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A Comparison of Scrum and Holacracy and Their Impacts on Organsation

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Abstract

Creative destruction happens. This last decade has unleashed changes in the world economy that led to the collapse of entire well established industries. The innovative energy and disruptive forces driving these tectonic changes arise from new players that mainly come from the industry of information technology. One thing these young companies have in common is that the way they are managed is as disruptive to traditional management methods as the goods that are spawned by them. In their article that led to this thesis Bernardis et al. (2016) stress that every company that does not want to get crowded out by these management methods which are new for a bigger part of businesses outside the software industry, must consider modernising their management approach.

There are two methods that stand out from the wide range of approaches: *Scrum*, which is the most common approach in agile software development nowadays, and there is *Holacracy* which is a more recent approach and still in its early-adopter stage. While Scrum has been the object of some research, there is very sparse research on Holacracy. A dedicated comparative analysis of organisational aspects of both methods appears to be inexistent. Therefore, this thesis aims at providing a general understanding of both approaches from the perspective of organisation sciences focussing on the levels of structure (organisational structure, internal processes, governance), collaboration and individual (motivation). By answering the research question this thesis aims to contribute to the academic void of low coverage on Holacracy and to the body of knowledge on currently successful practices in terms of organisation science.

This thesis uses both a theoretical deductive discussion and a qualitative approach to answer the research question. Semi-structured expert interviews aim at providing non generalisable, first practical insights with focus on the above dimensions of organisation. As a result, this thesis highlights fundamental differences to traditional organisation forms: a partly radical change to the idea of hierarchy, process concepts that give transparency a boost, a shift to work centered governance, a powerful tool-kit that serves team and meeting effectiveness, and outstanding conditions to ensure motivated employees.

Finally, this thesis proposes a categorisation of Scrum and Holacracy with respect to existing organisation forms, labelling them as management innovation in the sense of Abrahamson (1996).

Kurzfassung

Kreative Zerstörung geschieht. Das vergangene Jahrzehnt hat in der Weltwirtschaft Veränderungen entfesselt, die zum Zusammenbruch ganzer, alteingesessener Branchen geführt haben. Die innovative Energie und die disruptiven Kräfte, die diese tektonischen Verschiebungen antreiben gehen von neuen Marktteilnehmern aus, die hauptsächlich aus dem Bereich der Informationstechnologie kommen. Eine Sache, die diese Unternehmen gemein haben ist, dass die Art wie sie geführt werden, im Vergleich zu traditionellen Managementmethoden ebenso disruptiv ist wie die Produkte und Dienstleistungen, die sie entwickeln. In ihrem Artikel, der zu dieser Diplomarbeit geführt hat, betonen Bernardis et al. (2016), dass jedes Unternehmen, das nicht durch diese Managementmethoden, die für einen Großteil der Unternehmen außerhalb des Softwarebereichs neu sind, aus dem Markt gedrängt werden möchte, in Betracht ziehen muss, seine Managementansätze zu modernisieren.

Es gibt zwei Methoden, die aus der großen Anzahl herausstehen: *Scrum*, welches der heutzutage verbreitetste Ansatz zur agilen Softwareentwicklung ist. Weiters gibt es *Holacracy*, ein junger Ansatz, der noch in (s)einer "Early-Adopter-Phase" ist. Während Scrum Gegenstand einiger Untersuchungen ist, so gibt es kaum Untersuchungen zu Holacracy. Ein dedizierter Vergleich organisatorischer Aspekte der beiden Ansätze existiert bis dato nicht. Daher ist das Ziel dieser Diplomarbeit, allgemeines Verständnis beider Ansätze aus Sicht der Organisationswissenschaft zugeben. Dabei legt die Arbeit den Fokus auf die Ebenen Struktur (interne Strukturen, Prozesse und Steuerung), Zusammenarbeit und Individuum (Motivation). Durch die Beantwortung der Forschungsfrage möchte diese Diplomarbeit zur Forschungslücke und der niedrigen Abdeckung von Holacracy, sowie dem Body of Knowledge aktuell erfolgreicher Praktiken im Sinne der Organisationswissenschaften beitragen.

Diese Diplomarbeit setzt sowohl auf eine deduktive theoretische Herleitung einer Hypothese, sowie einen qualitativen Ansatz, um die Forschungsfragen zu beantworten. Semistrukturierte Experteninterviews zielen auf erste, (und daher) noch nicht generalisierbare Einsichten mit Fokus auf die o.g. organisatorischen Dimensionen ab. Als Ergebnis betont diese Diplomarbeit grundlegende Unterschiede zu traditionellen Organisationsformen: eine teilweise radikale Veränderung bezüglich Hierarchie, Prozesskonzepte, die Transparenz stärken, Bewegung weg von personenzentrierter in Richtung arbeitszentrierter Steuerung, mächtige Werkzeugkästen, die Team- und Meetingeffektivität stärken, und hervorstechende Bedingungen, die Motivation bei Mitarbeitern sicherstellen.

Abschließend schlägt diese Diplomarbeit eine Kategorisierung von Scrum und Holacracy im Kontext bestehender Organisationsformen vor, und ordnet diese als *Management Innovation* im Sinne von Abrahamson (1996) ein.

Contents

1 Introduction

> *Change is the law of life. And those who look only to the past or present are certain to miss the future.*
>
> **— John F. Kennedy**
> (Former President of the USA)

1.1 Motivation

Management as a discipline in the context of organisation has to deal with a growing number of radically changed environmental aspects – ranging from technological, to customer related to social ones with respect to human resource management for today's information industry and multiple generations in the job market.

Not least, the young IT and software industry and the new ways of management that it has established create enormous pressure on other industries. Looking at important stock indexes or rankings like Fortune 500[1] IT companies among the likes of Alphabet (formerly Google), Apple, Amazon or Facebook surpass most other companies in many ways both, as an enabler by the services they provide they drive innovation, and by the way these companies are managed differently. Considering Schumpeter's approach of *creative destruction*[2] their impact makes it inevitable for other firms to attempt to catch up with either management methods that foster bigger market success of these young firms in order to stay competitive (or develop their own competitive ones). Disruptive approaches (e.g. digital photography) have brought down whole industries including big players (e.g. Kodak) or market leaders (e.g. Nokia), that were not reacting fast enough to innovation within their industry or market.

The lively IT industry has also enabled customers, which, as a consequence, created further pressure on firms. With information being ubiquitously available, transparency has increased manifold. This has made for an increasingly more competitive environment for firms to get customers in the first place and later on keep them. Dealing with customer mobility is more important than ever before, which makes retention management an important discipline in fast moving markets, such as the tele-communication industry, for instance.

Next to external challenges, organisations need to deal with multiple generations of workers in the job market and an increasing lack of qualified candidates in (partly evolving) specialised fields. People belonging to *Generation X*[3] hold top-management positions, ones of *Generation Y* also are in the job market

[1] Wikipedia, 2016h lists five IT companies among the top 10 most valuable companies for March 2016, including Apple, Alphabet (formerly Google), Microsoft and Amazon on ranks 1 to 4, and Facebook on rank 7. Fortune.com lists the same five IT giants among the top ten most valuable companies in the Fortune 500 list (see Gandel (2016)).

[2] See Bullinger et al. (2009, p. 75).

[3] In social sciences the term *Generation X* refers to the generation after the so called *Baby Boomers*. It refers to people born in the 1960s and 1970s. (Appelbaum et al. (2005, p. 1) name the period from 1961 to 1981.) They are attributed a high career and status oriented attitude, especially compared to the previous and subsequent generations. In a study conducted by Appelbaum et al. (2005, p. 1) this presented itself in higher levels of productivity, motivation, learning skills and job satisfaction. *Generation Y*, also referred to as *Millenials*, are born between 1981 and 2000 (See Canaan Messarra et al. (2016, p. 793)). They are attributed an attitude that combines a willingness to work hard, while maintaining a reasonable work-life-balance and valuing purpose in an occupation higher than status or material benefits as long as the monetary rewards are on a satisfactory level. *Generation Z* refers to those born in the late 1990s (see Canaan Messarra et al. (2016, p. 792)). Its representatives are especially characterised by high individuality, which goes a long potentially (critically) low levels of identification with an employing company.

and some hold middle-management positions, as well (or have founded start-ups), and *Generation Z* is about to enter the job market soon. Given the differences in expectations and behaviour another challenge arises for companies in finding approaches for all generations and their peculiarities. Besides, before managing people of either generation it is an increased challenge to find the right people for the right job (which is also a process that has required change due to the changed technological possibilities).

As a consequence of all of these motivating arguments companies need to adapt, in order not to be wiped off the market. A requirement which is central to dealing with all of these challenges is to organise and manage a firm and its production in a way that allows it to succeed in an overall situation of highly increased complication. The chapter Organisation reflects on organisation and three of its central dimensions: structure, collaboration and individuals. Starting with organisation and management theory, the chapter State of the Art introduces radical new approaches that break with traditional management paradigms: Scrum and Holacracy. These two are among a number of management approaches discussed in Bernardis et al. (2016). Fig. 1.1 shows their placement in the metaphor of "Nextland" used in the article. This metaphor symbolises the setting for this thesis sketched at the beginning of this section - a new level of management established by a new generation of organisations and companies grouped as the ones inhabiting "Nextland". This thesis aims to deal with these new players and to gain insights into certain void spots.

Fig. 1.1.: Nextland, source: Bernardis et al. (2016)

Next to the starting point with regards to content there is also personal motivation that led me to do research in this field: my personal experience leading product development and a number of various customer projects in an Austrian software company. For more than 5 years I have been heading software development, product management and other and went through a transition from the *Waterfall* model (a rather traditional or conventional organisation approach in software engineering) to *Scrum*. These years of relevant management experience are part of an overall professional experience in software engineering of more than 10 years.

1.2 Problem Statement

Scrum and Holacracy are two young and successful management and organisational approaches, the rate of scientific recording of which is similar to their divergent degree of dissemination. Given their relative success their respective scientific coverage is proportionally low. Next to sparse coverage in scientific publications and missing awareness in the industry outside the software domain, (university) education aside from computer science curricula and literature also neglects them. While Scrum is part of computer science curricula, neither approach is covered in relevant educational literature like Schreyögg and Geiger (2016), for instance, while more common approaches like matrix, process organisation or network structures are covered.

With growing industry acceptance and relevance the scientific interest in Scrum has grown, which has led to a diverse coverage of research available which is nonetheless mostly focused on the the application of Scrum in the software domain. Some examples for (economic) aspects related to Scrum that have been researched are:

- Complexity management (G. D. Putnik (2012), G. D. Putnik and Z. Putnik (2012) or Seikola (2010))
- Success factors (Misra et al. (2006))
- Problems, issues and challenges (Ovesen (2012), Seikola (2010) or Boehm et al. (2005))
- Philosophical (Browaeys and Fisser (2012))

A perspective to Scrum that appears not to be deeply researched relates to organisation sciences. Topics that have been researched with respect to Scrum and organisation sciences include:

- Leadership and self-managed teams (Moe et al. (2009))
- Organisational culture (McElfish (2011), Strode et al. (2009))
- Transition and change management (Palm (2014) or Seikola (2010)) (which are master theses and no publications in scientific journals)

The situation with respect to Holacracy is different. It is an even more recent approach invented less than ten years ago. Zappos, a US-American shoe retailer with a billion dollar turnover, owned by Amazon has been the first major player to switch to Holacracy in 2014. Given the youth of Holacracy and low dissemination rate there is still very sparse scientific coverage. Bernstein et al., 2016 and Van de Kamp (2014), for instance, may be referred to from a scientific perspective (however, to get a comprehensive idea of what Holacracy actually is, its specification is needed - see HolacracyOne (2013) and Robertson (2007)). Despite Zappos' transition being very well documented there are no relevant studies in scientific papers to be referred to in contrast to Scrum. Missing knowledge about both methods outside the software domain is therefore an evident problem and academic void. At a very basic level of categorisation, there is no clear understanding of what they are and what their differences are. It is the aim of this work to contribute to this void. The following section describes this aim.

1.3 Aim of the Work

Given the problem described in the previous section this thesis aims to contribute to the academic void of low knowledge about Scrum and Holacracy in a subset of organisation science. Therefore, goals of this research project are the following:

- Presentation of both approaches and their respective differences, commonalities or complementarity.
- Determination of a proposed category to classify both approaches.
- Theoretical understanding of the aspects organisational structure and governance (processes), as well as their impact on collaboration and motivation with respect to both approaches.
- Provision of first insights and indicators into practical experiences via a collection of expert interviews without direct claim for generalisability.
- Contribution to future research by gathering data for subsequent qualitative and quantitative studies.

These research goals are pursued via the methodological approach described in the following section.

1.4 Methodological Approach

This thesis applies a deductive theoretic discussion and a qualitative approach to answer the research question. The main reason for choosing a qualitative approach instead of a quantitative one is the sparse scientific coverage of Holacracy, which makes for a non existent base of data and hypotheses to be tested. Furthermore, the scope of a masters thesis doesn't match the execution of a full-scale quantitative study considering the lack of data to be tested.

Chapter 4 explains the approach applied for this thesis. It briefly sketches the scientific criteria applied as a framework for setting up this thesis. Subsequently the methodical approach is explained. First, the choice of qualitative research as a main paradigm is argued. Based on this clarification, qualitative methods are explained. Next, the criteria for qualitative research and concrete approaches are explicated leading to the argumentation of the chosen ones and their fit for the needs and circumstances of this thesis and its topic. As a third section the actual research design is documented in detail. This includes the description of all phases of the research process and the chosen approach including expert interviews. The main phases of the research process correspond to the structure of this thesis and read as follows:

- **Theory:** results of the literature research as state-of-the-art with respect to general and relevant fields of organisation sciences, as well as a general description of Scrum and Holacracy, plus focused aspects from the perspectives of this thesis - structure, collaboration and motivation.
- **Research Question:** the actual guide for the research part of this thesis.
- **Operationalising:** aspects of the practical conduction of the interviews.
- **Sample:** aspects of finding the right candidates - especially in terms of fit and also in terms of numbers.
- **Inquiry:** aspects of the actual interrogation.
- **Evaluation:** the way of transcribing and coding the interviews.
- **Examination:** the way of analysing the interviews and generalising them, in order to reach the goal of this research project.

1.5 Structure of the Work

This thesis follows the standard structure of the faculty of informatics of Vienna University of Technology and general principles for research papers, especially master and Ph.D. theses. Therefore, the thesis is opened by an Abstract in English and Kurzfassung in German. Chapter 1 ("Introduction") briefly sketches the objectives of this work. Thus, the chapter starts with a section on "Motivation". Subsequently, the need for this thesis is outlined in the section "Problem Statement" (which of course relates to the academic void and the research question). Section "Aim of the Work" explains the intended use for the results of this research project, the methodological approach of which is described in section "Methodological Approach".

Following the standard structure there are main chapters dedicated to the "State of the Art", to the "Research Question", to "Methodology", to the "Results" and "Critical Reflection, Open Issues and Future Work".

Chapter "State of the Art" consists of sections for the three main theoretical fields:

- Organisation
- Scrum
- Holacracy

Chapter "3.1" deduces the academic void, respectively the gap in the present knowledge and leads to the research question, which is presented in chapter "3.2" including all sub-questions, that are needed to answer the main question of this thesis.

Chapter "Methodology" describes the way research is conducted in this research project, followed by a theoretical comparison of the two approaches in Chapter "Theoretical Analysis" and the evaluation of the expert interviews in chapter "5.2".

The actual findings are presented in chapter "6". Following the methodological approach the chapter is split into "Research Question 1" and "Research Question 2", and summarised in a "Conclusion".

Chapter "7" discusses the results of this thesis, open issues, future work and problems encountered that could not be solved.

1.6 Summary

The main objective of this chapter is to provide an introduction to this thesis and the research project in its focus. Five brief sections describe the direction of the work and its structure. The central part of the chapter is the motivation for this thesis, which leads to the problem statement and the aim of the work. The fourth and fifth sections conclude the introduction with an overview on the methodical approach and the structure of the work. The following list summarises the key points in this chapter.

- Companies face growing organisational challenges driven by the fast pace of change in the industry. Drivers are technology and young enterprises with disruptive offerings and as disruptive ways of being run: amongst others using Scrum or Holacracy.
- Scrum and Holacracy are two methods designed to manage work and partly organise whole companies. Coming from the software domain they are neither widely used nor known outside despite being among the approaches used by those successful companies posing a threat to conventional industries.

- While Scrum has some coverage in science, Holacracy is barely existent. Therefore, this thesis aims to contribute to that academic void by researching both approaches. The scope is the field of organisational sciences, narrowed down to structure, collaboration and motivation.
- The research follows a qualitative approach in this project using expert interviews.

Based on the introduction given in this chapter, the next chapter contains the state-of-the-art with respect to relevant aspects of organisation sciences and both inspected organisation methods.

State of the Art

2

> *I know of no new form of organisation that was invented by organisation theorists while advancing theory. I have seen no new form emerge from the test tubes of organisation theory. Instead, the researchers record what the inventive practitioner creates and give it labels like grids, system 4, or matrix organisation.*
>
> **— John Kenneth Galbraith**
> (Professor for economics, presidential counsel and diplomat)

What do the most successful companies of today's global industry do differently to those that lose ground? What makes them successful? Next to their disruptive offering, are they being differently managed, and if so how? Does the way they are being managed foster change and contribute to their success? Questions like these motivating ones lead to the object of this master thesis. Sketched in Chapter 1.1, organisations are subject to continuous change. While organisational theory itself has gone through fundamental changes multiple times, its object *organisation* as such has evolved widely, too. Rooted in the fields of social sciences and (industrial) economics, organisational theory is closely related to economical practice. The macro-trend for constant change in organisation reflects in the sub-discipline of *Change Management* as one of the pillars in organisational theory.[1]

In the early days of organisation and labour theory scientists were the center of innovation: mechanical engineer Frederick W. Taylor developed the approach of *Scientific Management* in the 1910s[2], while social scientist Max Weber came up with the *Ideal of Bureaucracy*, published posthumously in 1921 in "Wirtschaft und Gesellschaft".[3] However, recognised in continuing research, change came from within organisations and proved to be crucial for maintaining its vital functions and commercial success by evolving, re-inventing itself and adapting to social, technical and economic macro-trends. John Kenneth Galbraith's quote[4] opening this chapter strongly motivates this perspective of change spawned from within organisation. Scrum and Holacracy, the approaches central to this thesis, back up this quote as ones hailing from practice. This chapter describes the theoretical background of both methods, while initially outlining the aspects of organisational theory relevant for this thesis.

[1] See Schreyögg and Geiger (2016, pp. 357-434), who call *organisational change and transformation* one of five basic problems, which they label *generic problems of organisational design and configuration* ("generische Probleme der Organisationsgestaltung"). Each basic problem makes for a building block of their book and is therefore dedicated a whole chapter.
[2] See Taylor (1911) for a currently available re-print of the original edition, published by Harper & Brothers in London, 1911.
[3] See Weber (1921) for a currently available 5th edition.
[4] See Galbraith (1980), and Wikipedia, 2016e for J. K. Galbraith as a person.

2.1 Organisation

This chapter contains the theoretic foundations of organisation with respect to their use in this master thesis. The chapter is divided into six sub-chapters, of which numbers 2.1.2 and especially 2.1.3 aim to help classifying the *methods* analysed in, and numbers 2.1.4, 2.1.5 and 2.1.6 cover the *scope* within organisation (theory) relevant to the research of this thesis. Therefore, the list of sub-chapters reads as follows:

- A formal *definition* of organisation in Chapter 2.1.1
- A brief *history* of organisational theory in Chapter 2.1.2
- An outline to *management* with focus to aspects relevant in the context of this thesis in Chapter 2.1.3
- *Structure* and *processes* as top layer of organisation in Chapter 2.1.4
- *Collaboration* and *teams* as a middle layer of organisation in Chapter 2.1.5
- An *individual dimension* of the single human being as base layer of organisation in Chapter 2.1.6

Fig. 2.1.: Dimensions of Organisation in This Thesis

2.1.1 Terminology

Having argued the need for enterprises to adapt in Chapter "Motivation", change is well-known to organisation and management. Both, the term organisation and firms being referred to as organisation have widely changed. This leads to the question of the definition of the term *organisation*. There are two principal definitions of organisation (see Schreyögg and Geiger (2016, p. 5)):

- *Instrumental* organisation
- *Institutional* organisation

Instrumental Organisation

An *instrumental* use of organisation relates to a micro-economic use in the context of business administration, also referred to as *organisational structure* or *company organisation*.[5] The instrumental term is divided into a *functional* and a *configurational* approach.[6] The functional use refers to organisation as a means to reach the objective of the venture. They highlight that this approach is not sole, but accompanied

[5] Both terms refer to the German expression *Aufbauorganisation*. See Kistner and Steven (2002, p. 293). The term is opposed to, respectively complemented by process (-oriented) organisation (German: *Ablauforganisation*).
[6] See Schreyögg and Geiger (2016, p. 5) for the functional approach, and p. 9 for the configurational one.

by other means of governance like planning and control(ling). Schreyögg refers to Gutenberg (1983) as the most elaborate source for this approach in the German speaking region. Next to all factors needed to perform work (the objective of the venture) which he calls *elementary factors*, Gutenberg introduces a *dispositive factor*, which in other words can be called *management* (see Schreyögg and Geiger (2016, p. 6)). Directly quoting Gutenberg, Schreyögg demonstrates the meaning of the instrumental character: planning means the creation of order, organisation means the execution of the planned order. If an organisation works better, it better serves its instrumental purpose of being a catalyst for transforming work resources by enabling and orchestrating them. Mapped to the (metaphoric) root of the word instrumental Gutenberg's interpretation of organisation may be visualised as follows: if the work force and resources are musical instruments and players, planning is the composer of the musical work and organisation is the conductor.

While the functional approach of the instrumental organisation is heavily related to Gutenberg, the *configurational* one is most closely related to Kosiol (1976).[7]. The latter considers organisation as permanent structuring of work processes, a solid construction, which presides all other measures and dispositions. Organisation gets another role in this approach, that Schreyögg and Geiger (2016, p. 8) call the skeleton referring to Kosiol, who compares it to a blueprint that gives a venture its shape. Furthermore, Kosiol (1976, p. 20) labels it as literally stamped shape, overall unit and organic wholeness. Subsequently, he defines organisation as "finally thought structuring that is commonly applied on the long term." This static character of organisation distinguishes Kosiol's approach from Gutenberg's. In closing Schreyögg and Geiger (2016, p. 9) connect Kosiol's approach to the institutional one that they call the common one nowadays.

Institutional Organisation

The *institutional* use of organisation refers to the system as a whole, which is by itself an institution. Answering the question "What makes a group of human beings an institution?", there are three characteristics: common purpose, joint effectuation of work and continuity (see Schreyögg and Geiger (2016, p. 9)). Thus, an organisation pursues a *specific goal* or purpose, which does not have to be singular or one-dimensional (which becomes quickly obvious when thinking about any company that sells more than one good and glaring when looking at the giant ventures mentioned in the Motivation chapter). Schreyögg and Geiger (2016, p. 9) stress that the goals of the organisation do not need to be identical with the personal ones of the organisation's members and that some goals may be contradictory, e.g. liquidity and cost-effectiveness or flexibility and efficiency. Secondly, *joint effectuation of work* reflects in the regulated division of labour, which (according to Schreyögg) is the main reason for a group of persons to form an organisation. Finally, he names *permanent borders* as characteristic for institutional organisations, which allow the distinction between the inside and the outside. These borders, despite being stable, may be subject to adaptation, and allow the attribution of members to an organisation, which is impossible without them. Membership may be exclusive and non-exclusive and members may hold memberships of multiple organisations. In contrast to the solely micro-economic perspective of the instrumental view, the institutional view allows one to consider the emergence and evolution of structure, social aspects, defined (and formal) order, unplanned processes, functions and dysfunctions of organised work-processes, goals and conflicts (see Schreyögg and Geiger (2016, p. 10)). It is evident that the institutional term is wider than the instrumental one, which is why referring to Schreyögg it is predominant these days.

[7] See Schreyögg and Geiger (2016, p. 8) Later Schreyögg also refers to Nordsieck and Schnutenhaus.

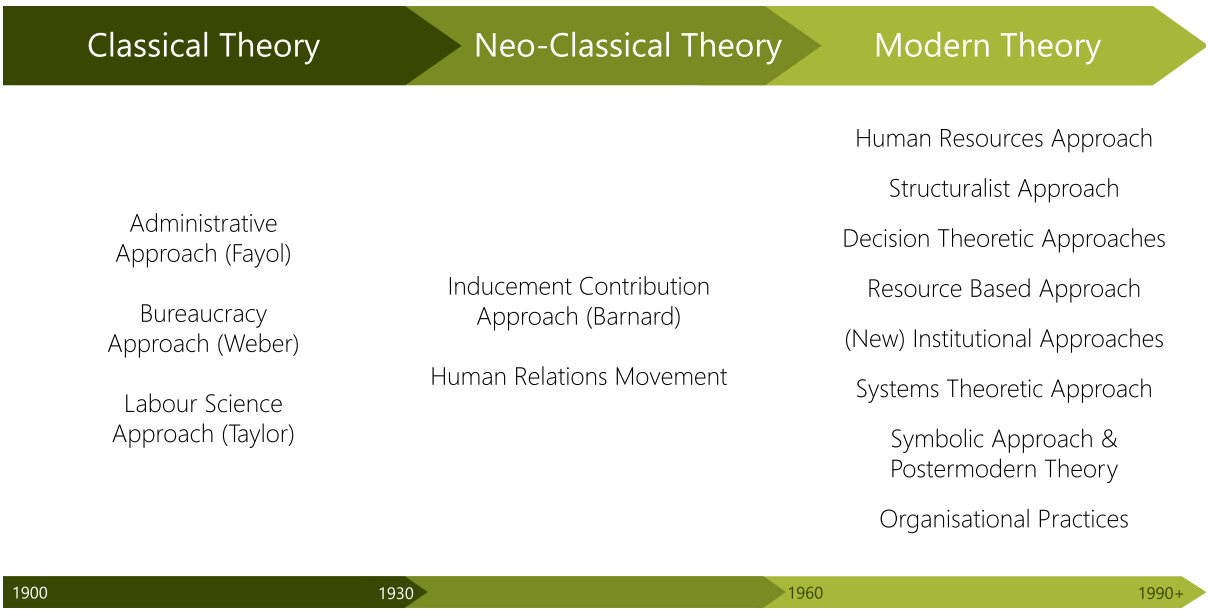

Fig. 2.2.: Development and approaches of organisational theory

2.1.2 A Brief History of Organisational Theory

Knowing where ideas have come from and which concepts have existed and have been overcome or dismissed is the basis to understanding new ideas. Thus, exploring at the history of organisational theory may help to gain a deeper understanding and classifying or dissecting aspects of the methods looked at in this thesis. [8] Organisational theory has been through a profound evolution since its inception in the early 1900s. Figure 2.2 visualises the development of organisational theory, that is briefly described in this chapter. Unless cited differently this chapter is grounded in Schreyögg and Geiger (2016).[9]

Following the model of William Richard Scott[10] established in 1961, organisational theory is commonly divided into three main phases:

1. Classical organisational theory
2. Neo-classical organisational theory
3. Modern organisational theory

The three phases are visualised in fig. 2.2. The transition from one to another is heavily coined by a shift in perspective with respect to the (underlying) *idea of human*. On a general level this term refers to the idea of humans in society and to employees (managed) and their needs from the perspective of employers (managers) on a more concrete level. Schreyögg and Geiger (2016, p. 125) describe an evolution from the image of a governed organisational member to a complex one. The subsequent chapters use to these terms.[11] This chapter investigates the idea of human in context with the (ethical, social or moral) grounding of theories and the transition from one to another. The main shifts occurred in the evolution of the three main phases. However, ideas of human also play a role in more distinct and smaller diversifications in a later and more advanced stage of organisational theory.

[8] In initial version of the thesis this chapter has been about twenty pages block, which has been radically shortened in the end to serve its character as brief introduction.
[9] Schreyögg and Geiger, 2016, pp. 435 sq. dedicate one chapter to the history of organisational theory: "Entwicklungslinien der Organisationstheorie". Unless directly quoted every fact presented in this chapter is based on the referenced chapter.
[10] See Wikipedia (2016i): "American sociologist, and Emeritus Professor at Stanford University, specialised in institutional theory and organisation science."
[11] Chapter "Motivation" at the beginning of this thesis also contains a reference to the terms *Generation Y/Millenials* and a definition.

Given that Scott's taxonomy (established 1961) is 55 years old, criticism regarding the lack of a diversification of the modern organisational theories is widespread. Therefore an era of *post-modernism* can be found, as well as a *constructivist* approach. However, Schreyögg and Geiger (2016) include these in the phase of modern organisational theories. The following sub-chapters introduce all phases.

Classical Organisational Theory

Classical organisational theory covers the first phase of organisational theory. Taylor and Weber, who have already been mentioned in the introduction of this chapter[12], are two of the fathers of classical organisational theory. Given their rather different domains of expertise, organisational theory has its roots in various scientific fields. Furthermore, it comes from different culture areas. While Taylor was American and founded labour science, Weber was German and invented the Bureaucracy approach. Next to these two, there was the *administrative approach* hailing from France established by Henri Fayol. Since the models of these three forefathers contain seminal concepts that are re-occurring in later theories in many different ways, they are presented somewhat more detailed than the most newer models.

Bureaucracy Approach

Schreyögg and Geiger (2016, p. 440) highlight the remarkable and fundamental character of Weber's work referring to him as the 'father of organisational theory'. Weber followed the scientific tradition of Karl Marx and Emile Durkheim.[13] His work contributes to the understanding of large organisations, both public and private. Central to his work is the term of *authority*, which he characterises as *charismatic authority*, *traditional authority*, and *rational-legal authority* which is the most important for the modern era following Weber's work. It is characterised by a belief of rationality attributed to the instance of authority, which clearly distinguishes it from the other two definitions.

Best known is his theory of "Ideal Bureaucracy", which follows the types of authority based on *rational-legal authority*. Weber's bureaucracy has the four attributes of *division of labour*, *hierarchy*, *generalised rules and norms* and *formalisation*.

Labour Science Approach

While Weber is classified into the field of (sociological) organisational theory, Taylor's work is counted towards the category of *management theory*. Successors in this school were Henri Fayol and Chester Barnard.[14] However, from the perspective of organisational theory Taylor's approach was the spawn of labour science, which is distinguished from the administrative approach of Fayol. Only viewed from the perspective of management theory, Taylor and Fayol may be directly related.

Taylor's work is stamped by the idea of the so called *homo oeconomicus*. Its postulate is that humans are lazy, seek to find happiness, and need to be motivated by money as it is the only incentive for employees to be motivated. In order to achieve productivity discipline is needed, as humans are deemed lazy. Thus, there is a need for rules that are constructed by engineers, which again serve the aim of productivity

[12] See page 8.

[13] *Karl Marx* (1818-1883) was a German philosopher and economist. His theoretical works on socialism and communism are considered his main legacy. See Wikipedia (2016f).
David Émile Durkheim (1858-1917) was a French sociologist and ethnologist. See Wikipedia (2016c).

[14] *Henri Fayol* (1841-1925) "was a French mining engineer, mining executive, author [...] who developed a general theory of business administration that is often called *Fayolism*". See Wikipedia (2016d). The third section of this chapter outlines Fayol's work and theories.
Chester Barnard (1886-1961) was a US American "business executive, public administrator, and [...] author of pioneering work in management theory and organizational studies". See Wikipedia (2016a). See also Chapter "Neo-Classical Organisational Theory" for a paragraph on his work.

despite lazy workers, motivated by money, and disciplined by rules. Based on this idea of humans the center of his work was the analysis of how work was performed, with the concrete goal of increased (maximised) productivity by rational and maximal specialisation. Schreyögg and Geiger (2016, p. 446) emphasise that despite being a practitioner he soon went for a formalised approach that he tested in studies especially at Bethlehem Steel Company. The results of which were reproduced in re-conducted tests, which lead to his formal approach of *scientific management* (1911). The main principles of which are *specialisation*, *optimisation*, *performance based wages*, *systematic selection of staff* based on specified *job-profiles*[15]

Given the idea of humans on which scientific management is based and its change throughout the 20th century, there is much criticism to Taylor's approach (see Schreyögg and Geiger (2016, p. 448)). Nowadays neo-liberal (waging) models still base on Taylor's idea of humans, while other later ones have challenged and abandoned them. The subsequent chapters show to which extent Taylor's concepts (and other ideas from the classical period) have been replaced by newer ideas.

Administrative Approach

In the closing of the section on classical organisational theory, a paragraph on the *administrative* approach which has been introduced at the beginning of this section. The administrative approach is attributed to Henri Fayol, who was a contributor to management theory in the tradition of (and successor to) Taylor. Following Yoo et al. (2006, p. 352) Fayol was a "seminal author in the classical school of management".[16] Similarly to Taylor Fayol was no academic, but a practitioner who analysed management practice in his work experience as executive of a mining company.[17] He published his collected practical experience as a book called "Administration industrielle et générale".[18] The book covers his *theory of administration*. According to Yoo et al. (2006, p. 352) "he argued that all industrial undertakings precipitate activities that can be categorized into six groups: technical, commercial, financial, security, accounting and management. Fayol's work focused on the latter category, management." In contrast to Taylor's approach Fayol did not focus on productivity, but on the integrating aspect of management as such. Despite being older than the terms themselves Fayol's approach might be related to both instrumental and institutional views on organisation. Eventually, Schreyögg and Geiger (2016, p. 443) state that he emphasises the *management process* more than Weber. By doing so he distinguishes five elements of administration: *planning*, *organisation*, *command*, *coordination* and *control*.

Continuing into his theory of administration he enumerates 14 "principles" of management (see Yoo et al. (2006, pp. 355-356)) including *division of work*, *unity of command*, *centralisation* and *scalar chain* (and also *equity* as well as *esprit de corps*, which are a the first blink of humanisation in organisation theory). These are the foundations for the principles of traditional organisational structures (and governance) which are referred to in the analysis and discussion part of this thesis.

Despite these differences, these principles also enable one to find parallels to Weber's work (esp. hierarchy related and division of work), and also to Taylor's (esp. division of work and all authority related principles). However, and interestingly, "Fayol did not regard his list of principles as fixed. Rather, Fayol believed that the actual number of principles was arbitrary and his original list non-exhaustive".[19] Summarising all

[15] Schreyögg adds that this was the hour of birth of modern staffing.
[16] Yoo et al. (2006, p. 352) refer to Wren and Bedeian (2009) in context of this statement.
[17] Again, the fact that both Taylor and Fayol were practitioners and no academics fortifies to Galbraith's quote from the introduction of this chapter.
[18] See Fayol (1916), whom Schreyögg and Geiger (2016, pp. 443, 512) quote without any publisher, but refer to a German edition published in München/Berlin in 1929. According to Wikipedia (2016d) the German edition from 1929 was the 2nd edition, published by Oldenbourg Verlag. Yoo et al. (2006) refer to an English edition published by Sir Isaac Pitman & Sons Ltd, London in 1949. This thesis refers to the work as such that he made public in 1916.
[19] See Yoo et al. (2006, p. 353). This also distinguishes his practical approach from scientific ones, that need to be reproducible leading to the same results.

peculiarities, a clear number of characteristics is evident that distinguish the administrative approach from the bureaucratic and labour science school.

Neo-Classical Organisational Theory

The Hawthorne Experiments

While the period of classical organisational theory was stamped primarily *authoritarian*, the advancement to the neo-classical period is characterised by the addition of a *human perspective*. The *Hawthorne Experiments* conducted at Western Electric Comp. (a daughter company of AT&T) between 1924 and 1932 are generally considered the initiation of the period. Schreyögg and Geiger (2016, p. 450) describe the basic question of the experiments as a classical labour science one: the research of the impact of physical factors to productivity.

This led to the central finding of the experiments that the reason for all improvements were social and emotional factors, i.e. *human relations*: the interaction with friendly managers or researchers, participation in the shaping of one's own working conditions and perceived importance proved to be key factors. The encouragement and facilitation of social interrelations led to an emotional chain reaction. Schreyögg and Geiger (2016, p. 451) highlight the shift in considering emotion as crucial factor and no more undesired trouble. As a consequence, the idea of the homo oeconomicus managed in an authoritarian way advanced to one of a *social man* managed in a participating and humanised way. In retrospective the main achievement of the Hawthorne Experiments is the *humanisation of work*.

Chester Barnard

The second important protagonist of the neo-classical theories Chester Irving Barnard (1886-1961), who was long-time president of New Jersey Bell Telephone Company until his retirement 1948. [20] Fernández (2010, p. 469) points out that despite his broad work and the landmark character of the findings recorded to his written legacy his contributions to organisational theory and management science tend to be overseen these days. As an example of his fundamentally new approach: during the great depression "Barnard instituted a 'no lay-off policy' in his company by 'cutting back all employees' hours instead of dismissing some'". (see Fernández (2010, p. 472)).

He published his main and most important work "The Functions of the Executive" in 1938 (see Barnard (1938)). His ideas are based on practical experience, reflection and findings of the Human Relations Movement. Schreyögg and Geiger (2016, p. 454) highlight the "phenomenon of *informal processes*" and his central theme, which is the firm as system of actions, the existence of which is precarious any time. Its existence has to be ensured by keeping a fragile balance between formal and informal relationships, internal and external demands, as well as *inducements* and *contributions*. This was the first time that the perspective included the outsides of the firm, which was a deviation both from the one of the classical theories, and the Human Relations Movement, which relates to Barnard's idea of enterprises as *cooperative systems*, which includes the willingness of employees to participate in that system (see ibid).

The four main themes of his approach to organisation are *inducements* (incentives) *and contributions*, *coalition theory*, *authority*, and *informal organisation* (see Malcolm and Hartley Tabor (2010) and Schreyögg and Geiger (2016, pp. 454-457)).

Furthermore, Malcolm and Hartley Tabor (2010) list a number of concepts considered as essential to the achievement of organizational goals by Barnard including *cross training of personnel*, *trust* and *leadership*

[20] See Fernández (2010, p. 472) and Malcolm and Hartley Tabor, 2010 for a biography of Barnard.

flexibility and balance. These concepts already include ideas that are vital to the approaches analysed later on in this thesis.

Looking at these theoretical concepts, it is evident that Barnard's thoughts propelled management theory alongside an evolving idea of human. In closing his relevance for the nowadays indispensable term *leadership* shall summarise this chapter:

> ...when Chester Barnard first suggested that there was more to executive behaviour than what was proposed by scientific management theorists, the thought was quite revolutionary without the creative element of systemic human cooperation, organizational success would not be achieved [...] And it was leadership, not management, which he saw as 'the indispensable fulminator of its forces'. (See Fernández (2010, p. 469))

Modern Organisational Theory

Having described classical and neo-classical organisational theories in the previous sections, this section sketches the age of modern organisational theories. As visualised in fig. 2.2 the field of modern organisational theory is very wide. Obviously, covering all theories on a similar granularity as the previous ones lies beyond the scope of the thesis. Hence, this chapter aims to briefly introduce the idea of modern organisational theories and to elaborate the main differences to the preceding periods.

The term *modern organisational theory* classifies organisational theories that evolved from the 1950s onwards. It can be divided into the following eight main categories (see Schreyögg and Geiger (2016, pp. 458-496)). Following Schreyögg and Geiger's categorisation *post-modern* organisational theory (the postulate for which has previously been mentioned) is included as one of these eight ones.

Human resources approach
The Human Resources Approach approach evolved from the Human Relations Movement. The main difference to the latter is *formal organisational design* (see Schreyögg and Geiger (2016, p. 458)). McGregor and his *Theory X* and *Theory Y* may be the best known contributor to this approach.[21] Theories X and Y consider the alleged motives of workers in the eyes of their managers and their behaviour resulting from them. According to *Theory X* employees dislike work, do not take responsibility and therefore need to be controlled thoroughly. Incentives are needed to motivate them to work. See Chapter 2.1.6 for a brief discussion of Theory Y. Other representatives of the Human Resources Approach are Agyris, Bennis, Likert, Kanter or Kotter among others (see Schreyögg and Geiger (2016, pp. 458 sq.)).

Structuralist approach
The structuralist approach follows classical organisation theory, especially advancing Weber's bureaucracy approach. Organisational structure is observed in a systematic empiric way by the structuralist approach making for a descriptive approach instead of a prescriptive one (see Schreyögg and Geiger (2016, p. 460)). Best known in the context of the structuralist approach is Richard H. Hall, a US American sociologist, whose publication "The Concept of Bureaucracy" is referred to as landmark work (see Hall (1963)). Besides Hall's work, Pugh, Hickson and Hinings, known as *Aston Group* also are important contributors. On the theoretic base the Aston Group came up with *seven organisation types*. The differences between these types of bureaucracy can be found in the level of structure, control, elaborateness, (de)centralisation

[21] Douglas McGregor (1906-1964) "was a management professor at the MIT Sloan School of Management and president of Antioch College from 1948 to 1954 [...] His 1960 book The Human Side of Enterprise had a profound influence on education practices.". See Wikipedia (2016b) and McGregor (1960). The latter refers to a currently available edition of the 1960 book published in 2005.

and decision processes (see Pugh, Hickson, and Hinings (1969, pp. 115 sq.)). Later on, this school of organisation theory was on known as *contingency theory* of organisation. Schreyögg and Geiger (2016, pp. 461-464) refer to Child, Osterloh, Sydow, Hrebiniak, Joyce, Corzier and Friedberg as further relevant work.

Decision theoretic approach
The decision theoretic approach integrates two fundamentally different fields - a formal scientific one based on optimisation using quantitative methods, and another one based empiric decision theory focussing on behaviour of groups and individuals.

1. *Empirical theory of organisational decisions*

2. *Decision-logic mathematical approaches*

3. *New institutional economics*, that are rooted in institutional economics, which have contributed to organisational theory since the early 1970s. As opposed to the neo-classical approach that views an organisation tied into its environment, new institutional economics regard an organisation as a self-determined system the existence and formation of which needs to be explained by means of economy. Three approaches crystallised in this field (see Schreyögg and Geiger (2016, pp. 469 sq.)):

    - The *transaction cost* approach
    - The *property rights* approach
    - The *Principal Agent Theory*, which is the best known theory in the field of new institutional economics. Ross, Fama, Jensen, Meckling, Goldberg, Schmitz, i.a. are known in context with the Principal Agent Theory.

Resource based approach
The resource based or knowledge based approach is an economic organisation theory. The approach is similar to the transaction cost approach and the Principal Agent Theory. It regards organisations and markets and the question which is the more efficient form to coordinate economic activities (see Schreyögg and Geiger (2016, p. 474)). In contrast to other theories this approach argues that organisations are more efficient, the success of which lies in specific knowledge that makes for advantages compared to those who do not have this knowledge. Schreyögg and Geiger (2016, pp. 474-476) refer to Barney, Grant as important representatives of this school.

(New) Institutional approaches
The central question of the (new) institutional approaches is the one for the shaping of formal structures of organisations. The approach is of high relevance nowadays. According to the new institutionalists organisational structure reflects a rational organisational arrangement. In this context *Institutionalisation* is a process that fixes "cognitive and habitual" patterns (see Schreyögg and Geiger (2016, p. 476)). Schreyögg and Geiger (2016, pp. 476-479) refer to Scott, Meyer, Rowan, Walgenbach, DiMaggio, Powell, Abrahamson[22]", Kieser and Zucker as representatives of this school.

Systems-theoretic approaches
With a large number of theories based in systems theory this approach is a very wide one. In addition to the theories listed in this section, systems theory simulated various other organisational theories, e.g. contingency theory of organisation or the socio-technical approach. The evolution of systems-theoretic organisational theories has been through a number of phases (see Schreyögg and Geiger (2016, pp. 480-486)).

[22] See Abrahamson (1996) in Chapter "Management.

Post-modern organisational theory

The group of post-modern organisational theory might be considered a high-level phase like the classical, neo-classical and modern theories. As previously mentioned, it is often categorised into the phase of modern organisational theory, as it is deemed still too young to be a phase on its own. So, this chapter sticks to Schreyögg and Geiger's categorisation. Interestingly, the earliest works classified as post-modern (at least ex-post) mentioned date back to the 1960s with the works of Weick, Berger and Luckmann, continued by Foucault in 1977 and Lyotard 1999. Listing the latter researchers Schreyögg and Geiger (2016, p. 486) emphasis that the subjects of the theories classified as post-modern organisational theory are too wide to find a common denominator. However, they list three main subjects:

1. *Rationality*, which discusses the use of the term itself. Obviously the use of rationality as argument includes the existence of irrationality. The theories dealing with rationality postulate a differentiated view on common rationality as only a narrowed way of thinking.

2. *Symbolic constituted organisational world*, which includes theories that deal with management via symbols (rules, norms, rituals, clothing, etc.) Weick's *Theory of Sensemaking* belongs to this approach (see Weick (1995)).

3. Ideas focussing on *objectivity* are strongly rooted in philosophy. Criticising the claim for absolute objectivity, which supposedly leads to indoctrination an idea of multiple truths is the core of this approach.

Organisational practices

As a final approach on post-modern ideas, Schreyögg and Geiger (2016, p. 490) mention organisational practices, which are complex social patterns evolved over time. The social interrelation of individuals and practices are in the scope of organisational practices research. Practices can be rituals, specialised language or (social) agreements. They are learned during socialisation and often tied to social groups or classes.

2.1.3 Management

After having explained organisational principles and having given an idea about the history of organisation science in the previous two sections, this sections aims to introduce aspects of management and relate it to organisation. Firstly, this serves the purpose of finding a possible category for Scrum and Holacracy. Secondly, this sections aims to provide an understanding of managerial principles to be used when analysing either approach in the following chapters. This section does not aim to provide a collection of management approaches or methods.

So, what is management? Leadership and management expert Stephen Denning (2011) has some interesting things to say about management:

> According to Matthew Stewart, management is 'a myth'. Professor Julian Birkinshaw of the London Business School tells us that management has 'failed'. Alan Murray of the Wall Street Journal warns that we are looking at 'the end of management', and author and CEO Jo Owen has written about 'the death of management'. Business guru Gary Hamel tells us that 'equipping organizations to tackle the future would require a management revolution no less momentous than the one that spawned modern industry.'

Despite being phrased in a rather radical and polarising manner, assessments like these reinforce the motivator of this thesis: disruptive, radically different and young approaches unleash their power in turning down paradigms that have been practice for decades. Depending on the definition of what management is, these words may gain more or less accuracy. The downfall of traditional paternalistic principles of steep hierarchy and rigid control supports the tendency that management "as we know it" is radically changing. So, what is management as we know it and where does management come from? The word management can be traced back to the two Latin words *manus* which translates to *hand*, and *agere* which translates to *perform*, *move*, *lead*, *do* or *guide*. Thus, management could be translated to *take by the hand* or to *guide someone/something by hand*. A Thesaurus search for management outputs "persons running an organisation" as a definition and proffers *administration*, *authority*, *board*, and *executive* as synonyms. In turn, the Oxford Dictionary defines management as "The process of dealing with or controlling things or people", adding "The people managing a company or organization, regarded collectively" and "The responsibility for and control of a company or organization" as sub-meanings in the context of the given definition with respect to management in an organisation. So, the common understanding of the word "management" relates it to governance, while attributing it to both a process and people or roles and positions, respectively.

A Short Note on History

But where does management as a formalised discipline come from? The previous section introduces Taylor's "Scientific Management" and Fayol's "Administration industrielle et générale" as two seminal works. Taylor's idea of management comprises his whole approach. In contrast, Fayol considers management to be one of six activities precipitating industrial undertakings next to technical or financial activities (see Yoo et al. (2006, p. 352)). Next to Taylor and Fayol, Barnard's work is considered overlooked in the context of early contributions to management (sciences) (see Fernández (2010, p. 469)). His main work is "The Functions of the Executive", which is based on his findings as long-time president and executive of New Jersey Bell Telephone Company. Aside from Barnard, Chong (2013, p. 59) also mentions Mary Parker Follett, who "was a political and social philosopher who examined business management as 'a significant part of the wider field of human government,'". However, the most prominent name when talking about Management may well be Austrian economist *Peter Drucker* and his work which he started publishing in the 1940s. *Management by objectives* is a well-known practice dating back to Drucker's book "The Practice of Management". His works include other books, namely "The Future of Industrial Man" or "Concept of the Corporation". Chong (2013, p. 64) highlights that:

> Drucker's view of management as a practice, and managers as dynamic, life-giving element in every organization deserves attention. Managers need to make a productive enterprise out of human and material resources, which includes managing workers and the organization of work. It recognizes that the quality of management and the integrity of managers are instrumental to the success of organizations.

Subsuming these seminal ideas, management strongly relates to the governance of humans (in an organisational context), which reinforces the literal understanding as explained in the previous paragraph. It is important to stress again that certain principles in management have also changed alongside the social ideas of humans as described in the previous section. Denning (2011, p. 16) mentions necessary changes in management practice: hierarchy and unity of command is not as relevant as it used to be, so there is a shift "from controller to enabler" and "from command-and-control to dynamic linking". This is also reflected in the way managers communicate: what used to be command, is now communication. All these changes go along a paradigm shift from management to *leadership*, which in its current understanding is

mainly characterised by a collegial, supportive and collaborative relationship of the leader towards the employee.

