen? section, para. 2; Taylor (2022), "Gelingende Selbstorganisation" section, para. 1 f. and "Unsere Herausforderungen" section, para. 2; Aebersold (2020), "1." section

New role definition	Enable rather than direct	<ul style="list-style-type: none"> • Create freedom • Enable collaboration 	<ul style="list-style-type: none"> • Help employees help themselves • Help new employees navigate the organizational structure • Ensure personal and professional development 	<ul style="list-style-type: none"> • Management did not disappear completely
	Situational leadership	-	<ul style="list-style-type: none"> • Leadership can be put on and taken off depending on competencies and skills 	-
Social skills and competencies	Emotional intelligence, especially empathy	-	<ul style="list-style-type: none"> • Advanced people and coaching skills, empathetic and a high interest in developing others 	-
	Communication skills	-	-	-

Table 9. Comparison of theoretical success factors to practical examples on leadership level⁵³⁷

The **new definition of leadership** is lived at DB Systel and Gini.⁵³⁸ Although the former CEO of Nexlore conveyed signs of being on the teal level of consciousness, the fact that they did not take responsibility away from the management board indicates that position and power are still important in the company. Additionally, the resistance against the coaching model showed that the employees did not yet realize the new concept's advantages.⁵³⁹ Unfortunately, an explanation of **what makes a great leader** could only be found in Gini's reports,⁵⁴⁰ and they did not mention communication skills. Instead, they added that new leaders must resist the urge to simply make a decision when someone asks them to, but rather enable the person to do so.⁵⁴¹ This phenomenon was also reported by DB Systel, who noticed employees trying to hand over decision-making tasks

⁵³⁷ Source: author

⁵³⁸ cf. Gini (2021a), "1." section, para. 2; Aebersold (2019d), para. 12; Jumpertz (2019), p. 43 f.; Joester (2018), para. 8

⁵³⁹ cf. Aebersold (2019d), para. 11 f.; Aebersold (2019e), para. 17 and 21 ff.

⁵⁴⁰ cf. Gini (2021b), p. 11

⁵⁴¹ cf. Gini (2017a), Auf der Suche nach Erlaubnis section, para. 1

to their more experienced colleagues.⁵⁴² Nevertheless, careful research—possibly combined with the research on culture and psychological safety—would be required to reveal the characteristics of the new generation of leaders.

In addition to this topic, DB Systel had a unique approach by letting the team elect their leaders—the two roles that explicitly bear some leadership responsibilities—and let them take away these roles if they were unsatisfied with the person.⁵⁴³ In contrast, Gini stood out with its stewarding training that could be used as an example or recommendation. Furthermore, it was the only company that reportedly divided people and technical leadership by introducing a mentoring program to reinforce employees' professional development with technical assistance.⁵⁴⁴ Table 10 analyzes factors relevant to the transformation process, including restrictions, pitfalls, and limitations.

	Success factor	DB Systel GmbH	Gini GmbH	Nexplore AG
Resistance from within	People defending their status	<ul style="list-style-type: none"> • Must reflect on what role would suit them • Helped employees reorientate with additional training • Ensured not to fall back into the old pattern • One manager left the company to retake a managerial position 	-	<ul style="list-style-type: none"> • Management did not have to demote themselves from one day to the next
	People wanting to be unique and indispensable	<ul style="list-style-type: none"> • Social pressure regarding status and title 	<ul style="list-style-type: none"> • Less clear how to recognize and honor individual performance of and who has the mandate to do so 	-

⁵⁴² cf. Sturm/Schneider (2021), 25:14

⁵⁴³ cf. Jumpertz (2019), p. 44; Reuter (2017), Die DB Systel in der Transformation section, para. 6

⁵⁴⁴ cf. Gini (2021b), p. 11 f.