This development process represents the trigger and motivation for this thesis: During the last two decades the evolution of management approaches has sped up. It has been especially driven by the young field of the IT and software industry from which management innovations evolved. According to Abrahamson (1996) “innovations are significant departures from the state of the art in management at the time they first appear” stating that they do “not have to be an improvement over the state of the art” but “only differ from them”. Bernardis et al. (2016)[23] gives a wide overview on these latest management innovations and the following chapters are going to investigate the specifics of Scrum and Holacracy as two recent approaches to the world of management and organisation.

Having created a basic understanding of what management is, there is the question of how far management relates to organisation. In context with organisation Schreyögg and Geiger (2016, p. 53) only mention "management by exception", "management by objectives" (p. 80) and "evidence based management" (p. 130). Referring to the authors mentioned prior to management is a crucial contributor to organisational success. Thus, it can be summarised that management is an integral part of organisation and depending on the application context of the word management may refer to...

- a *group of people* in an organisation
- a *position* in an organisation (both also with respect to hierarchy)
- a *role* in an organisation[24]
- a *process* that ensures the realisation of the organisational objective or goal

A Terminological Jungle

The previous paragraphs are aimed at creating a principle understanding of what management is. Still, this far this thesis has not given any suffix for concrete forms of management. The literature review for this thesis resulted in a seemingly untamed terminological jungle with respect to categories or labels towards forms of management. For example, *management by objectives* is classified as *program* by Schreyögg and Geiger (2016, p. 80)[25], as *(’good practice’) idea* by Ingham (1994, p. 53) and as *system* by Dinesh and Palmer (1998, p. 363) and Mio et al. (2015, p. 330). *Management model* is another label that Have et al. (2010) use in their collection of more than 50 well-known practices that range from *balanced scorecard* and *business re-engineering* to *SWOT analysis* or *Kaizen*. They compare a manager’s job to the one of a successful cook, who acts in an entrepreneurial way building sustainable business with the way she cooks. As a means for categorisation they provide a classification of models into one of five main application fields:

- Strategy
- Organisation
- Primary process
- Functional processes
- Employees and behaviour

Obviously, these categories represent five of the main fields in management, like strategic management (corporate governance), for instance. For the purpose of further analysis in this thesis this categorisation

[23] See also Chapter "Motivation".
[24] Role refers to a certain job and job profile. It represents a concretised form of one of Fayol’s activities.
[25] See Chapter 2.1.4 for programs.

appears to be valuable. Next to the overall label of management model they also mention the term *management style* as some kind of personal approach of the manager and *management theory* as scientific framework. As another label Stephen Denning uses *management system* with respect to Holacracy in an article in Forbes Magazine.[26]

In this jungle of inconsistently used labels there is one term that finds a special place in literature: In the context of change in management approaches Abrahamson (1996) established the theory of *management fashion*. He introduces so-called *management fashion-setters* as "organisations and individuals who dedicate themselves to producing and disseminating management knowledge." In the argumentative context of rationality and progress he argues that "over time, managers will use new and improved management techniques". He defines management fashion as "a relative collective belief, disseminated by management fashion setters, that a management technique leads rational management progress." The clear definition of his term distinguishes management fashion from other vague and seemingly synonymously used labels like the ones previously mentioned.

2.1.4 Organisational Structure

This section explicates the most important aspects of organisational structure. The main goal of which could be related to the instrumental view on organisation. Thus, the term refers mainly to the way work as main objective of an organisation is structured. Structure represents rules and limitations of freedom that serve the purpose of control and governance. By distributing and coordinating work, defining standardised procedures and processes, distinguishing competencies and authorities single work packages are simplified and foreseeable, while with a growing number of positions the complexity of the overall system grows. However, the benefits of all these described aspects are the main reason for the existence of organisations. (See Schreyögg and Geiger (2016, pp. 26-29))

Referring to Schreyögg and Geiger (2016) the two main fields of organisational structure are *differentiation* and *integration*. That is, differentiation of work, which pretty well relates to the classical perspective of especially Weber's bureaucratic "division of labour" without emphasizing hierarchy (at that point) and integration of an organisation and the individual within it. Remarkably, the growing complexity in an organisation complicates integration, while simplifying single pieces of work or (sub) processes. Following Schreyögg and Geiger's model both goals are accomplished via the following phases or steps:

- Analysis
- Synthesis
- Division of labour
- Organisational processes
- Integration

This model relates to definitions like the one proposed by Pugh, Hickson, Hinings, and Turner (1968), who define the primary dimensions of organisational structure as:[27]

- Specialisation
- Standardisation
- Formalisation
- Centralisation
- Configuration

The following sub-sections explicate these dimensions grouped by the main aspects of differentiation and integration.

[26] See www.forbes.com/sites/stevedenning/2015/05/23/is-holacracy-succeeding-at-zappos/
[27] See also Aston group and "structuralist approach" as one approach in modern organisational theories in Chapter 2.1.2.

Differentiation

Analysis of a company's work is the first step of differentiation. Referring to Kosiol (1976) the goal of understanding what the company does is broken down into the actual building blocks of work or delivery packages, their interrelation, the timely manner they are executed, the internal package hierarchy and last their aims. All of which serve as basis for the phase of synthesis. Schreyögg and Geiger (2016, pp. 29 sq.) also mention other approaches that focus on variability, novelty, transparency or uniqueness as distinction criteria, plus the classical business administration perspective of company and process organisation.

Synthesis serves the composition of the building blocks analysed and shaped beforehand. Common terms in this respect are *position* as the smallest unit, that is governed by an *instance* and aggregated to a *department*, which, in turn, may be aggregated to main departments, etc. In case the department equals the company the term is not applicable and there are no departments. Thus, the existence of at least two departments is necessary. The structure that evolves this way adds *hierarchy* to the organisation. Given that any instance presides over the positions below it the aspect of *authority* is immanent. Traditionally, the result of this phase is given by the *organisation chart*. *Configuration*, as in the model proposed by Pugh, Hickson, Hinings, and Turner (1968, p. 78) also addresses the aspects of synthesis aggregated in an organization chart.

Division of labour aims at the aspect of who does what in an organisation. The most traditional way to divide work is *specialisation*.[28] In turn, Pugh, Hickson, Hinings, and Turner (1968, pp. 72-73) relate specialisation to division of labour and "distribution of duties among a number of positions". As a result of a study they propose "a list of sixteen activities that [...] are assumed to be present in all work organizations, and on which any work organization may therefore be compared with any other." These range from *public relations and advertising*, *sales and service*, over *legal* to *employment*.[29] What is called activity by Pugh et al. can also be labelled role as in contemporary approaches. A role however may not be exclusive. That is, an employee may hold multiple roles in different contexts. As this term appears to be common the chapters on Scrum and Holacracy are going to make use of it instead of activity.

Other approaches to division of labour include object oriented division (e.g. orientation towards products or markets) or regional division (e.g. multinational corporations). See Schreyögg and Geiger (2016, pp. 42-65).

Integration

Integration, which is also called *coordination*, aims at bringing together the pieces of work generated by single individuals. As mentioned earlier in this section, with growing distinction and organisational structure overall complexity grows alongside clearer rules for single pieces of work. Therefore, integration serves the purpose of handling this complexity. Nonetheless because of this aspect, Schreyögg and Geiger (2016) point out that integration gets more attention than differentiation does. The approaches to drive integration described in this section relate to what Pugh, Hickson, Hinings, and Turner (1968, p. 74) classify as *standardisation*. They tie standardisation mostly to *procedures*, which they define as "an event that has regularity of occurrence and is legitimized by the organization". This section refers to procedures mainly with respect to so called programs. Given, that some of the approaches listed in this section

[28] Obviously, specialisation can already be related to the representatives of the classical organisational theories - Taylor, who pled for specialisation of the smallest possible granularity, and also Weber and Fayol who already included division of labour as integral part in their works. See Chapter 2.1.2.

[29] These are the terms used in Pugh, Hickson, Hinings, and Turner (1968, p. 92). Obviously the first one would be called marketing nowadays and employment refers to what is now common as human resource management.

did not exist when Pugh et al. published their work, standardisation in their terms may also apply to other approaches. Formalisation as in the model of Pugh et al. has the same characteristics as in Weber's bureaucratic model and refers to the degree of rules, procedures or communication brought to a written form. In the model presented in this section formalisation is not considered directly.

Hierarchy

A central means to achieve integration is hierarchy by *unity of command* or *functional management* respectively *multi-line systems*. These two approaches differ with respect to the shape of the command hierarchy. Whereas the first narrows towards to the top of a pyramid, the latter allows parallelism of instances. See the paragraph on "synthesis" in the previous section for a remark on the aggregation of instances to hierarchy. In Pugh, Hickson, Hinings, and Turner, 1968 hierarchy is referred to by centralisation. That is, centralisation is about the convergence of authority and power. They propose a six step scale of centralisation with 0 being the lowest operational level, up to 5 for the highest level of centralisation impersonated by instances above general management or executive level, e.g. a board of a group or a city council.

Programs

Another approach to deal with integration are *programs* that provide pre-defined and standardised solutions to recurring and thus known challenges or requirements. Schreyögg and Geiger (2016, p. 75) define programs as "verbindlich festgelegte und autorisierte Verfahrensrichtlinien [...] die das reibungslose Verknüpfen verschiedener spezialisierter Tätigkeiten sicherstellen sollen [...] ohne Einschaltung einer Instanz".[30] The reduction of the previously mentioned complexity is the main goal of programs. Management by objectives, risk management or compliance are possible examples for programs. (See Schreyögg and Geiger (2016, pp. 75-81).)

Matrix Organisations

Next to hierarchy and programs, *self-organisation* methods are the next major approach to integration. This relates to a trend to *horizontal adjustment*. While *vertical adjustment* refers to the hierarchical chains of command, horizontal adjustment refers to coordination among equal organisational units or contributors. The two dominant approaches in established organisation theory are the *matrix organisation* and the *process organisation*.[31] The label established is chosen especially to highlight the contrast to these young approaches that are mostly omitted in organisational science, two of which are Scrum and Holacracy. In a matrix organisation object and job are combined in a matrix structure. That is, a corporation that offers food applying a matrix structure could have a unit for non-alcoholic beverages, one for alcoholic beverages, one for cereals, another one for canned food and one for deep-frozen food. What makes that structure a matrix structure is that every unit contains all jobs from research and development, production and product management, over marketing and sales to accounting or legal. Usually the only instance above this matrix structure is the board.

Project Organisations

While a project is characterised by its one time character, there are also project organisations. The common definition of a project is a one-time undertaking with a defined beginning and end that transforms a pre-defined input into an output that is also previously agreed upon. In addition, the transformation may also follow a pre-defined process. Schreyögg and Geiger (2016, p. 99) add novelty as characteristic to the

[30] From German: programs are "binding and authorised procedures designed to ensure frictionless conjunction of various specialised activities without intervention of an instance."
[31] See Schreyögg and Geiger (2016, pp. 86-99) for the matrix organisation and pages 99-103 for the project organisation.

one time attribute of a project. In contrast to a project and its emphasis on a one time transformation process, a project organisation elevates projects to temporary organisational units, which makes them relevant with respect to organisational structure. Usually project organisations do not reach the extent of a matrix organisation, as certain administration jobs, e.g. accounting or human resources are not part of the project unit, but parallel ones with respect to hierarchy. Still, they are may be appointed a project manager with vertical authority. (See Schreyögg and Geiger (2016, p. 101).)

Clearly, self-organisation goes alongside a major paradigm-shift from a pyramid shaped hierarchy to a different one. As such it has been subject to wide research. The major benefits and drawbacks vary alongside the size of the organisation. That is, what makes for an advantage in a small organisation, may result in a disadvantage in a larger organisation - e.g. sped up decision processes versus transparency, or awareness of other (outside) perspectives and a more holistic view on the business versus increased coordination cost in a multi-line system.

Lateral organisation

Another approach for integration are lateral organisations. These approaches go beyond the extended horizontal adjustment and coordination of the previously described approaches. Rensis Likert's work in the 1960s, especially *System 4*, is considered seminal to lateral integration, which emphasises a team dimension. With respect to teams as discussed in the next section Likert's ideas are relevant.[32] The main aspects of lateral organisation models are (see Schreyögg and Geiger (2016, p. 167)):

- *Empowerment*, which refers to a shift in autonomy and authority by empowering employees. This includes transfer of knowledge alongside certain competencies for autonomous decision. Obviously, this thwarts centralisation as proposed by Pugh et al.
- *Horizontal cooperation*, which refers to the way (project) teams interact among each other. The interacting teams usually share different tasks or fields of expertise and coordinate and cooperate one below the other as needed. This term is also referred to as self-organisation, which relates to flat hierarchies.[33]
- *Cross-linked project groups*, which refers to the set-up of teams composed of experts that interact in a networked way of applying horizontal cooperation autonomously. This results in the person fitting the requirements getting to do the job, which again results in higher intrinsic motivation (see Schreyögg and Geiger (2016, p. 171)). Based on a study Proehl (1996, p. 6) points out that the complementarity and mutual respect and accountability alongside clear project definition, merits of the project and positive attitude are key for the success of cross-functional teams.[34]
- *Loose coupling*, aims at the capability to re-arrange organisational units matching the current needs. Units or teams therefore need to be self-contained and autonomous, in order to allow this desired flexibility.
- *Organizational citizen behaviour*, refers to the way employees or organisational members act within an organisation. If they act like "good citizens" they are supportive, help out new colleagues and are willing to help in critical situations without emphasising their personal benefits in return.

An emphasis on team aspects alongside a decrease in hierarchy and a shift in authority is the obvious common denominator of the aspects.

[32] See Schreyögg and Geiger (2016, p. 103) and Schreyögg and Geiger (2016, pp. 153-164) for a detailed description of System 4.
[33] See Schreyögg and Geiger (2016, p. 170) for continuative references.
[34] See also criteria for successful teams by Sheard and Kakabadse (2002) in Chapter 2.1.5.

Other works in this category are the so-called *network models* including Mintzberg's *adhocracy* or Kellog's *heterarchy*. These approaches build upon shortcomings of traditional approaches with respect the speed of decision processes slowed down by growing hierarchy. Schreyögg and Geiger (2016, p. 104) point out that

> Hierarchie wird dabei nicht länger als stabile Über- bzw. Unterordnung gedacht; die Entscheidungsautorität formiert sich in Abhängigkeit des zu lösenden Problems quasi immer wieder neu [...] Heterarchie verzichtet daher nicht gänzlich auf Über- und Unterordnung, sondern verknüft diese mit spezifischem Expertenwissen[35]

Multinational corporations with partly self-sustaining, still highly interwoven structures and ongoing re-distribution of authority are an appropriate example for successful applicability of network structures.

Process organisation

Schreyögg and Geiger (2016, p. 109) call *process organisations* the third way. *Business (process) re-engineering* as a typical field of application for information systems, is a common example for this way of integration.[36] The approach aims to reduce complexity grown by deep specialisation by reducing division of labour. The optimisation of the actual processes may lead to boosts in efficiency and productivity at the cost of possible redundancy. Information technology and the possibilities in applying it enable this approach. Depending on the actual field of work it may be applicable or not. That is, routine and administrative work may fit this approach better than highly specialised tasks that require expert knowledge and that lack routine character.

Summary

This section demonstrates important theoretical aspects of organisational structure. It describes organisational structure as mostly intangible top level and abstract entity of an organisation. The basic distinction is made between aspects of differentiation and integration. Differentiation refers to what labour is realised an organisation and how its execution is divided among the organisational members respectively employees. In turn, integration deals with the aspects of orchestration and the growing complexity caused by specialised.

Key aspects of organisational structure are governance, hierarchy and processes that evolve as result of both differentiation and integration. These aspects have to be looked at in the following chapters about Scrum and Holacracy. This chapter demonstrates a number of concrete approaches, which refer to various sources and especially as for the younger approaches mostly come from within organisations, e.g. matrix organisation, project organisation or programs. From a theoretical perspective the work of the so called Aston Group is a key reference (Pugh, Hickson, Hinings, and Turner, 1968 and also Pugh, Hickson, and Hinings, 1969).

After having discussed organisational structure as some kind of container the next section moves down one level into groups of humans and describes aspects of collaboration.

[35] From German: "Hierarchy is no longer thought of as stable super or suborder; decisive authority re-forms itself over and over depending on the problem to be solve [...] Therefore, heterarchy does not fully waive super or suborder, but associates them with specific expert knowledge"

[36] The term *information systems* in this context refers to the domain of information systems, which is also known as business informatics in education.

2.1.5 Collaboration

The second important aspect related to organisation and labour in the scope of this thesis is collaboration. Referring to the five generic problems aimed at by organisation, collaboration is not a literal dimension, but one central aspect in the dimension of integration of individual and organisation. While the previous section discussed integration as an aspect of structure serving the organisation, this section considers individuals, as well.

While machines act in a way that can be controlled and the orchestration of which can be designed, engineered and controlled, this does not apply to human beings. Therefore, collaboration is a topic that deserves separate consideration. Certainly, collaboration is not limited to organisations, but occurs in many inter-human contexts. However, it is in the highest interest of an organisation that its members or employees (in an economic) sense work together smoothly. In collaboration the participants of an organisation share a common organisational goal. On the level of integration of individual and organisation the goal may well be just a sub-goal, which still serves the overall one. Ascending hierarchy the goal served by collaborating gets closer to the overall organisational goal. Next to the common sense of collaboration as a form of directed work accomplished by multiple persons that contribute to a common goal, collaboration can also be viewed (and defined) from another perspective: Slater (2006) discusses collaboration in the light of its antithesis of *isolationism*. Thus, the emphasis lies on doing things together as opposed to doing things alone. Although this may seem trivial, she discusses how collaboration evolves from the circle of participants in an organisation, as well as organisational pitfalls of collaboration being killed from within the organisation. So, criticism may be rather superficial.

Depending on the direction from which collaboration is considered, it may take different forms ranging from communication and coordination to group aspects.[37] Depending on the direction in hierarchy coordination can be *lateral* respectively *horizontal* or *vertical*. Whereas, vertical coordination may also involve delegation (of decisions), which rather belongs to the structural view on integration than to the collaboration perspective which is tied to horizontal coordination. Both directions of coordination have been explained in the previous section, which made obvious that there are many aspects to coordination. For the sake of focus and clarity there are three main aspects of collaboration that this section discusses: events, teams and communication. The following three sub-sections outline one topic each.

Events

Given, that collaboration refers to a group of humans doing something together in a directed way, this still can be achieved separately or together, or put more technically, synchronously or asynchronously. Other than a spontaneous get-together of organisational members, events are a formalised way of congregation. So, in this thesis the term *events* is used synonymously and in summary for meetings, organisational rituals, etc.[38] Often, these events are parts of integrating mechanisms like programs and procedures. From the perspective of efficiency, events happen in a standardised way ideally, so that for certain requirements certain events are foreseen, which again serves the higher purpose of integration by arranging collaboration. Hence, a central role of meetings is the promotion of collaboration (see Lehmann-Willenbrock et al. (2016, p. 1295)).

Meetings are the most common type of events in organisational everyday life. A meeting could be defined as *a gathering of at least two persons* (not necessarily organisational members) *that serves an (any)*

[37] See also the beginning of the previous section and the synonymous use of integration and coordination.
[38] Scrum, for instance, also uses the term events.

organisational objective. The purpose of a meeting may be manifold: A. Allen et al. (2014, p. 799) propose a taxonomy of reasons for meetings and argue that meetings deserve more attention, both by researchers and by practitioners. As highlighted by Lehmann-Willenbrock et al. (2016) employees spend a large amount of their working time in meetings and meetings are not necessarily (perceived) useful. They point out that half of today's meetings are perceived ineffective. In the same article they relate meetings with Weick's idea of sensemaking, highlighting that "meetings have been discussed as the most common workplace activity that is aimed at sensemaking" (see Lehmann-Willenbrock et al. (2016, p. 1296)). They also relate certain behaviour to effective meetings: from a functional perspective (pro-actively) supporting the meeting generating ideas and planning ways to make sure that ideas or decision taken in the meeting are taken over into everyday life and become practise. Allen et al. (2014, pp. 1065-1066) mention a number of criteria for meeting effectiveness:

- Use of an agenda
- Observance of the scheduled meeting time, incl. starting on time.
- Appointment of a facilitator
- Conduction of the meeting at a quality facility
- Functional behaviour by participating in the creation of solutions and taking responsibility

Finally, there is *meeting citizenship behaviour*, which relates to the definition of citizenship in lateral organisations.[39] That is, the participant ensures meeting effectiveness and success by her behaviour (e.g. by being prepared for a meeting, which is a very well-known source for ineffective meetings). In contrast criticism directed to other persons and (constant) complaints are considered as *counterproductive meeting behaviour*.

However, the importance attributed to meetings in studies like these fortifies to role of meetings. So, despite negative practice it can be argued that meetings are a very important means to form and practice collaboration. Therefore, meetings are the first aspect of collaboration to be discussed when analysing Scrum and Holacracy in the subsequent chapters.

Teams

There are many sides to teams. Teams can be organisational units of grouped employees serving any purpose from objects like teams of call center agents responsible for different products to fully self-contained and cross-functional, self-organising teams in software engineering.[40] Referring to organisational units, team is often used synonymously for department, especially in younger industries or start-ups. (See Schreyögg and Geiger (2016, p. 41) Certainly, not every group of humans in an organisation is a team and the development of it takes time. The phases of *forming*, *storming*, *norming* and *performing* are a well-known model for the process of developing well-functioning teams. Sheard and Kakabadse (2002) highlight the social structure and every individual's contribution to it as characteristics of an effective team. They distinguish teams from loose groups and propose a list of nine key factors that make for an *effective* team:[41]

- *Goals* are clear and understood by all team members
- The team is aligned along *priorities* in a cohesive manner
- *Roles* and *responsibilities* are agreed on and understood by all team members

[39] See Lehmann-Willenbrock et al. (2016, p. 1296) for meeting citizenship behaviour, and also Chapter 2.1.4, section "Lateral Organisation".
[40] The term object refers to its use in Chapter 2.1.4. I.e. an object is a product or a market.
[41] See Sheard and Kakabadse (2002, p. 138). They also define the values for lose groups, which are irrelevant at this point.

- Team members are *self-aware* and behave according to the needs of the team
- *Leadership* takes the role of a catalyst
- The team has become an accepted *social system* with its own group dynamics
- *Communication* happens in an open way
- *Work objectives* (content) are influenced by the organisation, but not controlled
- The team as a stable and supported *infrastructure* provided by the organisation

As another attribute, in the context of projects teams often have a *temporary* character. In any case, a team is a group of people that pursues a common goal. Hence, a team can be considered a group of people that serves the purpose of collaboration.

From a historical perspective the first scientifically encountered team dates back to the Hawthorne Experiments.[42] However, these have just been observed and not yet explicitly appointed. During the following decades group-work became more and more common, especially fuelled by proponents of the human resources approach. Schreyögg and Geiger (2016, p. 142) even point out that Argyris and others deemed traditional organisation uneconomic because of its ignorance to and lack of group work. Since the 1990s group work continued becoming standard in more and more branches, the automotive industry being an important example. Partial autonomy and interdependence became important attributes of teams. Hence, organisational structure also was affected by the trend to team work, hierarchies changed (and flattened) and both horizontal coordination and delegation as explained earlier partly gained relevance.

There are many other aspects to teams that have been researched and that are beyond the scope of this thesis, e.g. group dynamics, conflicts and other social phenomenons. The subsequent chapters need to explicate how the researched approaches consider teams and the role they play. As a last point with respect to collaboration the next section outlines aspects of communication in an organisational sense.

Communication

The previous subsections explained events as a directed gathering of humans with a certain purpose and teams as cohesive groups of humans with certain attributes. There is one more important building for collaboration: Communication, which principally happens on every organisational level. However, in the context of collaboration communication goes beyond the spoken word. There are aspects such as the power of language and even *story telling* as means in leadership (see Forster et al., 1999). Furthermore, communication can result in inclusive or exclusive effects. For instance, if there is an ethnic majority in a multinational organisation or simply a multinational team and its members ignore the common tongue. The effects of which go beyond excluding participants from a conversation. Another form of the same issue is given by specialised or expert language. Most other employees may not be able to follow a specialised conversation of legal or IT staff. That is, the challenges in spoken language in organisations are manifold. Common language, as proposed in Holacracy, may help to overcome some of these challenges.

However, with respect to organisation, there is more to communication than the spoken word. Communication as a means of collaboration can be related to *formalisation* in the sense of Pugh, Hickson, Hinings, and Turner, 1968. That is, communication also involves documents, specifications, planning sheets or protocols, which may appear bureaucratic, banal and maybe neanderthal in terms of organisation science. Of course, considering modern technology also tools that support and also change communication are important means that foster communication. These aspects need to be considered, when discussing communication in the following chapters.

[42] See Chapter 2.1.2.

Summary

This section demonstrated collaboration as an important aspect of the integration of individual and organisation. It outlined important aspects focussing on events, teams and communication. Events were described as formalised way of purposeful congregation and meetings as the most prominent form of an event. Next, various aspects of teams have been pointed out ranging from a discussion about the term itself and historic aspects to team development and effectiveness. By all means, a team is a group of humans within an organisation that jointly works sharing a common goal. Finally, communication has been addressed highlighting aspects beyond the spoken word. In this respect, this section underlines forms of communication that strongly relate to the organisational dimension of formalisation like documents, protocols, etc. All these facets are important criteria for the analysis of Scrum and Holacracy later on.

After having descended to the dimension of groups of humans and their interrelations in an organisational context, the next section finally discusses aspects of the individual as atomic organisational unit.

2.1.6 Motivation

Advancing from the level of the organisational contributors to the smallest possible granularity there is the perspective of the individual. Therefore, this section discusses aspects relevant to the individual. Following the five generic problems aimed at by organisation the individual and motivation as a core human need related to work belong to the dimension of *integration of the individual and organisation* (see Schreyögg and Geiger (2016, p. 19)). This would make for one section with the previous section. As this thesis pursues a structural perspective of organisational levels from the top level of organisation as abstract entity down to the individual as atomic member of an organisation, aspects of individuals are considered separately. Besides, motivation is an individual dimension in the first place. A team can only appear motivated, if the individuals within it are motivated.

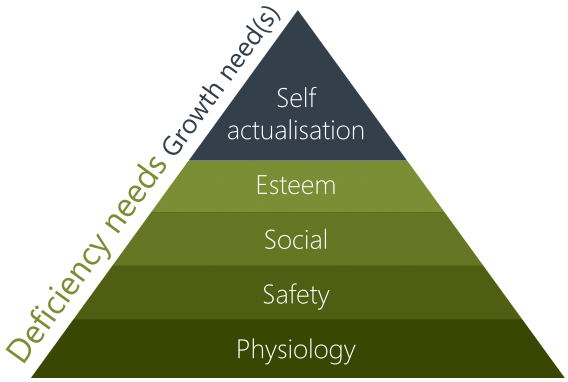

Fig. 2.3.: Maslow's Hierarchy of Needs

Extrinsic and Intrinsic Motivation

Going back to Taylor and the homo oeconomicus the main motive for humans to work was deemed remuneration or monetary incentives. As shown throughout the subsequent chapters that image of humans and organisational members has been overturned decades ago. Following this outdated perspective humans are only extrinsically motivated. *Extrinsic motivation* refers to motivation from the outside. This does not necessarily have to be triggered by monetary incentives. Competition may also be an extrinsic motivator. The person competing against another person is motivated to win. The opposite of extrinsic motivation is *intrinsic motivation*, which is a kind of motivation that comes from within. An intrinsically motivated person wants to do their job, because of reasons that can be found within them. Joy may be the most obvious and self-evident one. No matter if intrinsic or extrinsic motivation, a motivated employee performs better. So, from a simple economic perspective motivation has to be a top priority.

Maslow's Hierarchy of Needs

Obviously, there is the question of what motivates humans? In order to answer this question human needs have to be looked at. Maslow's *hierarchy of needs* is the classic model to start answering this question. As shown in fig. 2.3 the hierarchy of needs has a pyramid shape consisting of five levels. The lower the need in the pyramid, the lower is the need for humans. So, the first four levels are summarised as the so called *deficiency needs*. That is, when absent, humans sense them as a deficit. Obviously, as a primary and most basic need humans need to eat, sleep and satisfy other *physiological needs*. As soon as these are satisfied, humans crave for *safety* in any sense, ranging from personal safety over workplace security to financial security. Humans that have reached this level of satisfaction of needs care about *social* contacts, community aspects, a feeling of social affiliation and of being loved. As a final deficiency need humans want to be appreciated and valued, which reflects in the level of *esteem*. Having cleared their perceived deficits, humans strive for *self-actualisation*. What distinguishes the four deficiency needs from the fifth need for self-actualisation is the perspective or power of the need. While, the absence of any of the four deficiencies is experienced vital and as literal deficit its satisfaction is not tied to motivation. In contrast, self-actualisation which reflects in independence, in a desire to be the oneself and in an urge for growth has potential to be a large motivator.[43]

Based on a survey, Stum (2001) translates Maslow's pyramid to the so called *Performance Pyramid*, which refers to workforce needs. Hence, it maps the general needs in Maslow's hierarchy to contemporary working conditions and needs. The following list shows the five "new" criteria in a bottom up manner (so, the first list entry represents the lowest, widest level of the pyramid and the last represents the highest and most narrow one). Obviously, by adding *work/life harmony* as highest need this model adds a new dimension that appears to be a very important issue during last years. In contrast, the rest may differ from Maslow's model in terms of phrasing, but shows clear similarities and a mapping to workplace needs.

- Safety/security
- Rewards
- Affiliation
- Growth
- Work/life harmony

Two Factor Theory

Another important approach to motivation is Herzberg's *Two Factor Theory* introduced in 1959. Similar to Maslow's distinction between deficiency needs and growth needs, Herzberg's model distinguishes between *hygiene factors* and *motivators*. Both factors refer to job satisfaction, which is why they are also called satisfiers and dissatisfiers (see DeShields et al. (2005, p. 131)). Hygiene factors are similar to deficiency needs: if they are not satisfied they are experienced as missing. However, their presence is not perceived as enriching. Thus, they have the power to decrease job satisfaction. Referring to Ruthankoon and Olu Ogunlana (2003, p. 334) hygiene factors are "company policy, supervision, relationship with supervisors, work condition, relationship with peers, salary, personal life, relationship with subordinates, status and job security". Whereas, the presence of motivators is felt in a positive way and make for actual job satisfaction. Motivators are "achievement, recognition, work itself, responsibility, advancement, and possibility for growth." (See again Ruthankoon and Olu Ogunlana (2003, p. 334)) The opposite of either dimension is the neutral state of no (dis)satisfaction instead of a swing to the other dimension.

[43] See Crumpton (2016) for a recent discussion about Maslow's roughly 70 years theory.

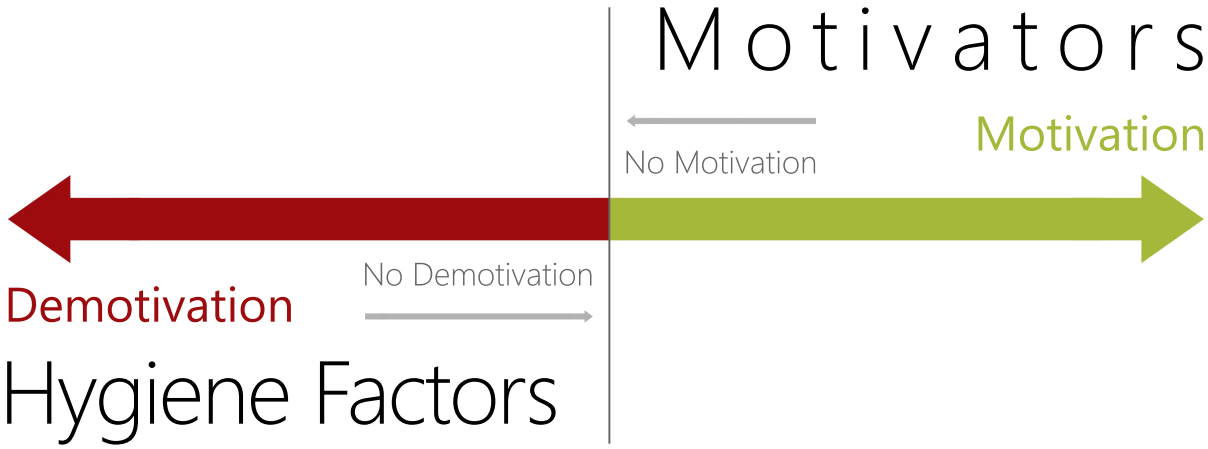

Fig. 2.4.: Herzberg's Two Factor Theory

Theory Y

Viewed from a perspective of historical development the next important approach in context with motivation and organisation is McGregor's *Theory Y* (See McGregor (1960)). Theory Y complements *Theory X*, which mirrors a "Taylorian" perspective of employees. According to this theory employees are not interested in and rather reluctant towards work. Plus, most people dislike responsibility. So, they need to be thoroughly controlled and punished (or sanctioned) if needed, because money as a sole motivator cannot alter the apathy. Obviously this can lead to a self-fulfilling prophecy when applied as a managerial guideline. Schreyögg and Geiger (2016, p. 133) even call the practice of Theory X a vicious circle leading into frustration and inner dismissal. Theory Y, in turn, assumes that humans are willing to work at efforts like in sports and that they find pleasure in taking responsibility. They perceive goals as binding and motivating if these align with their personal ones. These traits are wide-spread and not available to a small group of people as proposed by Theory X. Obviously, the perspective of Theory Y aligns well with principles of modern organisational theories. Self-responsibility and self-control, flat hierarchies and delegation of competency are some important examples for the implementation of the findings in this school of thought. Schreyögg and Geiger (2016, p. 135) highlight that Theory Y does not principally challenge hierarchy. Still, meeting employees at the same level may be a valid and crucial contributor to sustainable economic success of an organisation. Based on a quantitative study Russ (2011, p. 832) suggest that managers following Theory Y create "positive outcomes (e.g. higher quality decisions and increased productivity) for the organization", which fortifies to this postulate. Finally considered from a historic perspective rather than its inherent motivation perspective, Carson (2005, p. 459) highlight the importance of Theory Y as it "bore such fruits as self-directed work teams, self-management, job enrichment, and empowerment, to name a few."

A similar argumentation can be found with psychologist Chris Argyris.[44] In his work he considers pursuit of maturity versus traditional organisational structures (division of labour, hierarchy, chains of command and restricted control span). According to Argyris these structures fit childish behaviour rather than the mature behaviour of an adult. (See Schreyögg and Geiger (2016, p. 141))

Job Characteristics Model

Another important concept with respect to the impact of certain job characteristics to job satisfaction and other attributes to work is the *Job Characteristics Model* (JCM) by Hackman and Oldham. The model

[44] See also previous "Teams" in the previous section.

consists of the five job characteristics of *skill variety*, *task identity*, *task significance*, *autonomy* and *feedback*. These characteristics, in turn, influence "critical psychological states" that are relevant for work outcomes: the employee's experience with respect to meaningfulness and responsibility, as well as her knowledge of the work results. Summed upped in a simple equation these characteristics result in the so called *Motivational Potential Score*, which allows rating a job alongside its potential to (positively) affect the employee (see Singh et al. (2016)). The higher the MPS, the higher the potential that the employee is motivated with the outcomes of her job, which results from one or more of the psychological states. So, a high MPS may be due the employee's experienced meaningfulness.

$$MPS = \frac{skill\ variety + task\ identity + task\ significance}{3} \cdot Autonomy \cdot Feedback$$

Finally, Singh et al. (2016, p. 695) mention five specific work outcomes that may result out of the model:

- General job satisfaction
- Perceived job performance
- Internal work motivation
- Satisfaction with growth
- Thoughts of quitting

Mastery, Autonomy, Purpose

In a popular work Pink (2013) points out three key motivators that apply for work that involves cognitive efforts: *mastery*, *autonomy* and *purpose*. While monetary incentives can be considered as hygiene factor in the sense of Herzberg's model and certainly extrinsic, these three are mostly intrinsic factors. This idea also strongly contributes to Theory Y. Employees enjoy working, want to be good at what they do, plus both dislike and do not need rigid control to do their job.

Mastery

Humans want to be good at what they do, especially at things they enjoy doing. It does not matter if the job poses a challenge to the person working on it. If the person experiences mastery, internal rewards pass beyond any external incentive. Investing time and money into photography equipment or classes in one's free time, attending cooking course, playing a musical instrument or going beyond personal limits at doing sports are good examples of mastery as motivator. If not done professionally there is no monetary incentive and probably no direct extrinsic motive. Thus, mastery is a powerful intrinsic motivator. In the sense of Herzberg mastery is a motivator in the sense of achievement.

Autonomy

Humans that work on tasks that involve cognitive work strive to utilise their skills in their own way. Applying Maslow's hierarchy humans are motivated by self-actualisation. Perceived lack of autonomy, rigid control and extreme hierarchy thwart this need. Applying Herzberg, autonomy relates to responsibility, which is a clear motivator. Finally, responsibility is also one of the critical states in the JCM.

Purpose

Humans want to do things that make sense and that they do for a reason. Having to do work for the sake of just doing it causes frustration and kills motivation. In the sense of the JCM an employee who is given or experiences purpose in her work experiences meaningfulness and may therefore find satisfaction in the work she does.

Other Theories

Next to these best known theories there are still more theories that deal with motivation. However, describing them all lied beyond the scope of this thesis. Even following the name pattern there is Theory Z:

> Extending the foundational principles of theory Y, theory Z emphasizes the importance of fostering an organizational culture associated with trust, freedom, and collaboration by addressing employees individual needs, personalities, and goals. (See Russ (2011, p. 834))

Other theories include "Theory of Justice" (Adams (1963)) by John Stacey Adams, "Expectancy Theory by Victor Vroom (Vroom (1964)) or "Motivation Model" by Lawler and Porter.

As a final remark and as conclusion to this and the previous section: at the intersection of team work and motivation Delgado Piña et al. (2008) point out the relevance of team work for employee satisfaction and commitment to an organisation. So, inter-human aspects are - without any surprise - interwoven. Of course, this may also cause negative (social) effects like subjective negative perception of team work, shirking or bullying, for instance. After all, both dimensions need to be considered in the following chapters when looking at aspects of collaboration and motivation. Does the way organisational members collaborate applying the principles of Scrum or Holacracy stimulate motivation and how do motivated employees in these systems collaborate?

Summary

This section covers important aspects with respect to motivation and job satisfaction. Alongside their historic development starting with the ideas of Maslow's *Hierarchy of Needs* and Herzberg's *Two Factor Theory* the central concepts and findings to motivation have been demonstrated. Other models that have been mentioned in this section include McGregor's *Theory Y* and the *Job Characteristics Model* by Hackman and Oldham. It can be considered as common denominator of all ideas that are still considered valid that intrinsic motivation of employees is crucial for economic success of any organisation. All state-of-the-art methods fortify to the idea of a human being that strives for self-actualisation and purpose following the aim to be good at what they do. So, it can be said in summary that motivation plays a key role in the canon of success criteria for any management approach or organisation form.

2.1.7 Summary

This chapter discusses three main dimension of organisations. Its key aspects are:

- **Organisational structure**. This chapter shows organisational structure as the top level dimension or skeleton to an organisation. The historic development and aspect of different approaches has been drawn. A basic distinction between tasks in differentiation and integration was given, showing that the emphasis lies on integration, which refers to handling the complexity that grows by specialisation and division of labour. Approaches covered in this chapter range from single and multi-lined hierarchies over matrix organisation to lateral or process organisations.
- **Collaboration**. Collaboration has been demonstrated as the middle layer in organisations, a layer in which humans work together contributing to common goals. The central aspects in this section were events, in which employees get together for a certain purpose, teams which make for most beneficial unit of structure and communication which has more to it than the spoken word, but supportive artefacts like documents, protocols, etc.

- **Motivation**. As the lowest and atomic dimension this chapter discusses individuals and their needs. This chapter explains why from an economic perspective motivation of employees is crucial. It sketched relevant work and theories with respect to motivation starting with the well-known *Hierarchy of Needs* by Maslow, Herzberg's *Two Factor Theory* or McGregor's *Theory Y* and the *Job Characteristics Model* by Hackman and Oldham and went down to mentioning newer ideas like Theory Z.

  After having created the theoretical frame for the analysis of Scrum and Holacracy in this section, the subsequent ones present these two approaches following the structure given in this section.

2.2 Scrum

This chapter explains the theoretical and conceptual basics of Scrum. It consists of three parts, two of which illustrate Scrum matching the organisational dimensions of this thesis. Scrum theory does not provide concepts that directly address the individual in terms of motivation. Therefore, aspects of the individual can be found related to roles. A relation to the individual and motivation is drawn in the analysis in Chapter 5.1.2. This chapter consists of:

- An **introduction** covering Scrum basics in section 2.2.1
- A **structural perspective** on Scrum in section 2.2.2 focussing on aspects of hierarchy, processes and roles
- A perspective on **collaboration** in Scrum in Chapter 2.2.3 focussing on events, routines, team aspects and supporting Artefacts
- A brief selection of example implementations of Scrum in Chapter 2.2.4

The main source of information for this chapter is "The Scrum Guide" (see Schwaber and Sutherland, 2013). Despite being no scientific publication it is the official specification document maintained by the creators of Scrum and the organisation fronted by them. Scientific publications relevant for this master thesis like Ovesen (2012) and various studies. Furthermore this chapter links to a number of expert books, that are to different degrees also referred to in related publications.

2.2.1 Basics: Scrum in a Nutshell

Scrum is an *iterative incremental* management method coming from the domain of software engineering. The creators of Scrum, Ken Schwaber and Jeff Sutherland, define Scrum as

> "A framework within which people can address complex adaptive problems, while productively and creatively delivering products of the highest possible value."[45]

Scrum defines a set of *roles*, *Artefacts* or *documents* and an *iterative incremental process approach* including a well-defined set of *events* or *meeting routines*. Although mainly associated with projects, Scrum does not necessarily have to be used for regular projects only, but may also be applied to long running product development or service projects[46]. Scrum has its roots in the early 1990ies and found the first conference

[45] See Schwaber and Sutherland (2013, p. 3). (Obviously and despite its origin in software development that the method as such is purely addressing the creation of software, but the solution of problems in an organisational way and the delivery of products. That is an application to any other domain is designated.)

[46] See Benefield (2008), who describes the roll-out of Scrum and agile practices in 150 teams at Yahoo!, or Atlas (2009) for the "The Story of Scrum at amazon.com".

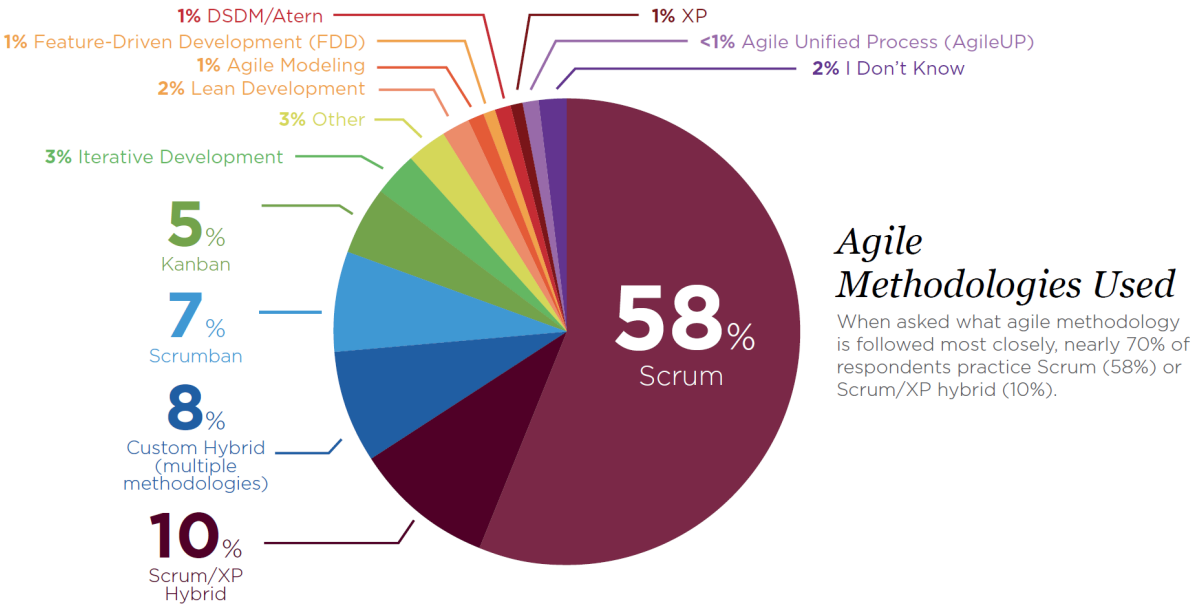

Fig. 2.5.: Share of development methods, source: VersionOne (2015)

presentation at OOPSLA[47] in Austin, Texas in 1995. As by now, Scrum is the most used management method in agile software development, which has been shown in quite a number of studies. According to "The 10th Annual State of Agile Report"[48] in 2015 58% of companies applying agile development methods use pure Scrum, or even 68% including the ones that use a hybrid approach, leaving a share of less than one third to all other agile management methods.[49] Figure 2.5 shows the shares collected in that survey. Bustard (2012), in a study conducted locally in Ireland in 2010 among 37 software development companies, found that 80% of the companies that use agile management methods use Scrum. The trend to adopt agile management methods is not new and apparently not temporary, as West and Grant (2010) recorded that "agile adoption goes mainstream" in another study conducted by Forester Research already at the beginning of this decade. Given the age of the study and complementing, current ones like VersionOne (2015) the popularity of Scrum and thus its share has not dropped, but rather increased.

The central artefact (or also document) in Scrum is the *Product Backlog*. The Product Backlog can be considered the collection of all planned features. That is the Product Backlog represents the object of a venture or a company (at least on its scope). From a process perspective Scrum is based on *iterations*, so-called *Sprints*, which represent a unit of time usually between 2 and 4 weeks. In order to create value and new product *Increments* for customers, *Releases*[50] are defined. A Release is realised within a number of Sprints. For communication Scrum defines a set of meetings, both for planning and approval, for team-aspects, and for inter-team-communication. For *controlling* there are also a set of tools, e.g. the so-called *Burn-down Chart*

An aspect that is worth mentioning separately is that Scrum breaks with the traditional role of a project manager and introduces the roles of *Scrum Master* and *Product Owner*, next to the actual (development)

[47] See Seikola (2010, p. 11). OOPSLA: Annual *Object-Oriented Programming, Systems, Languages & Applications* conference oopsla.org.
[48] See VersionOne (2015).
[49] As an interesting side-remark Holacracy is not mentioned in the current and latest version of the survey from 2015. The reasons of which may need to be subject of subsequent chapters.
[50] Sticking strictly to "The Scrum Guide", Schwaber and Sutherland (2013), as the official Scrum specification Releases are not mentioned. However, in practice Releases are the actual artefact or good that is delivered to a customer. Schwaber and Sutherland (2013) use the term *Increment*, which is explained in the subsection *Artefacts* of the section 2.2.2. As the Increment is only the technical term for a potentially shippable result of a Scrum iteration, the practically used term Release is used for the work result that is actually *released* to the public.

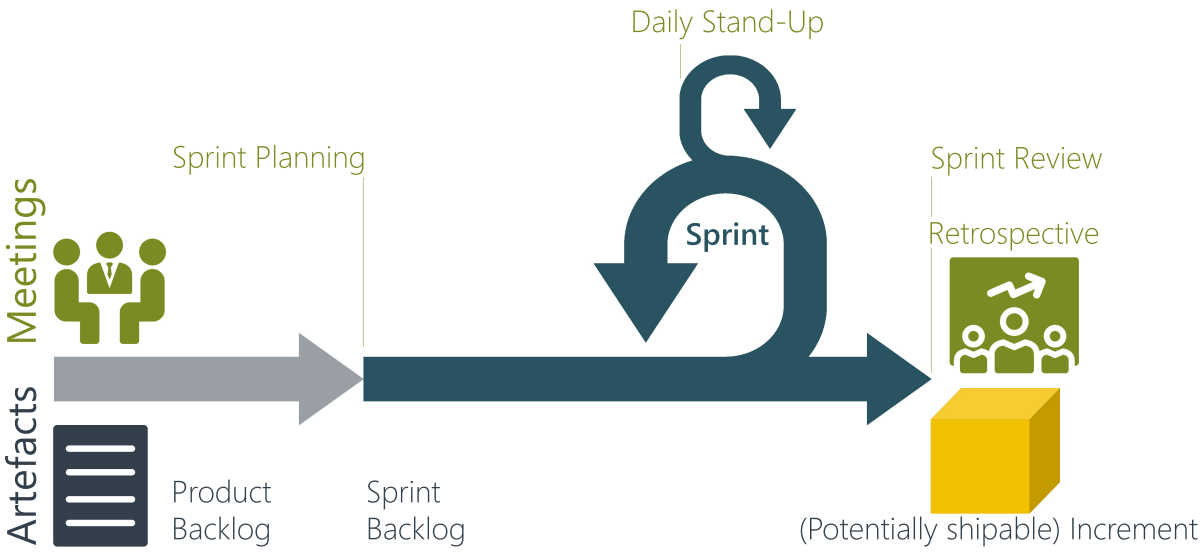

Fig. 2.6.: Central concepts in Scrum

Team. The Scrum Master is responsible to ensure that the process works and the Team can follow it without any *impediments*. The Product Owner is mainly in charge of the Product Backlog and represents the customer. Neither role has immanent vertical authority.

The subsequent chapters explain the details of all important concepts to understand Scrum.