Necessity and appropriateness		-	-	-
Pitfalls	Self-organization is not managed	<ul style="list-style-type: none"> Agility master and product owner have managerial tasks 	<ul style="list-style-type: none"> Leadership is essential for effective self-organization Reducing hierarchy levels led to chaos enhanced due to the lack of coordination and collaboration 	-
	Authority is not radically decentralized	<ul style="list-style-type: none"> Distributed responsibility among the three roles 	<ul style="list-style-type: none"> Fluid hierarchies of recognition, influence, and skill Concertive control Decision-making guidelines Never equally distributed Instead, participation and empowerment 	<ul style="list-style-type: none"> Risked that the new organization form would not fully unfold its potential if the management was not ready to hand over their responsibilities
	Reward system is not adapted	<ul style="list-style-type: none"> Competence paths instead of career paths 	<ul style="list-style-type: none"> Annual peer-based performance evaluation 	<ul style="list-style-type: none"> Holacracy does not cover topics such as personal development and reward systems

Pitfalls	(Wrong) way of introduction	<ul style="list-style-type: none"> • Democratic change process involving everyone • Balance between bottom-up and top-down • Incremental introduction of a radical change 	<ul style="list-style-type: none"> • Involved everyone in the decision-making process • Transparent collaboration made resistance visible and, therefore, easier to address and overcome 	<ul style="list-style-type: none"> • Platform for feedback and exchange • Initiatives led by promoters rather than management • Equal right to propose or reject an idea • Incremental introduction
	Legal reasons	<ul style="list-style-type: none"> • No legal form for completely hierarchy free organizations 	-	<ul style="list-style-type: none"> • Could not eliminate management due to legal liabilities
	Explanation and well-defined interface to the outer world	<ul style="list-style-type: none"> • Educated partners • Clarified communication 	-	-
	Struggle with self-leadership	<ul style="list-style-type: none"> • Employees were too insecure about taking responsibility at the beginning 	<ul style="list-style-type: none"> • Sudden autonomy was overwhelming for some employees • Some employees did not want to learn how to self-manage 	<ul style="list-style-type: none"> • Helplessness and a lack of orientation in the new system unsettled many employees
	Strategy	<ul style="list-style-type: none"> • Teams were ignoring the consequences of not meeting the business case 	<ul style="list-style-type: none"> • Strategy faculty • Employees must be able to look at things from a holistic perspective 	<ul style="list-style-type: none"> • Strategy board
Limitations	Groupthink	-	-	-

Limitations	Burnout through peer pressure	<ul style="list-style-type: none"> • Strict system because performance comes to the fore due to transparency 	<ul style="list-style-type: none"> • Applied peer pressure to ensure accountability and performance 	-
	Hiring	<ul style="list-style-type: none"> • Responsibility of the team 	<ul style="list-style-type: none"> • Responsibility of the team • Invest extra effort in finding the proper people who would fit 	-

Table 10. Comparison of theoretical success factors to practical examples overall the transformation⁵⁴⁵

DB Systel's strategy against the resistance of the **middle and lower-level management** was to offer them a perspective along with support and understanding for a reorientation.⁵⁴⁶ Nexplora chose a less offensive strategy by not demoting management overnight.⁵⁴⁷ Nonetheless, losing employees along the way is unavoidable because giving up status, salary, or reputation is challenging from a personal point of view and in a society where rank and titles are influential.⁵⁴⁸ Gini also mentioned that recognition and appreciation pose another challenge and need conscious development, such as their peer-to-peer performance evaluation framework.⁵⁴⁹ Similarly, DB Systel had to overwork its reward system by introducing competency paths instead of career paths,⁵⁵⁰ while Nexplora is still searching for a solution.⁵⁵¹ The lack of evidence for **necessity and appropriateness** is the last point that the IT industry cases might affect. A study design deliberately focusing on these aspects by examining other organizations (e.g., production companies, health care, or non-governmental organizations) could reveal the relevance of these factors.

The complications and declining mood at Nexplora after the reorganization could be explained as a result of **self-organization not being managed** because, unlike DB Systel with the agility master or Gini with its stewards, they did not introduce a role that would take care of it. The importance of this success factor was further enhanced by the evidence of employees **struggling with self-leadership** in every case.⁵⁵² Departing employees was the logical consequence of resisting change and learning: an unchangeable fact that organizations should consider before the transformation. Under these circumstances, only Gini mentioned that **hiring** requires extra effort, which nevertheless became the teams' responsibility in their and DB Systel's case.⁵⁵³

⁵⁴⁵ Source: author

⁵⁴⁶ cf. Reuter (2017), Die DB Systel in der Transformation section, para. 13

⁵⁴⁷ cf. Aebersold (2019e), para. 21 ff.