2.2.2 Organisational Structure

This section describes the aspects of Scrum that relate to organisational structure. The structural dimension contains aspects of hierarchy and processes. As a special characteristic of Scrum and its prescriptions this section contains a description of Artefacts in Scrum.

The Scrum Process

Scrum is a process oriented approach to organise complex and adaptive development work. This section explains the principle Scrum process and the Sprint as most important organisational unit in terms of time and planning.

The Scrum Process

The Scrum process is an *iterative incremental* project oriented one.[51] Project orientation does not necessarily meant that Scrum can only be used to manage projects. However, the Scrum process follows a concept of development cycles with a project like start and ending. Applied to a project these are its start and ending. Applied to product development they may be development phase for new versions of a product that are management like a project. *Iterative* refers to time-frames used for structuring and planning, so-called Sprints (see next paragraph). *Incremental* means that every Sprint produces an increment to the product. That is, the output is enlarged by the result of the last iteration. Thus, from the beginning of a Scrum project to its end multiple Sprints are conducted in an iterative way - one cycle after another. Within Sprints there are daily routines regarding events - see Chapter 2.2.3 for the *Daily Stand-Up*. Figure 2.6 visualises the overall process, which is very straight-forward and simple.

[51] *Iterative incremental* is a common term in software engineering.

From a meta or conceptual perspective Scrum follows the idea of the *Deming Cycle* (see Have et al., 2010, pp. 73-75. Figure 2.7 shows the Deming Cycle, which is a concept that extends the traditional principle of "plan - do" to "plan - do - inspect - adapt". The addition of the two steps of *inspection* and *adaptation* marks a major deviation from traditional planning. It mainly pays satisfies the needs of developing within a complex system of never final and constantly changing requirements and circumstances. During every cycle one learns a little more and adapts the system to the new understanding. In Scrum, the principle of the Deming Cycle is applied in the planning process, which allows adapting priorities and requirements for every Sprint based on new knowledge. From a human and also process execution perspective the Retrospective (see Chapter 2.2.3) and the whole idea of finding and removing impediments applies inspection and adaptation also on the execution side. Thus, in conclusion the Scrum process is an adaptive or responsive process that runs in cycles.

For simple and fully designed work processes this idea is too heavy. A graphic example would be assembly line work, which certainly needs to follow plan (know what to do) - do. Inspection and adaptation in this context of Scrum being applied in a production process can happen in the development stage, when the process that the assembly line executes is adapted.

Sprints

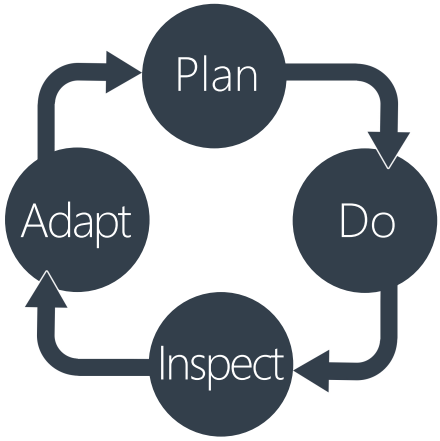

Fig. 2.7.: The Deming Cycle

In order to organise and plan work there is a need for structure, both with respect to time and work load. Therefore Schwaber and Sutherland (2013, p. 7) call *Sprints* the heart of Scrum. Sprints are the representation of the *iterative* part of the iterative incremental approach in Scrum. That is, a Sprint is an *iteration* in an organisation[52] managed using Scrum. Scrum does not mandate the length of Sprints. It may be set arbitrarily. However, the duration of a Sprint is fixed for the scheduled portion of work. The recommended duration of a Sprint is 2 to 4 weeks, respectively one month at the maximum. Longer Sprints are explicitly not recommended, as the "definition of what is being built may change, complexity may rise, and risk may increase"[53]. Its length may be adjusted if inspection determines that the length does not serve the aim of the scheduled work. Considered from the perspective of the enterprise applying Scrum, a fixed length of iterations is needed, in order to apply monitoring and controlling mechanisms.[54]

It is the goal of a Sprint to result in a potentially shippable, "Done" product Increment[55]. There is no break between Sprints. Each Sprint is followed by another. With respect to *Releases* as defined in the opening section of this chapter there is a sequence of Sprints until a completed work package is released, or a project is finished. Of course, these may be followed by a pre-scheduled next one. However, in organisational practice staff may also be assigned to other tasks or projects after completing the current one. This is a major difference in the application of Scrum for managing projects versus product development. All later on described events are part of each Sprint, either to start it, to run it or to close it. In general, the work amount for a Sprint is fixed and may not be changed, unless agreed with the Product Owner. (Not least because this endangers the time-line.) Thus, Sprints work like projects within a project

[52] Organisation in this context is used synonymously for any granularity or representation of work that is organised used Scrum, e.g. projects, product development, etc.
[53] See Schwaber and Sutherland (2013, p. 8).
[54] See Chapter Artefacts for controlling aspects and Burn-down Charts.
[55] See Chapters 2.2.3 for the *Sprint Goal*, and 2.2.3 for the *Increment*.

using the common attributes of projects - pre- and well defined beginning and end, as well as defined input and output. The subsequent chapters explain all routines, respectively events that are parts of each Sprint.

Roles

One thing that distinguishes Scrum from a wide number of traditional organisational approaches is a set of *new* and *specific roles* that are fundamentally different to traditional ones. This reflects in the absence of common roles of project managers, for instance. This chapter explains the roles defined by Scrum, who as a whole unit are called the *Scrum Team*[56].

The Product Owner

Referring to the Agile Manifesto[57] *individuals* and *customers* are in the focus of and the reason for work being done. This claim reflects in the role of the *Product Owner*. The main responsibility of whom is to represent the customer. Thus, the Product Owner represents the customer with respect to all production work[58] being done for some customer of a firm. She does so by "maximising the value of the product and the work of the Development Team"[59].

The Product Owner is responsible to collect all work to be done from all stakeholders, to document and specify it and to prioritise it according to the company strategy, customer needs, project requirements, deadlines, etc. In order to accomplish this task, the main artefact the Product Owner is responsible for, is the Product Backlog[60]. Being the role responsible for priorities the Product Owner obviously needs to be backed up by (top) management, in order to take decisions and to prioritise. Schwaber and Sutherland (2013, p. 5) stress that it is the sole responsibility of the Product Owner to manage the Product Backlog.

Fig. 2.8.: The Scrum Roles

With respect to traditional project organisation the role of the Product Owner is a part of a project manager focused on the tangible result of work accomplished. Schwaber and Sutherland (2013, p. 5) underline that "For the Product Owner to succeed, the entire organisation must respect [...] her decisions [...] and the Development Team isn't allowed to act on what anyone else says". It is important to state that Scrum itself does not grant the Product Owner any vertical authority. All decisions addressed by the quote refer to the object of a venture or project, and not to micro-management or people management. Also, Scrum does not prescribe any structure out of its own scope[61]. However, this does not contradict hierarchy or organisational authority assigned to staff managed using Scrum.

[56] See Schwaber and Sutherland (2013, p. 4).
[57] See agilemanifesto.org.
[58] Production or developing work in this context is used synonymously for the object of a company (or "Unternehmenszweck" Schreyögg and Geiger (2016)) and its core business of an enterprise, as opposed to administrative work, such as book-keeping, business administration, controlling or IT administration.
[59] See Schwaber and Sutherland (2013, p. 5).
[60] See Chapter 2.2.3.
[61] Again this refers to administrative work outside the production process, e.g. the sales process related to the produced goods.

The Scrum Master

Having defined the role of the Product Owner and having pointed out the absence of a conventional project manager, the role of the *Scrum Master* takes over some of these responsibilities. The main task of the Scrum Master is to ensure that the Scrum process is understood in the first place, followed and works. Building on a working Scrum process (which is constantly made sure to be in place) the Scrum Master has to ensure that the Development Team can perform in the best possible way. That is, it is also the Scrum Master's job to collect so-called *Impediments* that disturb or hinder members of the Team, respectively the Team as whole, to concentrate on its assigned work and deliver. Impediments can be everything from a keyboard with a broken key, to recurring disturbances to lack of knowledge for certain tasks. The Scrum Master collects Impediments and resolves them, in order to increase productivity. It is obviously similar to the Product Owner that the Scrum Master needs to be backed by (top) management, as well. This refers especially to the Scrum process itself, which is bound to fail, if followed partly or twisted (too strong)[62]. Alike the Product Owner role there is neither vertical authority assigned to the Scrum Master role[63]. Schwaber and Sutherland (2013, p. 6) call the Scrum Master a "servant-leader for the Scrum Team" who "helps those outside the Scrum Team understand which of their interactions with the Scrum Team are helpful and which aren't", in order to " maximise the value created by the Scrum Team". Within the Scrum Team she also collaborates with the Product Owner with respect to Product Backlog management and agile practices, facilitating Scrum events, etc.[64] Obviously, also the organisation profits of the job the Scrum Master does, as she ensures the implementation of Scrum, coaches staff, helps in overcoming difficulties in understanding, increases effectiveness and fosters change.

Next to the process related function with respect to the Team, *monitoring* is another important duty of the Scrum Master. The Scrum Master is in charge of keeping track of the velocity of production to provide all stakeholders involved[65] with necessary (structural) information.

Obviously the Scrum Master and her tasks are a whole new approach taking over tasks of a good manager without being one in the classical sense. This refers especially to ensuring that the Team can work well and deliver, which should in the best interest of every manager applying leadership. So, summarising it can be said that the Scrum Master is often referred to as a *care-taker*.

The Development Team

The third role defined by Scrum is the one of the *Development Team*[66]. The Development Team is responsible to perform the actual production of the firm's goods, respectively the object of the venture: "The Development Team consists of professionals who do the work of delivering a potentially releasable Increment of 'Done' product at the end of each Sprint."[67] Development Teams are characterised as *self-organising* and *cross-functional*, i.e. all needed skills are available in the Team. There are no sub-teams in the Development Team, of course there may be functional specialists and the Development Team is held accountable for its work results as a whole. Scrum does not give any further prescriptions on the composition of the Development Team. With respect to software development it is proposed to fill

[62] E.g. see Chung and Drummond (2009, p. 118): where the adoption process of Scrum at Yahoo! is described and a number of case studies refer to different approaches: "Command and Control 'Agile'", "'Agile' Cowboys" and "True Agile DNA". In these following agile principles and Scrum Guidelines worked well, whereas deviation caused a list of serious problems down to process failure.

[63] In her Master Thesis "Scrum meets Change Management" Laila Marijke Palm conducted a set of interviews on various aspects of Scrum in practice. In the section "Der Scrum Master ein Change Agent" an interviewee points out explicitly the problems of a person who is both Scrum Master and team leader with vertical authority. See Palm (2014, p. 92).

[64] See Schwaber and Sutherland (2013, p. 6).

[65] Scrum Team, (top) management, sales, marketing, product management, customers.

[66] As this thesis focusses on a generalised application of Scrum (and Holacracy) the *Development Team* could also be called Production Team, with Production as a generalised attribute outside the world of software development.

[67] See Schwaber and Sutherland (2013, p. 5).

all usual positions. In the case of software development that would be programmers, testers, usability experts, UI designers, etc.

As for the Development Team's size Schwaber and Sutherland (2013, p. 6) define the size optimal if the Team is "small enough to remain nimble and large enough to complete significant work within a Sprint." In practice more than nine members cannot be handled due to communication issues. Atlas (2009, p. 132) reports an unconventional measure at Amazon, speaking of so-called "2 Pizza Teams", which are teams of a size that can be fed with two pizzas. Other than this rather unusual approach, numbers of 5 to 7 members are common.

In context with organisation it is important to mention the way Scrum deals with self-responsibility: the Development Team chooses the amount of work that it can accomplish during a Sprint and commits to it. Thus, there is a fundamental shift from micro-management to self-responsibility, which makes for more accuracy and reliability in planning. Obviously this only works at a certain point of maturity in the (overall) team.

2.2.3 Collaboration

This sections covers concepts in Scrum that relate to collaboration as laid out in Chapter 2.1.5. Therefore, spoken in terms of Scrum all *Events* defined by the standard and the *Artefacts*. Team aspects are part of the role concept, which in Scrum rather relates to structure than to the aspects of collaboration regarding teams.

Events

Scrum prescribes four *events*. The purpose of which is "to create regularity and to minimise the need for meetings not defined in Scrum"[68]. Furthermore, Scrum uses the concept of so-called *time-boxes*. These are pre-defined time-limits for every meeting type.[69] It is the Scrum Master's responsibility to schedule all events and make sure they are attended by the required stakeholders.[70] This task can also be done by helping the Product Owner in coordinating meetings. The Scrum events as described in the following sub-chapters are:

The *Sprint* is the most important unit of organisation in Scrum, which is why it is explained in the Organisational Structure chapter. Schwaber and Sutherland (2013, p. 7) call it a "container for all other events". Thus, it is not an event as such - especially as it is a period of time and not a "closed" event that is started and finished within the course of a day.

- Sprint Planning
- Daily Scrum
- Sprint Review
- Retrospective

Sprint Planning

For every Sprint a so-called *Sprint Planning* is held. For a one-month Sprint the time-box is set to 8 hours, i.e. one working day. For shorter Sprints the time-box is to be adjusted accordingly. Given the time-boxes

[68] See Schwaber and Sutherland (2013, p. 7).
[69] The time-box for each meeting type is given in either subsequent sub-chapter.
[70] The role of the Scrum Master is explained in Chapter 2.2.2.

of the related events (Sprint Review and Retrospective) for a two week Sprint all three events - finishing off one Sprint and planning the next one - may fit into one working day.

Obviously the purpose of Sprint Planning is to plan the work for the upcoming Sprint. That includes activity of all Scrum roles. All organising work is the Scrum Master's responsibility. From the Product Backlog the Team chooses the work that it commits to do for the next iteration. The Product Owner explains the *Sprint Goal* to the Team and makes sure that the Product Backlog is up-to-date - both in terms of work and priorities - and that all requirements are clear and well understood. The Sprint Goal serves as "an objective that will be met within the Sprint through the implementation of the Product Backlog"[71].

Sprint Planning is split into two parts. Schwaber and Sutherland (2013, p. 9) define two topics:

- "What can be delivered in the Increment resulting from the upcoming Sprint?"
- "How will the work needed to deliver the Increment be achieved?"

In practice these two parts are often distinguished as *Sprint Planning* and *Task Planning*. Sprint Planning is the part of the planning meeting, which is attended by the Product Owner, who ensures the understanding of all chosen requirements. However, Task Planning is the second part of the meeting, where the Team breaks down requirements into atomic chunks of work that need to be done to accomplish one unit of requirements[72] which is usually not attended by the Product Owner. The reason the Product Owner usually does not attend Task Planning is twofold: at first, the Team is by definition self-organising, which excludes micro-management and therefore the Product Owner's interference in the internal planning process of the Team dividing and organising the work, it has committed to. Secondly, relating to the origin of Scrum in software engineering, Task Planning may get too technical and mostly irrelevant for the Product Owner.

As the result of Sprint Planning Schwaber and Sutherland (2013, p. 9) define that "by the end of Sprint Planning, the Development Team should be able to explain to the Product Owner and Scrum Master how it intends to work as a self-organising team to accomplish the Sprint Goal and create the anticipated Increment."

Daily Scrum

The *Daily Scrum* serves a number of purposes. At first, paying respect to the fact that within (project) teams communication often runs only between single peers. On the other hand, communication within a team room may be perceived as disturbance that should be minimised.[73] Therefore, the Daily Scrum is a meeting routine that is held on a daily base with a time-box of 15 minutes. The meeting is held at the same time every day, usually at the beginning of the day. In practice, a number of constraints may cause issues, e.g. a policy of flexible working times, distributed teams and home office, to name a few. For the meeting, the effectuation of which including all team members is ensured by the Scrum Master, the Team gathers and follows a simple protocol. Every team members explains:

- What did I work on yesterday?
- What do I (mean to) work on today?

[71] See Schwaber and Sutherland (2013, p. 10).

[72] Scrum introduces a concept of so-called *User Stories* as container for requirements. (For a specialist book on User Stories see Cohn (2004).) Going deeper into the routines of planning work, there is also a mechanism for estimating work using so-called *Story Points*. However, these lie beyond the scope of this thesis. Schwaber and Sutherland (2013) do not include them. Yet, there is plenty of specialist literature dedicated to sub-topics like planning, e.g. "Agile Estimating and Planning" - see Cohn (2005).

[73] Of course, this depends on the field of work. While sales requires lots of talking on the phone and direct communication at one's desk, and management tasks often work in small chunks with foreseeable interruptions, other expert and knowledge work requires uninterrupted concentration and silence. However, this goes into the field of workplace design, which is beyond the scope of this thesis.

- Do I face any impediment that hinders me working on the Sprint Goal?

By explaining these simple facts the progress within the Sprint is made transparent and problems can be addressed by the Scrum Master immediately to ensure that the planned amount of work can be completed as agreed. The Product Owner does not need to attend the Daily Scrum. However, she is not advised to not attend it like the Retrospective. For the Team the Daily Scrum is an excellent forum to understand what everybody else on the team is working on. Furthermore, it serves as opportunity to sort out problems with a bigger group of people than the respective neighbour, which may trigger discussions or subsequent meetings of smaller groups to help a team member that is stuck with an issue she cannot solve, while somebody else on the team has knowledge that helps. Going deeper into the ways of every day implementation of Scrum there are surroundings that are suggested where the Daily Scrum shall take place and how progress can be fed to the tracking process. These details are beyond the scope of this thesis.

Summarising the purpose of Daily Scrums Schwaber and Sutherland (2013, p. 11) state that they "improve communication, eliminate other meetings, identify problems to development for removal, highlight and promote quick decision-making, and improve the Development Team's level of knowledge."

Sprint Review

"A *Sprint Review* is held at the end of the Sprint to inspect the Increment and adapt the Product Backlog if needed."[74] Given these basic conditions, the Sprint Review is a meeting with a time-box of four hours for a one-month Sprint, organised by the Scrum Master. It is at least attended by the Scrum Team (the participation of whom is ensured by the Scrum Master), whereas the Product Owner may invite customers, or other management and stakeholders, as well. The main purpose of the meeting is to demonstrate the work that has been *Done*[75] in the last Sprint. Work packages that do not match the Done criteria are not demonstrated and not considered finished. They are shifted to the next Sprint.

By demonstrating work results the Sprint Review is the prime opportunity to show that the self-organising character of the Team works. It also allows to find weaknesses in the Team that may be hidden by the self-organisation. Next to the obvious purpose of reviewing the current status, the Sprint Review also increases transparency, which Scrum promotes very clearly. It is another asset of regular and scheduled reviews with all possible stakeholders, that feedback can be collected from a very early stage on. This goes along very well with approaches of *Lean Manufacturing*, *Lean Management*, or even *Lean Start-Up*[76]. Schwaber and Sutherland (2013, p. 11) point out that the Sprint Review is "an informal meeting, not a status meeting, and the presentation of the Increment is intended to elicit feedback and foster collaboration". The result of the Sprint Review is the revised Product Backlog, which includes the probable work packages for the next Sprint and clarified details. On p. 11 they also add common aspects of project management and business administration, such as the review of changes of the marketplace or potential use of the product, time-line, budget, etc. This is especially delicate as the "The Scrum Guide" as official framework documentation does not prescribe any mechanisms and documents for these aspects. However, the Product Backlog may capture some of these facts in the shape of revised requirements, changed priorities and additional information on financial aspects. Having completed the Sprint Review the Retrospective is held, which is described in the next chapter.

[74] See Schwaber and Sutherland (2013, p. 11).
[75] This refers to the so-called *Definition of Done* and the array of *Done* criteria derived from it. The Team agrees upon the Definition of Done at the beginning of the project and adjusts it accordingly as an integral part of the inspect-and-adapt approach of Scrum. It is considered an attribute of maturing teams that the Definition of Done gets larger.
[76] See Blank (2013).

Retrospective

"The *Sprint Retrospective* is an opportunity for the Scrum Team to inspect itself and create a plan for improvements to be enacted during the next Sprint."[77] Following the principles of inspect-and-adapt the Sprint Retrospective puts the focus off the venture objective towards surrounding factors. Possible topics are:

- Team and relationship issues
- Organisational issues
- Process related issues
- Infrastructure and tool related issues
- Communication issues

The main objective of the Retrospective are to identify issues in these fields, to order and prioritise and to create a plan what to improve in the next Sprint. Of course, this complements to the collection of impediments brought up during the Daily Scrums. However, it is the aim of the retrospective to go beyond impediments.

Given that more human than formal topics are subject of the Retrospective, other approaches are needed. So are the skills that are needed to hold a Retrospective. As the Retrospective is held by the Scrum Master, core abilities required for her to bring in are profound moderation and communication skills. These are crucial as she needs to make sure that all team members are heard and feel free to speak. By ensuring this she fosters a vital and blameless discussion. Specialised literature proposes game-like approaches, including *Mad-Sad-Glad*[78], *Start-Stop-Keep-Shout-out*[79], and others. There is dedicated literature[80] on the topic of Sprint Retrospectives, as there are many social aspects that can be looked at, such as team building for newly assembled teams, team behaviour, motivation, etc. From the organisational perspective of collaboration and teams, as well as the individual dimension the Retrospective is a huge opportunity, as aspects related exactly to these organisational layers are in the focus of the meeting.

The meeting is time-boxed to three hours for a one-month Sprint and just like all other meetings, organised by the Scrum Master. The Product Owner does not necessarily attend the meeting. In case she holds vertical authority[81], her presence might impede some individuals to speak freely on certain issues.

Artefacts

This section covers the so-called *Artefacts* in Scrum. In terms of organisation these may be credited a supporting role in the structural dimension as they serve a purpose of control and planning, and may also be added to the integrational aspect of collaboration. According to Schwaber and Sutherland (2013, p. 12) *Artefacts* "represent work or value to provide transparency and opportunities for inspection and adaptation. Artefacts defined by Scrum are specifically designed to maximise transparency of key information so that everybody has the same understanding of the artefact." Given this definition, Artefacts also serve the

[77] See Schwaber and Sutherland (2013, p. 12).
[78] In this approach all team members write down what made them mad, sad or glad during the past Sprint. The notes are collected, arranged on a whiteboard and after grouping and discussing in the Team stored in the Impediment Backlog, in order to be resolved.
[79] In this approach the Team also write down comments for either of the four categories and handle them the same way as for Mad-Sad-Glad.
[80] See Derby and Larsen (2006) or Gonçalves (2014).
[81] Vertical authority in this context refers to a position in the formal organisation outside the Scrum project that casts the person with the Product Owner role to a position superior to the other Team and the Scrum Master.

purpose of making work goals clear to everyone, which relates Scrum Artefacts also to the individual domain. This chapter explains the Artefacts of Scrum and also adds some words on Burn-down Charts.

Product Backlog

From the perspective of a venture objective the *Product Backlog* is the most important Scrum artefact. Schwaber and Sutherland (2013, p. 12) define the Product Backlog as "an ordered list of everything that might be needed in the product and [...] the single source of requirements for any changes to be made to the product." The Product Backlog is maintained by the Product Owner, who's main working item it is.[82] This refers to requirements just as to (project) management aspects like priorities and being synchronised with the company's and the customer's needs. Obviously, the Product Backlog is a living document. Especially, given the agile approach of Scrum, requirements are constantly collected, reviewed and updated. Thus, there is *no finalised version* of the Product Backlog containing a large specification sheet that is agreed upon before work starts like in traditional approaches. Certainly this affects the way work is contracted.

Sprint Backlog

Referring to the concept of Sprints, their general set-up and basic conditions, the Product Backlog, plus the self-organising character of the Team, the role of the *Sprint Backlog* is quite self-explaining: "The Sprint Backlog is the set of Product Backlog items selected for the Sprint, plus a plan for delivering the product Increment and realising the Sprint Goal."[83] The Sprint Backlog is not a static document, but is modified throughout the Sprint. These changes refer especially to deeper understanding of certain work-packages when working on them. Also, it may occur that new work is added during the Sprint. This usually happens, if all work that the Team has committed to is finished earlier than estimated. However, that should be the exceptional case and is only done by the Team. As the Team matures planning accuracy is higher than for younger Teams, that either operate in a new constellation of staff or are composed of (mostly) junior employees. In this case of having to add work the Team picks the top prioritised items from the Product Backlog. Of course, this affects monitoring and respectively reflects in the Burn-down Chart.

Increment

The second part of structuring work using Scrum refers to the tangible results of the creation process. As Scrum follows a project approach the biggest unit of work is a so-called *Release*. A Release bundles a set of work results and Artefacts defined as goal of the Release in the *Release Planning*. Therefore, Releases represent the (compound) *increment* part of the iterative incremental approach of Scrum, with an increment being a *potentially shippable* set of functionalities that deliver value for a customer. A release unifies all potentially shippable increments created during its realisation. There are different possible perspectives on Releases: From a time perspective a Release is compounded by a number of Sprints. This perspective may be completed by a perspective of *business value*, which allows regarding a Release as a collection of features or customer value.

Burn-down Charts

Despite doing many things differently there is still a need for information on progress when managing an organisation. This need for monitoring is satisfied with so-called *Burn-down Charts*. These reflect the progress of one or multiple Teams. This is achieved by projecting scheduled work and actually completed work against a time-line. Fig 2.9 shows a sample Burn-down Chart. Obviously, this is a pretty simple but

[82] The Product Owner role is explained in Chapter 2.2.2.
[83] See Schwaber and Sutherland (2013, p. 14).

useful tool for monitoring. If there is delay in the project the curve of the actually done work is above the linear ideal progress. If the Team is faster than estimated the curve goes below the line of ideal progress. This is how the case of a Team completing work before the end of the Sprint described in Chapter 2.2.3 would look like. Hence, the Burn-down Chart is a very handy tool for planning and monitoring.

Burn-down Charts are not described in "The Scrum Guide", but only mentioned[84]. Other controlling mechanisms mentioned in the context of "monitoring progress towards a goal" are *burn-ups* and *cumulative flow diagrams*. In practice next to monitoring performance using Burn-down Charts and the like, the velocity of the Team is calculated, which allows constantly more accurate forecasting and planing. This even refers to non-estimated Product Backlog items, as with a large enough sample projections get closer to the actual the bigger the share is.[85]

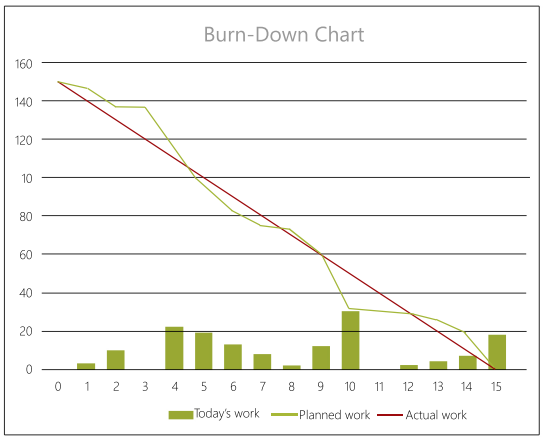

Fig. 2.9.: Sample Burn-down Chart

2.2.4 Examples Worldwide

Fig. 2.10.: Organisations Applying Scrum

Talking about example implementations of Scrum may read like a who is who of IT giants. But not only, since usage of Scrum by other branches is documented. Certainly, the big-part appears to be Scrum managing software development. However, there are other examples, as well. In order to demonstrate the practical relevance of Scrum, Fig 2.11 shows the Google search trends for Scrum.s

[84] Schwaber and Sutherland (2013, p. 14).
[85] This behaviour is based in the *Law of Large Numbers*. See Wikipedia, 2016g.

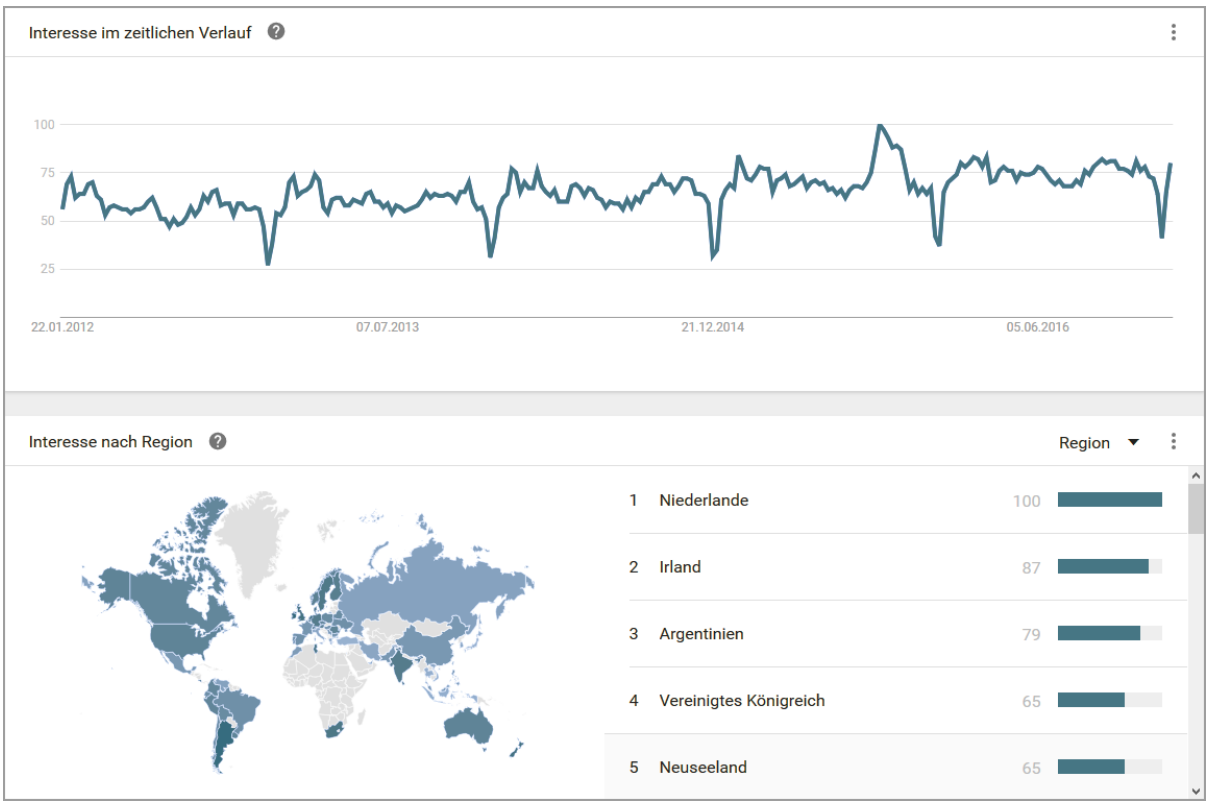

Fig. 2.11.: Google Trends for Scrum. Source: www.google.com/trends/explore?q=scrum

In the introduction to this chapter studies of large Scrum implementations at Amazon and Yahoo! have been mentioned. Atlas (2009) documents the implementation of Scrum at Amazon in a way that came from within the organisation and was not mandated top down. Benefield (2008) describes a large scale implementation of Scrum at Yahoo! in more than 150 teams all over the world. As a remarkable side note the documentation mentions a survey conducted at Yahoo! resulting in i.a. (see Benefield (2008, p. 3))

- 89% stating improved collaboration in the team (slightly more than half of which were votes for *better* collaboration, and little less than half for *much better*)
- 80% stating clearer goals in the team (with more votes for *much better* over *better*)
- 68% stating that time has been used better, respectively less time wasted and work thrown away

The study also documents an improvement from 82% (2005) *yes* to 86% (2007) when asked the question "If the decision was solely up to you, would your team continue using Scrum" (see Benefield (2008, p. 4)).

Randall (2014) explains the Scrum and Agile implementation at IBM, how to understand Agile and what IBM applies it for. In this context he does not only mention software development, but also the application of Scrum for "digital marketing initiatives" (see Randall (2014, p. 27)). Next to in-house development IBM also provides consulting services to their clients aiming at the reduction of costs and risks.

Other Scrum implementation documented in scientific journals include Adobe (see Green (2012)) and Salesforce (see Direction (2012)). www.scrumcasestudies.com provides a collection of case studies on Scrum implementations. The collection includes some of the previously mentioned names, and many further well known ones like Google, Netflix, ING Bank, Zurich Insurance Company Ltd., Intel, BBC, Vodafone Turkey or FBI Sentinel Project. Quoting the corporate website, ING highlights the importance of an Agile approach

> ING is the first bank to have embraced this way of working. It is a revolutionary step that has had a considerable impact on our company, but it was a very conscious decision to make this change.[86]

ING does not follow a pure Scrum implementation, but an extended implementation including further Agile concepts like tribes, etc. The implementation of Scrum at ING starting in 2011 has documented by Amir Arooni, who works as CIO of the Solution Delivery Center for Channels at ING Holland (see Verheyen and Arooni (2012)). A descriptive video of the way Scrum and Agile are implemented at ING can also be found at the company's YouTube channel *ING Nederland* or directly via youtu.be/NcB0ZKWAPA0. The company's journey to an Agile implementation is also documented in an interview with consulting company McKinsey (see www.mckinsey.com/industries/financial-services/our-insights/ings-agile-transformation) In the interview the two executives mention Google and Netflix as source for their Agile efforts. In the interview they highlight four pillars of the transformation

- The different way of working without managers, mainly referring to the changed process approach as such
- The evolution of a new organisational structure, new roles and a different from of governance (and therefore key points of this thesis)[87]
- The pace of delivery solved by ING's approach to DevOps
- A new people model, especially with respect to changed responsibility of (former) managers and remuneration (which aims at important aspects of a perspective towards Agile or Scrum and human resource management as central part of organisation)

In his Ph.D. thesis Ovesen (2012) documents a study conducted at 7 Danish production companies applying Scrum. The names of which are not included in the thesis. However, the target markets include digital audio products, healthcare solutions, hardware and other production facilities.

As a final example, Case 3: Product Owner and General Manager mentions the construction of Terminal 5 at London's Heathrow Airport applying many agile principles. The main goal of pointing out this project as an example is a large scale application of Agile principles in a complex, yet non software environment. In a search in scientific databases (Emerald Insight, etc.) Scrum did not show up in the context with the *Heathrow Terminal 5 project*. However, there is a book chapter and there are a number of blog posts on the agile approaches used. The project appears to special, as its overall duration was about 20 years at a cost of about 4.6 Billion GBP.[88] David Hicks, a multiply certified Scrum expert and co-founder of the Scrum Alliance mentions the application of Scrum principles in the project without giving any project details in his biography page at the Scrum Alliance (see www.scrumalliance.org/community/profile/dhicks).

Chapter 8 "Heathrow Terminal 5: Case Study" of his book "Managing Quality in Projects" Basu (2012) provides some insights at the agile principles at use. With respect to the principles introduced in this thesis most importantly is the iterative approach which allowed starting construction before the design had been finished, which appeared uncommon to construction work. Other agile principles at work include a just-in-time approach and prototyping, which are common to Agile software development, but not specifics of Scrum.

In a blog post Paul Hammond draws parallels between the Leadership principles encountered in the Terminal 5 project and Agile software development, referring to an unreferenced article in Director

[86] See www.ing.jobs/Netherlands/Why-ING/What-we-offer/Agile-working.htm

[87] In this context the organisation's riddance of silos is mentioned, which is also a point stressed in Case 1: Scrum Master answering questions S-02, S-12 and in Case 3: Product Owner and General Manager answering question S-04.

[88] See www.brighton.ac.uk/centrim/research-projects/learning-from-landmark-projects.aspx, and en.wikipedia.org/wiki/Heathrow_Terminal_5

Magazine (see www.director.co.uk/ and phammond.com/blog/heathrow-terminal-5-the-agile-terminal/). An integrated team and the permanent alignment with the stakeholder appear very important in this context.

All online sources in this section have been visited last on February 18th 2017.

2.3 Holacracy

This chapter explains the theoretical and conceptual basics of Holacracy. It consists of four parts, two of which illustrate Holacracy categorised into organisational dimensions of this thesis. The four sections of this chapter are:

- An **introduction** covering Holacracy basics in Chapter 2.3.1
- A **structural perspective** on Holacracy in Chapter 2.3.2 focussing on aspects of organisational structure - in terms of Holacracy Circles, roles, double-linking, and organisational control
- A perspective on **collaboration** in Holacracy in Chapter 2.3.3 focussing on events, routines and team aspects - in terms of Holacracy called shared language and core practices
- A brief selection of example implementations of Holacracy in Chapter 2.3.4

To date, the scientific coverage on Holacracy appears sparse. For this reason the Holacracy Constitution HolacracyOne (2013) and the publications of Brian Robertson, the creator of Holacracy serve as main resource and reference. The Constitution serves as rule book, and Robertson (2007), the publicly available white-paper, serves as official, practical reference and hot-to. Other publications include the book Robertson (2015) and an interview Robertson (2013). As for other relevant literature, there is a book chapter by Van de Kamp (2014) and there is a recent articles by Bernstein et al. (2016). The latter one has been co-written by Ethan Bernstein, an assistant professor of leadership and organizational behaviour at Harvard Business School as author, which provides some useful insights in terms of organisation and Holacracy. Other publications like G. D. Putnik and Z. Putnik (2012, p. 252) refer to Holacracy as an example in various contexts (complexity management in this article), but nonetheless are not dedicated to Holacracy as such. Eventually, Eckstein (2016, p. 5) mentions Holacracy in the context of a conference paper focussing on Sociocracy.

2.3.1 Basics: Holacracy in a Nutshell

Holacracy™[89] is a much more complex approach than Scrum. So, the first question certainly is one asking for definitions of Holacracy. Here are some definitions or classifications: In the words of its creator Brian Robertson (2007, p. 6)

> Holacracy is not a model, idea or theory. Holacracy is a practice [...] for organizational entities, not for individual humans or even groups of humans.

While Van de Kamp (2014, p. 13) calls Holacracy

> a Governance framework for organizations which radically replaces some of the practices we have used to craft our organizations in the past century: (1) the top-down hierarchy and (2) the need for management.

[89] Holacracy is a registered trademark of HolacracyOne, LLC. of Spring City, PA, USA.

Bernstein et al. (2016) describe Holacracy as

> a form of self-management that confers decision power on fluid teams [...] and roles rather than individuals

and Bernardis et al. (2016) categorise Holacracy as

> ein soziales Betriebssystem, das die Entscheidungsautorität über die gesamte Organisation verteilt.[90]

So, it appears safe to say that there is an emphasis on organisation in Holacracy. The following explication in this section shall help to answer this question in a more profound way. When starting to explain Holacracy these are the four main aspects (see Robertson (2007, p. 7))

- **Organisational structure**. In Holacracy an organisation is divided into so called *Circles*. The Governance and organisational structure of a Holacracy differs to a traditional hierarchic structure in multiple ways: A Circle is a *self-organising* unit with a *Purpose*. Every Circle is linked to its Sub-Circle via a system of so-called *double-links*. Alongside the Purpose every Circle autonomously evolves the roles it needs to fulfil its Purpose. The main difference to conventional organisational structures is that roles are function oriented instead of being tied to a person. Thus, it is possible that the same person holds a role in the top-most Circle and in one of the lowest level ones at the same time. Clearly, this overturns the classical idea of hierarchy.

- **Organisational control**. There is an emphasis on fast decisions in Holacracy. These are valued more highly than slow decisions that are derived alongside a chain of command. By directing decisions to the place at which a need for them arises, leads to a shift in responsibility - both effectively and perceived. Robertson (2007, p. 7) calls the effect "ownership of impact", which leads to organisational learning next to fast decision processes. A person decides from the perspective of a role and her accountabilities. This limits decisions to a field of one's competencies and rids the organisational members from a feeling of being forced into a decision (This refers to the well-known perception of: "The boss of my boss of my boss, who has absolutely no clue about this decided something completely stupid"). A decision may be retaken at any time, which Holacracy's principle argues that the best possible decision evolves by time.

- **Core practices**. In oder to keep collaboration going Holacracy defines regular Circle meetings: *Governance Meetings* serve the Purpose of issues related to the Circle, like the altering or addition of roles. *Operational meetings* deal with the Circle's everyday business. Administrative organisational tasks like hiring or budgeting are addressed in so called *modules* that serve as add-ons.

- **Shared language & meaning**. By putting an emphasis on Purpose and providing a common language Holacracy aims at organisational culture. All terminology is fixed in the Holacracy constitution and the concepts behind it aim at mental models shared in every Holacracy.

The subsequent sections explain each of these concepts arranging them by the organisational categories of *organisational structure*, *collaboration* and *motivation*.

2.3.2 Organisational Structure

[90] From German: "a social operating system that distributes the decision-making authority across the organization."

As sketched in the introduction to this section organisational structure is emphasised in the fundament of Holacracy. In order to understand the basic concept behind the structure in Holacracy an analogy to the human (or animal) body may help: an organism is whole in itself, and so are organs. A heart does not need any other organ to be a heart. By itself it serves the Purpose of a heart. That is, acting as a pump. Still, in conjunction with other organs its Purpose in a greater context can evolve and the heart can act as a vital part of a living organism making its function as a pump a pivotal function of vertebrae.

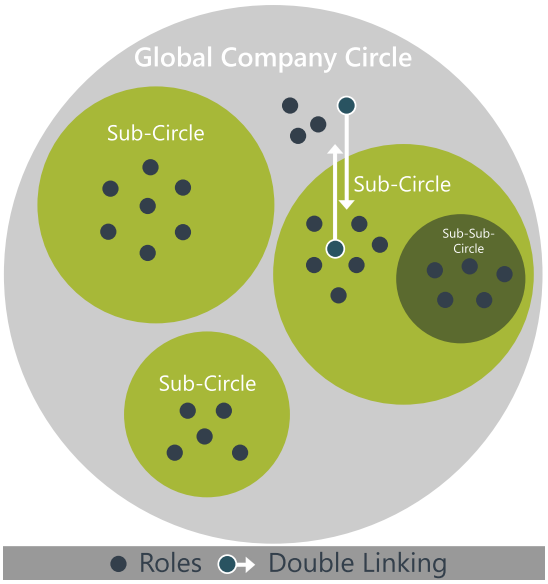

Fig. 2.12.: Example Circle Structure

Deconstructing the term Holacracy, its first building block is the word *holon* that consists of the two Greek words *holos*, which translates to *whole*, and *on*, which means *entity*. Thus, a holon is an entity that is whole in itself. The term holon dates back to Arthur Koestler's book "The Ghost in the Machine" in 1967. Edwards (2005, p. 270) states "Koestler proposes that nested systems, such as organisations, are more adequately represented as complex strata of holons rather than as networks of individual parts". Next to Koestler, philosopher Ken Wilber and his works are also associated with the term holon. According to Edwards the difference in their understanding of holons is the following

> "While Koestler tends to emphasise the spatial or ecological relationships between holons, Wilber tends to focus on the developmental or genealogical aspects."

When holons are grouped they result in a so called *holarchy*, which is a "a nodal point in a nested hierarchy" (see Edwards (2005, p. 270)). Thus, a holon may contain other sub-holons, which together become a holarchy. This term is used by Robertson (2007, p. 7) who defines the organisational structure of Holacracy as "fractal 'holarchy' of self-organizing teams (Circles)".

These underlying concepts suggest that Holacracy follows principles and mental constructs that are different to conventional ideas of organisation. While organisational structures historically strongly relate on hierarchy which starts to get abandoned or at least altered, Holacracy appears to overthrow the concept replacing it with a radically different approach. Following the concept of the holarchy a Holacracy consists of holons that are called *Circle* in Holacracy. The structure of a holarchy does not resemble the familiar pyramid shape or the square shape of a matrix organisation. Fig 2.12 shows a sample Circle structure. This section explains how control in Holacracy works, despite not following a conventional hierarchy.

Circles

Circles are the most important organisational unit in Holacracy. Robertson (2007, p. 7) equates Circles to self-organising teams. However, there is a major difference to a conventional team. A Circle is group of roles that collaborate for a common Purpose and not a group of people. Alike roles, Circles may be created in Governance Meetings alongside a given Purpose. Given its characteristic as a holon each Circle is authorised to define roles and their accountabilities (see Robertson (2007, p. 10)). A Circle has a

defined accountability aligned to its Purpose and in terms of Robertson pursues *leading* (Governance), *doing* (the Circle's actual work), and *measuring* (the collection of feedback). Finally, there is no Circle that has no roles assigned.

Each Circle follows its own Governance Process, in order to update roles processing the collected feedback (see Chapter 2.3.3). Updating roles refers to their addition, alteration or removal. These changes (and also the creation of new roles) result from sensed tensions that are raised in a Governance Meeting by the person that senses the tension. Chapter 2.3.2 describes the concept of roles. In the introduction chapter of his book Robertson (2015, p. 5) defines a tension:

> The human capacity to *sense dissonance in the present moment and see the potential for change* strikes me as one of our most extraordinary gifts - our restless, never satisfied, creative spirit that keeps us always reaching beyond where we are. When we feel that the sense of frustration at a system that's not working, or a mistake that keeps getting repeated, or a process that seems inefficient and cumbersome, we are tuning in to a a gap between how things *are* and how they *could be*.[91]

Circle are interconnected. That is, every Circle is linked with its Sub-Circles by a system of double-links, which is explained in section 2.3.2. Links represent roles and aim at communication and coordination. Considering all these principles the living and dynamic character of a Circle enforces and supports self-organisation. Constant possibility to adapt the system the current need and the riddance of allowance to alter your field of responsibility or to apply changes to the organisation makes the feeling of improvement and the emergence of a "natural ideal or 'requisite' Circle structure" (see Robertson (2007, p. 13)).

Roles

Roles in Holacracy build upon accountabilities. "An accountability in Holacracy is one specific activity that the organization is counting on" (see Robertson (2007, p. 8)). Hence, a role is usually small and associated with clear power. The person that takes over a role decides about the role's accountabilities. Nobody else (including CEOs or board members) is allowed to define the accountabilities of a role. Roles are taken willingly and can also be put down. Roles are created during Governance Meetings based on a sensed tension, or a need for it, respectively. If no one volunteers to take the role, the need that induced the role stays unsatisfied. This relates to an idea of humans wanting to take responsibility and doing what is necessary, if they are allowed to do so. This is opposed by the situation in a conventional organisation in which an instance gets aware of a need and assigns it or delegates its fulfilment to a subordinate. In this respect accountabilities also protect autonomy, as no one needs to ask for permission when they execute their role. Every decision is allowed for a role unless it violates an existing rule. The process of being able to propose oneself for a role allows accessing roles that would otherwise be impossible to access due to hierarchy or politics. So, an employee may propose herself for a role. If she is accepted for the role by the members of the Circle in which the role is proposed, she takes over the role.

A role is typically characterized by a Verb in its participle, i.e. *doing this*, *collecting that*, etc. There is no defined size or effort for a role. So, there can be roles that take 15 minutes a month, like sending out a certain protocol every four weeks, and roles that equal full-time jobs, like the one of a programmer, who is not involved in administrative tasks. For this reason the number of roles that a person holds is undefined. The same refers to the number of accountabilities per role. So, a role clearly relates to a portion of work and not to a person, which is why it also cannot be equalled to a job description. Given, that an employee

[91] The emphasised parts are aligned with the source.

can hold roles in different Circles on different levels, a role does neither equal a job title nor position in a company.

Every role belongs to a Circle. And, technically speaking a Circle is a role that may have sub-roles. Both entities have a Purpose and accountabilities. Just as there is no Circle that does not contain roles, there is no role assigned to anyone.

Double Linking

While the organisational structure in Holacracy is built on Circles the need for integration is satisfied by the principle of *double-linking*. A *link* is a role representing a Circle to another Circle. The attribute *double* refers to the fact that it takes two links to integrate every Circle in the holarchy.

so-called *Lead Links* represents the Super-Circle to its respective Sub-Circles. Thus, a person in a Circle that has Sub-Circles is appointed the role Lead Link within the Super-Circle she belongs to. With respect to a conventional hierarchic structure, Lead Links define priorities in accordance with the Sub-Circles, provide feedback concerning roles in a Sub-Circles and allocate resources to it. However, a Lead Link does not hold any decisive authority within a Sub-Circle. Neither does she approve the work done within a Sub-Circle. Of course, it is not prohibited to talk among colleagues. Still, all other conventional attributes of an instance do not apply to Lead Links. The other way round, it is not forbidden for the Sub-Circle to ask its Lead Link about unclear priorities.

In the opposite direction as representative of a Sub-Circle there are so-called *Representative Links* or simply *Rep Links*. Their task is to care for the Sub-Circle's needs by representing their Circle. This refers to communication with any other Circles. Rep Links mainly represent Sub-Circles in Governance Meetings of Super-Circles ensuring that the Circle is heard. According to Robertson (2007, p. 12) "A Rep Link is accountable for ensuring the Super-Circle is a conducive environment for the Sub-Circle, by carrying key perspectives from the Sub-Circle to the Super-Circle's Governance and operations".

Organisational Control: Dynamic Steering

Under the label of *Organisational Control* Holacracy emphasises the organisational need for steering. This is done by the principle of *Dynamic Steering*, which follows (rapid) *feedback* and *failure*. The idea of which can be compared to driving a car or to skiing. A driver may find other cars or skiers who cross her way performing possibly dangerous and certainly unforeseeable turns. So, she has to be present and react to other traffic or skiers. It is simply impossible to plan the ride completely upfront and stick to this plan. Not reacting to possibly impacting events is like driving with eyes closed. Obviously, not necessarily but in many cases this approach is going to lead to a crash. Classical management following an approach of "try to get an idea of how things are going to turn out, create a (best possible) plan (upfront without situational knowledge), do, stick to the plan, and revisit when done" resembles the driver that does not react to other road users. Agile principles and concepts like the Deming Cycle target this problem. In Holacracy Dynamic Steering aims at resolving the issue. There are three key rules for Dynamic Steering (see Robertson (2007, p. 15)):

1. Every decision can be picked up again at any time. No topic is sealed and protected of being re-discussed. Whenever a role experiences tension or problems, a primarily taken decision may be revisited. Thus, feedback an any time needed enables this process.