⁵⁴⁸ cf. Fuchs (2019), Neue Wege auf alten Schienen section, para. 6

⁵⁴⁹ cf. Gini (2018b), Feedback section, para. 3; Gini (2017c), Ein Blick unter die Haube section, para. 4

⁵⁵⁰ cf. Jumpertz (2019), p. 39 and 44

⁵⁵¹ cf. Contaldi (2021), para. 28; Winiger (2020a), An was ich mich gewöhnen musste section, para. 2

⁵⁵² cf. Aebersold (2022), para. 6 f.; Gini (2021a), "5." section, para. 2; Sturm/Schneider (2021), 25:14

⁵⁵³ cf. Gini (2022), "Bereit für umfassende Konsent-Entscheidungen" section; Taylor (2022), "Unsere Herausforderungen" section, para. 5; Taylor (2021), Selbstorganisation erfordert geteilte Verantwortung section, para. 4; Sturm/Schneider (2021), 07:34, 20:33 and 21:16; Jumpertz (2019), p. 42

Furthermore, Nexple risked that the new organization form would not fully unfold its potential if the management was not ready to delegate their responsibilities.⁵⁵⁴ On the contrary, the two other companies ensured a **radical decentralization of authority** through roles or dedicated decision-making rules.⁵⁵⁵ It is noteworthy that Gini also observed the existence of a natural and dynamic hierarchy influenced by reputation and experience, which is considered acceptable as long as everyone has the chance to participate and weigh in on decisions that affect them.⁵⁵⁶

The **way of introduction** was democratic in all three cases and,⁵⁵⁷ in the cases of DB Systel and Nexple, incremental.⁵⁵⁸ Gini did not provide information on the latter. In addition, they all emphasized the importance of involving employees in the change process to ensure a high acceptance of the solution but keep a balance between bottom-up and top-down.⁵⁵⁹ Moreover, although this organizational form has **legal and external boundaries**,⁵⁶⁰ only DB Systel mentioned how important it is to maintain **well-defined interfaces to the outer world**, especially to the customer.⁵⁶¹ Furthermore, two companies mentioned the topic of **strategy**: while employees are required to maintain a holistic perspective at Gini,⁵⁶² teams ignore the consequences of not meeting the business case at DB Systel.⁵⁶³ In two cases, monitoring the strategy was the responsibility of a dedicated team: the strategy faculty at Gini and the strategy board at Nexple.⁵⁶⁴ Finally, there was not sufficient evidence about **groupthink** (i.e., which is likely another common challenge of people working in teams), nor whether peer pressure leads to **burnout**. There is, in fact, more pressure because performance comes to the fore due to transparency.⁵⁶⁵

Independent of the research question, all the organizations reported **slower decision making**, contrary to the promise of a fast process due to 1) initial insecurities of dealing with autonomy and bearing the consequences of a decision and 2) more coordination and effective communication required to come to a group consensus.⁵⁶⁶ To determine whether this is because the organizations have only recently finished the transformation or due to a long-term limitation of self-organization would require a longitudinal study.

⁵⁵⁴ cf. Aebersold (2019e), para. 21 ff.

⁵⁵⁵ cf. Gini (2021b), p. 7 f.; Sturm/Schneider (2021), 06:38

⁵⁵⁶ cf. Taylor (2021), para. 3; Gini (2017a), "Wer trifft die Entscheidungen" section, para. 2

⁵⁵⁷ cf. König (2020a), Veränderungsprogramm Bottom-Up section; Aebersold (2019b), "was sagen die Mitarbeitenden" section, para. 3; Aebersold (2019c), para. 10 f.; Joester (2018), para. 3; Gini (2017a), Langsame Entscheidungsfindung section, para. 1 and Widerstand section

⁵⁵⁸ cf. Aebersold (2019c), para. 1; Reuter (2017), para. 5

⁵⁵⁹ cf. Gini (2017a), Langsame Entscheidungsfindung section, para. 1

⁵⁶⁰ cf. Aebersold (2019d), para. 17; Aebersold (2019e), para. 17; Fuchs (2019), Neue Wege auf alten Schienen section, para. 8; Reuter (2017), Den Betriebsrat ins Boot holen section, para. 1 f.