2. A decision ought to be taken now and be *workable*. A long decision process that aims at finding the best possible decision for a potentially yet unknown list of parameters is refused. Holacracy argues that the best decision is going to emerge over the course of time. This idea keeps the whole system capable of acting. It also turns failure into something productive or at least not as critical. Failure happens if one lacks information. Still, one has tried and learned from failure. So, adjusting the plan (or decision) may lead to better results. This can be compared to a scientist performing experiments that may fail. His chance of succeeding is still greater than the one of another scientist who is just trying think of the perfect theory without trying practically. Still, this is common practice in conventional management approaches.

3. Considering the previous two rules, the decision to postpone a decision is not forbidden. On the contrary, only present issues (or tensions in the terms of Holacracy) matter. Acting in a predictive way and trying to resolve future tensions shall be avoided. That is, decisions shall be taken at the "last responsible moment".

Applying these rules it is ensured that every tension sensed by a role can be processed. If not brought up, a tension may not be as critical. Otherwise, it would be discussed in a meeting. Compared to riding a biking: it may not be necessary to evade a pebble. But if there is a rock in the way it makes sense to change ones course and maybe also direction. Certainly, this does not fully exclude accidents caused by completely unforeseeable events. The focus on presence and fast reaction avoiding a long chain of command radically improves this problem. As a final remark, conventional upfront planning and according adjustment are certainly also allowed.

Organisational Control: Integrative Decision Making

The concept of integrative decision making in Holacracy aims at making every voice heard. However, this process focusses on reaching *workable* decisions, as opposed to vote for or against a certain proposal. A decision is considered workable, as soon as there are no *objections* to it. Robertson (2007, p. 17) defines an objection as "a tangible present-tense reason why the proposed decision is not workable right now – why it is outside the limits of tolerance of some aspect of the system". Everybody is allowed and invited to bring in their objections. Following this approach ego and emotions of the meeting participants are taken out and nobody is forced to argue pro or con the discussed topic. Integrative decision making is achieved in a pre-defined process:

- *Present Proposal:* First, the person who senses the tension describes it including a possible solution. Others may ask question to ensure understanding. Any other (potentially manipulative) questions, discussion or comments are cut off by the facilitator.

- *Reaction Round:* Following the proposal every participant is invited to provide a quick "gut reaction". Interruptions or discussion is absolutely forbidden and immediately stopped by the facilitator. Everybody is meant to have the chance to freely express their thoughts.

- *Amend or Clarify:* Replying to the feedback the proposer can clarify her ideas based on the feedback and also amend to proposed solution accordingly. Again, no discussion or interjections are allowed.

- *Objection Round:* Based upon the clarification and possible amendment the facilitator asks every participant if she has any objections towards the proposal. Again, objections are simply stated without allowing discussion or interjections. In case there are no objections the proposal is accepted and the decision is taken.

- *Integration:* This last step aims at an open dialogue. The goal is to integrate the "core truth into an amended proposal". By doing so, the amended proposal may further improve. As soon as there is a state that may seem to work, the facilitator goes back to the previous step and calls for objections.

Finally, Robertson (2007, p. 17) highlights that

> This rapid decision-making process systematically integrates the core truth or value in each perspective put forth, while staying grounded in the present-tense focus provided by dynamic steering.

2.3.3 Collaboration

After having explained structural principles in Holacracy in the previous section, this section goes into aspects of collaboration. There are a number of mechanisms in Holacracy that foster collaboration. Striving for an ego-less organisation of roles and accountabilities indirectly aims at smooth collaboration. At first, the clear definition of roles and their respective accountabilities supports collaboration. A situation of "Oh, I thought you would do this!?" gets less probable than in a system of more or rather less clear and mostly outdated job descriptions. Holacracy's Governance Process and dynamic steering stimulates collaboration and constant learning. Next, there is the Holacracy constitution, which is binding for all members of a Holacratic organisation.[92] The constitution does not exclude anybody, neither is it specific or tailored for anybody, nor is there anybody who stands above it. Next to these general principles there are events, a decision making process and shared language that serve Purpose of collaboration.[93]

Events

Events play and important role in Holacracy. So, there are two main types of meetings, also called *core practices*: *Governance Meetings* and *operational meetings*. Both meetings happen on Circle level and follow different structures and Purposes that are described below.

Governance Meetings

Governance Meetings solely focus on collaboration and the way work within the Circle is done. Operational every-day work issues are not in the scope of these meetings, and handled in *operational meetings*. The goal of this is mainly pursued by creating, updating or deleting roles based on tensions and the dynamic steering process. Alongside the accountabilities authority of a role is also decided. Any change takes effect as soon as there are no (more) objections. Governance Meetings are held in regular intervals, usually monthly. Their attendance is not mandatory, but open to all Circle members and Rep Links of Sub-Circles, which ensures that everybody has a voice that can be heard. Thereby the structure of the organisation is living and dynamic all the time. This opposes large re-organisations in conventionally organised ventures that only take place every couple of years.

In order to keep the meetings efficient a fair, strict and clear process is necessary. Therefore, Governance Meetings are joined by a *facilitator*, who is also a team member. Her main task is to ensure that the process and possible time-boxes are followed, plus to shut down discussion whenever arising at a point that does not require exchange of arguments of opinions. As for the time-box aspect, these are voluntary for Governance Meetings. Next to a clear Purpose Governance Meetings follow a pre-defined structure. A template agenda for a Governance Meeting includes (see Robertson (2007, p. 21)):

[92] The constitution is publicly available via www.holacracy.org/constitution. The constitution is available in English, French, Italian and Dutch. Visited January 17th 2017.

[93] Again: Holacracy in its fundament addresses work and not people, so "serving the Purpose of collaboration" with respect to Holacratic theory refers to the best possible execution of work. In the context of this thesis the analysis is partly drawn further and take different perspectives and point out implications.

- *Check-in*, which allows everybody to express their "current mindset and emotional state". This refers to the why behind certain tensions that may be addressed during the meeting.
- *Administrative concerns*, in which the last meeting minutes are checked for objections.
- *Agenda setup*, which is driven by all participants of the meeting who can propose agenda items. Furthermore, the facilitator announces the scheduled time for the meeting.
- *Specific items*, which refers to the processing of all agenda items until the fixed time is up. Decisions are written down by the secretary, who is also a Circle role.
- *Closing*, which allows every participant to briefly reflect on how the meeting went and whether she is satisfied or dissatisfied and what could be improved. Again, any discussion is shut down by the facilitator.

Robertson (2007, p. 21) stresses that "regular Governance Meetings are key to the effective practice of Holacracy."

Operational Meetings

In contrast to Governance Meetings operational meetings focus on every-day business of a Circle. They focus on the actual work that is performed by the Circle. Next to resolving issues that are not relevant for structure, planning may also be done in operational meetings. There are four types of operational meetings

- *Daily stand-up meetings*, that are practically identical to the ones in Scrum. They are held on a daily base and usually take no more than 10 minutes. In a daily stand-up meeting every Circle member briefly summarises what she did the day before, and what she is working on that day.
- *Tactical meetings*, that serve the Purpose of inspecting metrics as input for the dynamic steering, tactical issues and concrete actions needed on a (usually) weekly base. Alike Governance Meetings tactical meetings also follow a pre-defined and similar agenda (see Robertson (2007, p. 23)). The results (i.e. necessary actions) of a tactical meeting are written down by the secretary and made available to the Circle members. Again, the facilitator ensure that the process is followed, discussion are shut down and time-boxes are followed.
- *Strategic meetings* are meant to concentrate on the big picture of the Circle. They are held in a lower frequency between monthly, quarterly or yearly. In contrast to the other meeting types the agenda is fixed upfront, and the scope is usually set to one or two topics that are thoroughly discussed.
- *Special-topic meetings*, which are all other meetings that can be called in by every Circle member inviting the needed participants. Obviously, the topic is specific and neither covers Governance, nor concrete operational or tactical and planning issues.

Add-On Practices

Standard administration processes do not have to be modelled from scratch in Holacracy. These are handled by so-called *add-on practices* or *modules*. Modules are out of the scope of the official specification. Neither does this thesis profit of a deeper description of modules. Robertson (2007, p. 24) lists existing modules for "strategic planning, budgeting, compensation, project management, personnel development, hiring & firing, team formation, retrospectives, and much more."

Communication

The whole process in Holacracy is very communication oriented by giving every role a voice at any time. As for the communication aspects proposed in Chapter 2.1.5 the Holacracy explicitly defines the creation and re-visiting of meeting minutes in Governance Meetings. Furthermore a protocol of tactical meetings summarising all decided actions is to be created and sent out to all affected employees. Still, with respect to means of communication there is no pre-defined list of artefacts like in Scrum. For this reason this section does not further extend this aspect of collaboration. Obviously, no organisational member is hindered to contribute to this field of communication artefacts.

Share Language and Meaning

The official Holacracy specification emphasises "Shared Language and Meaning". Speaking of "powerful mental models and concepts into the organizational culture, creating a body of culturally shared language and meaning which facilitates ultra-high-bandwidth communication beyond ego" (see Robertson (2007)). As this is not explicated to a profound level and this thesis does not provide an interpretation. What may seem like self-adulation appears to refer to the underlying scientific, conceptual and philosophical considerations:

> The component models harnessed by Holacracy include type models, developmental models, organizational space models, integral theory, team dynamics models, and many more. Providing even a summary level view of each of Holacracy's key models and the language and cultural meaning that results is a topic for an entire article of its own, and beyond the scope of this introduction. (see Robertson (2007))

2.3.4 Examples Worldwide

The relatively low prevalence of Holacracy has already been highlighted. This section contains examples of concrete Holacracy implementations. Certainly, this assessment is no gut feeling of the author of this thesis, but based on respective research. Fig 2.13 shows the Google search trends for Holacracy to be found at www.google.com/trends/explore?q=holacracy. The one peak correlates with the adoption of Holacracy by Zappos in 2014.

Zappos (www.zappos.com/) is a US American online shoe retailer with a billion Dollar turnover and more than 1,500 employees. Founded in 1999 Zappos has been bought by Amazon in 2009 for roughly $1 billion to $1.2 billion, depending on the source referred to.[94] In 2014 Zappos started migrating to Holacracy. This appears not only to be the biggest Holacracy adoption so far, but also received wide media attention and is well documented. Media attention and documentation refer to specialised and mainstream media, not scientific journals.[95] Zappos also served as a model for the German online retailer Zalando (www.zalando.de/), that followed their business model. However, this does not include a known use of Holacracy by the latter.

Structure & Process, a German consulting company offers a publicly available list of organisations worldwide applying Holacracy. http://structureprocess.com/holacracy-cases/ Organisations practising Holacracy cover a wide range of industries, ranging from production (Soulbottle, Germany), business incubator (Impact Hub, Netherlands & Austria), consulting and organisational development (dwarfs & Giants, Austria. Encode.org, organisation distributed in Austria, USA, etc.), education (Business School

[94] See techcrunch.com/2009/07/22/amazon-buys-zappos/, visited January 16th 2017.
[95] See also https://www.zapposinsights.com/about/holacracy

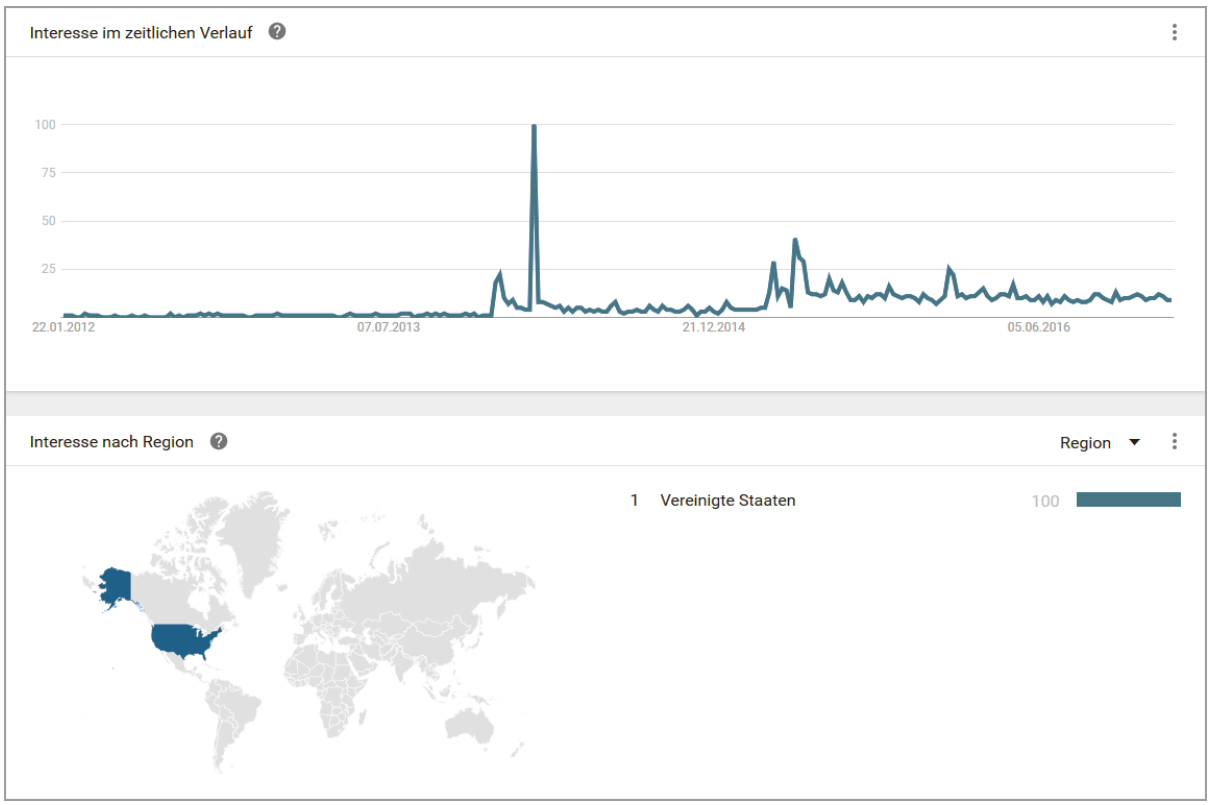

Fig. 2.13.: Google Trends for Holacracy. Source: www.google.com/trends/explore?q=holacracy

Lausanne), financial competence (Three Coins, Austria & Switzerland) and online ticketing (Ticketfrog, Switzerland) to insurance brokerage (FinanceFox, Germany) or IT and software development services (Doctusoft, Hungary. Paramount Software Solutions, USA & India).[96]

In order to not to draw a biased image only showing a movement towards the implementation of Holacracy: Medium, a social media company, has adopted and practised Holacracy for a couple of years and has stopped its use again.[97]

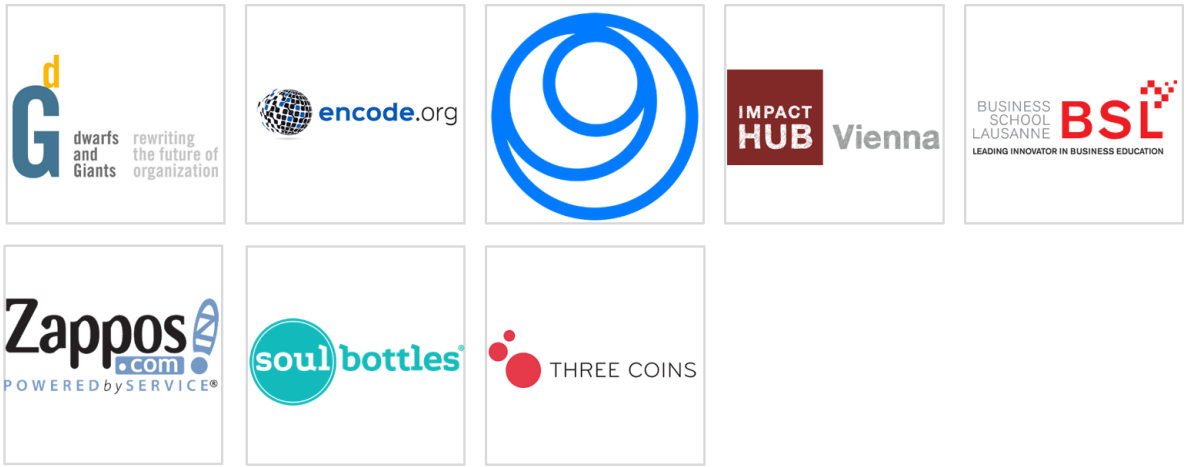

Fig. 2.14.: Organisations Applying Holacracy

[96] The organisations referred to can be found at structureprocess.com/holacracy-cases.
[97] See https://blog.medium.com/management-and-organization-at-medium-2228cc9d93e9#.2v7dpq7r4

Beside this research based impression, assessments of Holacracy experts conformed to it. In two preparatory phone calls setting up two of the interviews both experts assessed that interest is largely growing, but the dissemination rate is still rather low. Of course, scratching the surface is difficult, as organisations do not necessarily make their organisational structures or models public. A CEO of an Austrian Software and Consulting company talked to in the acquisition phase for the interviews explicitly stressed that it was company policy not to talk about organisation aspects in public. There appears to be a concentration of Holacracy implementations in the Netherlands and Switzerland. The educated guess of two of the experts talked to in the research phase was between 20 to 30 implementations in the DACH region, with a concentration in Switzerland and some implementations in Austria and reported lower interest and refusal in Germany.

Research Question

3

> *Wir arbeiten in Strukturen von Gestern mit Methoden von heute an Strategien für Morgen vorwiegend mit Menschen, die die Strukturen von gestern geschaffen haben und das Übermorgen in der Unternehmung nicht mehr erleben werden.*
>
> **— Knut Bleicher**
> Professor for Management, University of St. Gallen (CH)

3.1 Academic Void

Chapter 2.1 gives a comprehensive impression of organisation science focussing on structure, collaboration and individuals. While scientific literature knows a wide range of (partly outdated) organisation forms (e.g. System 4) that correspond to different meta models (e.g. matrix organisations, project organisations, lateral organisations), both Scrum and Holacracy appear rather inexistent in organisation sciences. Certain characteristics of Scrum have been subject to research in (case) studies (see chapters 1.2 and 2.2.4). As a result of literature research, a dedicated analysis of Scrum in terms of organisational structure appears not to exist this far. Furthermore, the scientific coverage of Holacracy is almost non-existent, as pointed out in the introduction of this thesis. Therefore, there is a wide academic void, that this thesis aims to partially fill.

3.2 Research Question

This chapter deduces and explicates the research questions. Based on the state-of-the-art with respect to organisation science, Scrum and Holacracy an academic void has been determined, which has been explained in the previous section. As a result of the theoretical examination of the topic the following research questions have been defined:

> What are the internal organisational structures and (governance) processes in Scrum and Holacracy? What are their differences or similarities? What is the difference of Scrum and Holacracy compared to traditional organisational structures and governance processes?
>
> What is the impact of the use of Scrum and Holacracy on collaboration and motivation and what are their differences or similarities?

These questions reflect the academic void while limiting the scope from all aspects of organisation to the observation of three concrete aspects respectively layers. The layers looked at are:

- **Structure**, the analysis of which aims at organisational structure and governance processes
- **Integration**, the analysis of which aims at collaboration

- **Individuals**, the analysis of which aims at aspects of responsibility and motivation

As both approaches in the scope of this thesis are fundamentally different to traditional ones in many aspects their impact on these dimensions shall be analysed. Given the different character of the organisational layers, a twofold research question appears reasonable and fitting. By answering these two questions this thesis aims to gain findings about how both approaches influence organisations. Conducted in a qualitative way[1] the insights serve as a fundament for subsequent (quantitative) studies. The sparse scientific coverage of Holacracy is contributed to with basic research and qualitative interview data for subsequent studies, plus another academic work in row of rather few yet. Also, professionals in traditionally run organisations may use the findings of this comparison as a handy tool or decision-making helper. Viewed from the motivation perspective given in the introduction of this thesis, two methods of great practical relevance are looked at, which is also one quality criterion of qualitative research as described in chapter "4.2".

3.3 Interview Guideline

This section contains the guideline for the interviews. As all interviews but one have been conducted in German, the practically used German version of the same questions can be found in the Appendix A.

Structure

- How would you describe the influence of Scrum/Holacracy on the structure of your organisation? (H-01/S-01)
- How well acquainted are you with the process concept of Scrum/Holacracy? How would you describe its influence on (the) processes in your organisation? (H-02/S-02)
- How, in your perception, is hierarchy present in your company, and which correlations with Scrum/Holacracy do you see in this respect? (H-04/S-03)
- How would you depict the division of labour in your company and which role does Scrum/Holacracy play thereby in your eyes? (H-04/S-04)
- How do you feel about process transparency in daily routines as supported by Scrum/Holacracy? (H-05/S-05)
- What, according to you, are the greatest advantages, and the greatest disadvantages due to Scrum/Holacracy as seen from a structural, and process related view? (H-06/S-06)
- How did you experience the phase of the implementation of Scrum/Holacracy, how did (other) staff members feel about it? Which problems struck you? (H-07/S-07)

Specific Question(s) on the Topic of Structure

- How is the interface with other companies designed in the case of Holacracy? Catchword: “Can I talk to your superior?” (H-08)

Collaboration

- How would you describe the influence of Scrum/Holacracy on collaboration within your organisation? (H-09/S-08)
- How would you describe the influence of Scrum/Holacracy on discussions/conferences and meetings in your organisation? In this connection, please think of aspects like quantity, quality, frequency, efficiency etc.! (H-10/S-09)

[1] See chapter "Methodological Approach".

- What, according to you, are the greatest advantages, and the greatest disadvantages due to Scrum/Holacracy from the perspective of cooperation? (H-11/S-10)

Specific Questions on the Topic of Collaboration

- How do you feel about Governance Meetings from Holacracy, and which opportunities, which advantages and disadvantages do you see, both for yourself and for the organisation as a whole? (H-12)
- How would you evaluate the influence of Scrum retrospectives on collaboration, as well as harmony in the team? (S-11)

Individual and Motivation

- How would you evaluate the correlation between Scrum/Holacracy as a method of organisation and your job satisfaction, as well as from the point of view of motivation? (H-13/S-12)
- In which way do you see yourself considered as an individual by the concepts of Scrum/Holacracy? (H-14/S-13)
- How would you describe the aspects of personal responsibility and decision-making competence deriving from Scrum/Holacracy and how do you personally feel about them? (H-15/S-14)
- What, according to you, are the greatest advantages, and the greatest disadvantages due to Scrum/Holacracy with regards to yourself as individual? (H-16/S-15)
- How does your company deal with opportunistic employees and those who do not want to take responsibility? (H-17/S-16)
- How do you assess a person's suitability for Scrum/Holacracy? Is everybody suitable? Are there any groups or types that are more or less suitable and if so, which? (H-18/S-17)

Specific Questions on the Topic of the Individual & Motivation

- How do you personally feel about the access to your organisation when guided by the Claim for Purpose in Holacracy? (H-19)
- How do you feel about the issues of authority and responsibility under the aspect of Governance in Holacracy? (H-20)
- How do you evaluate the impact of your Scrum role on your position in your organisation? (S-18)
- How do you feel about the opportunities of feedback in the form of the Scrum Retrospective with regard to your personal position in your organisation? (S-19)
- How would you describe the correlation between your role in Scrum and your responsibility? What effect does it have on your job satisfaction? (S-20)

General Questions

Gender

- Female
- Male

Which age-group are you in?

- 20 to 30 years
- 30 to 40 years
- 40 to 50 years

- 50 to 60 years
- 60 to 70 years
- Not specified

How many years of professional experience do you have?

- 0 to 3
- 3 to 7
- 7 to 10
- 10 to 20
- 20 to 30
- 30+
- Not specified

Which position do you hold in your company?

How many years of experience with Scrum/Holacracy do you have?

In which way and in in which function are you concerned with Scrum/Holacracy?

What kind of training concerning Scrum/Holacracy did you receive?

- In-house
- Professional training
- Certification
- Not specified

What is your highest educational level/degree?

- Compulsory/Secondary school
- A-Levels/High School Diploma/School Leaving Exam
- University/College
- Not specified

4 Methodology

> *Science is more than a body of knowledge. It is a way of thinking; a way of skeptically interrogating the universe with a fine understanding of human fallibility.* [1]
>
> — **Carl Sagan**
> Astronomer

The purpose of this chapter is to deduce and argue the methodical (research) approach chosen for this thesis. In order to do so, this chapter is split into two main sections and an introductory thought of the criteria of science, which serves the purpose of explaining the need for this chapter. The first main section explains the chosen methodological approach. The second part explicates the scientific design of this thesis. In addition to the actual description, the goal of this chapter is also to argue the choice of the chosen research method and research design.

4.1 Criteria of Science

Centuries of philosophical and epistemological discussions have shaped the idea of what science is. Still, there is no single and general definition of science. Nonetheless, in order to ensure that a piece of work be considered scientific a set of constraints needs to be fulfilled. Following Ebster and Stalzer (2013, pp. 18-20) these are crucial criteria for science:

- The work has a *clear subject*.
- The results represent some kind of *novelty* as opposed to just reciting existing knowledge.
- The existing body of knowledge in the domain of the work is contributed to and there is a clear *use*.
- Results presented in the work have been achieved using an *adequate method*.
- *Generality* is an overall goal.[2]
- Reference to *theory*, which means considering the current body of knowledge that has been built upon these criteria instead of re-inventing the wheel or running into errors or dead-ends that have already been resolved.
- *Traceability* of the way the work has been conducted and results have been achieved. i.e. any other person who follows the documented process and applies the documented method to the research area should understand every step and obtain the same results.

Several of these points underline the need for describing the methodological approach, which is subject of the next section.

[1] See Sagan (2011), which also refers the actual interview as video on YouTube. The quoted phrase starts at 3:52.

[2] This refers to the ambition of the work. While in qualitative approaches of science samples may be small, these serve the purpose of collecting knowledge that may later on be applied in quantitative approaches that allow generalisations using statistical methods. The aim is still contribution the general understanding of an observed object. Whereas a study for a company conducted with the sole aim of serving management as a decision-making basis cannot be described as scientific. See Ebster and Stalzer (2013, p. 19).

4.2 Methodological Approach

This section describes and argues the *methodological approach* chosen for this thesis. Chapters 2.2 and 2.3 describe the state-of-the-art with respect to Scrum and Holacracy. While there exists a broad base of research on Scrum outside the scope of the research question of this thesis, there appears to be very sparse scientific coverage on Holacracy. For this reason a quantitative approach testing hypotheses built on solid theoretical ground is not possible due to missing theoretical insights, especially with respect to Holacracy. Thus, a qualitative approach appears to be favourable. Flick (2007, p. 27) highlights that the goal of qualitative research is primarily the discovery of new knowledge which in turn is used as an empirical basis for new theories. Testing known matter or existing theories is not in the scope of qualitative approaches. *Openness* of the methods towards the research object is a major characteristic of qualitative research. This clearly differs from the paradigm of quantitative approaches that focus on "testing complex models empirically and statistically".[3] Mayring (2016, pp. 24 sq.) lists openness as one of five postulates of *qualitative thinking* that he aggregates to a model:

- **Orientation towards the subject**, which includes *wholeness*, *historicity* and *problem centering*.[4]
- **Description**, which includes *reference to single cases* that get thoroughly described, *openness* towards the subject albeit with careful *control* of the methodical approach.
- **Interpretation**, which starts by explaining the *initial understanding* of the researched matter, allows *introspection* as a means to adding personal domain experience and considers the whole process as *researcher object interaction*.
- **Gradual generalisation**, which refers to *argumentative generalisation* by *induction*. However the scientific criterion of *generality* is satisfied by questioning when to apply *quantification* in the process of gradual generalisation.

Mayring calls the attributes emphasized in the model **pillars of qualitative thinking** and adds that they may serve as *qualitative check-list*. As argued in the beginning of this section the scientific knowledge base mainly with respect to Holacracy is too limited, in order to conduct a quantitative survey. Therefore, applying the pillars of qualitative thinking to the scope of this thesis there is a *focus on single cases* using expert interviews as chosen means for collecting knowledge. The subsequent section explicates the research process. By conducting an interview series talking to domain experts using a semi-structured guideline this thesis' approach is *open*. By providing the interviewees with the option to review the results of the interview evaluation *revision* and openness are strengthened. The research design chosen for this thesis follows established processes of qualitative research and documents it as concrete methodical approach. (See chapter 4.2) The *initial understanding* of the author of this thesis is documented in the first two chapters. In order to avoid bias towards to the observed interviewees the use of *introspection* is excluded from this thesis, despite the fact of the author being a Scrum professional with over five years of practical experience. Set up as a collection of interviews with the option for revision there is *interaction* between researcher and subject. Put into the context of the overall motivation and the surrounding state-of-the-art, this thesis considers a general perspective with respect to the research object. A *historical perspective* is considered in terms of Chapter 2.1.2, which sketches the history of

[3] See Flick (2007, p. 27). For a comprehensive work on quantitative empirical (social) sciences see Atteslander, 2010. The main criteria for which are *validity*, *reliability* and *objectivity*. In contrast to Mayring (2016) Flick (2007) also considers these with respect to qualitative research.

[4] The critical discussion comparing this postulate to the perspective of quantitative research argues that the latter one focuses on the perspective of the researcher rather than the one of the examined subject. Obviously this is immanent when aiming to test existing hypotheses and making data provision the main role of the interrogated subjects. In contrast, qualitative research focuses on gathering new knowledge by observing and analysing single cases.

Fig. 4.1.: Linear research process model - based on Flick (2007, p. 128)

organisation. Furthermore, *concrete practical problems* as the setting for the whole thesis are given in Chapter "Motivation": The practical importance of the decline of traditionally organized industries towards disruptive ones is either in progress or imminent and obvious. An observation of new successful approaches serves the purpose of advancing a concrete practical problem. Chapter "6" also points out possibilities for *generalisation*, Yet, serving as early stage and basic research, in addition to the possible time-frame and scope of a master thesis, generalisation at a larger scale may be done at a later point in another work that utilises the interview collection as input to a larger qualitative or even quantitative study. Finally moving on to the stage of evaluation, *induction* is a central means of knowledge creation in this thesis.

In summary this section explains important aspects of the chosen qualitative research method and argues their applicability and fit for the research object. The subsequent section extends the methodological approach to a concrete research design based on qualitative research methods. This includes the explanation of research related terms used in the argumentation of this section.

4.3 Research Design

This section describes the *research design* chosen for this thesis. It builds upon the methodical choice explained in the previous section. Relevant literature like Flick (2007), Mayring (2016) or Przyborski and Wohlrab-Sahr (2013) serve as methodical guideline for the research design of this thesis.

Flick (2007, p. 128) describes two process models and theories for (qualitative) research design: a linear and a circular one. Fig. 4.1 shows the linear process model, which fits the requirements and goal of this thesis.[5] Obviously this is a meta process model, as the actually chosen approaches for each step need to be determined by taking into consideration the needs of the observed object. There are possible "implementations" of these process models. The one chosen for this thesis is the *case study*. Other ones are *biographical study*, *phenomenology*, *grounded theory* or *ethnography*. The subsequent paragraphs describe all steps and their execution plan for the application in this thesis.

Theory

Flick (2007, p. 127) considers theories to be a view on the world in a current version and not a collection of tested facts. This relates the approach to the meta-school of (social) constructivism.[6] However, the attribute of a versioned perspective pays respect to the constraints of revision and (empiric) testing. There is an almost infinite number of possible examples for theories that have been considered true or proven

[5] The circular model iterates through the steps of inquiry and evaluation. Therefore, as a possible critique to the linear model Flick mentions that the constant check for the fit of the applied methods, categories and theories towards the examined object is not as good as compared to the circular model.

[6] *Constructivism* is an epistemological school opposing *positivism*. While the latter is rooted in natural science and focusses on observing things and proving theory by observation and fortifying it by quantification and statistical means, constructivism relates closer to philosophy. It postulates that all knowledge is the result of processes of formalised perception, assumptions, generalisations, deduction or induction that are agreed on to a certain degree. Therefore the main argument is that all knowledge is constructed, which relativises truth and objectivity. Certainly, the philosophical and epistemological debate among these schools is not in the focus of this thesis. However, it is obvious and also being covered by the enlisted literature referring to qualitative research that there has been a broad discussion on the scientific right of these. Many aspects among the *pillars of qualitative thinking* like generalisation and quantification aim to close this gap, while still stressing the constructivist way of thinking. (See Chapter 4.2 and Mayring (2016, pp. 24-38)) Flick (2007, pp. 100-105) discusses aspects of this area of conflict.

and have been revised later on. A striking example might be the shift from a geo centric to a helio centric view of the world.

The starting point for this thesis is a broad literature research, which serves the purpose of understanding the current body of knowledge with respect to the research domain and object. This part is covered in Chapter 2 as State-of-the-art. The chapter covers theoretical aspects of organisation sciences as a framework to the perspective of the work, and theoretical aspects of both Scrum and Holacracy. In order to be comparable, the latter ones are structured in a way using dimensions derived from the surrounding perspective of organisation.

Hypotheses

The second step of the research design is one that states the subject of the investigation. The previous section explains some key differences between quantitative and qualitative methods. While quantitative methods aim to test hypotheses, qualitative methods aim to gather new knowledge given maximum possible openness. This reflects in a tendency to use *research questions* rather than hypotheses in that second step of the research process. The obvious goal is to identify an academic void based on the theoretic study, determine the right questions to fill the gap in the best possible way and to conduct their answering using a qualitative approach. While the chosen qualitative research approach is part of the subsequent steps, the research question needs to be defined based on the previously analysed theoretical base. The preceding chapter contains its derivation and explanation.

Operationalising

Using the research question the research project needs to be operationalised in the next step. The methodical approach chosen for this thesis is the *expert interview*. Other main methods are *observation* and *document analysis*. Referring to Przyborski and Wohlrab-Sahr (2013, p. 131) the expert interview is a special case of the narrative interview. The goal of the interviews is an exploratory one (with regard to the research question), as opposed to testing pre-existing hypotheses.

A crucial question with respect to expert interviews is the definition of experts. Przyborski and Wohlrab-Sahr (2013, p. 131) characterise an expert as a person that has special or non-standard knowledge that others do not have. With respect to the object of this thesis the interviewees need to be persons with practical experience in the application of Scrum or Holacracy. Interviews with persons who have no experience cannot contribute to the insights that are the thesis' goal. The interviews use a pre-defined semi-structured guideline.[7] An English version of the guideline can be found at the end of the Research Question chapter (see 3.3) and in German as used for 7 of 8 interviews in Interviewleitfaden.

Sample

No matter if driven by a qualitative or quantitative approach the definition of a meaningful sample that benefits the research goal is crucial. While quantitative approaches that mainly rely on mathematical and statistical methods often use random samples, the sample for a qualitative study needs to be carefully chosen. Przyborski and Wohlrab-Sahr (2013, p. 174) stress that sampling determines the generalisability of a qualitative study. This reflects in the definition of *pre-defined criteria* for the interviewed subjects. Other sampling methods are *theoretical sampling* or the *snowball sampling*.

The criteria for interviewed subjects to fit the needs of this research project are:

- Professional experience (working) with either Scrum or Holacracy.
- Allowance only for an interview to their field of expertise - Scrum or Holacracy - and not the other, if they lack experience in it.

[7] See Flick (2007), Mayring (2016), Przyborski and Wohlrab-Sahr (2013), etc. for all aspects of creating interview guidelines and phrasing questions the right way.

- Adequate work experience, in order to be able to provide this study with meaningful insights and results. That is, interviewees must not be at career entry level or trainees. This refers to a basic and internalised understanding of work processes, collaboration and ideally a certain ability for reflection. The excluded groups a priori don ot have these experiences and understanding and therefore cannot contribute with the required responses.

- Subjects do not necessarily need to hold a certain position within the organisation in order to provide valuable insights. With respect to Scrum and Holacracy, interviewees should hold different roles, in order to get a wider impression, avoid focus on one single spot or perspective and back generalisability. This includes directly practising professionals and other staff involved in organisations applying either approach next to coaches or consultants.

Another matter of sampling is the execution of personal interviews, which is done by expert interviews, as explained previously. Finally the third and equally important question with respect to sampling is a size that fits the needs of the research project and is therefore big enough. Przyborski and Wohlrab-Sahr (2013, p. 182) point out the importance of *theoretical repletion* via (maximally) contrasting cases over a concrete (possibly low) number, which is also called *maximum variation sample*.

Not really a question, but rather a practical problem that needs to be solved is how to access the appropriate institutions and people. Flick (2007, pp. 142 sq.) dedicates a whole chapter to this topic discussing important aspects and also problems. As for this thesis, the extremely low dissemination rate of Holacracy makes it difficult to find suitable participants who are also available an willing to be interviewed. Interview candidates for this thesis are searched for using specialised and personal channels within the Holacracy community and a public list.[8]

Inquiry

In the next step the inquiry part of the study is conducted. That is, the completion of the actual expert interviews. The definition of criteria for the sample, the availability of the interview guidelines and persons that are willing to be interviewed are necessary pre-requisites. With respect to the actual execution of the interview Przyborski and Wohlrab-Sahr (2013, p. 101) highlight that the most important task of the interviewer is to start the narration and to keep it going, which requires establishing a situation of trust in the first place and thorough attention.

The actual recording of the inquiry is an important part of that step. [9] The interviews for this study are recorded in MP3 format, which is possible both for personal and for remote interviews via Skype or telephone.

Another important aspect in this context is privacy protection. It is common practice to make data anonymous, which is also applied to the interviews in this thesis. Furthermore, and finally, a note of privacy protection is provided to the interviewees upfront.

Evaluation

In the next step the interviews need to be transcribed first, in order to be evaluated. Mayring (2016, pp. 89-102) describes a number of ways for transcription including *literal*, *commented*, *summarising* or *selective* transcription. A hybrid between a summarising protocol and selective protocol appears to be appropriate for the needs of this study. The selective protocol adds to the need of focussing on the

[8] The term channels summarises online forums, a dedicated Slack channel for the Holacracy community in the DACH region and direct personal recommendations by professionals talked to. See structureprocess.com/holacracy-cases/ for a not necessarily exhaustive, but nonetheless to date only list of enterprises applying Holacracy.

[9] See Flick (2007, pp. 371 sq.) for an extensive discussion of classical and modern recording techniques - *field notes*, *research diaries*, *documentation sheets*, etc.

structure, collaboration and motivation. Deviations that go too far away from the scope of the interview guideline, e.g. narration of every-day situations that do not contribute to the research questions are filtered out in the transcription. Next, the idea and concepts of the summarising protocol appear fitting, as the research questions target gathering focused knowledge, which is why a literal transcription is inappropriate. It is applicable to distil every nuance in an open interview situation in a social scientific context.

After transcribing the interviews a summarising case description is created. It portrays the interviewee and highlights characteristic statements. In the next step data is to be gained from the transcribed material. In order to so, Flick (2007, pp. 386 sq.) describes techniques of *coding*, which is the process of applying mark-up or codes to the data, in order to gain insights and draw interpretations. *Thematic coding* appears to match the needs of this study, as it serves the analysis of interviews with pre-defined scope, as well as the comparative character of this thesis (see also Flick). The results of the coding process may result in a large number of codes that are aggregated and serve as an interpretation base. In this respect there is a certain overlapping of qualitative and quantitative methods. Peaks in the codes may be identified and used to draw conclusions or interpretations. Finally, the resulting codes serve the purpose of comparison. Other approaches of coding are *theoretic coding*, *qualitative content analysis* and *global analysis*. Coding is tool-based for this thesis using https://www.dedoose.com/, which allows refactoring of codes, the creation of charts and export to Excel, which is used to further aggregate and process practical insights and results for this thesis.

Examination

In the last step the results of the evaluation step are examined and compared to the theoretical base in the state-of-the-art. The results of this step are presented in chapter 6, which covers theoretical and empirical results. In a last research step Chapter 7 critically reflects which goals have been accomplished and which have not. The chapter is closed by an outlook and possible future work.

Analysis

5

> *A scientist in his laboratory is not a mere technician: he is also a child confronting natural phenomena that impress him as though they were fairy tales.*
>
> **— Marie Curie**

This chapter builds upon the previous ones and focusses on the analysis of Scrum and Holacracy with respect to the research questions. Chapter 2 discusses the state-of-the-art with respect to the relevant aspects of organisation theory, as well as explicated the concepts of Scrum and Holacracy. This allows for deriving an academic void and the research questions central to this thesis. Matching the given knowledge and the derived research question the research design has been chosen. Following the latter, this chapter contains an initial main section that presents a theoretical analysis of both approaches. The second main section contains an analysis of the interviews conducted during the course of this thesis. Finally, the subsequent chapter summarises the findings and results of this analysis process.

5.1 Theoretical Analysis

In the following, I will (i) systematically assess Scrum's and Holacracy's structural dimensions using the Model of Schreyögg and Geiger (2016), and (ii) compare the two organisational forms to traditional organisational forms (i.e. hierarchy and the Model of Pugh, Hickson, Hinings, and Turner (1968)), and (iii) I will discuss implications of these distinct structural forms for motivation and collaboration. In order to accomplish the three above aims in a systematic way, this section is is divided according to the two research questions. In order to answer the questions thoroughly, they are split into their separate parts and discussed one by one. For each aspect Scrum and Holacracy are considered separately.

5.1.1 Research Question 1

> What are the internal organisational structures and (governance) processes in Scrum and Holacracy? What are their differences or similarities? What is the difference of Scrum and Holacracy compared to traditional organisational structures and Governance Processes?

Organisational Structures

This first section of the analysis concentrates on the internal organisational structures of Scrum and Holacracy. Of course, the building blocks of organisational structure - composition (in order to use a different word for distinction), processes and governance - are interwoven. Their separate consideration aims at a better and clearer understanding and deeper insights into both approaches. However, throughout this section it may appear obvious that it is hard to discuss structure, processes and governance in a separated way. So, every discussed aspect may in turn refer to the other resulting in one or another redundancy in this section. For the sake of a structured approach, the distinction is still taken.

Theoretical aspects of this topic have been explicated in Chapter 2.1.4. A number of questions shall help in understanding the internal organisational structures of either approach:

Dimension	Fit	Short Description
Analysis (+)	Partly	Applicable and designed for analysis of work. Restrictions in the parts of organisation outside of the Scrum implementation.
Synthesis (+)	Partly	Applicable and designed for synthesis of work. Restrictions in the parts of organisation outside of the Scrum implementation.
Division of Labour (+)	Yes	Within the scope of production fully supported.
Processes (+)	Yes	Process driven approach offering a blueprint for the actual working process.
Integration (+)	Yes	Roles support the integration of organisation and individual and help reducing complexity.
Specialisation (*)	Yes	See division of labour.
Standardisation (*)	Yes	Formalised process that is desired by the organisation applying Scrum.
Formalisation (*)	Yes	Well documented and defined process, supporting documents, etc.
Centralisation (*)	Yes	Low degree of centralisation. Dealt with by distributed authority using roles.
Configuration (*)	Partly	See synthesis.

Tab. 5.1.: Analysis of Scrum With Respect to Dimensions of Organisational Structure

- Which dimensions of structure does the respective approach meet? That is, in which structural dimension can the approach be used or applied? Dimensions of structure refer to the definitions of Pugh, Hickson, Hinings, and Turner (1968) (as representative for traditional organisation structures) and Schreyögg and Geiger (2016) (as main reference in this thesis) shown in Chapter Schreyögg and Geiger, 2016.

- How is an organisation implementing either approach structured? This question refers to aspects of specialisation, centralisation and configuration using the dimensions of Pugh, Hickson, Hinings, and Turner (1968). Especially in the context of specialisation and centralisation which results in traditional hierarchies the latter are referred to, in order to compare Scrum and Holacracy to a traditional perspective and to carve out differences.

- Which is the position of Scrum or Holacracy in the whole organisation and how is it embedded? This question aims at getting an idea of the scope and scale of both approaches and to help comparing them to traditional approaches.

- Which roles does the approach define, and how do they work? This questions aims at aspects of division of labour or specialisation and to some degree configuration.

- What are the differences to traditional structures? How do they compare to traditional approaches in terms of structure or composition and roles? These questions aim at the classification of Scrum and Holacracy by distinguishing their ideas from or highlighting commonalities with traditional structures.

Scrum: Filing into the Dimensions of Organisational Structure

The first goal is to get an understanding of the phases or dimensions of organisational structure that Scrum can be used in. Table 5.1 summarises the analysis of Scrum with respect to the dimensions of Organisation by Pugh, Hickson, Hinings, and Turner (1968) (*) and Schreyögg and Geiger, 2016 (+).

Analysis. The dimension of analysis focusses on the analysis of work itself. Primarily, Scrum is a project oriented approach. Concepts like the project organisation show that this is a valid concept that does not contradict organisational structure or hold immanent unfinished or temporary character. Nevertheless,

and pretty similar to the concept of a project organisation, Scrum does not cover the aspect of company administration. Activities like accounting or distribution, marketing and sales are not part of the actual project concept. However, given the central artefact of a formalised and mandatory Product Backlog Scrum explicitly targets the analysis of work. For this reason, Scrum partly matches this organisational dimension as it neither covers work outside the actual production process, nor provides concepts for it. Applying the concepts of Scrum to using it in the development of a marketing campaign and even more complex development processes, e.g. in the field of business development, seems valid. Thus, the fit is a principal yes that is restricted from a conceptual perspective.

Synthesis, Configuration & Centralisation. The dimension of synthesis deals with aspects of responsibility and decision power. The dimensions of synthesis in the one model and configuration in the other model focus on the same structural aspects. Instances are the impersonation of the synthesis process and hierarchy is its obvious result from a traditional perspective. From the perspective of the model Pugh, Hickson, Hinings, and Turner (1968) centralisation is the outcome of this structuring process. Centralisation as such is a relative dimension, i.e. there can be higher or lower degrees of centralisation. The second outcome of the synthesis process is a structure of teams or departments.

Firstly, Scrum obviously uses a core concept of team work to synthesise the organisation of work in groups of humans with specified decision rights. Similarly, given a clear role concept, Scrum provides concepts to deal with responsibilities. The Product Owner represents the business needs and holds the sole power to specify requirements, to change them and to go give and maintain priorities. The Scrum Master holds responsibility of team aspects, working conditions and takes over a twofold position: to the outside organisation she acts as a voice of the team and towards the inside of the team and the scope of a Scrum implementation she is responsible for ensuring coordination aspects (organising and facilitating meetings, creating reports, etc.), smooth working conditions and best possible process quality - both with respect to following the principles of Scrum, and the actual working process itself. Third, the Development Team holds the responsibility to conduct the production part. In this context it holds full responsibility to choose tasks following current priorities and to commit to them. Work is not mandated or divided using micro-management. Thus, there is a high degree of self-responsibility assigned to the operative employees or project members. Obviously, decision power is distributed among the roles. However, no role holds power over another role, but only over their particular part of work. While the Product Owner is not concerned with how code is written (assuming Scrum is used to organise the implementation of software) and which tasks the team chooses to work on, the Development Team, in turn, is not responsible for defining requirements or giving priorities. Obviously the degree of centralisation in Scrum is rather low.

Again, there is no explicitly defined structure for the part of the organisation outside the Scrum implementation. Therefore, Scrum partly covers this dimension. Concepts like Scrum of Scrums, which is used to organise large scale development projects, also use Product Owner teams and hierarchies to satisfy the principal need of this dimension of organisational structure.[1]

Division of Labour & Specialisation. While the dimension of synthesis results in the structuring of people with different degrees of authority and fields of responsibility, the division of labour aims at the actual distribution of work. Division of labour corresponds to *specialisation*, which is the first dimension of organisational structure according to Pugh, Hickson, Hinings, and Turner (1968) (see Chapter 2.1.4). The combination of these two labels allows understanding the position of this dimension very well. In Scrum work is divided into a) the principle parts of its definition and prioritisation and approval by the Product Owner, b) its smooth execution and facilitation by the Scrum Master, and c) its actual execution by the Development Team. Scrum theory speaks of cross-functional Development Teams. Thus, the

[1] See Paasivaara and Lassenius (2016, p. 79), who call *Scrum of Scrums* a "scaling practice".

required further specialisation is desired, but not pre-defined, because this is clearly part of the actual implementation. Again, the part of the organisation outside of the Scrum implementation is not touched. However, considering that Scrum is used for its purpose of organising product development in a project driven way, division of labour is an intended key concept.

Integration & Standardisation. Schreyögg and Geiger (2016) define integration as the measure to reduce complexity that is created by the division of labour and the high degree of specialisation. In this model common organisation models like the Matrix Organisation are means to reduce complexity by giving structure and possibly defining processes. Integration overlaps with the understanding of *standardisation* in the model of Pugh, Hickson, Hinings, and Turner (1968), which in turn also overlaps with organisational processes. By defining a standardised and structured process and by proving roles with clear responsibilities and interfaces the need to reduce complexity is met in a light weight way. Given the possibility to organise large scale production using Scrum of Scrums huge projects can be organised solving integration in a transparent and efficient way. At this point hierarchy naturally evolves by aggregating Scrum teams to a larger whole of multiple cascaded or stacked teams. However, this does not contradict the conceptual principles of Scrum meant to organise a piece of complex work.

Processes, (Standardisation) & Formalisation. Certainly organisational processes are manifold. On a general level, operational structuring is a traditional means in business administration. Approaches like process organisation and *business process re-engineering* even focus a process driven organisational structure and applying Schreyögg and Geiger (2016) may be considered one approach of creating organisational structure to support integration. Given their often formalised and well defined character the dimension of organisational processes relates to *formalisation* in the model of Pugh, Hickson, Hinings, and Turner (1968). Scrum provides a formalised process that is well documented in the way it is prescribed. Despite the possibilities to customise the actually implemented process, there is a high degree of standardisation. Given concepts like the artefacts (Product and Sprint Backlog, etc.), protocols or the *Definition of Done*, formalisation is a core concept that backs up transparency.

Scrum: Internal Structure of a Scrum Implementation

Summarising the classification of Scrum into the dimensions of organisational structure in the previous section it can be said that Scrum is designed to organise the complex production or development process of products. This is achieved by defining a meta process model, by defining a team structure with clear roles, and by providing formalisation at various points in the production process. All these concepts can be tailored to fit the needs of the actual implementation. The approach itself is project oriented and process driven. However, this does not contradict the use in a long running way. In this respect Scrum may serve as an organisation model for the project part of a project organisation.

Scrum: Position of a Scrum Implementation the Organisational Whole

It is an important question that has already been answered partly, at which point within an organisation Scrum is meant to be used and also implemented. Scrum has a clear focus on production. Its determination is to solve complex, adaptive problems (see Schwaber and Sutherland (2013, p. 3)) which draws the possibilities for application away from simple requirements and assembly line work. Obviously the focus is on firms that face these complex kinds of requirements and circumstances of developing products or goods. This makes for a clear position in the overall organisation. However, considering the possible application of project work, there is a possibility to use Scrum in other parts of an enterprise than simply production. The only limitation is that the overall process may be inconvenient for highly repetitive and simple work processes and those that usually are not organised as projects, e.g. accounting or human resources.

The most common case may certainly be software development. Depending on the scale of the organisation everything but company administration is going to be affected by the pace of Scrum Sprints. Given that there are organisational models like the project organisation, Scrum may be the means to organise the whole project part of a project organisation. In this case Scrum may cover a large part of an organisation in case there is a need for team work and adaptive management of requirements and flexible or floating priorities. Given that Scrum would be used in the development part of an multi line organisation or Matrix Organisation, e.g. in software and product development of a larger bank, the position may be completely different. All this also reflects in the headcount of the part of the organisation using Scrum and the one that does not. The ratio may clearly vary, resulting in different possible positions in the overall structure. In summary, the position of Scrum in the overall organisation depends on the scope of the organisation and thus also the relative relevance of work organised using Scrum. In any case, administration is never covered by Scrum.

Scrum: Roles

Roles usually evolve in the step of division of labour and may well be aligned with the evolution of hierarchy in the processes of synthesis and integration. While certain roles may be fixed like the common existence of a general manager or an accountant, other roles may freely evolve. In Scrum, roles are a key concept. It defines a set of three roles that integrally serve the purpose of a Scrum organisation. In contrast, Holacracy only defines the facilitator as an explicit role. Scrum defines the roles of the Product Owner, the Scrum Master and the Development Team, as explained in Chapter 2.2.2. It is important to underline that these roles do not freely evolve or may not exist, but due to their respective purposes are vital to the success of work being organised using Scrum.

Scrum: Comparison to Traditional Approaches for Structuring

In order to answer the question of the difference between Scrum and traditional approaches, it makes sense to look at its application domain. Scrum has an immanent project character, which is why it does not make sense to directly compare Scrum to the general structure of models like a Matrix Organisation, or overall organisational approaches like line or multi-line organisations. However, one main difference of Scrum to more traditional organisation models is the flattening and nearby absence of hierarchy. Scrum applies a hierarchy of tasks of competences, but not of power. That is, no role holds power over the person behind it. The other way round every role holds power of their piece of work of field of competence. That is, distributed authority is an important criterion for distinction towards traditional approaches. Obviously Scrum may serve as means to organise projects within a project organisation. However, there are other models that Scum can be aligned to.

Considering the definition of a *program* by Schreyögg and Geiger (2016, p. 75) Scrum complies to that model very well. Scrum has a pre-defined and *binding meta-process*, the execution of which is *authorised* (and desired) by the company implementing Scrum. The process intends to ensure the *smooth execution* of *specialised tasks*. And, the consultation of an *instance* is not needed to run that process. Considering that no role holds disciplinary power over another, Scrum could be classified as a program.

Lateral Organisations are another established group of organisation models. The concepts of Scrum align well alongside the attributes of these. By holding all skills within a Scrum team and enforcing self-responsibility *empowerment* is ensured. *Horizontal cooperation* is fully accomplished within the team. However, it is not defined as to how the communication with the outside organisation is conducted. Attributes of *cross-linked project groups* are fully met: *complementarity* is given by the roles in the first place and can be extended to the skills gathered in the Development Team. *Mutual respect* is fostered by the means of the Retrospective. *Accountability* is immanent due to the concept of the Development

Dimension	Fit	Short Description
Analysis (+)	Yes	Can be handled in the course of Operational Meetings.
Synthesis (+)	Yes	Organisation using a holarchy of Circles.
Division of Labour (+)	Yes	Self-emergent, but not specified.
Processes (+)	Yes	Clear governance and working process.
Integration (+)	Yes	Transparent processes and well defined decision making, clear and fixed rules reducing complexity.
Specialisation (*)	Yes	See division of labour.
Standardisation (*)	Yes	Formalised process that is desired by the organisation applying Holacracy.
Formalisation (*)	Yes	High, given the Constitution, protocols, etc.
Centralisation (*)	Yes	Low and decentralised.
Configuration (*)	Partly	See synthesis.

Tab. 5.2.: Analysis of Holacracy With Respect to Dimensions of Organisational Structure

Team's commitment to the chosen work. *Clear project definition* is the main objective of the Product Owner. *Positive attitude* may be backed up by self-responsibility, the immanent improvement process aiming to remove impediments and retrospective intended to deal with social aspects, as well. Next to cross-linked project groups there is *loose coupling*, which can be achieved by creating and adapting Scrum Teams according to the current organisational needs. Finally, *organisational citizenship behaviour* is a rather individual attribute that can be reached by creating conditions that make for solidary employees. Autonomy and lack of rigid hierarchies may strengthen this aspect.

Holacracy: Filing into the Dimensions of Organisational Structure

Analysis. As stated in Chapter 2.1.4 analysis of work refers to breaking down the company's objective into the actual building blocks of work or delivery packages, their interrelation, the timely manner they are executed, the internal package hierarchy and lastly their aims. Mapped to Holacracy, both main meeting formats potentially address the purpose of these tasks. In Governance Meetings perceived tensions can result in the creation of a new Circle, which in turn serves the (better) execution of a piece of work. The essence of the Governance Process strengthens permanent analysis of work. Subsequently, the discussion of project aspects is done in Tactical Meetings. That is, initially analysing a project (synonymously for a piece of work), its requirements and execution plan is done in these meetings. From the perspective of analysis as an initial phase of defining the objective or produced goods of an organisation as a base for the creation of its structure (as opposed to a constant process), the Anchor Circle is established as first Circle when implementing Holacracy handles analysis in its Governance Process.

Synthesis, Configuration & Centralisation. The aspects of synthesis and configuration refer to the evolution of structures to organise people, equipping them with a defined range of authority or competence and the aggregation to groups of humans governed by instances. In Holacracy, the hierarchy of people is replaced by a hierarchy of tasks or work. Thus, the concept of an instance, which is taken over by Lead Links in Holacracy has clearly defined authority (see Chapter 2.3.2 and HolacracyOne (2013, pp. 5-6)), none of which includes people management. A group of roles working together on a common purpose is called Circle. The way circles are synthesised is not pre-defined. Therefore, the degree of centralisation is completely open, as the structure of a Holacracy emerges itself and constantly keeps on changing. That is, there is neither a pre-defined concentric Circle structure, which theoretically is possible, but unlikely as it would also be strictly linear, nor is there any other foreseeable structure. So, there is no parallel to conventional structures, both in terms of dimensions and concrete shape. Thus, next to the unforeseeable and permanently changing structure the degree of centralisation is significantly and immanently lower due to the distribution of competencies.

Division of Labour & Specialisation. In Holacracy, specialisation and the division of labour reflect in the emerging Circle structure. In case specialisation is needed, the Governance Process produces a new or modified Role or Circle. Therefore, the higher the specialisation in an organisation practising Holacracy, the more circles it has and the more complex their arrangement. The "Comparison to Traditional Approaches for Structuring" later in this section discusses differences between high degrees of specialisation and the way labour is divided in Holacracy.

Integration & Standardisation. Integration is a means to reduce the complexity created by differentiation (mainly synthesis and division of labour) and standardisation is the formalisation of the respective processes (see Schreyögg and Geiger (2016) and Pugh, Hickson, Hinings, and Turner, 1968). Most common organisation forms (Single or multi-line system, Matrix Organisation, project organisation, etc.) are considered means for integration. Mapped to Holacracy the (constantly evolving) holarchy as a result of the Governance Process takes over the integration part. The difference to traditional models lies in the shape of authority and command structures of self-organising Circles (teams). Obviously, the standardisation character of the structure in Holacracy is fulfilled by the whole process specification - Governance including Dynamic Steering and Integrative Decision Making. Given the clear and universal character of the Holacracy Constitution, the universal process definition, the importance of roles and their evolution, plus the practical tool support (e.g. Glassfrog, holaSpirit, etc.) integration is satisfied very effectively and transparently.

Processes, (Standardisation) & Formalisation. Holacracy strictly defines the Governance Process (see HolacracyOne (2013, pp. 13 sq.)), Dynamic Steering (see Robertson (2007, pp. 14-16)) and Integrative Decision Making (see HolacracyOne (2013, pp. 20-22)). Governance and Tactical Meetings follow a well-defined and strict process that is enforced by a facilitator. In addition, mandatory meeting protocols, invitation routines are also defined. All principles are put to written form in the Constitution, which has to be ratified by the Anchor Circle as the organisational board. The degree of formalisation in the sense of Pugh, Hickson, Hinings, and Turner (1968) is therefore obviously very high in Holacracy.

Holacracy: Internal Structure of a Holacracy Implementation The central structuring concept of Holacracy are Circles. From the perspective of organisation theory Circles could be called teams. The main difference to traditional structures is that Circles aggregate to a different form of hierarchy. That is, each Circle is self-responsible and autonomous with respect to the way work is executed. Circles aggregate to a so called holarchy, which is a hierarchic structure with the main difference that there is a hierarchy of work and not of people. Super-Circles are entitled to pass on priorities and to allocate resources. However, no super Circle may specify how work is executed in a Circle and who does what. These are fully self-organising, including the possibility to form Sub-Circles in turn. This relates to the concept of roles. Every Circle contains roles and a role is always part of a Circle. A role is bound to a person and holds a list of accountabilities, next to a purpose and a possible domain. Circles are a special case of a role, i.e. a role that contains other sub-roles that are needed to pursue the purpose of the parent Circle and therefore to contribute to the completion or success of the work of the Super-Circle.

Holacracy: Position of a Holacracy Implementation the Organisational Whole

The answer to this question may be straight-forward, but does not have to be. As demonstrated, Holacracy aims at organising work at any scale. In case it is applied for an organisation as whole, Holacracy covers the whole organisation, i.e. the position of Holacracy in the Organisation equals the organisation. However, with respect to larger organisations with multilateral domains of work different organisational parts may use different approaches to organise work. The same can be said for organisations that start a Holacracy implementation in one department or line. In any case and also in summary, the position of

Holacracy is as large or small as allotted and desired. Holacracy as such does not limit its application field.

Holacracy: Roles

Roles are an important aspect of Holacracy. This reflects in the fact that there is a clear definition of what a role is, starting with its purpose, moving onto its domain and a well-defined and formalised (written) set of accountabilities. There can be no person without any role and no role can be unassigned. The actual forming of roles is subject to the Governance Process and therefore a central part to the way Holacracy works and operates an organisation. Roles are a living thing that contribute to the organisational success and are much more powerful than the traditional concept of job descriptions that are written down and rarely ever revisited. The interviews are to show the practical application and benefits of this aspect very clearly. Pre-defined roles in every circle: Lead Link and Rep Link as described earlier, a facilitator to run and moderate Governance and Operational meetings, and Secretary for administration work (e.g. sending out invitations or protocols). There is special importance to the facilitator role, as the facilitator is designated to ensure the smooth execution of the Integrative Decision Making process.

Holacracy: Comparison to Traditional Approaches for Structuring

There are four principles of traditional organisational structures:

- High Degree of Division of Labour
- Chain of Command
- Unity of Order
- Limited Control Span

Argyris analysed them with regard maturity, pointing out that they rather fit the behaviour of a child than rational and mature adults (see Schreyögg and Geiger (2016, pp. 140-143)). The structure in Holacracy can be related to this postulate, as discussed below:[2]

High Degree of Division of Labour. Taken to the extreme this is a veritable Taylorian approach. The individual is deprived of her possibilities. She cannot enact her competences due to a highly standardised work-flow and fine granular pieces of work. Individual specialisation and additional skills do not matter. Concepts like the process organisation (catchword "business process re-engineering") dissolve this Taylorian character by taking back division of labour in favour of a focus to the process perspective. While the granularity of specialisation (not to be confused with competence) for an assembly line worker (and also some other blue collar workers) is very low to atomic, the granularity of specialisation for white collar workers may be larger. In the context of the latter it usually reflects in a job description, that is practically followed or not, depending on various factors (e.g. organisational size and related needs). The job description and job title as a formal representation of the division of labour are put to written form and fixed until re-visited and possible changed. Unless there is concrete need for it or promotion they stay unchanged.

In Holacracy, division of labour emerges to a level that is perceived necessary following the Governance Process. Division of labour does not end in itself (fixed job title or job definition that is often circumvented or bypassed). And most definitely it does not serve the purpose of limiting or controlling people (again job title "Head of..."). The overall process ensures the orientation towards a shared Purpose and priorities deriving from it but the individual is invited to contribute to the evolution of the organisation at all

[2] The interview for Holacracy to different degrees reinforce the need for a certain degree of maturity, in order to be able to fit the system. Case 8: Holacracy Coach explicitly points out the need for a principle ability to reflect and therefore adult thinking and behaviour.

times. Individuals hold roles. Roles are alive. Every organisational member may hold roles at any Circle level matching her competences, ignoring all politics and aspects of hierarchy. Furthermore, by asking everybody to process their tensions, everybody is explicitly invited to think beyond her piece of work. Hence, there is a huge shift in perspective compared to the traditional one with respect to division of labour, from looking down the structure to looking upwards.

Chain of Command. In traditional organisation structures the chain of command aims at reducing complexity caused by the specialisation. The most traditional case is unity of command or single line management. That is, a pyramid structure with increasing competency climbing up the (scalar) hierarchy. Thus, hierarchy in the sense of general linguistic usage: a system of superiors and subordinates with upwards increasing authority. Superiors issue orders, subordinates obey and execute these. The lower the position in the organisation, the less the individual authority.[3] In Holacracy, there is no power of humans over humans or of one role over another. Every role needs to be aligned with the purpose of its Circle and approved by the Circle members, which includes the Lead Link and therefore the purpose and priorities of the particular Super-Circle. This, in turn, ensures coherence of the organisational structure and overall alignment.

Unity of Order. This characteristic refers to the organisation acting as a fully aligned unity. More than the goals, but also how they are reached, is dictated by corporate governance. Self-responsibility, autonomy and use of one's skills has no place in this approach. Obviously, the principles of Holacracy thwart this approach. While there is an overall purpose, every role-holder is not just entitled to self-responsibility and authority with respect to her role, but also bound by the Constitution to process her tensions, track her projects and to define next steps (see HolacracyOne (2013, pp. 1-3)). The constitution explicitly grants every role "the authority to execute any Next-Actions you reasonably believe are useful for enacting your Role's Purpose or Accountabilities" (see HolacracyOne (2013, p. 3)). Thus, while there are universal and agreed Purposes and priorities communicated by Lead Links the practice of Unity of Order in Holacracy is diametrically opposed to its execution in traditional organisations.

Limited Control Span. This principles relates to an idea of humans in the vein of McGregor's Theory X. Limited control span refers to a small number of subordinates, in order to accomplish maximum control of opportunistic employees (see Schreyögg and Geiger (2016, p. 141)). Holacracy considers every organisational member as intelligent being, granting her not just self-responsibility, but also a number of constitutional duties and competencies, as previously laid out. Next, in Holacracy no person has power over another person.[4] A Lead Link does not control the persons in a Circle that she is Lead Link to, but only provides priorities and allocate resources. The approach in Holacracy therefore completely differs (or deviates) from this principle.

Processes

The second section of the analysis of organisational structure concentrates on organisational processes as a second important aspect of organisational structure. Therefore this section is also based on the state-of-the-art discussed in Chapter 2.1.4. Like the previous section this section inspects Scrum and Holacracy separately posing a number of question aiming to reach the desired understanding and classification.

- Does the respective approach define a process concept? This question aims at the principle understanding, if the respective method is process oriented.

[3] Argyris points out acceptance problems and a dependency due to a narrowed perspective on the system - see Schreyögg and Geiger (2016, p. 141).
[4] All interview candidates report this separation as very liberating.

- Which organisational processes are covered by the respective approach and what are the internal processes in either one? This question aims at finding the application spots for the respective approach. It mainly focusses on the field of standardisation as in the definition of Pugh, Hickson, Hinings, and Turner (1968).

- Are there similarities to traditional approaches to organise processes and what are the differences to them? Obviously, this question aims at comparing the process concepts of Scrum and Holacracy to traditional ones and to find commonalities or highlight differences.

Governance, which appear to be more than a process is discussed separately in the subsequent section.

Scrum: Process Concept in Scrum

Given the pre-defined and central meta-process Scrum is obviously a process driven approach. The process prescribed by Scrum is an iterative incremental one. That is, it uses a concept of iterations to break down work into periods, which serves the purpose of dividing work into chunks and also to measure progress. The incremental character refers to the aim of creating a gradually growing result in every iteration. This question is simple, but not unimportant, as Scrum as a model could lack a process concept. A Matrix Organisation, for instance is an organisation form the targets the organisational structural as part of dimension structure in organisation science. However, it is not process oriented per se. Therefore, it appears important to underline that Scrum is a process oriented organisation approach. Given, that Scrum can also be used in long running product development makes its project character secondary.

Scrum: Coverage of Organisational Processes

The field of possible organisational processes is wide. It also varies depending on the industry that an organisation is in. In general there may be the core business or objective of a venture, and there may be administration or supporting processes like accounting. Another necessary distinction is the one between service companies and those that produce goods. The processes in either one are also different. Scrum targets the development of products in a complex and adaptive environment. That is, Scrum is designed for the needs of (complex) production processes, which rules out service companies that do not develop anything. For instance, the software development process within a tele-communication company may well be organised using Scrum, while the process of customer retention definitely may not. The latter is neither an iterative process, nor deals with a adaptive and complex requirements. An agent in customer retention follows a well-defined and simple process to convince customers to stay with e.g. their phone provider. That is, Scrum mainly targets complex and non-repetitive processes with changing priorities, which narrows down the possible application processes.

Scrum: Comparison to Similar Process Models

For the sake of completeness an explicit comparison to other process organisation models makes sense. Considering all previous thoughts on the process character and the application domain of Scrum it only appears meaningful to compare Scrum to traditional project management approaches and rather not to concepts like business process management, which is a totally different domain and scope. The main difference to traditional approaches in terms of project oriented work is the iterative incremental character. Traditional approaches, especially in the domain of software engineering, where there are comparable approaches and past solutions for the same problems, follow a strictly plan driven approach. The most prominent example is the so called *Waterfall Model*. This was characterised by the principle of "plan - do", as opposed to "plan - do - inspect - adapt" in Scrum. Furthermore, it was characterised by long serial phases of analysing requirements, specifying them, implementing and testing them and finally rolling

them out. The lack of feedback in almost every phase has led to a very low number of financially or timely successful software projects and even less satisfied customers due to the fact of lack of feedback or adaptability. Obviously the iterative incremental process of Scrum differs from that. Plus, a Product Owner whose explicit role is to be in constant contact with the stakeholders, keeping requirements up to date and gathering feedback from the first iteration significantly improves these issues. Considering other working processes, these may neither deal with complex problems nor deal with a long running iterative process, as shown using the example of the retention management agent. This can be mapped to many other organisational processes, such as hiring and firing, legal, accounting or sales.

Holacracy: Process Concept in Holacracy

Not unlike Scrum, Holacracy is also process driven. While Scrum defines an iterative incremental (product) development process, the process model in Holacracy is characterised by an iterative evolution process. The biggest difference is that the main process focusses on the evolution of an organisational structure that suits the present needs in the best possible way instead of focussing on a measurable, productive outcome as central objective as Scrum does. The Governance Process in Holacracy is oriented towards a structural outcome. In this respect Holacracy as an organisation form appears closer to the concept of Process Organisations as Scrum, while not removing focus from the division of labour as extremely as process organisations do. Traditional structures as the already discussed before (e.g. unity of command, or multi-line systems) per se are not process oriented. Therefore, it is important to emphasis the process orientation of Holacracy as new organisation form. The general structural discussion of Holacracy with respect to the dimensions of organisational structure at the beginning of this section contains further consideration regarding the process concept of Holacracy, while the Governance Process is discussed separately in the next section.

Holacracy: Coverage of Organisational Processes

Holacracy can be considered as a tool-kit and framework designed to produce an organisational structure the fits the present needs at any time. Therefore, there are no pre-defined specific processes for concrete organisational needs, like hiring, dismissal and other aspects of the HR process, for instance. However, the open concept of Holacracy considers this by the idea of add-on practices or modules. These are not part of the Constitution, but of the practical guide (see Robertson (2007, p. 24)). In this context Robertson mentions "modules for strategic planning, budgeting, compensation, project management, personnel development, hiring & firing, team formation, retrospectives, and much more". Thus, Holacracy is principally prepared and open to satisfy any organisational process, but does not provide them out of the box. [5]

Holacracy: Comparison to Similar Processes Approaches

There is a very close evolutionary relationship from Holacracy to Sociocracy (see Eckstein (2016, p. 5)). The main principles in Holacracy (e.g. double-linked circles) have been adopted from Sociocracy. This also refers to an election process to roles (functions in Sociocracy) consent-based decision making. In this context Eckstein (2016) also mentions the concept *teal organisations* (see Laloux (2014)), that also share similarities to Sociocracy. The parallel between Holacracy and Sociocracy is therefore more than obvious. Taking a Google search as indicator for relative popularity and dissemination a search for Holacracy produces roughly 250.000 hits, while a search for Sociocracy results in only a fifth of the hits - about 48.900. While Holacracy is only at the beginning of getting popular and enter the heads of

[5] Case 7: Holacracy Facilitator and Coach mentions add-ons in practice, comparing them to apps on an operating system. Holacracy takes the position of the OS, and practices may come from external source. That is, add-ons practices are sample implementations of other organisations that use Holacracy and that have made their solutions public. A pure copy-paste-solution is certainly dangerous and is most likely not going to work, as stressed by the interviewee.

management scholars, Sociocracy still appears farther away from popularity than Holacracy. Given the process driven focus on structural improvement there is a certain similarity to the concept of business process re-engineering, as already argued previously in this section. Otherwise, and in general, Holacracy appears fundamentally different to all mentioned organisation forms.

Governance

This section discusses aspects of governance as the wholeness of authority, autonomy, decision making processes, responsibility, delegation, etc. Aspects of governance are also covered in Chapter 2.1.4 despite not having a dedicated chapter or label in that chapter, as it happens on every organisational level and in various processes - from corporate governance to project governance. It holds a special position in the effectuation of an organisation form, which is why it is treated separately in this chapter. Governance directly links to authority and responsibility. It relates to who is entitled to take (which) decisions and also to the way they are achieved. Thus, governance may have a process character, assuming there is a defined decision making process, e.g. following a chain of command to reach a decision. From a perspective of organisational structure it relates to the hierarchy of instances and command, which are the result of synthesis and integration. While the term *corporate governance* refers to the governance of the overall organisation, equalling a board of directors, general management, etc., governance also happens on different organisational levels. There is also *project governance*. So, governance obviously spans multiple aspects of structure. The following questions aim to get an understanding of how governance works in Scrum and Holacracy.

- How do decision processes and responsibility work in either method? This question refers to how decisions are taken and how they affects the dimension of synthesis in the model of Schreyögg and Geiger (2016).
- Which position does authority and unity of command hold in either approach? This question is rooted in the dimension of centralisation defined by Pugh, Hickson, Hinings, and Turner (1968). It aims at understanding the degree of centralisation of either approach, and translates to who holds power and who decides.
- How far is the respective method hierarchic and how does hierarchy look like in an implementation? This question relates centralisation and configuration (Pugh, Hickson, Hinings, and Turner (1968)) or synthesis and integration (Schreyögg and Geiger (2016)). It aims at explicating the correlation of decision power, responsibility and position in the overall organisational structure.
- What are the differences to traditional Governance Processes or Governance Processes in traditional organisation structures? This question aims at finding differences and commonalities in the way power is distributed in traditional approaches and to therefore also how decisions are taken differently.

Scrum

Given the position of a Scrum implementation in the overall organisation as discussed before, it is necessary to consider the type of use. In case, Scrum is used to simply run a project, the question is who takes which decisions in the project and how are the decisions reached. If Scrum is used to organise the production part of a product development company, e.g. in the domain of software development, the implementation may well have a permanent character and therefore be tied to larger and permanent

decision structures. Given this principle distinction between Scrum and Holacracy the focus of the discussion is obviously different and more role based.

Scrum: Hierarchy, Decision Processes, Responsibilities and Authority

There are two main roles that hold the explicit and designated power to take certain decisions. The Product Owner solely decides about the specification and the priorities of work to be done. It is also her job to ensure that these are aligned with the priorities of the stakeholders and the requirements of the customer, who may be an internal customer, a manifold customer (product development) or a single external customer (custom development project). In this respect the Product Owner also represents the organisation as decisive container or framework.

With respect to hierarchy in the context of the enclosing organisation, a distinction is needed: "internal" hierarchy and "external" hierarchy. Within a Scrum implementation there is no hierarchy in the traditional sense. That is, no role holds authority over another role. There is technical authority and autonomy meaning that every role has the competency to enact their job (as part of the whole process) without being governed by any other role.

So, authority only refers to work and not to decisions of people management. The Development Team itself is entitled to choose the tasks to work on, considering current priorities that come from the Product Owner. It is the duty of the Development Team to commit to the chosen work items. In case goals are not met, the overall process is designed to make the reasons for it transparent. In addition, Product Owner represents the customer, the organisational or the project goals and is solely authorised to prioritise. The last point for internal decisions is the Development Team. The decisions within the Development Team are of technical nature and the decision process is not formalised. In case of software development teams commonly there is a structure of senior, (regular) and junior developers. There is also the common role of a software architect who holds a senior decisive position. However, all this is common practice, and not part of the Scrum specification. By definition the team is to be cross-functional and therefore provide all necessary skills. Decisions are then obviously taken depending on expertise. When Scrum is applied to manage development in industrial production, there are certainly senior engineers and the decision competency evolves by team dynamics, if not defined on the part of the organisation. Above all there is the inherent and pre-defined character of the self-organising team.

In terms of external hierarchy Scrum is embedded in an organisational whole which is why Scrum Team members may be part of a company-wide hierarchy outside the Scrum Team(s). There may be two decisive interfaces to the outside hierarchy: The Product Owner serves as an interface to govern the subject of production and the organisational priorities (which may equal the customer's priorities). Secondly, there is personal planning and staff allocation to projects when Scrum is used to run projects. Otherwise (if Scrum is used for production in fixed teams) this aspect relates to human resource management and development leaving out recurring personnel planning. In both cases there is either a parallel structure with instances, or the Product Owner acts as instance for her team.[6]

From a process perspective and compared to Holacracy there is no defined process to reach a decision, but only role-based autonomy as laid out previously. A final aspect to facilitating decisions is the Scrum Master, who is to hold moderation skills and may serve as moderator or mediator in discussions. Nonetheless, this does not include the mentioned priorities or the how of a technical implementation.

Scrum: Comparison to Traditional Governance (Processes)

In order to summarise this section I compare the aspects of governance in Scrum to governance (processes) in traditional organisation forms. Before being able to do this, there is the question of what is a traditional

[6] Case 3: Product Owner and General Manager reports a parallel structure answering question S-01.

organisation form in this respect? Obviously, organisation forms are practically applied organisation theories (respectively adopted or derived from practice - see Galbraith's quote at the beginning of Chapter 2). Thus, it appears more systematic to ask, what is traditional governance and therefore which organisation theories the governance in Scrum should be compared with? Traditional in this context refers to a hierarchic system with little to no autonomy of the individual. Certainly, classical and neo-classical organisation theories can be considered traditional in this sense. Given, that the beginning of modern organisation theory dates back to the 1950s and models like the Human Resources Approach (e.g. McGregor's Theories) are meanwhile common knowledge (or may be considered adopted into mainstream thinking), not outdated, and moulded into younger theories. The difference in governance of these younger theories and Scrum may therefore be less.

Since comparing single theories and Scum is beyond the scope of this thesis, I refer to (three of) Argyris' four principles of traditional organisational structures[7], which also summarise concepts of traditional organisations that represent in governance. First, *chain of command* diametrically opposes all principles in Scrum, which refuses micro-management. Team members choosing work themselves are the opposite of the end of a chain of command.

Secondly, *unity of order* which needs to be considered in a differentiated way. Alignment within the scope of the Scrum implementation is guaranteed by the Product Owner. In case of Scrum being used to manage product development accordance with general management is possible. If it is used for customer projects is not going to be unity of command. The character is rather service oriented than in-house production oriented. The customer heavily influences priorities and therefore decisions. The other side to unity of command, that the way to corporate goals are mandated by corporate governance does not apply. The Development Team decides how to effectuate work and what to commit to in a fully self-organising way. During a Sprint no influence from outside the Development Team is allowed. In theory, a change of priorities during a Spring is factually forbidden due to all its side effects (task planning of the Development Team, dependencies in terms of coding the case of software development, messed up metrics and controlling, etc.). In practice, however, this may happen.[8]

Last, *limited control span* refers to an idea of humans that strictly opposed self-responsible or self-organising teams. Thus, put briefly Scrum diametrically opposes this characteristic given its overall approach to autonomy and responsibility, as discussed before.

Holacracy

Governance holds a central position in Holacracy. The term *governance* is used 95 times in the Holacracy Constitution.[9]

Holacracy: Hierarchy, Decision Processes, Responsibilities and Authority

First, it is important to ask what governance means in the context of Holacracy. As an organisation form Holacracy is applicable to a whole organisation, while Scrum is focused on a project oriented development or production part. Therefore, governance in Holacracy has a wider impact than in Scrum. While in Scrum priorities entering the ecosystem of a Scrum implementation come from all organisational stakeholders (general management, sales representing existing and potential customers, product management including

[7] See Schreyögg and Geiger (2016, pp. 140-143) and paragraph "Holacracy: Comparison to Traditional Approaches for Structuring" earlier in this chapter.

[8] Case 2: Development Team Member describes a situation, in which these changes appear necessary. The Product Owner, who is also the general manager adds emergency requirements due to a customer request, or a short term sales situation. See the answer to question S-01.

[9] See the discussion of motivation and Holacracy in the following section, that compares the number of hits of important terms including *governance* in the Constitution.

market research and trends, professional services, etc.), these are a *potentially* a part of the system in Holacracy.[10] Thus, in Scrum overall governance is driven from the outsides in Scrum, while in Holacracy top-level authority (in this case corporate governance) may be a part of the system.

Governance may be broken down further into the questions "What is an instance?", "Who is entitled to take which decisions?", "How big is their authority?", "When are decisions taken?", and "What are the responsibilities of each instance?".

As laid out before, the approach to synthesising work and to integrating humans and the organisation that they work for is different in Holacracy. Hierarchy, is a) one possible result of the process of synthesising work when structuring an organisation, and b) one possible way of integrating humans and an organisation by bundling authority (see Schreyögg and Geiger (2016)). This results in competencies and clearer focus, due to defined scope and a respective degree of authority. This approach is intended to reduce complexity, which is a product of the specialisation process. The result of this structuring process in Holacracy is a *holarchy* instead of a hierarchy of power or decision competence.[11] That is, every circle has its *own* Governance Process, but is connected to its superior via a Lead Link that ensures the abidance by the super-circle's priorities and purpose. [12]

Applying theory regarding *instances* to the concept of decision in Holacracy, instances appear to be split. While Lead Links define priorities and allocate resources, every role-holder has a clearly defined power over her role, and so does the circle. Thus, there is no single person who is entitled to command her subordinates.[13] The Constitution grants an "Authority to Act" to every role, stating that

> As a Partner assigned to a Role, you have the authority to execute any Next-Actions you reasonably believe are useful for enacting your Role's Purpose or Accountabilities. However, you cannot exert control or cause a material impact within a Domain owned by another Role or another sovereign entity, unless you have their permission. (See HolacracyOne (2013, p. 3).)

Th is means that no organisational member has power to control or determine the way another role-holder executes her role. This makes for a fundamental difference compared to the traditional concept of hierarchy, which usually translates to: those who hold a higher position in an organisation have the power to command those below. In Holacracy, this is impossible given the above rule. Authority therefore translates to autonomy and self-responsibility.[14]

Decisions are an outcome of this high importance of Holacracy, so that they are achieved in a formalised way following the process of *Integrative Decision Making* (see Chapter 2.3.2.). This process, which is facilitated and practically controlled by facilitators, formalises and speeds up decisions.[15] In addition to this formalised process the concept of *Dynamic Steering* is driven by the central idea of picking up again a decision at any time (see Chapter 2.3.2.) This makes for huge differences to traditional decision processes

[10] Case 7: Holacracy Facilitator and Coach refers to a Holacracy implementation to a couple of departments of about 150 employees in an organisation of 20,000 overall employees. Thus, a Holacracy implementation does not necessarily cover a whole organisation. During my research I also learned of a large Austrian bank that is currently introducing Holacracy in one department.

[11] See Chapter 2.3.2 for a definition of a *holarchy*. Besides, a text search for the term *hierarchy* in the the Holacracy Constitution results in no matches.

[12] See Case 7: Holacracy Facilitator and Coach for a graphic explanation of the shift from authority over persons to authority over roles and related work. See the answer to question H-03 of IP-H3.

[13] See again the graphic visualisation of this in Case 7: Holacracy Facilitator and Coach, question H-03.

[14] Case 6: Holacracy Practitioner and Consultant reports both the liberating freedom and the necessity to be willing to take responsibility

[15] See Case 6: Holacracy Practitioner and Consultant, who refers to the processing of 30 to 40 issues within one hour when answering question H-10.

that often depend on future events that are unclear and possibly unforeseeable at the time the decision is taken. The difference to a conventional "plan-do" approach could not be greater. Now, coherence might be an issue, given every role's autonomy. However, following the priorities that are communicated from one circle to every circle below it, coherence and overall alignment is ensured. That is, while every role is authorised to execute the role however they wish to, the overall purpose and the organisational goal is kept in the focus.

Pursuing the question of *who is entitled to take which decision*, everybody who is invited to a Governance or Operational Meeting is part of the decision process in the meeting. Everybody has the same rights within her circle(s), which is ensured by the Integrative Decision Making process that makes everybody bring forward their questions and later on objections. The only thing that stands above this process is the Constitution that defines a number of rules and existing policies. However, the latter may be changed in a Governance Meeting.

Holacracy: Comparison to Traditional Governance (Processes)

The matching section for Scrum discussed what can be understood by traditional governance (processes) or traditional organisations and how they decide. In summary, this discussion ended in referring to the comparison of Holacracy and the principles of traditional organisational structures by Argyris. This is a point, at which structure, processes and governance appear inseparable. Therefore see "Holacracy: Comparison to Traditional Approaches for Structuring" earlier in this section.

5.1.2 Research Question 2

> What is the impact of the use of Scrum and Holacracy on collaboration and motivation and what are their differences or similarities?

Collaboration

Chapter 2.1.5 highlights events or meetings, teams and formalised communication as the central aspects of collaboration that are relevant for this thesis.

In order to analyse Scrum and Holacracy in a systematic and comparable way, the following questions are posed to either method:

- Events: Does the respective approach define events or meeting formats and if so which are they? This question refers to the principal definition of meeting formats.
- Events: What purpose do events pursue? This question refers to the possible large list of meeting purposes as proposed by A. Allen et al. (2014). It aims at determining if there are pre-defined purposes of meetings in either approach.
- Events: Are events formalised and if so how? This question refers to the rules related to meetings, the absence of which would leave a meeting with an open effectuation.
- Events: Which criteria of meeting effectiveness are addressed and practically solved by the events? This question refers to the criteria proposed by Allen et al. (2014).
- Teams: What role do teams play in the respective approach? This question refers to the principal use of teams, and to their relative importance and use in either method.

- Teams: What is the character of the teams, if there are any? Are they formal or informal? Are they permanent or temporary?

- Teams: Which criteria of *team effectiveness* are addresses and practically solved by the respective methods? This question refers to the criteria proposed by Sheard and Kakabadse (2002).

- Communication: What does the respective approach do to support aspects of communication in a formalised way? This question refers to the understanding of *formalisation* (of processes, communication, rules, etc.) defined by Pugh, Hickson, Hinings, and Turner (1968).

Scrum: Events

Definition of events, purpose and character. Scrum defines a set of *four events* as a central part of its specification and overall process. Each of them happens on a regular basis in a defined interval at a pre-defined point in time. (see Chapter 2.2.3) In contrast to Holacracy, the project driven approach of Sprints prescribes the point at which every meeting takes place. (In Holacracy every Circle chooses the interval for meetings) From a structural perspective the meetings purely serve a work related purpose, as opposed to governance. Organisation of staff is outside of the process and changes to the process next to changing meeting times or the length of the Sprint is not intended. Governance, on the level of Holacracy is not in the scope of Scrum. On the other hand, the reason for meetings is clearly defined - from inter-team communication and addressing of impediments (Daily Stand-Up), planning (Sprint Planning), control and feedback (Sprint Review) to team building, maintenance of relationships, removal of process flaws or impediments (Retrospective). While the content of meetings is defined and in the case of the Daily Stand-Up it is defined that everybody tells the team what she did the day before and what she is working on the current day; there is no formal(ised) and mandatory process to follow as in Holacracy. In this respect despite defining clear goals and responsibilities, the meeting rules in Scrum are not as strict as in Holacracy.

Events & meeting effectiveness. Based on a study, Allen et al. (2014) propose a list of criteria for meeting effectiveness. The following list inspects the concepts of Scrum with respect to the defined criteria.

- *Agenda:* Scrum does not prescribe the use of an pre-defined agenda. The use of it may still be enforced by a skilled Scrum Master, who is meant to have adequate moderation skills and know how to ensure efficient and effective meetings. If the team experiences the lack of structure in the meeting they can address it in the Retrospective.

- *Focus on time:* By definition, every meeting in Scrum has a time-box. It is the Scrum Master's job to ensure that time-boxes are respected. In case of dissatisfaction every team member has the chance to highlight the potential need for more discipline with respect to compliance to schedules in the Retrospective. In my humble practical experience, I faced the exact situation of team members addressed the issue of starting on time and not spending time wait for team members that were constantly late to meetings. The retrospective is well suited and the right forum to discuss issues like these.[16]

- *Facilitator:* In Scrum the Scrum Master takes over the role of a facilitator in the sense of Allen et al. (2014). That is, she acts as moderator and enforces discipline. From the perspective of Scrum theory her job is to ensure the smooth execution of the process which includes these tasks during meetings.

[16] Case 7: Holacracy Facilitator and Coach mentioned increased discipline and an educational effect of starting meetings on team, no matter if every invited attendee was present or not.

- *Quality facility:* While this is not subject to Scrum as an organisation method to provide a quality facility, the Retrospective is the right format to address this issue, in case there is a problem with the location.

- *Functional behaviour:* This refers to attendees participating in the accomplishment of solutions and in taking responsibility. From the principal perspective of autonomy and self-responsibility this is a desired behaviour. However, this is an individual issue. Again, the Retrospective is a format that allows to process possible issues in this context.[17]

- *Citizenship-behaviour:* The answer to this criterion is the same as the previous one, only that citizen behaviour refers to meeting attendees acting like good citizens.

Scrum: Teams

While from a structural perspective teams may be another word for department and serve as a means to organise and group humans with respect to control and specialisation, taking a human perspective teams hold different characteristics. Chapter 2.1.5 discusses theoretical aspects of teams as an important means for collaboration.

Role of teams. Scrum obviously defines a team structure as a central concept: the so-called Scrum Team consists of the three roles Product Owner, Scrum Master and Development Team. The responsibilities of each role have been discussed in Chapter 2.2.2. In order to get an idea of the relative importance: a search for the term *team* in Schwaber and Sutherland (2013) as the official specification document results in 142 matches. A Google search for the term "Scrum team" results in roughly 28,800,000 hits.[18] Certainly, the first number is the one with real importance, as it demonstrates the relative weight of the term in a 16 page document with 6.125 words, showing statistical relevance of the term team in the concepts of Scrum. In comparison the term *Scrum* "only" appears 215 times. *Sprint* results in 165 hits, *product* in 144, *Product Owner* in 37, *Scrum Master* in 34, and *project* in only 7.

From a structural perspective the team is a container or the basic organisational unit. Chapter 5.1.1 mentioned Scrum of Scrums as an aggregation or scaling method for multiple Scrum projects. In the scope of a regular Scrum implementation the Scrum Team is the base unit.

Character of teams. Scrum teams are formal teams which means that their role is defined in the Scrum specification assigned with clear accountabilities. Accountability in this respect differs to the one in Holacracy and is mostly comparable to operational aspects of Holacracy. [19]

Depending on the character of the implementation Scrum teams can be temporary or permanent. If Scrum is used to organise a projects the character of a Scrum team is temporary. By design it is composed according to the needs of the project. This also means that there has to be a supply of employees to choose from, which suggests the obvious existence of an organisational structure next to the project structure. That parallel structure may include all conventional organisational aspects like line management, aspects of human resource management and development, etc. In contrast in a product organisation using Scrum

[17] Case 1: Scrum Master reports troublemaker in the team the taming of whom was ensured by the retrospective. Case 2: Development Team Member refers to a differentiation between which issues to handle in the Retrospective and which to handle in a one to one conversation.

[18] Search conducted February 8th 2017.

[19] Case 2: Development Team Member, which has been conducted in an organisation that uses Scrum for product development, reports two permanent teams organised as Scrum teams with one shared Product Owner.
Case 7: Holacracy Facilitator and Coach, which has been conducted in an organisation that uses Scrum in order to organise projects, mentions Scrum teams as project units that are composed for every project next to permanent teams as organisational units. The adoption of Scrum principles, e.g. the way to communicate and to try to permanently improve is also mentioned in that context.

teams are likely to have a permanent character. In this case the inter-mixture of Scrum roles and line functions is more likely due to the permanent character of structures.[20]

Scrum teams are by definition *cross-functional* and *self-organising* (see Schwaber and Sutherland (2013, p. 4)). Cross-functionality refers to having all necessary skills within the team, but also to the fact that teams are meant to collectively own work and to allow for removing bottlenecks and knowledge being bound to single persons. This aims at removing single points of failure, and also to improve quality applying the simple principle the four eyes may see more than two eyes. This desired redundancy of skills, in turn, could make the approach accessible or valuable to less complex labour. The benefit is distribution of knowledge among a project team. However, it is a team characteristic and an issue of knowledge management, and no sole characteristic of Scrum.[21]

Team effectiveness. Sheard and Kakabadse (2002) defined nine key factors of effective teams, as compared to loose groups of humans. The following list discusses their applicability to the principles of Scrum.

- *Clearly defined goals:* it is the Product Owners accountability and responsibility to make sure that goals are well defined in the first place and understood by the whole team. If any change occurs or questions arise, it is her job to make sure that the whole team understands current goals, otherwise there is no team, but a loose group of individuals working on individually chosen or random goals.

- *Priorities:* Identical to the goals, the Product Owner is responsible to provide and maintain priorities and make them visible to and understood by everybody in the team. Priorities are formally available in the Product Backlog which at every point in time reflects the project's (the development unit's) priorities. The maintenance and control of clear priorities ensures a cohesively aligned team,.

- *Roles and responsibilities:* as already pointed out previously there are clear roles in Scrum, each of them to be agreed on by the participants of a working Scrum implementation. Responsibilities are pre-defined and not up to arbitrary choice, which in turn would distinguish a (potentially) effective team from a loose group of humans.[22]

- *Self-awareness:* While the Scrum process is not as rigid as the one in Holacracy, there are also concepts to ensure disciplined behaviour appropriate to the needs of the team. The permanent involvement of the Scrum Master in every meeting ensures discipline and the following of the process. The focus on constant improvement and removing impediments also allows to address unhealthy behaviour, which can be done on a daily base during the Stand-Ups. Lastly, the Retrospective allows to discuss and more importantly solve team issues.[23]

[20] Case 6: Holacracy Practitioner and Consultant, which has been conducted in an organisation that uses Scrum for product development, reports no temporary limitation. In the case of this interview the general manager is also the Product Owner, which makes for an practical example of combined Scrum role and line responsibility.
Case 7: Holacracy Facilitator and Coach, which has been conducted in an organisation that uses Scrum in order to organise projects, mentions project durations from a couple of days up to two years. See also the remarks about the team character of project versus "regular" team in the previous footnote. In that organisation there is another duplicate meaning in language at use: the term Product Owner and Project Manager is used synonymously. These are independent of line management. The general manager, who was the interview partner, mentions his occasional function as Product Owner or project manager, in which he explicitly separates his line management function and project function.

[21] Case 5: Founder and Holacracy Expert highlights the character and benefits of interchangeability in the team. See the answer to question S-12.
Case 3: Product Owner and General Manager also describes the desired effect of a reduction of information silos answering question S-04.

[22] Case 5: Founder and Holacracy Expert mentions the need for a strong Scrum Master a couple of times, while Case 6: Holacracy Practitioner and Consultant challenges this need with the reality of an imperfect Scrum implementation. The acceptance of the roles and their responsibilities is not challenged in either interview.

[23] Case 1: Scrum Master reports the situation of a constantly bothersome and annoying team member that may need to be asked to leave, if no behaviour that serves the team can be accomplished. Case 6: Holacracy Practitioner and Consultant explicitly

- *Leadership:* Sheard and Kakabadse (2002) relate leadership in effective teams to performance and call it catalytic as opposed to directive in loose groups. In Scrum, leadership is distributed among the roles. While the Product Owner provides leadership from the business perspective, the Scrum Master provides leadership with regards to the process, and the Development Team takes over responsibility for the Development part. In no way (from a theoretical perspective) there is directive management, or micro-management. Every role holds full responsibility and accountability for their part of the overall process. Again, depending on the way Scrum is used (for projects in a separate surrounding structure, or for formalised teams and product development) there may be directives outside of the Scrum process.

- *Group dynamics:* Independent of the way Scrum is implemented (for project work or to permanently organise development) every team member is entitled to communicate her impediments and to discuss the any issue in the Retrospective. It is an explicit goal of the Retrospective to inspect the last Sprint with respect to people and relationships (see Schwaber and Sutherland (2013, p. 12)).

- *Communications:* Sheard and Kakabadse (2002) attribute open communication to effective teams, in contrast to formal communication in loose groups. However, they do not specify formal and open any further. In Scrum the content of meetings is defined, and the necessary contribution of every role to respective meeting is defined. However, there is no formal protocol or rigid process as in Holacracy. Formal may be used contrasting formalised. In this case there is an average degree of formalisation. Considering that every team member has a voice at every time and there is no immanent hierarchy, open communication is possible in theory. Exceptionally formal communication would therefore be rather caused by organisational culture rather than by Scrum. E.g if Scrum roles are mixed with line functions in a bank that tends to be organised conservatively, communication may be more formal.[24]

- *Content:* The design of the way work is distributed sustains organisational influence on the content, but does not control its choice and way of execution. That is, the Product Owner specifies work and solely provides priorities. The Development chooses the amount of work and in turn implements it without being told how to do it. Of course, the overall purpose of the project or the venture is ensured by re-aligning requirements and results in the Sprint Review. Thus, the clear separation of responsibilities and the relatively high degree of self-organisation balances organisational needs and the effectiveness of a team that is no being micro-managed.

- *Infrastructure:* Sheard and Kakabadse (2002) relate infrastructure to IT, HR topics, or clear communication of goals by the top management. These are outside of Scrum to some degree. The improvement process aiming at removing impediments allows one to address and remove issues in this context at every point in time. The Scrum Master picks up any issue related to IT infrastructure or team issues, and the Product Owner is explicitly in charge to provide clear work and priorities. It is her duty to make sure that the team does not run short on work. Thus, while not being part of the organisational part that Scrum is responsible for. Scrum equips its practitioner with the means to process them.

highlights the issue of feeling cornered when addressing personal problems publicly in the Retrospective. Thus, while providing the discussion format as such, a one to one meeting outside of the Scrum process may help to solve certain problems. The separation of tasks and persons in Holacracy makes discussion about unhealthy behaviour easier compared to Scrum, since nobody is addressed personally.