⁵⁶¹ cf. Sturm/Schneider (2021), 27:39; Joester (2018), para. 4

⁵⁶² cf. Gini (2022), Bereit für unternehmerisches Denken? section; Gini (2017e), Wer macht wann Business Development? section, para. 1 f.

⁵⁶³ cf. Sturm/Schneider (2021), 21:54

⁵⁶⁴ cf. Aebersold (2019d), para. 3; Gini (2017e), "neue Academy gründen" section, para. 4

⁵⁶⁵ cf. Gini (2021b), p. 14; Sturm/Schneider (2021), 23:00

⁵⁶⁶ cf. Schläppi (2022), Fehlende Strukturen? section, para. 2; Gini (2021a), "2." section, para. 2 and "4." section, para. 2; Sturm/Schneider (2021), 25:14; Gini (2017a), Langsame Entscheidungsfindung section, para. 1

6 Conclusion

Transforming a conventional, hierarchical organization into a self-organized one is not impossible, but there are many ways to do so. Rather than searching for standardized instructions, this Master's thesis revealed the critical success factors for implementing self-organization that can serve as a guideline for organizations in their search for the most suitable method for their transformation. With the help of a case study design, the theoretical foundation derived from the literature review (see Table 5) was compared to current practical examples and adjusted to the latest state-of-the-art by removing outdated items, adding new ones, and revealing additional research areas. Table 11 summarizes the success factors; items requiring further research are marked with an asterisk.

Organizational level
<ul style="list-style-type: none"> • Change management <ul style="list-style-type: none"> ◦ Ensure support by the management ◦ Provide required resources (<i>time, money, information, competencies, coaching, and supervision</i>) ◦ Hire an external coach/consultant ◦ Apply the amount of change the organization needs by balancing ambition and possibilities and adjusting the pace of change ◦ Proclaim self-organization a strategic goal* • Framework conditions <ul style="list-style-type: none"> ◦ Create an environment that encourages learning and experimenting ◦ Redesign structures and processes <ul style="list-style-type: none"> – A network organization with a “company within a company” approach is recommended – Tailor to the organization and do not blindly copy from another ◦ Define the boundaries of self-organization* ◦ Define the scope of decision making by the owners/highest management board* • Formal system <ul style="list-style-type: none"> ◦ Follow the rule of minimum specifications ◦ Document it • Roles <ul style="list-style-type: none"> ◦ Redesign them in a way to <ul style="list-style-type: none"> – Assist employees in completing their daily tasks – Support conflict management*
Team level
<ul style="list-style-type: none"> • Team's mission, vision, and goals <ul style="list-style-type: none"> ◦ Provide a reason why the team exists and what it is attempting to accomplish ◦ Align it with the underlying organizational goals and other teams • Team design <ul style="list-style-type: none"> ◦ Self-chosen teams

- Strategic thinking
 - Encourage employees to take action to solve problems without waiting for direction
 - Encourage them to experiment with new methods*
 - Let them seek best practices from others*
 - Discuss differences in what each member must contribute to the work*
- Culture*
 - Build on trust
- Conflict management
 - Provide training
 - Establish guidelines and processes
 - Develop the interpersonal skills of the employees*
- Promote information and knowledge sharing
- Foster psychological safety*

Individual level

- Develop the professional-organizational skills of the employees (*learning abilities, analytical and statistical thinking, entrepreneurial thinking, reliability*)*
- Provide training to develop self-leadership competencies
- Focus on purpose*

Leadership level

- New role definition
 - Facilitator and coach
 - Someone who enables rather than directs
 - They should resist the urge to make the decision when someone asks them to
- Social skills and competencies
 - Seek emotional intelligence, especially empathy*