[24] Case 7: Holacracy Facilitator and Coach reports situations of Scrum implementation where the adoption of a role may hold a certain (high) reputation and therefore elevate its holder as somebody with greater importance than "plain team members". Case 5: Founder and Holacracy Expert mentions the loss of power as a problem for certain managers transitioning to Holacracy. See the answer to question H-07.

In summary, all the concepts provided in Scrum satisfy the criteria for team effectiveness. The effectiveness of teams, however, was rather not covered in the interviews, while Case 6: Holacracy Practitioner and Consultantexplicitly mentioned the benefits of the separation of competence and the absence of interference of Product Owner in technical decisions.

Scrum: Communication

Chapter 2.1.5 discusses formalised communication as a part of collaboration. Pugh, Hickson, Hinings, and Turner (1968) refer to *formalisation* in a broad sense of putting processes, rules and communication to a written form. Communication, no matter if happening in the form of a (virtual) meeting or as formalised written artefact is a central aspect to successful collaboration.

Formalisation of communication. Scrum defines so-called 2.2.3. These serve multiple purposes: certainly, the two central artefacts are the *Product Backlog* and the *Increment*. Given, its role as central tool for collecting, specifying, prioritising and distributing requirements, as well as tracking their status and progress the Product Backlog holds irreplaceable importance for the flow of information through the whole team. From the perspective of a whole organisation a central source of information also helps in terms of communication with the outside world and customers (be it internal or external). Information does not need to searched for. Responsibility is clear and progress can be tracked in a transparent way.[25] It is common to use tools to manage Product Backlog, e.g. Atlassian JIRA, but also Excel sheet.[26] On a Sprint level there is the *Sprint Backlog*, which serves the same purpose as the overall Product Backlog, but with a focus to the current iteration and with the latest and complete version of the requirements. (See the idea of acting just-in-time and collecting changing requirements in a complex system.) In reference to the criteria for *team effectiveness* (see Sheard and Kakabadse (2002)) both Backlog satisfy the needs for *clearly defined goals* and *priorities*. Hence, they can be classified as highly supportive means for communication that serves team effectiveness and therefore productivity.

Aiding transparency, *Burn-down Charts* also are valuable means of communication. Central and important questions like "Where are we?", "How did we perform?" and "Are we going to deliver on time?" can be answered by the means of the Burn-down Chart. Embedded in the whole governance (planning and controlling) process of Scrum this part of communication that involves the insides and the surrounding of the team is satisfied by formalising this part of the organisational scope.[27]

Sheard and Kakabadse (2002) also refer to communication in the sense of the spoken word as important criterion for team effectiveness. This aspect is mainly addressed by the meeting formats that formalise communication in Scrum and make it routine. For the sake of completeness it is also mentioned in this section.

The Increment, in turn, may not be attributed to communication, but "simply" as the result of a Sprint. It is therefore the manifestation of what the team works for.

Finally, there may be a number of further documents or points for formalised communication, e.g. agendas for the Scrum meetings (which again increase meeting effectiveness - see A. Allen et al. (2014)), protocols, a formalised Impediment Backlog, etc. However, these are not covered by Schwaber and Sutherland (2013), but can be found in practical best-practice literature.

[25] 5.2.4 mentions these benefits regarding communcitation with customers answering question S-06

[26] See jira.atlassian.com. JIRA as tool to manage requirements is mentioned by Case 1: Scrum Master answering question S-04, and by 5.2.2 answering question S-04 S-05, S-09. 5.2.4 mentions both Excel and JIRA answering question S-01.

[27] Again, see the example of 5.2.3 who mentions customer communication, which is ensured by the degree of formalisation in the planning process.

Holacracy: Events

Definition of events, purpose and character. Holacracy defines two main types of meetings: Governance Meetings and Operational Meetings (see Chapter 2.3.3). From a structural perspective the meetings serve the purpose of governance (Governance Meeting) and operational business or venture objective (Operational Meeting). Governance refers not only to the level of general management or corporate governance or project organisation, but to permanently working on developing the organisation as whole on every level. Operational Meetings are specialised to four sub-types as explained in Chapter 2.3.3. The claim for purpose as central motive in Holacracy equips meeting also with a clear purpose. Following a rigid process starting at the invitation, meetings are strictly formal(ised) in Holacracy. With respect to the taxonomy of reasons for meeting as proposed by A. Allen et al. (2014) these are open, next to the general purpose, i.e. everything that is related to everyday business is handled in Operational Meetings and organisational development is process in Governance Meeting.

Events & meeting effectiveness. The following list discussed the concepts of Holacracy with respect to criteria for meeting effectiveness proposed by Allen et al. (2014).

- *Agenda:* In Holacracy there is a difference between the formal process of meetings, which betimes is practically confused with agenda and the actual meeting agenda, i.e. the list of tensions to be processed. Both, in case of Governance Meetings and Tactical Meetings the facilitator creates the agenda during the meeting. This is because every participant is invited to bring forward her tension, and not because of lack of preparation. Hence, every participant is required to join the meeting prepared for it. The meeting process enforced by the facilitator ensures the processing of all agenda items.

- *Focus on time:* While Holacracy does not define time-boxes for different meeting types in its Constitution, every meeting has to have a meeting time sent out upfront with the invitation to the meeting by the secretary of the Circle. During the meeting the facilitator ensure the compliance with the scheduled meeting time.[28]

- *Facilitator:* Allen et al. (2014) propose a facilitator in order to improve meeting effectiveness. Holacracy defines a role of exactly the same name. The purpose of whom is to ensure that the process as described in Chapters 2.3.2 (Integrative Decision Making) and 2.3.3 (meeting process for Governance and Tactical Meetings) is followed.

- *Quality facility:* Obviously, this requirement is not really subject to the organisation method. However, if any organisational member experiences tensions caused by the local meeting (working) conditions, she can also process them in a Governance Meeting. For example, meeting in a large room with other communication running in parallel, bad lighting, or the lack of needed presentation devices or likely processed (if not available) in an organisation that is reflected enough to use Holacracy.

- *Functional behaviour:* This refers to attendees participating in the accomplishment of solutions and in taking responsibility. The preceding argumentation highlighted the separation of tasks or roles and the persons holding the roles. So, in this case it is again the process (enforced by the facilitator) that takes over control. Similar to the next point it is practically impossible not to take participate (everybody has to object or confirm) and to take responsibility. Outside of meetings the granularity of responsibility can be chosen by applying for roles at higher or lower Circles.

[28] Case 6: Holacracy Practitioner and Consultant mentions one hour meetings during which 30 to 40 item are processed.

- *Citizenship-behaviour:* This is a special case, as it refers to the way participants of meetings behave. In Holacracy there is hardly any space to act as individual following your own rules in a meeting. The process ensures discipline. The facilitator simply kills misbehaviour. Plus, only acting in one's own favour and being uncooperative to others is hardly possible, since there is no "being for or against something" (someone's proposal), but pure process driven decisions based the Constitution and on objections or no objections. Therefore it can be presumed that citizenship-behaviour as defined in Chapter 2.1.5 is a side effect of the defined processes.

Holacracy: Teams

This section discusses aspects of teams in Holacracy as important building block of collaboration in organisations. The discussion refers to theoretical concepts presented in Chapter 2.1.5.

Role of teams. In Holacracy the term *team* is not common (or rather not used). Robertson (2007, p. 7) calls the structure of organisational structure of Holacracy a "fractal 'holarchy' of self-organizing teams (Circles)". However, teams are an important building block of Holacracy. The difference to the usual character of a team as group of humans is replace by so-called Circles in Holacracy. A Circle is an organisational unit that emerges from the Governance Process and represents a group of roles needed to execute a piece of work. A text search in the Holacracy Constitution (see HolacracyOne (2013)) for the term *team* results in only one hit. The Constitution is a 41 page document. A search for the term *Circle* results in 378 hit, while *process* outputs 129, *Holacracy* just 71, only 14 of which are not part of disclaimers, copyright tags in footers, etc. Searching for other prominent characteristics of Holacracy leads to *facilitator* with 97 hits, *governance* with 95, *meeting* with 62 and *structure* with only 7. The relative importance of teams alias Circles could not barely be higher in Holacracy. As an additional remark, in comparison to the Google search for "Scrum team" that resulted in 28,800,000 hits, a search for "holacracy team" results in 105,000 hits. In both cases both terms searched for contribute to the number. The striking difference between the size of the result set is most certainly due to the different degree of popularity of either approach. Refining the search to "holacracy Circle" restricts it to "only" 28,100 results (a thousandth of the hits for "Scrum team"), which obviously backs the thesis that the lower popularity is visualised by these numbers.[29]

Character of teams. Circles in Holacracy are a key concept. A Circle as such is defined to have a purpose and a domain, contain roles, and enact clear, agreed on and written accountabilities. Its character therefore formal.

The Governance Process determines the character of the Circle with respect to its life span or endurance. Every governance meeting may result in a new Circle being created, or an existing one being modified or dissolved. For this reason teams in Holacracy may have temporary or permanent character. In every case there is a *global company Circle* or *anchor Circle* for the whole life-span of an organisation practising Holacracy. This top level Circle most likely also changes alongside the evolution of the organisation, but its dissolution equals a termination of the organisation or an exit from Holacracy to another organisation form.

Cross-functionality is no explicit criterion for Circles in Holacracy. Nonetheless, the Governance Process is designed to have the needed structure emerge itself. That is, if any Circle member senses a tension due to missing skills, she is going to address it in the next Governance Meeting. The process allows for the addition of roles or the modification of existing ones by the addition of accountabilities to resolve the tension.

[29] The search has been performed on February 8th 2017.

Team effectiveness. The following list discusses the applicability of the criteria for team effectiveness Sheard and Kakabadse (2002) to the principles of Holacracy.

- *Clearly defined goals:* Similar to the Product Owner in Scrum the Lead Link provides goals to her sub-Circles and makes sure they are understood by everybody. A group of humans with unclear goal is no team.

- *Priorities:* The same as in Scrum, it is one accountability of every Lead Link to give clear priorities to the sub Circles she is responsible for. By providing clear priorities that are understood by everybody on the team is to be aligned in a cohesive way.

- *Roles and responsibilities:* Roles are a key concept in Holacracy. Next to the role of Lead Link, Rep Link and Facilitator they are subject to the Governance Process and therefore part of a permanent evolution process. Given the central character of the Governance Process and its principle of Integrative Decision Making and the role transparency provided by tools like Glassfrog, holaSpirit, etc. the process ensure that everybody both agrees on and understand the roles in her Circle.[30] Compared to the concept of job descriptions that are documents filed somewhere in an HR department role transparency is enormously different and improved by the approach of Holacracy. This transparency and process driven acceptance contributes clearly to the need for well understood roles within a team.

- *Self-awareness:* The separation of task and person driven by the rigid process in Holacracy enforces discipline and kills inappropriate behaviour. The formalised character of Integrative Decision Making (see Chapter 2.3.2) that rigidly defines who is allowed to speak at what time, and the accountability of the facilitator who kills all discussions drifting away from the process provide the means to ensure behaviour that meets the team (Circle) needs.

- *Leadership:* Holacracy distributes leadership among all Circles and roles. As every role holds accountabilities and a voice to be heard in the Governance Process, the specification provides quite catalytic leadership. The directive that is immanent are the priorities and allocations that are given by Lead Links. Therefore, the freedom with respect to work may be a little less free compared to Scrum. Goals and priorities are communicated very clearly and the choice what to work on is less flexible than in Scrum. The way work is executed is as flexible for every role, which makes for common ground with Scrum. Given, that there is exceptional emphasis on the evolution of the organisation, the invitation for (or even job of) everybody to participate in the Governance Process emphasises distributed, or catalytic leadership, as well.

- *Group dynamics:* Firstly, the agreement on a system like Holacracy that requires a high degree of reflection reinforces the idea of group dynamics as proposed by Sheard and Kakabadse (2002). The permanent, joint work on the emergence of an organisation that fits the current needs the best possible way provided by the principle of Dynamic Steering ensures the character of dynamics by allowing to re-visit every decision at every point in time (see Chapter 2.3.2). Finally, the high emphasis on formalised communication that separates tasks and roles from humans strengthens the group aspect by moving discussion to a factual level.

- *Communications:* while meetings in Holacracy are formalised, they may not necessarily be formal. The way of the governance as a concept that endows everybody with a voice to be heard in the whole organisation makes for a principally open communication culture. That strict protocol in

[30] All interviews highlight role transparency. Case 7: Holacracy Facilitator and Coach explicitly points out the constant re-visiting of roles in the used tool holaSpirit, which makes for a good practical example of role transparency.

meetings principally moves subjective dominance or extra formal communication to organisational culture. The process itself aims for openness.[31] As the article provides no further specification of formal, compared to open

- *Content:* Same as for Scrum priorities and allocation is provided by the Lead Link, but there is also no micro-management and full autonomy with respect to the way one executes one's role. Sheard and Kakabadse (2002) attribute "task focus" to loose groups, as opposed to context being influenced but not controlled by the organisation in effective teams. There is no further definition of these two values. Certainly, there is a focus on tasks and roles in Holacracy, rather than on the persons that execute them. Nonetheless, the high degree of autonomy of every role with respect on the way of its execution aligns Holacracy with the value for effective teams.
- *Infrastructure:* Similar to Scrum the tension driven approach and the aim of the Governance Process to adapt the organisation to work the best possible way, satisfies the needs for functional and adequate infrastructure.

In summary, all the concepts provided in Holacracy satisfy the criteria for team effectiveness, which has been practically acknowledged at many points in the interviews.

Holacracy: Communication

As laid out in the corresponding Scrum section this thesis relates formalised communication to Pugh, Hickson, Hinings, and Turner (1968) and emphasises communication beyond the spoken words.

Formalisation of communication. In contrast to Scrum, Holacracy does not define formalised or written communication. Both main references, the Constitution (HolacracyOne (2013)) and Robertson (2007) do not contain the words *communication*, *document* or *protocol* in the same way as Scrum defines its artefacts. Communication in the sense of this thesis can be found between the lines of as result of process steps: There is the defined *Secretary* role for every Circle, whose job it is to collect all decisions of Governance Meetings, to put them to a written form of meeting minutes (see Robertson (2007, p. 21)) and to make them available to the participants. As an output to Tactical Meetings the Secretary collects a list of *action items*, writes them down and again sends them out (see Robertson (2007, p. 23)). Both documentation processes are just mentioned in the process description, but not as a concrete document being an integral part of the specification.

However, in the sense of Pugh, Hickson, Hinings, and Turner (1968) Holacracy is highly formalised. The Holacracy Constitution (see HolacracyOne (2013)) is a exceptional materialisation of rules for organising work and collaboration. My research on organisation forms found no as strict and formalised or comparable definition of organising work. The Constitution in its current form is a 41 page document that mostly addresses the process of governance and the evolution of the related or emerging structure. It does not describe how to operationalise the process, which is part of further literature (e.g. Robertson (2007) or Robertson (2015)).

The use of Glassfrog, holaSpirit or other tools to support the Governance Process and to write down and maintain role definitions highly attributes to formalised communication, which in turn contributes to the central aim of transparency.

Concluding this paragraph on communication, it can be argued that despite not prescribing a number of concrete documents, communication in Holacracy is highly formalised in the sense of organsiation theory.

[31] Case 7: Holacracy Facilitator and Coach reports a recurring situation with people learning Holacracy who need to get used not to impulsively speak whenever they feel to comment during a meeting. The learning curve is considered steep. However, The benefits with respect to the pace of decisions and meeting efficiency of a working Holacracy implementation driven by the defined meeting structure have been pointed out in every interview. Case 6: Holacracy Practitioner and Consultant mentions 30 to 40 issues processed within a meeting that lasts an hour.

Motivation

Chapter 2.1.6 presented a collection of the most respected and best known motivation theories. In order to analyse Scrum and Holacracy with respect to their potential to address motivation, both methods are contrasted to the core concepts of the presented theories. Before comparing either method the principle question of the consideration of the individual and her needs is asked.

Scrum

A text search in the Schwaber and Sutherland (2013) for the term motivation produces no search results. Scrum per se defines roles, but does not specify the individual as a key position in its concepts. The word individual is mentioned two times in context with humans in Schwaber and Sutherland (2013), but does not address aspects of human needs or motivation.

Scrum & Maslow's Hierarchy of Heeds

Chapter 2.1.6 introduced the concepts of Maslow's seminal theory. Maslow's model is quite low level and can also be applied to human needs outside a labour situation. In this context the chapter also introduced the so-called *Performance Pyramid* by Stum (2001), which extends Maslow's concepts to a modern work situation. Given, that the first four layers of Maslow's pyramid refer to so-called deficiency needs their application to a formal organisation method will not result in a motivated employee. In turn, the fifth layer of *self-actualisation* holds the power to motivate an employee. The condition that a person works in a domain that she likes is a pre-requisite for self-actualisation to take effect. Assuming that Scrum is used in skilled work situations that require proper professional education (e.g. studying computer sciences) which in turn is not completed accidentally, the principal pre-requisite for self-actualisation is met. Considering the concept of a self-organised team and team members who are entitled to choose the amount of work to do themselves and to commit to it, strengthens this condition. In turn the overall concepts of Scrum address the deficiency need of *esteem* by providing regular feedback and also explicitly giving a voice to the individual in the Retrospective, collecting and processing impediments to create best possible working conditions. The need of *social involvement* is addressed in so far as there is a principal concept of team work, which makes for nobody to have to work alone, while group aspects and social tensions or conflicts can be processed in the retrospective. Advancing to the Performance Pyramid the need for *work/life harmony* is added, while some of Maslow's dimensions are translated or developed further. Clearly work/life harmony may be an issue of organisational culture, and rather of the organisation form. The layers of *rewards* and *affiliation* are certainly met alike the two other deficiency needs in Maslow's model. Rewards correspond to the regular and timely feedback provided in the Sprint Review and also the Retrospective. A clear and dedicated team structure strengthens affiliation. Challenging the situation of the team in short term projects, this may be reduced to the situation of colleagues and therefore cast out of the scope of Scrum. In summary, it can be said that from a theoretic perspective concepts in Scrum align with ideas in Maslow's hierarchy of heeds.

Scrum & Herzberg's Two Factor Theory

Chapter 2.1.6 described the idea of Herzberg's *Two Factor Theory*. The first group of the so-called *hygiene factors* does not hold the power to motivate people. It is therefore ranging from a degree of perceived dissatisfaction to no dissatisfaction. In turn, the *motivators* range from no motivation to a certain positive degree of motivation. Herzberg defined a list of motivators. Subsequently this section challenges their applicability to concepts of Scrum.

Achievement. Self-organisation is a central concept in Scrum. Having team members pick work themselves instead of being micro-managed every team member has the chance to perceive a feeling of

achievement, in case she is ambitious. As the approach itself is dedicated to solve complex problems it holds an immanent potential to satisfy the feeling of achievement when solving complex problems. This contrasts to work at an assembly line, which holds way lower potential for perceived achievement. The task is simple and repetitive and no problem needs to be solved. This need can related to the reason for the perception of self-actualisation in Maslow's model. Given, the relatively high degree self-responsibility in a Scrum implementation the potential for achievement is met due to the same conceptual building blocks that make for self-actualisation.

Recognition. The same formats in Scrum that hold the potential to satisfy the needs for esteem or rewards in the previous paragraph make for perceived recognition. The fact that Sprint Reviews and Retrospectives are scheduled and performed regularly has the power to strengthen the feeling of recognition.[32] Individuals do have to ask for feedback, but are provided with it every two or three weeks. The high frequency and the absence of a need to ask for it compared to common models makes for a huge improvement. Appraisal or formalised feedback by an instance or the employee's superior usually happens once a year in traditional approaches. And milestone checks or reviews in project management models like the waterfall model neither have an iterative incremental character, nor foresee addressing people issues.

The Daily Stand-Up might also be used to get recognition when praise is verbalised in the inter team situation. However, the actual idea of the Stand-Up is to say what one did the day before and what on works on that day. So, the Daily Stand-Up is not designed appraisal or feedback format.

Work itself. Whether a person likes working or not is rather a personal issue. The principal willingness to work and find pleasure in performing good work (or not) relates to Theory Y (or Theory X) and to the concept of intrinsic versus extrinsic motivation. Again, as discussed earlier Scrum is applied for fields of work that require educated staff. For this reason the principal readiness to find pleasure in working itself may be higher than in jobs that require lower qualification. The organisation form can create working conditions that make work enjoyable. By giving a certain degree of autonomy and responsibility to the individual, Scrum at least does not thwart that. From the perspective of Pink (2013) the application of Scrum creates conditions of autonomy, mastery and purpose, and therefore has the theoretical potential to make work enjoyable.[33]

Responsibility. Obviously, responsibility is a key concept in Scrum. Firstly, there is the clear role concept that hold three different roles responsible for different parts of work and competence. The concept of self-organising team and the absence of micro-management strengthens responsibility down to the individual and the single team member. However, responsibility is not forced to individuals, as every team member is entitled to pick work items form the current Sprint Backlog. Therefore, Scrum ensure in a very simple, but powerful way that responsibility is lived in the Scrum Team, while allowing for different personal speeds and levels of wanted responsibility by leaving out micro-management. That is, less skilled or more junior employees can work at their pace while still taking responsibility for a piece of work, while more senior team members can do the same also at their pace. Next to the individually perceived own

[32] Case 1: Scrum Master mentions a review situation twice, after which the Scrum Master used the Burn-Down Chart to motivate the team. She printed it out and wrote "Awesome" on it, hanging it up in the team room. As the performance of the team increased in the following Sprint she printed it out again adding three exclamation tags after another "Awesome". This is a very graphic example of Scrum based recognition in practice. The communicative tools are used to create recognition.

[33] The applicability of Scrum Pink's ideas is discussed later in this section.
Case 2: Development Team Member showed a slightly controversial perspective on this aspect: the candidate pointed out that he is and can only be intrinsically motivated to perform his job, and that an organisation form or management method only holds the power dissatisfy him. This relates to an instrumental character of organisation. The organisation form - in the eyes of the candidate - is no more than an instrument. If the approach ensures smooth working conditions and does not create a feeling of being interrupted or perceived unnecessary noise it is considered good. Thus, this perspective equals the one of Herzberg's hygiene factors.

possibility to adjust the portion of work of one's responsibility the team profits of the self-balancing overall speed.

Advancement. As discussed in Chapter 5.1.1 Scrum either covers project organisation or project oriented product development. Therefore advancement is not directly in the scope of Scrum, but rather of the enclosing organisation and its potential hierarchy including human resources development. However, in this respect the means of the Sprint Review offers a chance to make seen in the other direction. That is, principally all stakeholders are invited to join the retrospective. Taking the perspective of the person that is being demoed the results of the Sprint, patterns of productivity or exceptional progress or performance get obvious by reviewing progress in scheduled and frequent intervals. This visibility and transparency may contribute to the chances of advancement. However, given that work organised with Scrum is rather expert work the immanent career ladder may not be as steep as in traditional management hierarchies, which is why advancement may play such an important role.[34] In any case, Scrum does not hinder the chances for advancement.

Possibility for growth. Same as for the previous aspect and the one of achievement, work organised with Scrum holds the potential for growth, as it deals with complex problems. Obviously, this is not a direct achievement of the application of Scrum as a method. However, solving complex problems makes for perceived individual growth.

Relationship with peers. Various concepts in Scrum have the power to work on the relationship with one's peers. Firstly, there is a principal team of humans working together. By providing the Daily Stand-Up every team member gets talk to every team member every day. If there are problems (impediments) these can also be addressed on a daily base, which should make for an open and good team climate. Eventually, the instrument of the Retrospective also brings together the whole team while explicitly working on reflecting what went (goes) well and what went (goes) unsatisfactory.[35] Thus, there are Scrum concepts to address and improve the relationship to peers.

Working conditions. Given, the role of the Scrum Master there is a dedicated role to care about work conditions. In case there is anything that hinders smooth working, it is the Scrum Master's job to remove this impediment. Impediments may be collected on a daily base during Daily Stand-Ups, which makes employees get used to speak up about problems. While there is no time for longer group discussions in the Daily Stand-Ups the retrospective provides the right format to do so. As it is conducted for every Sprint, the chance to address issues regarding the working conditions, this motivator is clearly met.

In summary, Scrum provides formats, roles and concepts to address all of Herzberg's motivators.

Scrum & McGregor's Theory Y

Chapter 2.1.6 described McGregor's *Theory Y*. The way employees and their attitude towards work are considered by their superior is central to Theories X and Y. The inherent and fundamental principle of a self-organising team in Scrum fully respects the concepts of Theory Y. Allowing (and even more asking) the team to choose the amount of work to do and to commit to it shows an image of humans at work that is based in humans willing to take responsibility and finding motivation in it. By applying the ideas of Pink (2013), in the paragraph after the next, this kind of trust-based motivation can be extended and strengthened. The idea of having the Product Owner provide and specify the principle work to be done and give priorities does not contradict the fit to Theory Y.

[34] Thinking of my personal work experience at the Austrian National Bank, OeNB, there was a position of so-called senior experts. And in software development there is a common distinction between junior developers, developers and senior developers and possibly software architects.

[35] Case 3: Product Owner and General Manager explains the importance of the retrospective for the team climate and improving collaboration.

Scrum & Hackman and Oldham's Job Characteristics Model

Chapter 2.1.6 introduced the *Job Characteristics Model* (JCM) by Hackman and Oldham. The JCM is summarised in a simple equation resulting in the *motivating potential score* of a job. The discussion of the matching of Scrum and the Two Factor Theory and the Hierarchy of Needs pointed out its application domain as important characteristic that may positively affect human needs. The JCM measures aspects of these in a concrete way. While Scrum may not have a direct influence on *skill variety*, its principles are designed for work committed by knowledge workers, which is why a relatively high skill variety can be presumed. Certainly, this does not mean that only knowledge workers may have high skill variety. A nurse, for instance, is no knowledge worker and needs a variety of skills, as well. Presuming the intention of Scrum to solve complex and therefore compound problems, *task identity* may be lower than the of a carpenter who builds a piece of furniture from scratch and to its completion. Furthermore work is accomplished in a team and - in software development - concepts like collective code ownership sustain replace-ability. In turn, *task significance* may be higher again due to the application domain of Scrum. From a simple, economic perspective it would not make sense to solve complex problems at high costs, if they were insignificant. A certain task significance can therefore be presumed. The two further factors of *autonomy* and *feedback* have been discussed in the previous paragraphs. I therefore argue that the application of Scrum has the potential for a high MPS. Tessem and Maurer (2007) show the successful application of the JCM in a qualitative case study in a software Development Team. The study resulted in finding a high degree of motivation and proposes how to sustain motivation in growing teams.

Scrum & Pink's Model of Motivation

The last motivational model presented was Pink's approach to intrinsic motivation in Chapter 2.1.6.[36] *Autonomy*, as the first of three powerful intrinsic motivators is a key concept in Scrum. The factors that address to this motivator are same again: the self-organising team, team members that are entitled to choose the amount of work to do themselves without any micro-management and to freely commit to it, complete independence during a Sprint and clear roles and responsibilities increase autonomy. There is no difference to the argumentation, as for autonomy in the context of the JCM.

Secondly, *purpose* is met in Scrum on a concrete level: a Scrum project holds a concrete vision, every Sprint has a defined Sprint goal, user stories as the common unit of work packages hold a purpose in their standardised definition. User Stories are mentioned in Chapter 2.2.2. As a core of a user story there is a defined scheme: As a <INSERT_WHO> I would like to <INSERT_NEED>, so that I <INSERT_REASON>. In my humble practical management experience the third factor in the user story the definition, the *why* made a huge difference. Since programmers want to make things work and care more about a clean implementation, than about user needs, adding a reason for the needed feature or solution helped improve quality for end users by adapting the perceived purpose in the eye of the developer. (Of course , practice allows deviation and there are flawed implementations like for any other organisation method, as shown in many studies about the principle pitfalls of Scrum implementations. However, this is a discussion and comparison of theoretical concepts.)

Mastery, the third motivator, may again be satisfied by the domain of knowledge workers applying Scrum as argued in context with the Two Factor Theory and the JCM. The argumentation with respect to mastery as motivator in Scrum is as simple as it is striking: an assembly line worker is not likely to try to get better at repeating the same action. A knowledge worker needed intrinsic motivation to master her profession in the first place to be reach appropriate proficiency to be employed in the first place. When at work, she is

[36] Case 3: Product Owner and General Manager explicitly refers to Pink's factors of autonomy, purpose and mastery. All being met by the principles of Scrum in action. Case 2: Development Team Member shows a candidate who claims only to find intrinsic motivation and considers management methods or organisation forms in a way that matches Herzberg's hygiene factors.

going to going to aim at doing her job the best possible way, if given the chance to do so. Once again, the character of self-organisation, free commitment and separation of roles, giving professional and technical freedom to the team member doing her job create the circumstance to allow mastery - if searched for by the person herself. The Retrospective as a formalised reflection format empowers employees to speak up about skills they feel they need to grow, in order to do their job better. Depending on the organisational culture growth in this respect can be supported or ignored. Plus, depending on the type of person the Scrum process does not hinder a person to take what is left and to work on it with an "eyes closed, 9 to 5" kind of attitude. Obviously this argumentation applies to the use of Scrum as suitable approach, but certainly is neither contradicting the fit to other activities and organisation forms, nor limited to it. Any kind of skilled work may result in pleasure and motivation - ranging from advanced craftsmanship, like perfecting one's skills of carpentry, to intellectual growth of a knowledge worker. In summary, Scrum provides concepts that allow mastery to take effect.

Holacracy

The same searching the Holacracy specification, searching the "Holacracy Constitution" (see HolacracyOne (2013)) resulted in no finding for the term "motivation". A search for the term individual results in the clear statement "Circle Needs Over Individual Goals" (see HolacracyOne (2013, p. 29)). In a different context "Individual Action" is mentioned (see p. 32). However, this refers to rights to act in a certain way, and not to individual needs.

Holacracy & Maslow's Hierarchy of Heeds

The same as for Scrum, the Hierarchy of Needs the human needs addressed in it are relatively low level when applying the ideas behind Holacracy to it. The same argumentation as for Scrum may be applied to Holacracy. However, there is a main difference: while Scrum applies to production work, Holacracy is designed to potentially organise labour within a whole organisation. Therefore, also the second lowest layer, respectively need of *security* can also addressed. With respect to work the need for security can refer to job security. While an organisation form may not protect an employee from being fired, she may be given more or less space to be heard.

The other, higher layers are addressed in a similar way as in Scrum. A high degree of formalised meeting and discussion formats holds the power to satisfy the next two layers: work is made visible, as are problems. Team aspects are permanently addressed by the Governance Process and problems are sorted out, which leaves no one by herself. Still, the separation of role and person may make for a different perception of the need for *esteem* (or *rewards*, as in the model of Stum (2001)) and *social recognition* (or *affiliation*): there is no space for ego in discussions. The process takes out ego and replaces it by roles and pieces of purpose driven work. This idea holds the power to change social relationships in organisations. The integrated decision process makes shifts discussion from being in favour of something or against it to a formalised decision, which in turn may reduce politics and conflicts.[37]

Given the concept of Integrative Decision Making and Dynamic Steering, the principal tension driven Governance Process and an omnipresent purpose the need for *self-actualisation* is addressed. Thus, the one dimension that has the power to motivate is met by concepts of Holacracy.

Holacracy & Herzberg's Two Factor Theory

Achievement. The same as for Scrum in the application of Holacracy the same principles that meet self-actualisation may also strengthen the perceived feeling of achievement. Given the powerful means

[37] Case 5: Founder and Holacracy Expert especially stresses the benefits of separating the organisation of work and humans and focussing on work resulting in an improved working climate and friendships.

to change the overall system via the Governance Process the individual gets very powerful tools to be involved in the organisational evolution and change. A key difference to Scrum is that Holacracy is not production oriented, but open to organising any kind of work. Still, as the Governance Process is also feedback driven, achievement is also made visible.

Recognition. Holacracy provides no format like the Sprint Review in Scrum, where humans are lauded for the work they did. Of course, applied leadership and emotional intelligence may make for positive resonance and recognition. However, the separation of work and humans may translate into being recognised in executing one's roles to a satisfactory level. an approach to ensure feedback includes recognition the accountabilities of a Lead Link could be extended to providing feedback and if adequate praise.

Work itself. The aspect of work itself being a motivator takes a similar shape as with the application Scrum. Given, that Holacracy requires a sophisticated process and trained practitioners the likelihood to be used at the exemplary assembly line is low, due to the administration overhead. In this case a classical line or multi-line managed hierarchy appears both more fitting and common. Thus, next to organisational culture, aspects that are in the focus of Theory Y and Pink's model of intrinsic motivation appear more relevant, in case work itself is perceived motivating or not.[38]

Responsibility. Holacracy postulates self-organising Circles as a key concept, fully autonomously deciding about the execution of one's role, and urging every Circle member to bring her tensions into the Governance Process. Thus, self-responsibility is a key concept in Holacracy. This does not mean that everybody is forced to take over the same degree of responsibility. The holarchy of Circles results in high level and low level Circles. As everybody needs to accept their roles, nobody is forced into responsibility that she does not want to take. Therefore, Holacracy addresses responsibility in a healthy way, allowing every employee to take over as much responsibility as she wants to leaving space to grow.

Advancement. Advancement in a traditional hierarchic organisation results in more competence and authority (professional or with respect personnel authority, which is more important in this case). The design of roles in Holacracy, the holarchy instead of a hierarchy and the chance to bring in tensions makes for a permeable and therefore completely different system. (Micro) Politics do not play a role. So, a member of a sub-sub-Circle has the chance to provide her skills (and tensions) in her super-super-Circle without having to be afraid to violate hierarchy and omitting her boss and her boss' boss. Given the Governance Process, everybody gets the chance to experience advancement in every governance meeting, if not objected by the respective Circle members. The binding and pre-defined process of Integrative Decision Making ensure objectivity on top of the principle possibility. Thus, if one accepts that advancement does not meant to control more people and a cooler job title, Holacracy offers great chances for more advancement than any other organisation method.

Possibility for Growth. This dimension and its discussion relates to the arguments given for advancement and achievement. The same reasons that may satisfy these two other motivators may push the possibility to grow.

Relationship with Peers. Again, all arguments with respect to the creation of hierarchy of tasks instead of a hierarchy of humans also hold immanent power to improve inter-human relationships. Also, the frequent character of meetings - from getting together in Daily Stand-Ups with all colleagues in Circle

[38] Case 5: Founder and Holacracy Expert highlights that the candidate by no means would be willing to work in a traditionally structured organisation. The candidate in Case 7: Holacracy Facilitator and Coach points out a feeling that he may experience huge trouble finding his way, if needed to work again in a traditionally structured organisation. Certainly, these two remarks relate to more aspects than addressed at this very point, but they back the argument that Holacracy holds the potential to create exceptionally convenient working conditions.

to tactical and operational meetings create for regular interaction. The formalised Integrative Decision Making process and especially the position of the facilitator in meetings creates a shift away from personal discussions to factual and objective ones. The principle of Dynamic Steering allows learning and changing one's mind, while regular Governance Meetings make sure that problems don't get covered or ignored. Hence, the core principles of Holacracy theoretically may contribute well to a good relationship with the peers.[39]

Working Conditions. The tension driven Governance Process and principle conceptual openness, next to the shift to a focus on work instead of humans, resulting in a fundamentally different communication are main concepts that may create likeable working conditions. Other than in Scrum, there is no dedicated role to care about the working conditions. In the case of Holacracy the process is in charge to evolve an organisation that its members enjoy working in. By including literally every employee to contribute to the evolution of structure, every organisation member has the chance to shape her own working conditions. Since there is no other organisation member who can mandate how a role is executed and everybody is urged to process her tensions, everybody has control about the way she does her work. As everybody fulfils their own roles, which everybody is in charge of oneself, and not roles that have been designed by others everybody has very strong control over this motivator. The Governance Process may also results in a role that is accountable to care about working conditions in a way that the Scrum Master does. Compared to other organisation forms and models of fixed job-descriptions and dictated structures instead of living, evolving and constantly revisited roles and accountabilities, the concepts of Holacracy provide great freedom and chance to design one's best possible working conditions. (The objection principle in the integrative decision process serves as a security mechanism with respect to abuse.)

Similar to Scrum, concepts in Holacracy have the potential to strongly satisfy the motivators in Herzberg's model, if implemented and executed properly.

Holacracy & McGregor's Theory Y

As for Scrum the inherent idea of humans that Holacracy is based on clearly aligns with the idea of humans in Theory Y. Self-organisation, autonomy and responsibility, a permeable holarchy that invites every participant to process her tensions match the idea of the human who seeks responsibility and principally enjoys work, as characterised in Theory Y. Given, that Holacracy potentially addresses a whole organisation and is not conceptually restricted to a development process as Scrum is, its willingness to seek responsibility may even go beyond the degree in Scrum.

Holacracy & Hackman and Oldham's Job Characteristics Model

As Holacracy has been researched sparsely, there is no study as for Scrum and the Job Characteristics Model. Still the arguments, if the application of Holacracy has the potential to make for a high MPS are similar to the application of Scrum. Again, the main difference is that Holacracy potentially organises a whole company, while Scrum focusses on the development part. The argumentation with respect to *skill variety*, *task identity* and *task significance* are similar to Scrum. Applying the difference that the scope of a Holacracy implementation may be larger compared to a Scrum implementation does not change the principal application domain of work that requires a sophisticated working process. Work that can be automated (or taken over by robotics in the coming decades) has a low need to be organised with a framework like Holacracy. The process would simply be too heavyweight. The two other factors of *autonomy* and *feedback* have been discussed multiply in this section, and are explicitly desired (autonomy)

[39] Case 5: Founder and Holacracy Expert explicitly mentions the change of inter-colleague relationships and the emergence of personal friendships in this context.

and requested by and provided via the whole process concept (feedback). Therefore, I argue that the concepts of Holacracy have the power to result in a high MPS.

Holacracy & Pink's Model of Motivation

As discussed throughout this whole chapter *autonomy* is a key concept to Holacracy. Therefore I argue that a further discussion would only repeat argument and would not create stronger emphasis that this intrinsic motivator is clearly intended by the principles of Holacracy. Given the freedom to shape roles the way one intends to, if respecting the Constitution and not harming the company, which would result in objections *mastery* can be achieved. The arguments why achievement in the context of Herzberg's theory also apply to this motivator. Finally, *purpose* is the central beacon in a Holacracy implementation. The position that it takes in the whole Governance Process, being tied to every role and Circle, always knowing why things are done and what greater idea they serve, strongly reinforces the finding that the intrinsic motivator of purpose is certainly addressed when working in a Holacracy.

5.2 Empirical Data

This section contains a description and analysis of all interviews conducted during the course of this thesis. It contains a total of eight cases - four for each approach. Every case contains a case description including characteristics of the case, demographics intended for quantitative future studies and an interpretation of the interview based on the coding and paraphrasing of the interview. The results of the coding process are limited to the top 3 ranked codes for every case. This is due to the uneven distribution and of the rather small sample due to the qualitative approach. This presentation has been chosen to give the clearest possible interpretation, since one interview has 17 codes only on the ranks 1, 2 and 3, while others have one code per rank on the top ranks. Every other presentation appeared to be incomparable.

The interviews have been preceded by a sampling process. The first goal of the empirical step of this thesis was to find the right candidates matching the criteria defined in the research design (see chapter 4.3). Given the still rare character of Holacracy implementations, it proved harder to find candidates than for Scrum. It has been an explicit goal to find experts with preferably versatile backgrounds and experiences. The phase of first contacts started in summer 2016 and the interviews were completed by early 2017.

5.2.1 Case 1: Scrum Master

The interviewee has been chosen to contribute with her long-time practical experience as certified Scrum Master and as senior software developer, holding a Ph.D. in computer science. She has practical experience with Scrum of about 11 years. In her Scrum practice she has worked as Scrum Master and as Development Team member. Therefore, she has a wide and differentiated perspective on the multiple aspects of Scrum, both theoretical and practical. When working as Scrum Master she has facilitated two Scrum implementations and has been called to multiple projects as "firefighter" (literal quote). Next to her work as software developer and Scrum Master she works as CEO of a recently established agency that currently focusses on education and training with respect to current software trends.

There are two outstanding aspects of the interview: first, the interviewee's explicit interest for *motivation*. She mentions her personal (theoretic and practical) occupation with the topic. And, she refers to a concrete situation, in which as a Scrum Master she printed a Burn-Down Chart of a Sprint with good performance and used it for motivating purposes:

> Ich habe, als ich ein bestimmtes Team geleitet habe, besonders hübsche Burn-Down Charts ausgedruckt, awesome draufgeschrieben, ins Zimmer gehängt und die Leute gelobt. Das in der nächsten Woche ist dann noch besser geworden. Ich habe es dann nochmal ausgedruckt und awesome mit drei Rufzeichen draufgeschrieben. Das ist auch dann Mitarbeitermotivation. Weil sich dann visualisieren lässt, dass das Team gut gearbeitet hat und man das in gewisser Form feiern kann.[40]

Secondly, she puts strong emphasis of the *interchangeability* or desired redundancy of team members, which aims to remove the risk of single points of failure or information silos and to increase transparency (See the answers to question S-02 and S-12 of IP-S1).

This interview has been the third interview conducted for this thesis.[41] It has been conducted at a café in Vienna in early 2017. There was an initial time-box of one and a half hours. The interview was preceded by an introduction of the research questions and goals, as well as the resulting structure of the thesis and the interview. The recording of the actual interview lasts an hour and 4 minutes.

Gender	Female
Age	30-40
Education	University
Work experience	10-20 years
Job	Senior software developer, CEO
Scrum training	Certified Scrum Master
Scrum roles	Scrum Master, Development Team member
Scrum experience	11 years

Tab. 5.3.: Demographics for Scrum Interview 1

Table 5.4 show the top 3 ranked codes of interview 1. The interview had 88 code applications resulting in 8 ranks with 12 (1 codes), 9 (1 codes), 7 (1 codes), 6 (2 codes), 5 (1 codes), 4 (6 codes), 3 (6 codes), 2 (14 codes) and 1 (56 codes) respective occurrences. Certainly these reflect the perspective that the interviewee took. Her experience as Scrum Master led to a high ranking of the code *Scrum Master*. Her dedication for motivation and her team orientation shows in *team* as highest ranked code. Finally, *Daily Stand-Up* is simply the most prominent meeting and therefore may have been the third ranked code.

Rank	Code	Occurrences
1	Team	12
2	Scrum Master	9
3	Daily Stand-Up	7

Tab. 5.4.: Top 3 Codes of Case 1 - Scrum Master

5.2.2 Case 2: Development Team Member

The interviewee has been chosen to cover the perspective of working as member of the Development Team with less focus on Scrum theory than candidate S1 when considering that perspective. He has more than 20 years of professional experience working as senior software developer, currently additionally holding the position of software architect in an Austrian software product company, for which he has

[40] From German: "When I headed a particular team, I printed particularly nice burn-down charts, wrote awesome on them, hung them into the room and praised the people. The next week has become even better. I then printed it again and wrote awesome with three exclamation marks on it. This is also employee motivation. Because then it can be visualized that the team has worked well and you can celebrate in a certain form." See question S-09.

[41] Since this thesis follows the order of presenting Scrum first and then Holacracy, the interviews are presented in the same order ignoring the order of conduction.

been working for close to ten years. The candidate has been practising Scrum for more than five years. He received only a Scrum in-house training by a Scrum Master and no professionally facilitated training. The first team meetings in the implementation phase were accompanied by a professional coach. The interviewee, therefore, contributes to the study with a truly experienced, practical perspective and less evangelist perspective.

Outstanding statements of the interviewee are his approach towards motivation, and the discrepancy between theory and practice of roles. He considers an organisation or management method in an instrumental way and attributes an inability to motivate, relating them to the characteristic of Herzberg's *hygiene factors*:

> Ich bin nicht von außen und schon gar nicht von oben motivierbar. Ich bin motiviert. Und eine Organisationsform ist dann gut, wenn sie mich nicht demotiviert [...] Hinsichtlich Motivation stört Scrum nicht. Man kann Programmierer nicht motivieren, man kann sie nur demotivieren. Es gibt keine Organisationsform, die für mehr Motivation sorgt. Es gibt nur eine, die für weniger Motivation sorgt, weil sie einen behindert [...] Es wird nie vorkommen, dass jemand einen schlechten Tag hat, und grantig ist, und es freut ihn nicht und dann sagt „He, wir haben ja Scrum. Auf einmal freut mich wieder alles". Das passiert nicht. [42]

The discrepancy between theory and practice of roles refers to the reality of imperfect implementations. Compared to the other interviews this is outstanding, as all directly involved interviewees considered the theory a tool-kit or framework that is used to build a fitting implementation of either approach (See the answer to question S-20 of IP-S2).[43]

This interview has been the fourth interview conducted for this thesis. It has been conducted at the office of the interviewee in early 2017. Again, the interview was preceded by a general introduction. The interview did not have any time-box, and the recording lasts an hour and sixteen minutes.

Gender	Male
Age	40-50
Education	University
Work experience	20-30 years
Job	Senior software developer, software architect
Scrum training	In-house
Scrum roles	Development Team member
Scrum experience	5 years

Tab. 5.5.: Demographics for Scrum Interview 2

Table 5.6 show the top 3 ranked codes of interview 2. The interview had 97 code applications resulting in 9 ranks with 13 (1 codes), 11 (1 codes), 8 (2 codes), 7 (2 codes), 6 (4 codes), 5 (2 codes), 4 (4 codes), 3 (10 codes), 2 (20 codes) and 1 (51 codes) respective occurrences. Clearly the ranking of the codes including three development related roles, respectively the Scrum role Scrum Master reflects his job as developer, and an impression that he does not feel impeded by Scrum as organisation form. Important characteristics of his interview have been described above.

[42] From German: "I am not motivated from the outside and certainly not from above. I am motivated. And an organisation form is good if it does not demotivate me [...] Regarding motivation, Scrum does not bother. You can not motivate programmers, you can only demotivate them. There is no organisational form that provides more motivation. There is only one that makes for less motivation because it impedes one [...] It will never happen that someone has a bad day, and is grumpy, and it does not please him and then says "Hey, we have Scrum. All at once, I'm happy again ". That does not happen." See question S-12.

[43] Direct involvement refers to the fact that candidate S4 is only indirectly involved with Scrum in an organisation, in which development run applying Scrum. He could be considered an internal that is still depending on Scrum, but has a completely different perspective from the other trained practitioners.

Rank	Code	Occurrences
1	Developer	13
2	Meeting	11
3	Scrum Master, Tester	8

Tab. 5.6.: Top 3 Codes of Case 2 - Development Team Member

5.2.3 Case 3: Product Owner and General Manager

The interviewee has been chosen due to his long-time experience with Scrum and his perspective as CEO. He works as General Manager of an Austrian IT Service and Development Company, which he has been with for 20 years. He has wide practical and theoretical experience with Scrum and other organisational practices. In 2007 he introduced Scrum to his company and describes the company wide adoption of Scrum concepts (e.g. the way to communicate blameless and focus on improvements). He highlights that if the company would do product development, the whole company would be Scrum driven. At this time, Scrum is used to organise processes and there is a principle permanent company structure next to the structures of Scrum projects. He is certified as Scrum Master, Product Owner and Scrum Professional, and has facilitated and coached many Scrum implementations. Furthermore he works as Product Owner in projects of his own company.

He considers Scrum the best organisation method designed to process complex problems as in software engineering (see the answer to question S-17 of IP-S3), and explicitly states the compliance of Scrum to all three intrinsic motivators in the model of Pink, 2013 - mastery, autonomy and purpose (see the answer to question S-12 of IP-S3). His approach to responsibility exactly meets the why behind the concept of self-organisation and shared responsibility. It reinforces the idea of humans of Theory Y, and builds on the idea of dedicated employees who are willing to take responsibility:

> Mitarbeiter, die keine Verantwortung übernehmen möchten [...] meistens stimmen da die Rahmenbedingungen nicht [...] Dass Leute eigenverantwortlich das aus ihrer Sicht beste machen, daran glaube ich als Vorgesetzter, auch als Chef. Wenn ich Verantwortung von jemandem einfordern will, hinterfrage ich, ob ich vielleicht etwas verlange, das gar nicht möglich ist [...] ich verlange z.B. von niemanden, wenn wir einen Fixpreis abgeben, dass er die Verantwortung für den Fixpreis übernimmt, weil es Schwachsinn ist, für einen Fixpreis die Verantwortung zu übernehmen. Wir wissen alle, dass wir nicht wissen, was passieren wird und es ist eine Wette, die kann man möglichst gut managen. Und jeder wird das beste tun. Und wir haben die höchste Sorgfalt zu Beginn, in der Mitte und am Ende. Im Worst Case würde die Firma pleitegehen. Und wir schauen halt, dass wir keine Commitments eingehen, die wir als Firma nicht überleben können. That's it... liegt meistens am Vorgesetzten, wenn der Mitarbeiter keine Verantwortung übernehmen mag.[44]

This interview has been the fifth interview conducted for this thesis. It has been done at the office of the interviewee in early 2017. It was preceded by email correspondence to clarify the scope of the study and the fit of the interviewee. Given the pre-interview correspondence, the general introduction was a short summary of the correspondence. The interview had a time-box of an hour, and the recording lasts 58 minutes.

Table 5.8 shows the top 3 ranked codes of interview 3. The interview had 74 code applications resulting in 5 ranks with 5 (4 codes), 4 (7 codes), 3 (6 codes), 2 (17 codes) and 1 (40 codes) respective

[44] The quotation is taken from the answer to question S-17.

Gender	Male
Age	40-50
Education	Matura/High school
Work experience	20-30 years
Job	CEO, Product Owner
Scrum training	Certified Product Owner, certified Scrum Master, certified Scrum Professional
Scrum roles	Product Owner, Scrum Master/Coach
Scrum experience	10 years

Tab. 5.7.: Demographics for Scrum Interview 3

occurrences. The distribution of the coding of this interview is quite different from the other interviews. The occurrence of the codes *process*, *collaboration*, *Product Owner* and *change process* on rank one and *role(s)*, *structure*, *team*, *autonomy*, *feedback* and *complex process* on rank two may relate to a couple of reasons: the interviewee has answered the interview with a long-time management background. As CEO his perspective is holistic. His experience with and obvious interest in organisational and also personnel development aspects reflects in the wide range of relatively high rated codes. Last, the interview had a clear time box. The ranking of collaboration as on of the top rated codes is the most outstanding characteristic regarding the coding of this interview. With regards to collaboration there is a graphic situation that he describes when relating self-organisation to collaboration and its positive outcomes of it:

> Selbstorganisation bedeutet, dass Leute autonom sinnvoll agieren, wissen wo sie andere Leute einbeziehen müssen. Das wird dadurch gestärkt, oder das Gefühl dafür. Bei uns passieren viele Dinge automatisch... ich kann mich erinnern, wo wir in dieses Büro eingezogen sind, haben wir gerade erst begonnen mit Scrum. Da gab's noch einen Sitzplan, in dem wir versucht haben, einen Sitzplan mit allen abzustimmen. Bei uns entscheiden die Leute, wo sie sitzen. Das kriegen wir gar nicht mit, wenn sich die umsetzen. Ich sehe nur, wenn jemand sein Zeug vorbeiträgt. Ob es Sinn macht, dass sich Leute anders setzen im Sinne eines Projektkontexts, oder einer Umorganisation, das entscheiden die selbst. Das war vor zehn, fünfzehn Jahren nicht so, da wurde gesagt „du sitzt da". Und wenn jemand wo nicht sitzen wollte, dann hat er sich gemeldet. Dann wurde diskutiert und dann versucht, es allen recht zu machen... Das gibt's heute nicht mehr. [45]

Rank	Code	Occurrences
1	Process, collaboration, Product Owner, change process	5
2	Role(s), structure, team, autonomy, feedback, complex process	4
3	Individual, meeting, responsibility, reorganisation, project, project organisation, project manager	3

Tab. 5.8.: Top 3 Codes of Case 3 - General Manager & Product Owner

[45] From German "Self-organisation means, that people act autonomously meaningful, know where they must involve other people. This is strengthened, or the feeling for it. With us, many things happen automatically... I can remember when we moved into this office, we just started with Scrum. There was still a seating plan, in which we tried to arrange a seating plan with everyone. With us, the people decide where they are sitting. We do not notice, if they reseat themselves. I only see if someone carries his stuff by. Whether it makes sense that people sit differently in the sense of a project contexts, or a reorganization, they decide for themselves. Ten, fifteen years ago this was not the way it was said "this is where you sit". And if someone did not to want to sit at his place, then he spoke up. Then it was discussed and tried to make it right for everyone... This is no more today." See question S-08.

5.2.4 Case 4: Professional Services Manager

The interviewee works as professional services manager in an Austrian product development company that uses Scrum. He has been chosen as a type of stakeholder that is explicitly only indirectly in contact with Scrum. His contact to Scrum as an approach to organise development is different from the perspective of the CEO in Case 3: Product Owner and General Manager. Due to his position in the field working as head of a team of professional services consultant with a lot of hands-on practice himself in customer projects and pre-sales projects, he very much depends on the results of the Scrum process. His perspective is different from that of a Scrum Team member, as in the eyes of the customer he is the provider and the face of the company (or literally the product). It is his job to communicate needs of existing customer to product management, respectively the Product Owner and to provide feedback to these in terms of delivery dates and extent. Internal interfaces and the position of communication are of special interest in his case.

In his interview, he highlights transparency and clarity as huge benefits multiple times:

> Die strukturierte Herangehensweise, die Transparenz, die dadurch geschaffen wird, die Planbarkeit, die Sicherheit, die Verlässlichkeit, dass Dinge bereitstehen, wo sie geplant worden sind und im Sprint aufgenommen und bearbeitet wurden [...] [46]

He considers these an important building block for his successful delivery in customer projects and also in communication with the company's customers. He furthermore highlights the advantages of the lean and iterative incremental approach of Scrum creating direct value for his customers:

> Ein Vorteil ist noch, dass diese Planungsportionen im Sinne der Sprints und der Sprintplanungen auf Basis dessen, dass sie relative eng gestrickt sind für den Kunden, überschaubar sind und daher keine Überplanung stattfindet [47]

The interview has been the eighth and last interview conducted for this thesis. It has been conducted at the office of the interviewee in early 2017. It has been preceded by a short email correspondence. The interview had no time-box, and the recording lasts 57 minutes.

Gender	Male
Age	30-40
Education	Professional school
Work experience	10-20 years
Job	Professional services manager and consultant
Scrum training	none
Scrum roles	none
Scrum experience	indirect

Tab. 5.9.: Demographics for Scrum Interview 4

Table 5.10 show the top 3 ranked codes of interview 4. The interview had 56 code applications resulting in 6 ranks with 7 (1 codes), 5 (2 codes), 4 (7 codes), 3 (3 codes), 2 (16 codes) and 1 (27 codes) respective occurrences. The ranking of codes for this interview nicely back up the impression that transparency is the perceived biggest benefit perceived by the interviewee. The low count of codes for this interview

[46] From German: "The structured approach, the transparency it creates, the planability, the security, the reliability that things are available, where they have been planned and scheduled and worked on in the Sprint...". See question S-06.

[47] From German: "A further advantage is that these planning portions in the sense of the Sprints [...] are manageable on the basis that they are relatively tightly scheduled to meet the customer's interest. Therefore no over-planning takes place." See question S-10.

relates to the fact that the interviewee does not directly work with Scrum. The candidate has explicitly been chosen to gain insights of a person who (only) interacts with a Scrum organisation as part of an overall product developing organisation. An importance of roles in a modern structured organisation with a flat hierarchy as described in the interview reflects again in the relatively high usage of the code *role(s)*. Another important code that sticks out of this ranking is *Distribution of knowledge*, which has been an important factor in three of four Scrum related interviews. In this interview distribution of knowledge has a different meaning, but principally the same outcome: by having a centrally maintained Product Backlog information is universally available, which increases efficiency in the case of this interviewee. From the overall company perspective it creates transparency and may increase productivity.[48]

Rank	Code	Occurrences
1	Transparency	7
2	Role(s), Sprint	5
3	Structure, individual, advantages, distribution of knowledge, interface, prioritisation, Product Backlog	4

Tab. 5.10.: Top 3 Codes of Case 4 - Professional Services Manager

5.2.5 Case 5: Founder and Holacracy Expert

The interviewee has contributed to this study as designated Holacracy expert. She has had a professional career of more than 30 years. Currently she works as founder and partner in 2 start-ups that both practice Holacracy. She has engaged with Holacracy since 2010 and is a certified Holacracy coach. In this occupation she has collected wide practical and theoretical experience, which reflects in an extensive and very wide interview. Her answers contain both the perspective of the practitioner who describes the practical experience of a person who experiences Holacracy in action, and that of an expert who has perspectives of the implementations and coaching that she has done.

She highlights the separation of work aspects and humans needs very clearly:

> Wenn Sie mir zuhören, merken Sie, dass ich überhaupt nicht davon rede, wie es mir damit geht oder welche Gefühle ich dazu habe. Wenn wir von Holacracy sprechen, sprechen wir von optimaler Struktur, sodass Zusammenarbeit bestmöglich funktioniert, um den Purpose der Organisation auszudrücken. D.h. Holacracy ist die perfekte Antwort auf Zusammenarbeit. Und da würden jetzt Menschen, die Zusammenarbeit verstehen als „wir Menschen kommen gut miteinander aus“ aufschreien „das ist die Katastrophe und es kümmert sich nicht um das Zusammen der Menschen“. Das ist ein ganz anderes Thema und hat mit Holacracy nichts zu tun. [49]

This fact results in her having made unique friendships as a result of her Holacracy practice in her current organisation. With respect to collaboration and meetings, she explicitly states that regardless of the above-named separation these are no conflict-free zones, but often the opposite. The process driven focus on work instead of humans acts as a catalyst to the improved relationships and optimised collaboration, which in turn she calls a huge motivator (see the answer to question H-13).

[48] In turn, cases 1 and 3 describe the reduction of information silos as aim of the process of knowledge distribution, which from a theoretical perspective reduces division of labour in a Taylorian perspective. It is the declared goal that (in theory) everybody in the team is able to work on everything. In this context cases 1 and 2 mention the practical necessity for a certain specialisation with regards to efficiency.

[49] From German: "When you listen to me, you realize that I do not even talk about how I feel about it or what feelings I have. When we speak of Holacracy, we speak of optimal structure, so collaboration works best to express the purpose of the organization. That is, Holacracy is the perfect answer to collaboration. And now there would be people who understand cooperation as 'we humans come out well together' cry out 'that is the catastrophe and it does not care about the Unity of people'. This is a very different topic and has nothing to do with Holacracy." See question H-09.

Wenn Sie mir zuhören, merken Sie, dass ich überhaupt nicht davon rede, wie es mir damit geht oder welche Gefühle This interview has been the first interview conducted for this thesis. It has been preceded by a one hour personal introduction and general talk about Holacracy two days before the interview via Skype. The actual interview has been conducted via Skype as well in early 2017. The interview had a time-box of two hours, and the recording lasts an hour and 47 minutes.

Gender	Female
Age	51-60
Education	Matura/high school
Work experience	30+ years
Job	Founder and board member of two start-ups
Holacracy training	Certified Holacracy coach
Holacracy roles	Practitioner, GCC member and expert
Holacracy experience	7 years

Tab. 5.11.: Demographics for Holacracy Interview 1

Table 5.12 show the top 3 ranked codes of interview 5. The interview had 135 code applications resulting in 10 ranks with 12 (1 codes), 10 (1 codes), 9 (1 codes), 8 (2 codes), 6 (1 codes), 5 (4 codes), 4 (7 codes), 3 (8 codes), 2 (21 codes) and 1 (89 codes) respective occurrences. The ranking of the codes for this interview clearly reflects the apparently central aspects of Holacracy. The same as for the overall ranking regarding Holacracy the code *role(s)* is ranked number 1, and *tension* number 2. The overall number of 135 different codes and the fact that the interview has been the longest with close to two hours of recorded interview time makes for a great depth. It is therefore impossible to reduce the interview to a single or central message. The clear ranking of top rated codes, thus, gains more relative importance and relevance. The following quote not only contains an application of all three codes (as an example), but also very concisely explains the tension based evolution process in Holacracy.

> Der General Circle ist eine Zeitlang für alle Organisationen, die beginnen der einzige Kreis und füllt sich selbst mit Rollen und die Rollen tun die Arbeit, die zu tun ist. Im Entscheidungsprozess fängt sich irgendwann an herauszustellen, dass es bestimmte Themenblöcke, die mehrere Rollen zwar sehr intensiv beschäftigen, aber die anderen Rollen eher gar nicht. Das ist in der Regel das Zeichen, dass sich bereits ein Subkreis abbildet.[50]

Rank	Code	Occurrences
1	Role(s)	12
2	Tension	10
3	Decision Process	9

Tab. 5.12.: Top 3 Codes of Case 5 - Founder & Holacracy Expert

5.2.6 Case 6: Holacracy Practitioner and Consultant

The interviewee works as an organisational coach specialised and certified to Holacracy. His concise answers and reflected practical experience as Holacracy coach made for a great contribution to the insights provided in this thesis.

A characteristic of Holacracy that he especially highlights is the overall efficiency driven by integrative decision process that, according to his experience radically changes the output of meetings:

[50] From German: "The General Circle for all the organisations that begin for a time is the only circle and fills itself with roles and the roles do the work that is to be done. In the decision-making process it starts getting evident that there are certain subject blocks that occupy with several roles very intensively, but the other roles not at all. This is usually the sign that a Sub-Circle already forms." See question H-03.

> Enormer Zuwachs von Effizienz, weil einfach klar ist wer welche Entscheidungen zu treffen hat und es keine ewig langen Konsensfindungsprozesse gibt und damit in einem Tactical Meeting von einer Stunde zwischen 30 und 40 Punkten abzuarbeiten ganz normal ist. Wenn man mal in Holacracy gearbeitet hat und wirklich drinnen ist, ist es kaum noch erträglich an klassischen Meetings teilzunehmen, weil die Effizienz und Qualität der Meetings um soviel höher ist und auch der „Pace“ [51]

He also stresses the altered and focused importance of self-responsibility, which he considers both as weight and motivator:

> Ein Riesenthema ist auch dieses hohe Maß an Eigenverantwortung. Ich bin einfach niemandem Rechtschaft schuldig, kann alles selbst entscheiden, was ich in meinen Rollen tue. Das macht auch ein Stück Druck, weil ich gefordert bin, diese Dinge selbst voranzubringen und zu entscheiden. Gleichzeitig gibt mir das die Freiheit und den Gestaltungsspielraum, das in die Welt zu bringen, was mir wichtig ist. [52]

This interview has been the second interview conducted for this thesis. It has been preceded by a phase of email correspondence and a phone call, the topic of which was a personal introduction and general exchange about Holacracy, roughly two months before the actual interview. The actual interview has been conducted via Skype in early 2017. The interview had a time-box of one hour, and the recording lasts 44 minutes.

Gender	Male
Age	30-40
Education	University
Work experience	7-10 years
Job	Partner, Coach
Holacracy training	Certified Coach
Holacracy roles	Coach
Holacracy experience	2 years

Tab. 5.13.: Demographics for Holacracy Interview 2

Table 5.14 show the top 3 ranked codes of interview 6. The interview had 87 code applications resulting in 6 ranks with 6 (2 codes), 5 (2 codes), 4 (3 codes), 3 (9 codes), 2 (19 codes) and 1 (52 codes) respective occurrences. The most noticeable fact about the coding of this interview is that it is the only Holacracy interview in which *role(s)* is not the top rated code. Nonetheless, with *autonomy* (6), *transparency* (3) and *reorganisation* (5) the ranking contains three of the overall most frequent codes (ranks in the braces). His answer regarding the structural and process related advantages of Holacracy to some degree illustrates the main points of the code evaluation and their representation in the interview:

> ...volle Transparenz, ständige Anpassung der Struktur an geänderte Rahmenbedingungen, veränderte Struktur anhand von Spannungen, Veränderungsrelevanz, die jedes Organisationsmitglied wahrnimmt und sich daran anpasst, also im großen und Ganzen Responsiveness... [53]

[51] From German: "Enormous growth of efficiency because it is easy to see who has to take which decisions and there are no long-lasting consensus-making processes and thus in a tactical meeting of an hour between 30 and 40 [add: agenda] points are quite normal. Once you've worked in Holacracy and your are really used to it, it's hard to take part in classic meetings, because the efficiency and quality of the meetings is so much higher and also their pace." See question H-10.

[52] From German: "The high degree of self-responsibility is also a huge topic. I am simply not guilty of anyone's right, I can decide everything that I do in my roles for myself. This also creates a bit of pressure, because I am required to advance these things by myself and decide. At the same time, this gives me the freedom and the creative leeway to design into the world, which is important to me." See question H-13.

[53] From German: "...full transparency, constant adaptation of the structure to changed conditions, changed structure by means of tensions, change relevance, which every member of the organisation perceives and adapts to, therefore, in large measure, responsiveness..." See question H-06

Rank	Code	Occurrences
1	Autonomy, Transparency	6
2	Governance Meeting, Reorganisation	5
3	Power, Clarity, Role(s)	4

Tab. 5.14.: Top 3 Codes of Case 6 - Holacracy Practitioner and Consultant

5.2.7 Case 7: Holacracy Facilitator and Coach

The interviewee has contributed with his perspective of an ongoing transition process. He works for large Swiss organisation with about 20,000 employees that is currently adopting Holacracy in multiple departments (about 30 and 100 people have been reported in the interview). The implementation is supported by the board. The interviewee works as HR development specialist and Holacracy Coach and has been occupied with Holacracy for about one and a half years. Therefore, he provides a very insightful internal view on a Holacracy implementation in a large organisation. Next to his job in the named organisation he also works as free-lance Holacracy Coach.

He highlights the different character of hierarchy, speaking about a hierarchy of growth or actualisation, as opposed to a hierarchy of domination. A statement made in this context is very graphic - illustrating the difference between a person and a role and their allocation:

> Man sagt jetzt nicht „Wo ist der Klaus? Der ist bei der Monika.“, sondern „Welche Rolle ist wo?“. Welche Person die Rolle füllt, ist dann was Anderes. Die klassische Hierarchie sagt, "das ist die Claudia und die ist für diese Abteilung zuständig und du bist jetzt in ihrem Team". Das ist wahrscheinlich der größte Unterschied. [54]

This interview has been the sixth interview conducted for this thesis. It has been preceded by a short email correspondence. Before starting with the interview guideline both parties introduced themselves and the structure of the interview was laid out. The interview has been conducted via Skype in early 2017 with a time-box of 90 minutes. The recording lasts an hour and 33 minutes.

Gender	Male
Age	30-40
Education	University
Work experience	10-20 years
Job	Holacracy Coach & HR development specialist
Holacracy training	Holacracy Coach, currently certified Holacracy Practitioner
Holacracy roles	Holacracy Coach
Holacracy experience	1,5 years

Tab. 5.15.: Demographics for Holacracy Interview 3

Table 5.16 show the top 3 ranked codes of interview 90. The interview had 88 code applications resulting in 10 ranks with 10 (1 codes), 9 (1 codes), 8 (2 codes), 7 (2 codes), 6 (3 codes), 5 (3 codes), 4 (5 codes), 3 (0 codes), 2 (14 codes) and 1 (49 codes) respective occurrences. Given his job as Holacracy coach the top rated codes of this interviewee clearly relate to a very pure perspective. The overall application of 88 codes, however, and his insightful explanation as described in the above quote give a very differentiated impression. Although, purely statistical these 3 ranks contain core concepts. Again, *role(s)* is the dominant code, followed by *tension*, the same as for Case 5: Founder and Holacracy Expert.

[54] From German: "You do not say 'Where is Klaus? He's at the Monika.', but 'Which role is where?'. What person fills the role is another thing. The classic hierarchy says 'This is Claudia, who is responsible for this department and you are in her team now'. This is probably the biggest difference." See question H-03.

Rank	Code	Occurrences
1	Role(s)	10
2	Tension	9
3	Process, purpose	8

Tab. 5.16.: Top 3 Codes of Case 7 - Holacracy Facilitator and Coach

5.2.8 Case 8: Holacracy Coach

The interviewee has been working as internal consultant and coach of an academic Holacracy implementation in Switzerland for one and a half years. He is the primary person to contact and referred to regarding Holacracy. The organisation applies Holacracy for about 20 people faculty level, also including interaction with or interfaces to students or partners. Being at the edge of a successful transition, which he calls his "honeymoon with Holacracy" (see his answer to question H-11), the interviewee contributes a very valuable perspective to this thesis, as he describes issues of the transition phase and opens insights into personal challenges during that phase including pitfalls and learnings.

Next to a change towards distributed leadership, he highlights a critical aspect regarding the change to the new structure:[55]

> We fell into the typical temptation of pre-engineering and designing the organisation. So, back then we designed – I think – five circles. And I must say that most of them survived, but today they are highly challenged. Today we have the GCC with a few roles in it and four sub-circles. So, it's similar to the attempt at the beginning, but I would say it's similar by luck. What we did in pre-engineering was pretty wrong.

This interview has been the seventh interview conducted for this thesis. Unlike the other interviews it was the only one that has been done in English. It has been preceded by a short email correspondence. The main introduction was done via email and the candidate gave a brief introduction about his work and the organisation's profile. The interview has been conducted via Skype in early 2017 with a time-box of 60 minutes. The recording of the actual interview lasts an hour and two minutes preceded by five minutes of general talk and introduction that are not put to transcription.

Gender	Male
Age	40-50 years
Education	University
Work experience	20-30 years
Job	Multiple roles including Executive Education Program Leadership, Holacracy internal consultant, Faculty Development, Business Development
Holacracy training	Certified Coach
Holacracy roles	Internal Consultant, Trained Coach
Holacracy experience	1,5 years

Tab. 5.17.: Demographics for Holacracy Interview 4

Table 5.18 show the top 3 ranked codes of interview 8. The interview had 73 code applications resulting in 7 ranks with 7 (2 codes), 6 (2 codes), 5 (3 codes), 4 (6 codes), 3 (10 codes), 2 (12 codes) and 1 (38 codes) respective occurrences. The interviewee highlights aspects of the individual, which reflects in the top rated code individual. Chapter 5.2.9 refers to a quotation of this interview regarding the importance of the individual in the eyes of the interviewee. Another striking fact is that alongside case 5 and 7 three out of four Holacracy interviews result in role(s) as the top rated code. In case 6, role(s) is on rank 3.

[55] For the remark on leadership see the answer to question H-03 and for both see the answer to question H-01.

Rank	Code	Occurrences
1	Role(s), individual	7
2	Meeting, transparency	9
3	Reorganisation, decision process, Governance Meeting, Tactical Meeting, Integrative Decision Making	8

Tab. 5.18.: Top 3 Codes of Case 8 - Holacracy Coach

Rank	Code	Occurrences
1	Role(s)	52
2	Meeting	39
3	Transparency	35
4	Process	33
5	Reorganisation	31
6	Autonomy	30
7	Team	26
8	Structure	25
9	Individual	24
10	Tension	23

Tab. 5.19.: Top 10 Most Occurring Codes in All Expert Interviews

5.2.9 Evaluation and Interpretation of the Interviews

Despite the non-existent claim from generalisability this section contributes to the hypotheses and indications generated in the course of this thesis. Mayring (2016) proposes

- A quantitative interpretation of the generated codes
- An interpretation of the codes with respect to the (research) questions

Since this thesis does not perform an quantitative study, in this section the codes are interpreted according to their order of occurrence, instead of being statistically analysed. In order to get a graphic first impression, Fig 5.1 shows a weighted visualisation of the ranks 1 to 25 of code occurrences in all interviews as tag-cloud. The bigger the code, the more often it occurs in the interviews. Next to the (relative) size, the colour also indicates a degree of representation: all green codes occur at least ten times, up to 52 times for the code *role(s)*. The darker the green tone, the more often the code occurs. All codes shown in blue occur between 3 and 9 times. Codes that occur one or two times are left out in the tag-cloud. In addition to the tag-cloud fig. 5.2 shows a plot of the the code occurrence and the number of codes per rank. That is, the most prominent code is *role(s)* occurring 52 times. And, at the other end of the ranking there are 161 codes that all appear once (e.g. for character traits of individuals). Subsequently, table 5.19 shows the ten most occurring codes for both Scrum and Holacracy, while they are also looked at separately afterwards. The thematic and selective coding has been done spanning paragraphs. Hence, it is important to add that the ranking of codes does not represent a word count.

The definition and application of the codes followed the steps of open and selective coding, which are part of the thematic coding (see Flick (2007, p. 402) and Chapter 4.3). In order to do that, the interviews have been analysed and codes have been created and extended during the course of the evaluation. The aggregation steps serve the reduction of redundancies and also allow to better group the results. The current hierarchy of codes is the result of the coding process, which resulted in 359 aggregated codes. The hierarchy does not necessarily reflect the ranking of codes, but follows the concept of thematic coding, which aims at logically grouped codes.

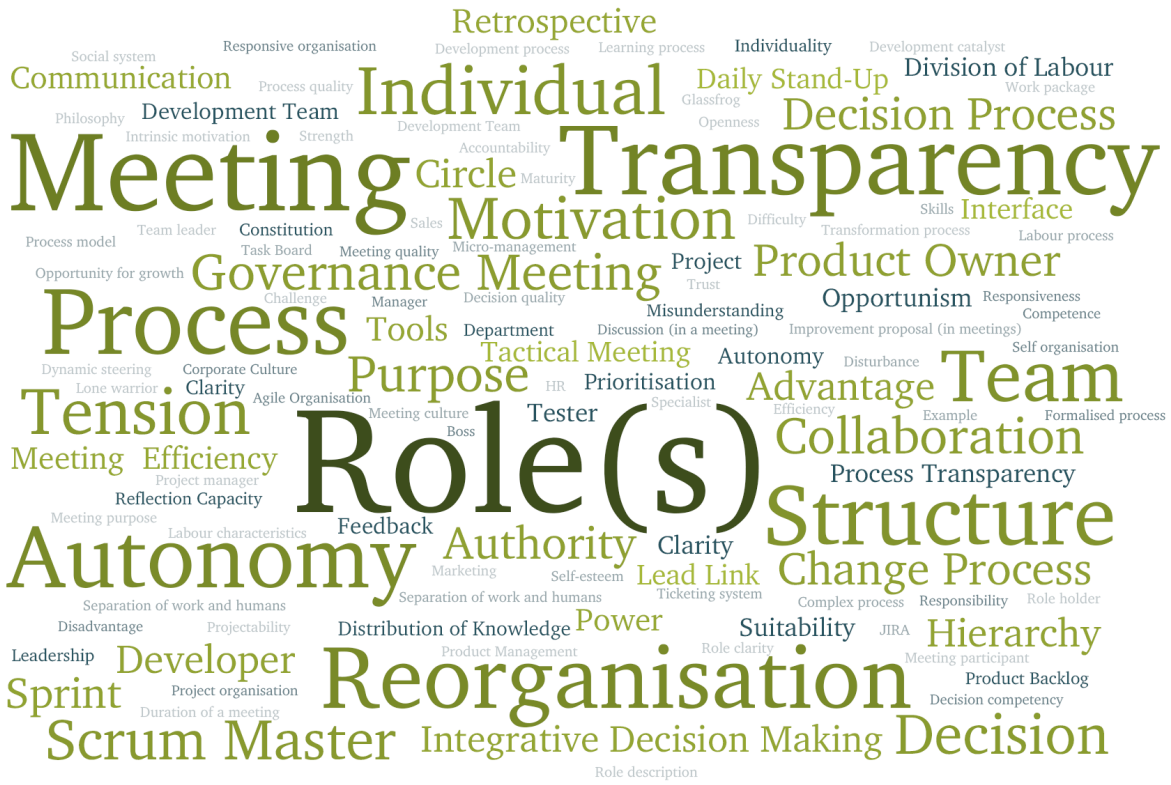

Fig. 5.1.: Weighted Visualisation of the Ranks 1 to 25 of Code Occurrence

Interpretation with Respect to Structure

Taking a general look at the ranking of codes with respect to structure, one thing is striking: hierarchy is absent in the ten most frequent codes. In fact, the code *Hierarchy* is on rank 15 with 15 occurrences. *Manager* and *Boss* both only make it to rank 24 of 28 ranks with 5 occurrences each. This insight appears to be of great importance as it illustrates the character of both Scrum and Holacracy regarding structure.

The understanding of both approaches appears to emphasis *roles* and the scope of labour over power - not only in theory, but also from the empirical side of the expert interviews. In this context Case 7: Holacracy Facilitator and Coach refers to "hierarchies of growth" instead of "hierarchies of domination" (see question H-03). That is, the organisation in this perspective does not focus on power of humans over other humans. Answering the same question the interviewee illustrates the character of roles and their importance to both create perceived structure and also identity and affiliation (see the case description of case 5.2.7 for the quoted question.)

The high occurrence of the code **Process** certainly relates to the fact that both approaches are clearly process driven. Also, an obvious tendency to think process oriented can be observed in all interviews. Other codes including the term process are *Decision Process*, *Change Process*, *Process Transparency*, *Knowledge Distribution (Process)* and *Labour Process*. Thinking terms of processes, therefore, appear to be a common thing in Scrum or Holacracy organisations.

The code **Reorganisation** has primarily statistical importance. It refers to the situation of implementing either Scrum or Holacracy, which has been addressed by a concrete question S-07 and H-07 and has been subject of some examples throughout the interviews.

Autonomy is one code that has importance with respect to structure and also regarding motivation. In the context of structure high ranking of autonomy is important since it relates to the degree self-organisation

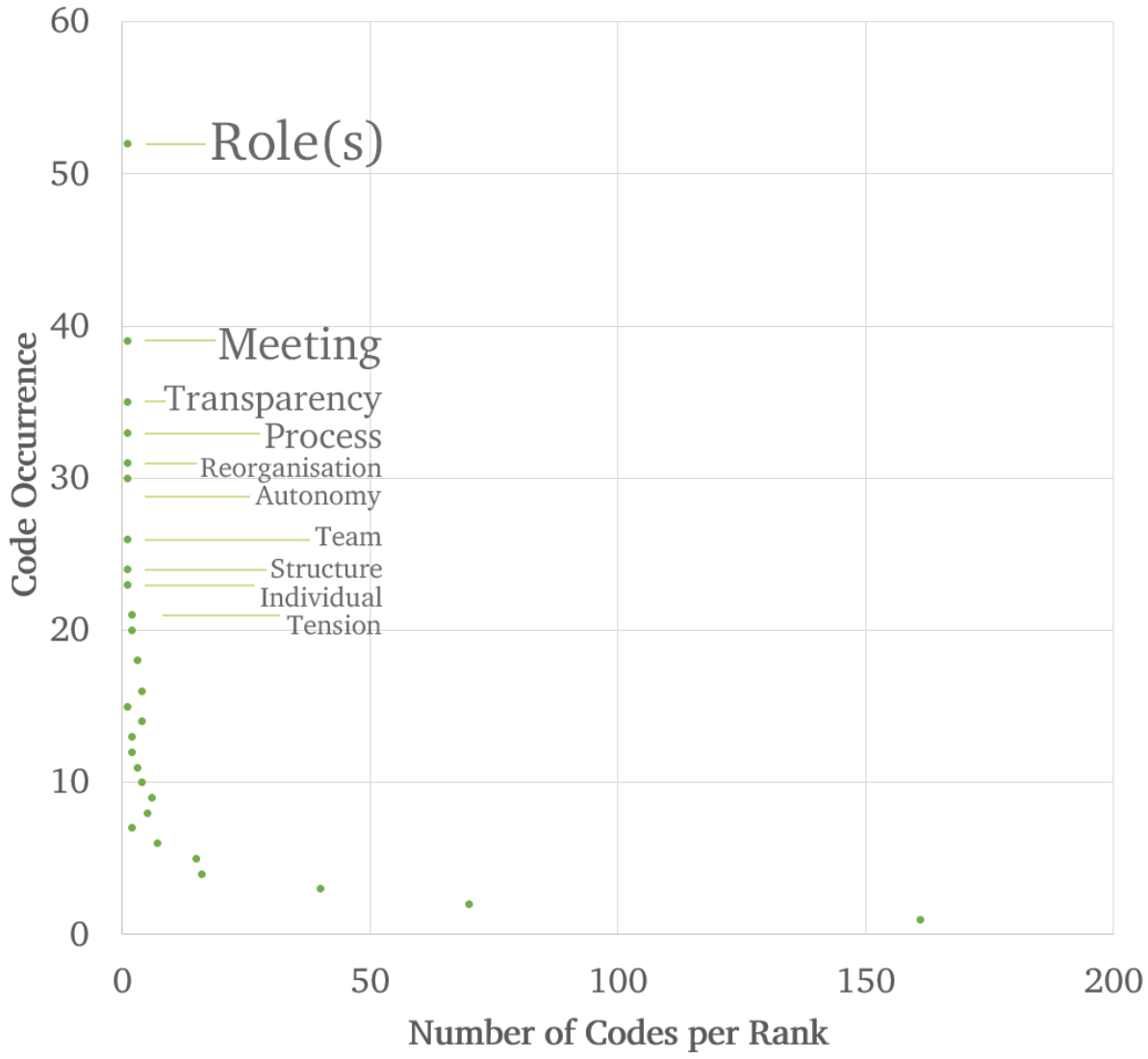

Fig. 5.2.: Code Occurrence and Number of Codes per Rank

or self-responsibility. In the aggregation process the following codes have been aggregated to the code autonomy: *Freedom of Action* (Handlungsspielraum), *Distribution of Power*, *Delegated Authority*, *Shared Authority*, *Participative Leadership* and *Self-Responsibility*. All these codes demonstrate the importance of the code Autonomy regarding structure. That is, in terms of the governance of both Scrum and Holacracy self-organisation (or just autonomy) is not just a buzzword, but has importance in practice reports.

In the context of Structure the code **Team** may be interpreted differently from the context of collaboration. As explained at the beginning of the state-of-the-art, team may be another word for department or an organisational unit. However, the fourth most use of the code Team instead of department or any other impersonal term points to a human component in the structure of especially Scrum. The term is barely used in the Holacracy interviews, since there is the term Circle. Also, in Holacracy there is the separation of work and humans which was reflected in different perspectives in the interviews - from absolutely no (conceptual) space for the individual to large possibilities for personal growth due to the given (team) structure.

Interpretation with Respect to Collaboration

The code **Meeting** refers to one central aspect of collaboration as argued in Chapter 2.1.5. While the theoretical analysis in Chapter 5.1.2 discussed aspects of meetings in both approaches, the relative occurrence as the second most code simply underlines the practical relevance of collaboration in both approaches and the examination of these. The argumentation for the code **Team** in the context of collaboration appears to be the same as for Meeting (see Chapter 2.1.5 for the theoretical analysis).

Autonomy may be the one code that can plausibly interpreted in all three dimensions. With respect to structure autonomy referred to authority and self-organisation. Regarding motivation: it leads to perceived opportunities for growth. But, it may also affect collaboration: the higher the degree of autonomy, the higher the responsibility everybody needs to take. If responsibility is distributed, everybody needs be able rely on his peers, since these may have been reduced to flat hierarchies. For this obvious reason autonomy may also affect collaboration.

Interpretation with Respect to Motivation

With respect to motivation, the result of the coding process suggests an interpretation that backs the theoretical analysis: Firstly, the dominance of the code **Role(s)** is striking. A clear role concept may relate to the aspect of *task identity* in the JCM, since the use of clearly defined roles and the assignment to them creates task identity. In other words, if there is no role definition, anyone can do the job theoretically speaking, which results in no task identity. Roles may also create belonging in the sense of the *social* dimensions in the models of Maslow and Herzberg. A role is certainly aligned to *responsibility* and potentially *achievement*, which are two other motivators in Herzberg's theory. Finally, in order to master work, one needs clear roles, which again contributes to the intrinsic motivation model of Pink.

The emphasis on a formalisation of meetings may contribute to the craving for effective **Meetings**, which hold the potential to demotivate or frustrate organisation members if conducted ineffectively. At multiple points in the interviews the increased efficiency has been mentioned, which has been related to a perceived improvement. Case 2: Development Team Member points out the beneficial aspect of a clear meeting purpose answering question S-09: "Es ist bei jedem Meeting – das sehe ich sehr positive – jedem von Anfang an klar, was eigentlich besprochen wird."[56]

From the perspective of Theory Y an employee is considered a self-responsible being that wants to take responsibility. **Transparency** may relate to this idea of humans. That is, employees get information, which makes them do their job in a better way. They understand the reasons behind decisions. And, they know the status of what they are working on. This may end in them doing better jobs and perceiving higher motivation. In contrary, viewed from a Taylorian perspective, there is absolutely no transparency. Hierarchy resembles a funnel and information gets less and thinner down the hierarchy. Finally, transparency has been the most applied code for Case 4: Professional Services Manager and Case 6: Holacracy Practitioner and Consultant, who clearly underlined the beneficial effect in this direction. Put in the words of Case 5: Founder and Holacracy Expert:

> In Holacracy geht es ganz generell um Transparenz, d.h. jeder Prozess ist transparent, jedes Projekt ist transparent, jede Zahl ist transparent, es ist einfach komplette Transparenz gegeben. Darum geht es. Wenn ich den Begriff Prozesstransparenz verstehe, sodass jeder zu jeder Zeit weiß, wie die Dinge laufen
>
> 57

[56] From German: "It is clear at every meeting - which see I very positive - from the start, what is actually discussed."

[57] From German: "In Holacracy it is generally a question of transparency. Every process is transparent, every project is transparent, every number is transparent, there is simply complete transparency. It's all about this. If I understand the term process transparency, so everyone knows at any time how things are going". See question H-05.

The code **Autonomy** does not require an extended interpretation. Autonomy is one of the three intrinsic motivators in Pink's model and also one of the two more influential factors in the JCM. Therefore the high occurrence of the code autonomy suggests a potential to motivate. Case 3: Product Owner and General Manager explicitly mentions Pink's model answering question S-12 in context of the motivational potential of Scrum.

The emphasis on **Teams** may also relate to motivation. No matter, if individuals prefer to work in groups or not the emphasis of team work can be related to the social dimensions in Maslow's and Herzberg's models, and may therefore also beneficially influence motivation. Putting high focus on team setup, integration, etc. may, in turn, result in team effectiveness as argued in the theoretical analysis.

Structure in the context of motivation is an important point. Considering that organisation is meant to provide order and have employees with a clear idea of responsibilities, etc., the absence of structure may at least have potential to demotivate. Put to extremes, no structure may equal chaos. In turn, structure may serve as basis for task identity in the sense of the JCM. It may also be the basis to provide feedback, which is an important motivator. Mapped to Pink's without structure there can be no autonomy. Also, without knowing what to do (and what not to do or what to rely on) nobody can master their jobs. Thus, the absence of structure results in uncoordinated random actions and therefore motivation is going to be absent. An emphasis structure may have a positive effect. (Given, that this thesis and therefore the interview guideline focusses on structure as an important part, it is also self-evident, that structure may be a dominant term in the evaluation.

The recognition of the **Individual** may serve as a basis for self-actualisation in the sense of Maslow. From the perspective of Theory Y, the inclusion of individuals also affirm the abiding by the immanent idea of self-responsible humans.

In the context of the interviews there have been different assessments: Case 1: Scrum Master relates the visibility of the individual and their performance to the potential to improve the team quality (see question S-13). Case 2: Development Team Member, Case 3: Product Owner and General Manager and Case 4: Professional Services Manager partly relate their consideration as indivual to opportunities or responsibilities. Case 6: Holacracy Practitioner and Consultant explicitly states he sees no position for the individual in Holacracy. On the contrary, Case 8: Holacracy Coach attests Holacracy a high importance of individuals (for both see question H-14):

> At the core of Holacracy there is a bunch of individuals. Everything what I have been describing so far have been individuals at play with their emotions, initiatives, personalities, skills. So, it has profoundly to do with individuals. I think much more than in a traditional hierarchy. That sense of individual is hugely related to Holacracy

The concept of processing **Tension** is a characteristic to Holacracy. From the perspective of motivation theories, the processing of tensions may result in a satisfaction of the needs for self-actualisation (Maslow) and achievement and responsibility (Herzberg). Again, requiring everybody to process their tensions reinforces the idea of *self-responsible* humans in Theory Y. Finally, from the perspective of Pink's model processing tensions may be a necessary pre-requisite to reach *mastery*. That is, in order to master one's job (as good as possible), everybody is entitled to remove any tension, or also impediment in terms of Scrum. In turn, considering that Scrum has a similar aspect by emphasising the removal of impediments, the same motivational potentials are addressed. All Holacracy related interviews put great emphasis on the processing of tensions as opportunity for every organisational member.

In Summary, these top ranked codes back the hypothesis that both Scrum and Holacracy incorporate many concepts and ideas that relate to motivation. Going deeper into the codes may not appear meaningful due to the size of the sample and the qualitative approach (over a quantitative one).

Evaluation and Interpretation of the Scrum Related Interviews

Given the size of the samples, the top ten ranked codes get more dense due to the greater specificity when limiting the codes to only one method. This results in multiple codes with the same code-count. Table 5.20 contains the ten most occurring codes for Scrum. These are 22 of 198 total codes resulting from the interviews with Scrum experts. Again, the lower values are neglected due to the size of the sample and statistical irrelevance.

Rank	Code	Occurrences
1	Meeting, Team	23
2	Scrum Master	21
3	Role(s)	20
4	Product Owner, Transparency	16
5	Sprint	15
6	Process, Advantage, Developer	14
7	Reorganisation, Retrospective, Motivation	12
8	Autonomy, Structure, Individual, Daily Stand-Up	10
9	Tools, Tester	9
10	Collaboration, Communication, Development Team	8

Tab. 5.20.: Top 10 Most Occurring Codes in Expert Interviews for Scrum

Given the size of the sample an interpretation of every single code may not be reasonable. Therefore, as an attempt to interpret the data with respect to the research questions, the following list shows the codes grouped by the three inspected organisational dimensions instead of their ranks. This grouped view suggests the interpretation that there is an emphasis on structure. Obviously, this is because Scrum is an organisation method. The relative appearance of the other dimensions, however, underlines the argumentation that there is more to Scrum than traditional structuring. This appears to be a valuable insight when comparing Scrum to traditional organisation forms (Research Question 1) and strengthens the inherent concept regarding collaboration and the potential effects regarding motivation are not accidental. Again, the relative prominence of the code *roles* and the concrete Scrum roles contributes to the argumentation given before.

- **Structure:** Team, Role(s) (Scrum Master, Product Owner, Developer, Tester, Development Team) Sprint, Process, Reorganisation, Structure.
- **Collaboration:** Meeting (Retrospective, Daily Stand-Up), Team, Transparency, Tools, Collaboration, Communication.
- **Motivation:** Motivation, Individual, Autonomy. Codes that may affect motivation: Team, Role(s), Transparency, Retrospective, Daily Stand-Up, Collaboration, Communication.

Evaluation and Interpretation of the Holacracy Related Interviews

Table 5.21 contains the ten most occurring codes for Holacracy. These are 19 of 230 total codes resulting from the interviews with Holacracy experts. Again, the lower values are neglected due to the size of the sample and statistical irrelevance.

Again, the following list shows the above code grouped by the inspected organisation dimensions. As argued before this section also does not interpret single codes of four interviews, but attempts to find commonalities. Similar to the interpretation regarding Scrum there appears to be an overhang in structure.

Rank	Code	Occurrences
1	Role(s)	32
2	Tension	23
3	Autonomy	20
4	Process, Reorganisation, Transparency	19
5	Governance Meeting, Purpose	18
6	Meeting	16
7	Structure, Authority, Decision Process	15
8	Individual, Decision, Circle	14
9	Responsibility, Disadvantage, Integrative Decision Making	13
10	Change Process	11

Tab. 5.21.: Top 10 Most Occurring Codes in Expert Interviews for Holacracy

Since, Holacracy propagates a hierarchy of work or roles, it is no big surprise that the code *role(s)* is the most applied code in this group of interviews. Also, since the concept of tensions is central to Holacracy it appears obvious that *tension* is the second most applied code. The fact that autonomy is the third most code in this group of interviews strengthens the conceptual power of the individual in her role. Other than for Scrum no concrete roles can be found among the ten most applied codes. However, it is interesting that there are the least codes for collaboration. Looking at the concepts of Holacracy, the interpretation that collaboration is all directed by the process and the constantly evolving structure is evident. In this context Case 5: Founder and Holacracy Expert describes the separation of work and personal respectively collaboration aspects. She describes handing control completely to the process and explicitly states that the process is going to spit out every personal tension that one brings into the process that solely focusses on work.

> wenn du in der Holacracy-Struktur versuchst, eine persönliche Spannung über die Prozesse von Holacracy zu prozessieren, wird es der Prozess ausspucken wie eine faulige Weintraube [...] Das System Holacracy siebt die persönlichen Spannungen aus [...] diese getrennte Betrachtung von Rolle und Person ist das, was Holacracy am meisten vorgeworfen wird und es ist das, was Holacracy bis heute noch immer zum einzigen Konzept macht, das ein tatsächlicher Entwicklungskatalysator ist, weil es durch diese getrennte Betrachtung von Rolle und Person uns Menschen in unsere eigene Verantwortung entlässt und das ist für viele Menschen sehr sehr sehr schwierig, weil wir es anders gewohnt sind. [58]

This statement may not primarily and solely refer to the individually, but mainly to the way collaboration is coined indirectly in Holacracy by the process. Integrative Decision Making gives everybody the same voice and the Facilitator kills discussions. Communication and therefore collaboration is objectified. For this reason there appears to be low conceptual emphasis on collaboration, as it is inherent to the process.

- **Structure:** Role(s), Autonomy, Process, Reorganisation, Transparency, Governance Meeting, Purpose, Structure, Authority, Decision Process, Decision, Circle, Responsibility, Integrative Decision Making, Change Process
- **Collaboration:** Tension, Meeting, Circle (as Team). Codes that may affect collaboration: Purpose, Decision Process,

[58] From German: "If you try to process a personal tension through Holacracy's processes in the Holacracy structure, the process will spit it out like a rotten grape [...] The system Holacracy filters the personal tensions [...] this separate consideration of role and person is what Holacracy is most accused of, and it is what still makes Holacracy the only concept that is an actual development catalyst because through this separate consideration of role and person it puts to us humans in our own responsibility and this is very very very difficult for many people, because we are used to it differently." See question H-02.

- **Motivation:** Autonomy, Purpose, Individual, Responsibility. Codes that may affect motivation: Tension, Transparency, Decision Process, Decision, Integrative Decision Making

Finally, motivation appears to get higher importance given the related codes, which may lie in the conceptual, scientifically grounded background of Holacracy, while Scrum appears rather empirical in this respect. Obviously *autonomy* (responsibility) and *purpose* are two of the three powerful intrinsic motivators in Pink's model. Including the interpretation of the codes *tension* and *transparency* from the general section, as well as the power of the *Integrative Decision Making* process granting responsibility to the individual (as visualised in the above quote) the assessment that Holacracy provides powerful mechanisms for motivation is backed up. Finally, these potentials require a shift of perspective and the willingness to accept responsibility, which has also been shown in the interviews (see e.g. the above quote). Other than accepting more responsibility, the challenge may also be one for managers to step out of their position of power (see Case 6: Holacracy Practitioner and Consultant, question H-07).

Results

6

> *Holacracy ist die perfekte Antwort auf Zusammenarbeit.*
>
> **— Interview Partner 5**

The previous chapter discusses Scrum and Holacracy based on the theoretical framework gathered in the state of the art in Chapter 2. This chapter contains the findings of both the theoretical research and the interviews. The results are grouped matching the research questions.

Given the use of a set of in qualitative depth expert interviews and that a qualitative study was not performed, this thesis holds no claim for generalisability. Therefore the results of this thesis are partly a theoretical proposition, and a hypothesis as a basis for further quantitative research and testing.

6.1 Research Question 1

> What are the internal organisational structures and (governance) processes in Scrum and Holacracy? What are their differences or similarities? What is the difference of Scrum and Holacracy compared to traditional organisational structures and governance processes?

This thesis highlights organisational structure, processes and governance as central aspects of structure in organisations. In this context a catalogue of criteria and characteristics for each aspect has been presented. Both Scrum and Holacracy are discussed with respect to these. The criteria to evaluate the concepts were:

Structure	**Processes**	**Governance**
Principal description and classification	Use of a process concept and decision competencies	Definition of governance processes
Synthesis and resulting structure	Application field of the process concepts	Process orientation of governance
Approach to division of labour and specialisation	Degree of standardisation versus self-emergence	Degree of distributed authority and centralisation
Formalisation of structure	Degree of process formalisation	Importance of roles in the governance process
Scope of the approach in the context of the overall organisation		Differences to characteristics of traditional governance (processes)
Differences to traditional structures		
Classification of the approach in comparison with the state-of-the-art		

Tab. 6.1.: Criteria to Evaluate the Internal Structure and Governance of Scrum and Holacracy

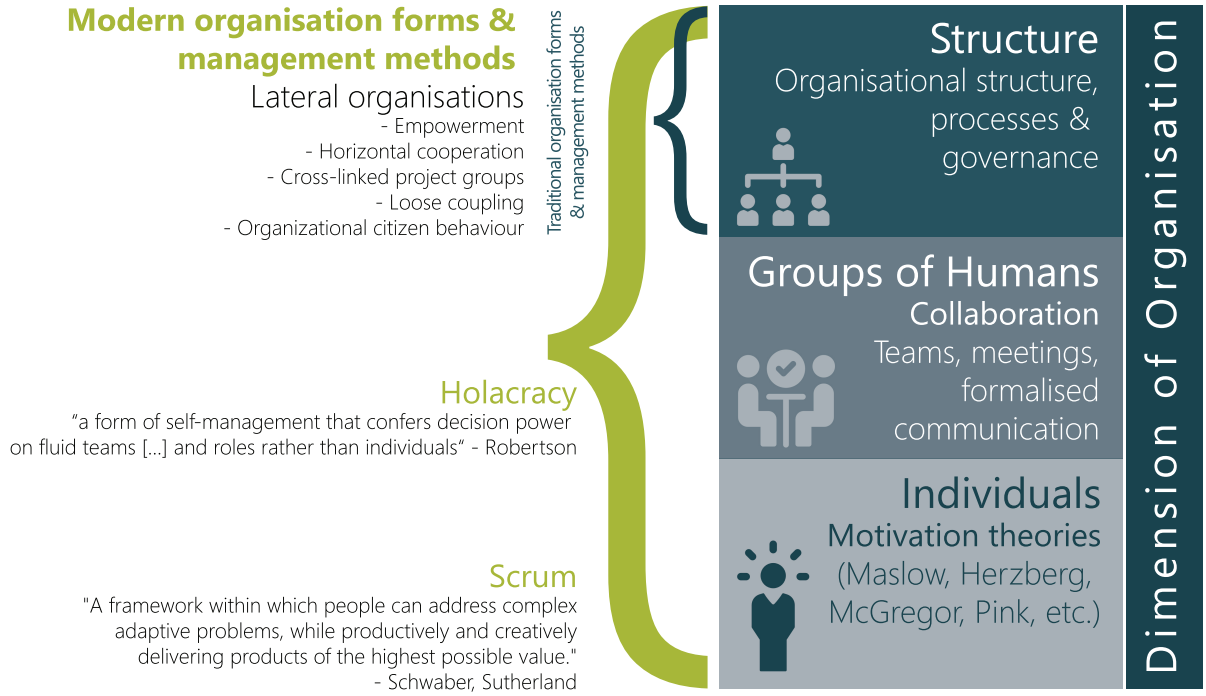

Fig. 6.1.: Dimensions of Organisation Extended by Central Findings

6.1.1 Scrum

Internal Organisational Structures and Processes. This thesis has presented Scrum as a highly process oriented organisation from. While there is an immanent project character to the way Scrum structures work, it does not necessarily have to be used for project work only. This has been shown in the context of practical applicability and addressed by the interviews, which all discussed the application of Scrum from a product development perspective, as well. Therefore, Scrum may only cover a production part of an organisation, while administration (e.g. accounting or human resources) is out of its scope. At a meta level the internal organisational structure of Scrum consists of: *a team structure including set of roles with clear responsibilities, both supporting the division of labour and assigning respective competencies, a process definition including defined meetings with clear purposes and a set of documents that supports the understanding of work, the process flow, transparency and communication.*

The work of Pugh, Hickson, Hinings, and Turner (1968) and Schreyögg and Geiger (2016) serve as domain of definition for organisational structure in this thesis. Following these dimensions and the models presented in the state-of-the-art, the internal structure of Scrum:

- Offers the tools to *analyse*, plan and *divide work* - Product Backlog, Sprint Planning and roles
- Applies *self-organising teams* as primary organisational unit with respect to *synthesis*. There is no hierarchy in Scrum. The enclosing organisation in practice often uses parallel structures (see Case 3: Product Owner and General Manager, which describes a Scrum project structure and separate teams to structure the overall organisation), or combines Scrum roles and line functions (see Case 2: Development Team Member, where the general manager holds the Product Owner role.)
- Ensures the best possible execution of work by using *cross-functional teams* that aim at a balance of *specialisation*, as well as desired redundancy regarding transparent *division of labour* and distribution of knowledge in complex project contexts.