Overall

- Expect resistance from within
 - Deal with people defending their status
 - Expect resignation
 - Deal with people wanting to be unique and indispensable
- Think about necessity and appropriateness*
- Avoid pitfalls
 - Manage self-organization
 - Radically decentralize authority
 - Aim for equity instead of equality
 - Adapt the reward system
 - Make hiring the responsibility of the team
 - Introduce the radical change democratically and incrementally while keeping a balance between top-down and bottom-up

- Take the limitations into consideration
 - Legal reasons
 - Prepare for explanation and well-defined interfaces to the outer world*
 - Consider an initial struggle with self-leadership
 - Expect resignation
 - Take care of the overall organizational strategy (with a dedicated team)*
 - Beware burnout through peer pressure*
 - Allow for hiring requiring extra effort*
- Respect (initially) slower decision making*

Table 11. Critical success factors for implementing self-organization⁵⁶⁷

Nonetheless, these results must be regarded cautiously, and certain restrictions must be considered. The primary limitation to the generalization of these results is that the chosen cases analyzed within the case study were predominantly from the German-speaking IT industry in central Europe. For example, success factors on the individual level or the necessity and appropriateness were given by default for these cases; hence, no explicit connection could be derived between these items and the companies' successful transformations. Furthermore, due to the short timespan between their end of transformation and this work, it is not evident whether they will successfully keep this organizational form or revert to hierarchical forms, either formally or informally. The last limitation stems from the disadvantages of the chosen methodology: the selection bias or the reliance on secondary material may be the most vulnerable aspects of this thesis. Nevertheless, these restrictions were considered throughout the study, declaring its goal to determine the explicit knowledge about the subject and save resources by not gathering already known data through primary surveys. As a result, the obtained information in the context of the case study prevented faulty hypotheses, models, and aspects of the derived framework from the literature review from being transferred to another more exhaustive study. Accordingly, a list of recommendations for further research was derived.

First, without delving more profoundly into the topics, an opposing study investigating companies where the transformation *did not* succeed could further prove the relevance of the success factors by eliminating those that were fulfilled but still led to failure. In addition, a longitudinal study of the cases from this thesis would counteract the previously mentioned limitation of not knowing whether the transformation will remain successful in the long term and provide an answer as to whether the initially slower decision making will accelerate. Lastly, research on organizations from various industries should evaluate the necessity and appropriateness of self-organization.

Second, data collected with a primary research method, for example, with an interview, could provide sufficient basis for evaluating the success factors of proclaiming self-organization a strategic goal, how to define the boundaries between self-organization and the highest management board, or whether hiring requires extra effort. Furthermore, an extensive study is recommended in the field of psychological safety, combined with culture, conflict management, and leadership, which aims to answer the following questions:

⁵⁶⁷ Source: author

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- Is psychological safety the only common ground of any self-organized culture, or are there other unique, essential, and shared aspects between self-organizations?
 - What is required for successful conflict management within self-organization?
 - Is there a pattern of social skills and competencies among leaders in self-organization?

Furthermore, in the scope of leadership, a series of mini studies could reveal how teams with self-elected leaders differ from those that have a leader assigned, what training is required to succeed as a leader in self-organization, and whether dividing the people and technical leadership results in noticeable differences. Finally, the area of strategy, strategic thinking, and entrepreneurial thinking were insufficiently researched in this thesis, which failed to provide answers on how the overall course of an organization can be upheld within self-organization. Additionally, the purpose topic led to a new research area that could be investigated from different perspectives, extending and (dis)proving the initial theory from Section 2.5.3. Lastly, social and psychological experiments could be conducted to see whether the apparent peer pressure in self-organization leads to (more) burnout.

In conclusion, the objective to derive a list of success factors for anyone leading or participating in the organizational change process has been successfully fulfilled. The list in Table 11 can serve as a checklist during the planning and execution process, offering many reflection points where the organization can adjust the details to their specific use case, finally leading to a successful implementation of self-organization in a conventional, hierarchical organization. Additionally, the resulted study proposals, founded on a methodical examination, contribute to sustaining the scientific research on self-organization.

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