- Provides a high degree of *standardisation* by pre-defined *roles* and a simple, adaptive *process* concept aiming at adaptability and transparency. This importance is also reflected in the interviews, as the evaluation resulted in *Role(s)* being the fourth most used code, and *Transparency* the third most. The code *Scrum Master* has been the second most used code in the Scrum specific interviews, *Product Owner* the fourth most and *Development Team* the tenth most.

- Puts great emphasis on a *formalised process* concept designed to transparently organise work in a complex and constantly changing domain, which makes it too heavy a concept for simple, routine work. The iterative incremental character is central to address the need for adaptivity and differentiates Scrum from plan-driven approaches. The evaluation of the interviews results in *Process* being the fourth most used code.

- Is *de-central*, which refers to its relatively low degree of decisions taken at the top of the organisation. (This aspect is further described in the next section on governance) From the perspective of the interviews the character of a de-centralised organisation reflects in *Autonomy* having been the sixth most used code overall and the eighth most in the Scrum specific interviews.

- Stands out because of a permanent, immanent *improvement process*. Scrum does so by complying to the Deming Cycle, which extends the conventional approach of "plan - do" by the two further steps "inspect - adapt" aiming permanent improvement.

- Is primarily *project oriented*, but applicable to organise work from short-term project work long-term product development.

Governance. This thesis shows that governance in Scrum happens in a decentralised, role based way. There is no concept of instances in Scrum. Neither is there an explicit project manager. However, Case 3: Product Owner and General Manager mentions the synonymous use of the roles Product Owner and project manager. A Scrum team is self-contained and may therefore be part of any larger organisational structure. Still, in theory, it is independent.

Every role has its own competency, which makes for a horizontal hierarchy, or hierarchy of competences: a) requirements and priorities are the sole domain of the Product Owner, b) process quality is the main competency of the Scrum Master, and c) the actual execution of work including the pace is the sole responsibility of the Development Team. While nobody is allowed to interfere with the priorities given by the Product Owner, only the Development Team decides upon their commitment and the technical aspects of the implementation of the committed work. So, this differs from aspects of governance of traditional organisation structures - unity of order, chain of command and limited control-span. The principle of self-organisation strictly contradicts chain of command and limited control-span. Unity of order may be considered by priorities representing the company's needs. However, Case 4: Professional Services Manager reports the situation of not being able to influence short-term planning by directly approaching developers.

From a process perspective, the Scrum process determines when to do planning and when to approve work and who is to do it. Given formal criteria like the Definition of Done, it is no arbitrary decision if a piece of work is complete. However, there are no strict decision processes as in Holacracy.

Classification in the Context of Traditional Organisation Forms. The organisational structure and governance in Scrums differs from the characteristics of traditional organisations by the absence of hierarchy regarding vertical or personnel authority, by self-organising teams and distributed authority.[1]

[1] Characteristics of traditional organisation structures: High division of labour, unity of order, chain of command and limited control-span. See Schreyögg and Geiger (2016, pp. 140-143)

While there are similar approaches in software engineering (e.g. Kanban), the principles of Scrum as a whole significantly differ from the state-of-the-art in organisation science. Even in its domain of origin, Agile principles were a deviation to the state-of-the-art, since plan-driven models (e.g. waterfall or Rational Unified Process) were prevalent at the time Scrum was publicised, which was in the early 1990s. Scrum may therefore be categorised as *Management Innovation* in the sense of Abrahamson (1996) (see Chapter 2.1.3: "innovations are significant departures from the state-of-the-art in management at the time they first appear" they do "not have to be an improvement over the state-of-the-art" but "only differ from them"). Meanwhile Scrum is considered state-of-the-art with respect Agile software development. Its importance outside the world of software engineering is yet to be proven. The interviews underlined its principal applicability for every complex problem, and Chapter 2.2.4 also refers to cases in other industries.

As an additional recommendation related to the proposition that Scrum may be used to organise the project part of a project organisation, Holacracy and Scrum may be applied in a complementary way. That is, Scrum can be used as approach to organise projects or production in a holacratic organisation. Case 7: Holacracy Facilitator and Coach explicitly mentions the application of Scrum (literally the use of Sprints is mentioned answering question S-02).

On a general level of categorisation Scrum matches some meta-models: The theoretical discussion argues that in terms of existing definitions Scrum fulfils the criteria of a *program* and complies to most principles of *lateral organisations*. It also may serve as means to organise the project part of a *project organisation*. Case 3: Product Owner and General Manager explicitly calls his organisation using Scrum, a project organisation (see the answer to question S-14). Since these are no concrete models (like System 4 in the category of lateral organisations), but only meta-categories this does not contradict the categorisation as management innovation.

6.1.2 Holacracy

Internal Organisational Structures and Processes. This thesis has worked out Holacracy as a highly structured, role and process oriented organisation form. The scope of Holacracy is holistic. That is, Holacracy may be applied to organise a whole organisation. The internal organisational structure of Holacracy consists of: *a dynamic and responsive circle structure of self-organising teams that constantly aim at adapting the organisation to the current needs taking decisions that have to work in present moment following a strict process*.

Following the above dimensions and models, the internal structure of Holacracy:

- Offers a format to *analyse*, plan and *divide work* - Operational Meetings
- Uses *self-organising teams* as primary organisational units with respect to *synthesis* - Circles. Following their self-organising and autonomous character, Circles are aggregated to so-called Holarchies instead of conventional hierarchies. Applying this principle the hierarchical structure of a conventional organisation chart may be converted to a Holarchy. Using so called Apps, Modules or Add-On Practices standard units or processes (human resources, legal or accounting) may be modelled without designing them from scratch (See Case 7: Holacracy Facilitator and Coach). In this context Case 8: Holacracy Coach mentions the danger of pre-engineering. The synthesis process in Holacracy usually happens using tool support, e.g. Glassfrog or holaSpirit, which increases transparency of the internal structure.

- Does not directly define *specialisation* and *division of labour*, but expects them to emerge as needed by the organisation's members and the tensions they sense. A role represents a specialisation assigned with concrete purpose, accountability and possible domain. Again, certain administration processes can be found in Holacracy communities as Apps, Modules or Add-On Practices.

- Provides a high degree of *standardisation* by a set of pre-defined *roles* (Lead Links, Rep Links, Secretaries, Facilitators,) and high *process* orientation (mainly the Governance Process, and Integrative Decision Making). In contrast to Scrum, there is the concept of dynamically evolving roles as well. In contrast to traditional plan-driven approaches the concept of Dynamic Steering makes a huge difference by putting the focus on the present, instead of future points in time the exact conditions of which are unknown and may be subject to change compared to upfront planning. This importance is also reflected in the interviews, as the evaluation results in *Role(s)* being the most used code, and *Process* the fourth most.

- Puts exceptional emphasis on a *formalisation* - Constitution (to be ratified), Governance Process, defined meeting structures, Integrative Decision Making, Dynamic Steering, protocols, etc.

- Is *de-central*, which refers to its low degree of decisions converging towards the top of the organisation. (This aspect is further described in the next section on governance) Even a concentric Circle structure would not change the autonomy of roles. Centralisation is only effectuated regarding priorities, which are centrally aligned to the overall purpose, which is ensured by Lead Links, who define priorities for their Sub-Circles. From the perspective of the interviews the character of a de-centralised organisation reflects in *Autonomy* having been the sixth most used code overall and even the third most in the Holacracy specific interviews.

- Stands out because of a permanent, immanent *improvement process*. Other than Scrum, Holacracy does not follow the Deming Cycle, but pursues the idea of organisation members sensing tensions and processing them.

- Is applicable for any type of organisation. The rigid processes focus on decision making, organisational evolution and meeting formats make it better suitable for knowledge workers, than for highly standardised works.

Governance. This thesis shows the importance of governance in Holacracy, which follows a strict and well-defined process approach. While there is some freedom in Scrum, decision making in Holacracy is completely formalised by the process of Integrative Decision Making. Authority, in turn, is distributed and partly de-central in Holacracy. Every role holds a well defined set of decision competencies, which cannot be overruled by any other role. However, Holacracy does not come without a hierarchy: in addition to the shift to a so-called holarchy, all interviews highlighted the theoretical insight that there is a hierarchy of work, roles or tasks instead a hierarchy of persons. People hold roles and, as pointed out right before, no role has control over another role. Therefore no person is the boss, superior, or instance of another person. Nonetheless, work is the boss. That is, every Parent-Circle aligns its Sub-Circles along its purpose defining priorities and assigning resources, in order to fulfil its Purpose.

In summary, the governance principles of Holacracy differ from governance aspects of traditional organisation structures (unity of order, chain of command and limited control-span). The same as for Scrum, the principle of self-organisation strictly contradicts chain of command and limited control-span. Unity of order may be considered by priorities representing the company's needs. Nonetheless, Unity of order by definition dictates that the top of the hierarchic pyramid defines the way work is done and how the goals are reached. Obviously, Holacracy thwarts this claim.

Classification in the Context of Traditional Organisation Forms. The main difference between Holacracy and traditional organisational structures is the fundamentally different approach to hierarchy. Traditional organisational structures result in a hierarchy of power, as shown in the models presented in state-of-the-art. Holacracy, in turn, creates a hierarchy of roles or work. Case 7: Holacracy Facilitator and Coach explicitly emphasises this difference speaking about hierarchies of growth (see the answer to question H-03). The holarchic character of a holacracy and the possibility to hold roles in multiple Circles across multiple levels is the biggest structural difference to traditional organisational structures.

The analysis in this thesis compared the internal structure of Holacracy to a formal definition of the one of traditional organisations. The characteristics of which are: high division of labour, unity of order, chain of command, and limited control span.

The scope of Holacracy is larger than the one of Scrum. Given its holistic approach designed to organise a whole venture, it exceeds the definition of a program. Similar to Scrum, Holacracy fulfils most characteristics of lateral organisations: *Empowerment* and *horizontal cooperation* (also self-organisation) are central concepts of Holacracy. *Cross-linked project groups* appear as a result of the processing of tensions, which results in the adaptation towards the present needs of a Circle. That is, if a role is needed it is created. It emerges from the networked structure of Circles. *Loose coupling* is ensured by the Governance Process, which aims at re-arrangement and by the concept Dynamic Steering, which allows constant adaptation. Last, *organisational citizen behaviour* may result as a side-effect of separation of work and ego (see also meeting effectiveness and the multiply quote example of friendships resulting from Holacracy practice in 5.2.5).

As pointed out in the corresponding Scrum results section of Scrum, both approaches may be applied in a complementary way. That is, Scrum can be used as approach to organise projects or production in a holacratic organisation. (see also Case 7: Holacracy Facilitator and Coach answering question H-02).

Like Scrum, Holacracy is not without any parallel to other organisation forms. The idea of self-responsible, double-linked teams (Circles) are principally identical to concepts of Sociocracy, which has been extended by the concept of Holons. (The analysis laid out Sociocracy being under-represented in practice.) Also, the principle of Daily Stand-Ups is an Agile principle that most prominently can be found in Scrum. The combination of which, however, appears to be unique and the comparison to the state-of-the-art results in a fundamental deviation. Therefore, like Scrum the conclusion of the research in this thesis proposes Holacracy to be classified as *Management Innovation* (see Abrahamson (1996)).

6.2 Research Question 2

> What is the impact of the use of Scrum and Holacracy on collaboration and motivation and what are their differences or similarities?

This thesis highlights teams, meetings or events, and formalised communication as central forms and means of collaboration. While teams have become a common form of collaboration in the last 20 years, their formal existence in management methods or organisation form appears only in a few (e.g. lateral organisations). In this context a catalogue of criteria and characteristics for each aspect has been presented. Both, Scrum and Holacracy have been discussed with respect to these. The criteria to evaluate the concepts were:

In terms of motivation this thesis presents the best known and most respected motivation and job satisfaction theories and analyses the applicability of the principles in Scrum and Holacracy to them. The main theories discussed are:

Teams	Meetings	Formalised Communication
Principal application	Principal definition	Principal definition
Formalised character	Formalised character	Formalised character
Temporal character	Temporal attributes	Fields of application
Cross-functionality	Pre-defined purpose	
Self-organisation	Meeting effectiveness	
Team effectiveness		

Tab. 6.2.: Criteria to evaluate collaboration of Scrum and Holacracy

- Maslow's *Hierarchy of Needs*
- Herzberg's *Two Factor Theory*
- McGregor's *Theory Y*
- Hackman & Oldham's *Job Characteristics Model* (JCM)
- Pink's *Model of Intrinsic Motivation*

6.2.1 Scrum

Collaboration

Teams. This thesis discusses the central character of the Scrum Team. The analysis of the interviews shows *Team* as the seventh most used code of 388 total codes. Adding the 24 sub-codes of the code-category "Team" in the context of Scrum, Team becomes the fourth most used code. The sub-codes include cross-functional team, unity, sub-team, team culture, i.a. Despite its qualitative character and absent claim for generalisability the interview series underlines that teams are a core aspect of Scrum. Limiting the results only to the Scrum interviews, the code *Team* is the highest ranked code next to the code *Meeting*.

The analysis of collaboration aspects of Scrum argues that Scrum teams are formalised and hold a clear purpose, which distinguishes them from loose group of humans and makes them a team. Furthermore, the temporal character of teams has been discussed as undetermined. Depending on its use for either managing products or being used in a persistent production context Scrum, Teams are either temporary or permanent.

From a categorising point of view, this thesis shows that Scrum Teams have characteristics of teams in lateral organisations. The characteristic of *empowerment* is given by the characteristic of self-organisation in Scrum. *Horizontal cooperation* in Scrum happens within the team. The way to collaborate with the outsides of the Scrum organisation is not subject to its specification. In addition, the attribute of *cross-functional project groups* in lateral organisations is also met by definition. Scrum Teams, by definition, are cross-functional. Given the application in a project oriented way, Scrum perfectly matches this characteristic, and also the one of *loose coupling*. Teams are meant to be composed to fit the needs of the current project.

This thesis also applies a set of nine key factors, that make teams effective, to the concepts of Scrum (see Sheard and Kakabadse (2002)). The criteria include clearly defined roles and responsibilities that the whole team agrees on, cohesive alignment alongside clear priorities, open communication and an open approach to work objectives. The theoretical analysis argues that Scrum conforms to all of these criteria. For this reason, an important result of this thesis is the hypothesis that the concepts of Scrum make for effective teams, which has to be proven or refuted by future quantitative research. This effectiveness may also be exemplified alongside the high emphasis on the benefits in transparency in Case 4: Professional

Services Manager. Collaboration also gets more efficient and communication gets more effective, which (as explicitly stated in the interview) in turn leads to higher motivation.

Meetings. This thesis presents meetings as central means for collaboration. The analysis of the meeting concepts classifies Scrum meetings as formalised and serving the defined purposes of planning, controlling or approval, as well as monitoring and improvement of collaboration and process quality. As mentioned in the previous paragraph, *Meeting* is also the most used code alongside *Team* in the Scrum, specific interviews. It is the second most overall used code.

The analysis results in arguing that the concepts of Scrum beneficially contribute to the meeting effectiveness in the sense of Allen et al. (2014). In this context the importance of the Scrum Master as *facilitator* is highlighted. Also, the concept of *time-boxes* contributes to meeting effectiveness. The other (human related) criteria may be satisfied as a side effect of the rules for Scrum. The argumentation is backed by interviews: Case 1: Scrum Master and Case 3: Product Owner and General Manager report improved discipline in meetings making them more productive (see the answers to question S-09). Productivity is also mentioned in Case 2: Development Team Member (answering the same question). Nonetheless, the hypothesis that the concepts of Scrum meetings contribute to meeting effectiveness has to be proven or refuted by future quantitative research.

Formalised Communication. This thesis argues that Scrum artefacts contribute to *formalisation* in the sense of Pugh, Hickson, Hinings, and Turner (1968). Case 4: Professional Services Manager highlights the beneficial contribution of a centrally available backlog to communication both internally and with customers. In this context, this thesis also showed that the artefacts in Scrum help to increase transparency and therefore aid collaboration. The Scrum artefacts are the *Product Backlog*, the *Sprint Backlog* and the *(Product) Increment*. Depending on the definition also the *Vision* and an *Impediment Backlog* are considered artefacts. Their beneficial contribution to collaboration may be tested by future quantitative research.

Motivation

The analysis of the concepts of Scrum with respect to their potential to motivate practitioners leads to the following aspects of Scrum that strengthen motivation:

- **Self-organisation**, appears to be the biggest and constantly re-appearing motive in Scrum. Put in different words, the self-organisation reflects the ideas of all applied motivation theories. The practical relevance of self-organisation in Scrum (and Holacracy) has been shown by autonomy as sixth most used code of 388 codes generated in the analysis of the interviews. Maslow's growth need of *self-actualisation* may be satisfied by self-organisation. Next, Herzberg's motivators of *responsibility*, *achievement* and *growth* may profit of self-organisation. The idea of humans in McGregor's *Theory Y* and their willingness to seek responsibility also reflects in the standard of self-organisation. Finally, *autonomy* is one of the two most influential factors the JCM and one of the three intrinsic motivators in Pink's model. Obviously, self-organisation is one form of autonomy. Case 2: Development Team Member mentions motivation deriving from the separation of competencies and therefore self-organisation. Lastly, the aspect of self-organisation is also reflected in the importance of Autonomy in the evaluation of the interviews, being the sixth most used code from the overall perspective and the eighth most, when limited to the Scrum interviews.
- **Teamwork** has great importance in Scrum as already pointed out earlier in this chapter. Maslow considers *social needs* as deficiency needs. The immanent team structure in Scrum obviously

satisfies this need. In Herzberg's model the *relationship with peers* is one of the motivators. Given a team-structure and the instrument of the retrospective to constantly work on, it may address this motivator. As mentioned earlier the interviews showed practical relevance of teamwork, as the code *Team* has been the most used code in the Scrum interviews.

- **Feedback** is given constantly in Scrum. All meeting formats allow for feedback to be given and received (certainly, the primary goal of a Daily Stand-Up is status and not feedback. The possibility to speak up with impediments makes for a feedback platform). The second highest need in Maslow's pyramid is *esteem*, which is guaranteed by the Sprint Review and the Retrospective. Next, Herzberg's motivator *relationship with peers* is meant to be worked on in the Retrospective, not only addressing what went wrong, but explicitly what went well. With respect to Theory Y open and valuing communication is taking shape in the form of scheduled feedback. At last, in the JCM feedback is one of the two most influential factors. Case 3: Product Owner and General Manager mentions the value of Retrospective and the adoption of principles like these outside the Scrum part of the organisation.

- **Emphasis on improvement** is a core principle of Scrum following the Deming Cycle. Again, the *relationship with peers* in Herzberg's theory can be satisfied by the focus on improvement, and so does the need for *self-actualisation* in Maslow's model. Herzberg's motivator of *working conditions* can also be positively influenced by the improvement focus in Scrum addressed by the Daily Stand-Up and the Retrospective. From the perspective of Theory Y, emphasis on improvement conforms to the idea of humans not considering work as painful, but being ambitious about it. Finally, *mastery* in Pink's model reflects in the goal of constant improvement. The Scrum process aims at enabling all its users to to do their work the best possible and therefore to be as good at it as possible.

- **Purpose** is an explicit and powerful intrinsic motivator (Pink). Scrum demands a *Vision* to every project, defines the requirement of a *Sprint Goal* for every Sprint and and adds a purpose dimension to every single requirement: *User Stories* are required to have a "why", a need or a reason next to the actual user and the desired action. So, purpose is clearly addressed by Scrum.

6.2.2 Holacracy

Collaboration

Teams. Given the term of Circles and the focus on organising work instead of humans, the analysis Chapter shows that team is no common term in Holacracy. However, Circles by definition are equalled to *self-organising teams*. Circles in Holacracy are formally defined and share a list of attributes (Purpose, Domain and Accountabilities. Circles are special forms of a Role that may have Sub-Roles) and roles (Lead Link, Rep Link, Secretary, Facilitator). From a *temporal perspective* the character of a Circle is not pre-determined: following the constant organisational evolution in Holacracy in every Governance Meeting a new Circle may be created or dissolved. Therefore, teams in Holacracy may be temporary or permanent, depending on their purpose. For example, a GCC, or an accounting Circle may have permanent character, while a project Circle is dissolved with the end of the project. The attribute of cross-functionality is no explicit attribute of Circles in Holacracy. Still, the tension orientation of the Governance Process makes cross-functionality emerge itself. That is, if a skill is needed in a Circle, a role is simply modified or added. Since this is "everyday practice", the distribution and addition of sills to a team is a very simple process compared to traditional organisation with high division of labour and specialisation.

Nonetheless, the discussion shows that teams need to be considered differently in Holacracy, while in traditional organisation the membership to a team relates to hierarchy, to common superiors and to a primary habitat in terms of collaboration. In Holacracy, everybody may (and does) hold roles in different Circles. Thus, everybody may be in different teams and collaborate with different peers depending on the Circle. Collaboration therefore gets a high emphasis in Holacracy, but affects a wider context.

The application of nine key factors that make *teams effective* to the concepts of Holacracy (see Sheard and Kakabadse (2002)) results in the argumentation that Holacracy conforms to all of these criteria. The criteria include clearly defined roles and responsibility that the whole team agrees on, cohesive alignment alongside clear priorities, open communication and an open approach to work objectives. For this reason, an important result of this thesis is the hypothesis that the concepts of Holacracy make for effective teams, which has to be proven or refuted by future quantitative research.

Meetings. This thesis discusses meetings as very important means for collaboration in Holacracy. Their relative importance can be found in the interpretation of the interviews, which resulted in *Meeting* being the overall second most used code. In the Holacracy specific interviews *Governance Meeting* is on rank five, and *Meeting* on rank 6. The analysis of the meeting formats in Holacracy proposes an exceptional degree of formalisation. With respect to pre-defined meeting purposes, these aim at governing the structure of the organisation and its parts, as well as organising and steering the actual operational work or company objective. From a temporal, perspective meetings in Holacracy are scheduled, but their frequency is partly up to every Circle. (Daily Stand-Ups certainly happen on a daily basis)

The analysis resulted in arguing that the concepts of Holacracy beneficially contribute to the meeting effectiveness in the sense of Allen et al. (2014). The importance of the Facilitator has been highlighted in this context. Also, the concept of *time-boxes* contributes to meeting effectiveness which is not as rigid as in Scrum, but proposed in the Holacracy specification. Case 6: Holacracy Practitioner and Consultant points out the value of the Facilitator ensuring decisions and results in meetings (see the answers to question H-10). Productivity is also mentioned in Case 2: Development Team Member (answering the same question). The demand to process tensions and to prepare for meetings, in order to contribute to the agenda also contributes to meeting effectiveness in the sense of the above criteria. In this context, Case 6: Holacracy Practitioner and Consultant highlights 30 to 40 issues being processed in a one hour meeting. The further discussion suggests that the other criteria mainly relating to human aspects and behaviour can be satisfied as a side effect of the rules for Holacracy meetings. The multiply referred to statement that Case 5: Founder and Holacracy Expert reports friendships to have evolved of Holacracy at work reinforces this possible indirect effect in meetings. The potential to increase meeting effectiveness (and efficiency) is a central result of the research conducted for this thesis. At last, the hypothesis that the practices of Governance and Operational meetings contribute to meeting effectiveness has to be proven or refuted by future quantitative research.

Formalised Communication. This thesis argues that Holacracy has a very high degree of *formalisation* in the sense of Pugh, Hickson, Hinings, and Turner (1968). The analysis classifies the Holacracy Constitution as an exceptional materialisation of rules for organising work and collaboration. In the sense of formalised communication as represented by the Artefacts in Scrum, Holacracy defines protocols, meeting minutes, i.a. to be written for Governance and Tactical Meetings by the pre-defined Secretary role in every Circle. Nonetheless the authoring of these is a step in formally defined processes, but not pre-defined documents as in Scrum. Nonetheless, the fact that Holacracy puts all its structure and process definition into a written form reinforces this formalised character. Since the definition of Integrative Decision Making is also strictly defined, communication in terms of the spoken word is also happening in a very formalised way. The impact of this way of communication on collaboration is best illustrated in Case 5: Founder and

Holacracy Expert, who explicitly mentions the emergence of friendships out of Holacracy's approach to communicate and collaborate.

Motivation

The analysis of the concepts of Holacracy with respect to their potential to motivate practitioners leads to the following aspects of Holacracy that strengthen motivation:

- **Self-organisation** reflects the concepts of all presented motivational theories, as explained above. In Holacracy self-organisation is a core concept. Circles are self-organising units with their own instances of the Governance Processes. The practical relevance of self-organisation in Holacracy (and Scrum) has been shown by autonomy as sixth most used code of 388 codes generated in the analysis of the interviews. With respect to self-organisation Holacracy therefore satisfies the presented motivation theories in the same context as Scrum: *self-actualisation* (Maslow), *responsibility*, *achievement* and *growth* (Herzberg), Theory Y (McGregor), *autonomy* (Hackman & Oldham, Pink). Finally, the importance of self-organisation in Holacracy can be found in the evaluation of the interviews, in which the code *Autonomy* is the third highest in the context of Holacracy and the sixth overall.

- **Teamwork** is effected differently in Holacracy than in Scrum. While Circles are self-organising units of humans, the overall organisation focusses on work, instead of humans. However, working together in groups of humans, composed self-responsibly by the organisational members matching their needs, makes teamwork an important characteristic of Holacracy. Therefore, Holacracy satisfies the need for *social interaction* and *relationship with peers*.

- **Feedback** is an explicit claim of Holacracy. Feedback is needed to run the operational process and also in terms of tensions to be processed. Given, that everybody is mandated to process their tensions makes feedback a central and inevitable aspect of Scrum. The strict moderation that neither allows subjective discussion or blaming, nor forces anybody to vote for or against a proposal, objectifies feedback. Case 5: Founder and Holacracy Expert reports friendships resulting from the communication style in Holacracy. Thus, Holacracy satisfies the motivators of esteem (Maslow), relationship with peers (Herzberg), valuing communication (Theory Y), feedback (JCM).

- **Emphasis on improvement** in Holacracy is treated similarly to Scrum, which offers the potential to trigger the same effects. While Scrum follows the Deming Cycle, Holacracy makes processing tensions its central principle aiming at improvement. Tensions are processed in every Governance Meeting. By this rule everybody has the option to adapt their roles. Being able to modifying circles allows to constantly adapt the overall organisation to satisfy the current needs and the overall purpose. Hence, in this context Holacracy satisfies the motivators of *self-actualisation* (Maslow), *working conditions* (Herzberg), *being ambitious about work* (McGregor), and *mastery* (Pink).

- **Purpose** is obviously an omnipresent claim in Holacracy. Every Circle and every role needs a purpose, so everybody at every time is able (theoretically) to know why they do their current work. The omnipresence and central claim for purpose in Holacracy certainly satisfies Pink's motivator. In the evaluation of the interviews purpose was on rank 16 of 388 codes generated in the evaluation of the interviews.

6.3 Conclusion

This chapter summarises the findings of this thesis. Summarised in a five sentences these are: both approaches define internal structures and governance processes that are radically different to traditional organisation structures. Both have large similarities to lateral organisations, but are concepts that deviate from the state-of- the-art, so they can be classified as management innovation. Both approaches provide large tool-kits regarding collaboration, which hold the power to beneficially influence the effectiveness of meetings and teams. Finally, both approaches may positively impact motivation - interestingly, this is mainly driven by the structural design and the arrangement of labour, and not by talking about humans. Quantitative future research may prove or refute these hypotheses.

6.3.1 Internal Structure and Governance

This thesis has shown that the **internal structures** of Scrum correspond to the ones of *lateral organisations*, while Scrum may also be classified as *program*. Given its project character Scrum may also be applied as means to organise the project part of *project organisations*. This argumentation is also backed by the practical impression (Case 3: Product Owner and General Manager explicitly calls his organisation a project organisation). The process emphasis in Scrum appears to be more dominant than in traditional (project) organisation forms. The iterative incremental aspect distinguishes Scrum from most conventional approach. In this context it is important to point out that Scrum is designed to solve problems in a complex, adaptive environment and that therefore it may not be the best means for highly standardised labour processes.

In comparison, the analysis in this thesis has shown that the internal structures in Holacracy differ even more to traditional organisation structures than the ones in Scrum. Certainly, this is due that the difference that Holacracy targets organising an organisation as a whole, while Scrum focusses on development. In this respect Holacracy appears completely open and unrestricted. Compared to established organisation theories the internal structure of Holacracy conforms to the principles of lateral organisations, just like Scrum. However, its concepts go beyond that. Both approaches have in common that they come from the world of software engineering, which may explain their rather technical and foremost systematic character. While both approaches have arisen from practice, Holacracy has deeper scientific roots. That is, Sociocracy (which appears to be even less than an outsider in the world of practised organisation forms) and its concepts regarding internal structures obviously has been to be more than an inspiration for Holacracy. Alike in Scrum there is a clear process component to the internal structure of Holacracy. Still, in the latter the process concept is more rigid. And, comparing it to traditional organisation structures its grounding in the Holacracy Constitution is outstandingly formalised. As a final remark with respect to processes, this thesis proposes to use Scrum and Holacracy in a complementary way.

Both approaches heavily rely on a role-based structure, which has also been the most striking result of the expert interviews. Also, both define a set of **roles** designed as crucial aspect to the well-functioning of either process. While, in addition to the pre-defined roles, Scrum prescribes cross-functional teams that will contain all needed skills, Holacracy makes roles an even more important aspect. Again, this is also visible in the results of the evaluation of the interviews. *Role(s)* is the highest ranked code for Holacracy, while it is the third highest ranked for Scrum. Roles are a crucial part of the constant evolution process in a Holacracy. They are constantly re-visited and maintained according to the present needs. This concept makes for a major difference to static job definitions, which traditional structures are built of, and that are hardly ever looked at after their definition. Roles in Holacracy are in the center of the governance process, they are autonomous in their effectuation, transparent by tool-support, follow a purpose, must

have a set of defined accountabilities and a possible domain - again, all of which are subject to change whenever perceived necessary by the role-holder.

From a **governance** perspective both Scrum and Holacracy rely on self-organising teams, which are called Circles in Holacracy. Despite possible contrary indications and wrong impressions Holacracy is a hierarchic system - following the degree of self-contained governance and autonomy on every level are called *holarchy*. The key difference to traditional structures is that in a Holacracy there is a hierarchy of roles or growth and not of domination or power of humans over humans. This is ensured by the autonomy of roles, which must not be told how to do their job. A company board conform to this rule define when ratifying the Holacracy Constitution starting the implementation. Next to the autonomy of roles and Circles, priorities and resource allocations are communicated by so-called Lead Links down the Circle hierarchy, which ensure that the organisation stays functional and goal oriented. In the other direction every circle has another role called Representative Link, which makes sure that the Circle's voice is heard in the organisation wide Governance Process. Now, the main difference to Scrum is that the latter only covers a part of the organisation. Scrum may be integrated into an organisation wide hierarchy, but every role is autonomous regarding their competency. Thus, there is a horizontal, competence or role based hierarchy in a Scrum implementation, and no vertical one. This ensures that developers are not interfered in development aspects or work assignment by micro-management. On the other hand the Product Owner role has the sole responsibility to define priorities. Alike the Representative Link role in Holacracy the Scrum Master in Scrum gives a voice to the Development Team within the organisation. The self-responsible commitment of the Development Team to the work done instead of being micro-managed is another key difference to traditional governance structures. The Team is only given priorities.

Given all these major differences of both Scrum and Holacracy to traditional organisation forms and management methods, this thesis proposes a classification of both methods as *management innovation* in the sense of Abrahamson (1996).

6.3.2 Collaboration

This thesis focused on three key aspects of collaboration: teams, meetings (events) and (formalised) communication (documents, etc.) Both approaches have been analysed by a set of criteria derived from the state of the art. In conclusion, Scrum uses teams as core concept. Scrum Teams have a formalised character. They can be temporary or permanent depending on the use case. By definition Scrum Teams are cross-functional. And, the setting that Scrum Teams face in the overall structure of a Scrum implementation may positively affect team effectiveness (see Sheard and Kakabadse (2002)). All these matches, again, contribute to the fit to the concepts of lateral organisations.

Holacracy also defines teams (Circles) as core concept. Their characteristics are similar, but slightly different to the ones of Scrum. That is, Circles are formalised in a higher degree than Scrum Teams are. Given the Governance Process that every Circle is subject to, Circles may be temporary or permanent. Circles are not defined as cross-functional. Nonetheless, the processing of tensions is determined to result in having all presently needed skill aboard. Alike Scrum Teams, the concept of Circles in their setting may also beneficially influence team effectiveness.

Next, the principal definition of concrete meetings both in Scrum and Holacracy has been confirmed. While meetings in both are core concepts and define clear purposes, the degree of formalisation is different. Holacracy defines a rigid meeting process, which Scrum does not. Finally, the beneficial effects of both concepts to meeting effectiveness (see Allen et al. (2014)) have been argued, and also reported along partly impressive insights regarding decision pace in the interview series. As two remarkable criteria

that make the concepts of Scrum and Holacracy stand out is the explicit use of time-boxes and dedicated facilitators who run the meetings following concrete rules.

With respect to formalised communication this thesis refers to Pugh, Hickson, Hinings, and Turner (1968), and proposes the explicit consideration of written communication (documents, process definitions, etc.) when analysing the collaboration part of organisation forms or management methods. In this regard, Scrum defines so-called artefacts as concepts vital to the functioning of the whole method, the beneficial effects of which have been reported in multiple interviews. In the sense of Pugh et al the formalised process and the common use of tools to support the development process makes for a high formalisation of communication. In comparison, Holacracy has an even higher formalisation regarding process definitions as given by the Constitution. With respect to document driven communication Holacracy, in turn, defines certain meeting minutes and protocols to be done, and assigns them to a Secretary role. Their exact embodiment is not as clearly defined as in Scrum.

In summary, both approaches provide powerful and remarkably well-thought concepts for collaboration that touch domains which are often only subject to managerial instinct or company policy.

6.3.3 Motivation

As a third block, this thesis matched the principles of Scrum and Holacracy to five well known motivation theories. The analyses showed large motivational potential in both approaches. This relates to key differences: while traditional organisation forms focus primarily on monetary incentives and approaches like management by objectives are still state of the art, both Scrum and Holacracy define and apply concepts that create motivating effects:

- Self-organisation
- Teamwork
- Regular feedback
- Emphasis on improvement and mastery
- Purpose

Especially the focus on *improvement* and the importance of purpose makes them stand out. Scrum follows the deming cycle, in order to make improvement a central claim. In turn, Holacracy uses the concept of processing tension to constantly adapt (improve) the organisational structure. In both case every organisational member is (to be) heard. This holds potential to beneficially influence working conditions and work itself, which both are considered motivators (see Herzberg). Secondly, *purpose* which plays a central role in Holacracy since every part of the organisation (the organisation as a whole, every circle and every role) must have one. The interviews showed the motivational potential of this concept as a beacon to give direction and meaning to work. In Scrum, purpose is no literally defined, but also an important part from the project vision to a concrete "why" for a requirement in every User Story. Therefore, this thesis claims that both Holacracy and Scrum provide means to organise work in a way that makes for motivated employees. The interview series also contributed to this hypothesis, which (quantitative) future research shall prove or refute.

7 Critical Reflection, Open Issues and Future Work

> *"Forty-two," said Deep Thought, with infinite majesty and calm.*
>
> **— Douglas Adams**
> The Hitchhiker's Guide to the Galaxy, Chapter 27.

This last chapter would like to consider the whole forest rather than individual trees. Overviewing this thesis, the final question is what went well and what did not in the writing of this thesis?

Ultimately, this thesis succeeds in formulating an interesting research question with both scientific and practical relevance. From a personal professional perspective to Scrum of the author, the expected results have been achieved and partly outdone. During the course of working on this thesis the questions have been refined several times with the help and encouragement from the supervisor. Viewed from a result perspective the question still seems relatively wide. For this reason the theoretical part of the thesis results in greater width than depth. The proposed hypotheses and insights appear satisfactory when measured against the research questions. The criteria of science and the research design that have been laid out have been followed successfully. Yet, the snowball system of collecting sources in the phase of gathering theoretic knowledge may not have gone that well. This refers to the selection of theories to align this thesis with, namely the choice of theories, e.g. in the category of motivation, theories might be more profoundly argued.

In the introduction this thesis defines goals. These may now serve as systematic indicators regarding the accomplishment of this work.

- This thesis has succeeded in presenting both approaches and their respective differences, commonalities or complementarity in a comprehensive way.
- It has also achieved to determine a proposed category to classify both approaches, mainly by aiming at a systematic distinction to traditional organisation principles.
- It has drawn a degree of theoretical understanding of all key aspects, in order to answer the research in a sufficient manner. However, it only scratches the extensive and vast world of Holacracy, since all experts consider themselves to still be learning, even those who have practised Holacracy for seven years. Hence, the principal goal in this point may be considered as accomplished. Certainly, there is space for major future research.
- It also succeeds in providing first insights and indicators into practical experiences: the interview series enriches this work providing surprising insights through the evaluation. The possibility to loosen up the theoretical discussion with practical insights and exciting expert quotations also counts very positively.
- Finally, this thesis manages to gather data for subsequent (quantitative) studies.

Future Work and Outlook

The following list proposes some further research that could be done in consequence or inspired by this thesis.

- The most important future work item would be the further practical verification of the hypotheses proposed in this thesis in a quantitative study advancing the qualitative insights of this thesis and aiming for generalisable, statistical relevance.
- Deeper scientific exploration of Holacracy in many regards, e.g. a systematic analysis of the organisation types and sizes that Holacracy can successfully be used in - theoretical and from the perspective of a comprehensive large scale case study, or social effects of the de-personalised concept of organising work instead of humans as sketched by the interviewees in this thesis.
- Discussion of young organisation forms and management methods in the context of culture: how do concepts like self-organisation work outside "western culture" considering the power distance index and others?
- Next to the dedicated findings regarding the research questions, this thesis shows a wide terminological jungle of labels or meta-categorisations for management methods or organisation forms. An systematic analysis of this problem would be an interesting future project.

Some final words of reflection: Because of the wide media coverage and the impressions given from the experts talked to, Holacracy appears to be creating a lot interest. An expansion beyond the current degree of dissemination is happening. Waiting for the "next Zappos", also in Europe, should therefore be exciting. While Holacracy may rather not turn out as fad, it may be too heavy weight and also costly as an organisation method during its implementation to become a player in the first row of organisation forms. On the other hand, Scrum already is the predominant organisation method in agile software development. However, Scrum may face some expansion beyond its initial domain. On the one hand there are the growing Lean and Agile movement, an increasing importance of software based services and start-ups applying all these approaches referred to by Bernardis et al. (2016), IT skills considered as indispensable, and complex organisational circumstances to be dealt with. On the other hand there is a decline of highly standardised and automatable work, which may even affect traditional plan driven project management. Thus, Agile approaches like Scrum may well gain further importance. Considering that Scrum is more lightweight than Holacracy, chances may even be better. The pitfall may be the character of Scrum as a philosophy and the necessity to understand the reason behind the relatively small set of simple rules.

In closing, a final critical consideration: movements like self-organisation and the dissolution of hierarchies of power in organisational life for the good of the individual cannot be taken for granted or as an irreversible trend considering the latest geo-political trends, increasing autocracy and protectionism. It is therefore vital to keep on asking critical questions, to process tensions instead of eluding them, and to aim for constant improvement. These are lessons that can be learned from Scrum and Holacracy.

Appendices

Interviewleitfaden

A

This chapter contains the guideline for the interviews. The interviews conducted during the course of this thesis have been done in German. Given that this thesis has been written in English, this chapter contains the original guideline in German.

Einleitung

Dieses Dokument enthält den Leitfaden zur Befragung im Rahmen der Diplomarbeit „A Comparison of Scrum and Holacracy and their Impacts on Organisation“ von Gregor Marboe. Die Arbeit wird im Rahmen des Masterstudiums *Business Informatics* an der *Technischen Universität Wien* am *Institut für Managementwissenschaften*/E330, Theresianumgasse 27, 1040 Wien, unter der Betreuung von Frau Prof. Dr. Sabine Köszegi durchgeführt.

Die Diplomarbeit untersucht die beiden Führungs- bzw. Organisationsansätze *Scrum* und *Holacracy*. Wissenschaftliches Ziel der Arbeit ist ein Beitrag zur Erforschung der beiden Ansätze aus Sicht der Organisationswissenschaften mit Fokus auf *Struktur*, *Zusammenarbeit* und *Motivation*. Da im Bereich Holacracy kaum Forschungsdaten vorliegen, soll die Arbeit hier einen Beitrag zur Grundlagenforschung leisten. Durch einen Vergleich der beiden Ansätze mit Blick auf Aspekte von Organisation soll die Arbeit auch im praktischen Bereich Einsichten bringen, um das Verständnis der Ansätze außerhalb des Softwarebereichs zu vergrößern und Unterschiede, Gemeinsamkeiten, wie auch Möglichkeiten eines komplementären Einsatzes aufzeigen.

Im Rahmen der Arbeit werden Interviews in qualitativer Form durchgeführt. Das bedeutet, dass freie Antworten nicht nur möglich, sondern erwünscht sind. Die Ergebnisse der Untersuchung werden anonymisiert und stellen die Basis für nachfolgende quantitative Studien dar.

Das Dokument enthält die Fragen bezüglich Scrum/Holacracy und gliedert sich nachfolgend in die drei spezifischen Kapitel der Befragung *Struktur*, *Zusammenarbeit* und *Individuum/Motivation*, sowie eine kurze Reihe allgemeiner, statistischer Fragen. Als spezifisch gekennzeichnete Fragen unterscheiden sich von anderen Fragen dadurch, dass diese auf Spezifika der jeweiligen Methoden eingehen, hingegen alle anderen Fragen sowohl für Scrum, als auch für Holacracy möglich sind und gestellt werden.

Struktur

- H-01/S-01: Wie würden Sie den Einfluss von Scrum/Holacracy auf die Struktur Ihrer Organisation beschreiben?
- H-02/S-02: Wie gut sind Sie mit dem Prozesskonzept von Scrum/Holacracy vertraut? Wie würden Sie dessen Einfluss auf die Prozesse in Ihrer Organisation beschreiben?
- H-03/S-03: Wie wird Hierarchie in Ihrer Wahrnehmung gelebt in Ihrem Unternehmen und welche Zusammenhänge sehen Sie in der Hinsicht zu Scrum/Holacracy?
- H-04/S-04: Wie würden Sie die Arbeitsteilung in Ihrem Unternehmen beschreiben und welche Rollen hat in Ihren Augen dabei Scrum/Holacracy?
- H-05/S-05: Wie empfinden Sie im Alltag Prozesstransparenz gestützt durch Scrum/Holacracy?
- H-06/S-06: Welches sind Ihrer Ansicht nach die größten Vorteile, welches die größten Nachteile durch Scrum/Holacracy aus struktureller bzw. prozessbezogener Sicht?

- H-07/S-07: Wie haben Sie die Phase der Umstellung auf Scrum/Holacracy empfunden, wie wurde diese seitens der/anderer Mitarbeiter empfunden? Welche Schwierigkeiten haben Sie beobachtet?

Spezifische Fragen zum Thema Struktur

- H-08: Wie gestaltet sich im Falle von Holacracy die Schnittstelle zu anderen Unternehmen? Stichwort: „Kann ich mit Ihrem Vorgesetzten sprechen?“

Zusammenarbeit

- H-09/S-08: Wie würden Sie den Einfluss von Scrum/Holacracy auf die Zusammenarbeit Ihrer Organisation beschreiben?
- H-10/S-09: Wie würden Sie den Einfluss von Scrum/Holacracy auf Besprechungen und Meetings in Ihrer Organisation beschreiben? Denken Sie dabei an Aspekte wie Quantität, Qualität, Frequenz, Effizienz, usw.!
- H-11/S-10: Welches sind Ihrer Ansicht nach die größten Vorteile, welches die größten Nachteile durch Scrum/Holacracy aus der Perspektive der Zusammenarbeit?

Spezifische Fragen zum Thema Zusammenarbeit

- S-11: Wie würden Sie den Einfluss von Scrum-Retrospektiven auf die Zusammenarbeit beurteilen, wie auf die Harmonie im Team?
- H-12: Wie empfinden Sie Governance-Meetings aus Holacracy und welche Möglichkeiten, Vorteile und Nachteile sehen Sie darin - für sich und für die Organisation als ganzes?

Individuum & Motivation

- H-13/S-12: Wie beurteilen Sie den Zusammenhang zwischen Scrum/Holacracy als Organisationsmethode und Ihrer Arbeitszufriedenheit, wie unter dem Gesichtspunkt Motivation?
- H-14/S-13: In welcher Art sehen Sie sich durch die Konzepte von Scrum/Holacracy als Individuum berücksichtigt?
- H-15/S-14: Wie würden Sie den Aspekt der Eigenverantwortlichkeit und Entscheidungskompetenz gegeben aus Scrum/Holacracy beschreiben und wie empfinden Sie diesen für sich selbst?
- H-16/S-15: Welches sind Ihrer Ansicht nach die größten Vorteile, welches die größten Nachteile durch Scrum/Holacracy bezogen auf Sie als Individuum?
- H-17/S-16: Wie geht Ihr Unternehmen mit opportunistischen Mitarbeitern und solchen, die keine Verantwortung übernehmen möchten um?
- H-18/S-17: Wie ist Ihre Einschätzung der Eignung für Scrum/Holacracy? Ist jeder dafür geeignet Sind bestimmte Gruppen oder Typen mehr/oder weniger geeignet und wenn ja welche?

Spezifische Fragen zum Thema Individuum & Motivation

- H-19: Wie empfinden Sie als Person den Zugang zu Ihrer Organsation geleitet durch den Purpose-Anspruch in Holacracy?
- H-20: Wie empfinden Sie die Punkte Autorität und Verantwortung unter dem Aspekt Governance in Holacracy?
- S-18: Wie beurteilen Sie die Auswirkung Ihrer Scrum-Rolle auf Ihre Position in Ihrer Organisation?
- S-19: Wie empfinden Sie die Feebackmöglichkeiten in Form der Scrum-Retrospektive in Hinblick auf Ihre persönliche Position in Ihrer Organisation?

- S-20: Wie würden Sie den Zusammenhang zwischen Ihrer Rolle in Scrum und Veranwortung beschreiben? Wie wirkt sich diese auf Ihre Motivation aus?

Allgemeine Fragen

Geschlecht

- Weiblich
- Männlich

In welche Altersgruppe fallen Sie?

- 20 bis 30 Jahre
- 30 bis 40 Jahre
- 40 bis 50 Jahre
- 50 bis 60 Jahre
- 60 bis 70 Jahre
- Keine Angabe

Wie viele Jahre Berufserfahrung haben Sie?

- 0 bis 3
- 3 bis 7
- 7 bis 10
- 10 bis 20
- 20 bis 30
- 30+
- Keine Angabe

In welcher Position sind Sie in Ihrem Unternehmen tätig?

Wie viele Jahre Erfahrung haben Sie mit Scrum/Holacracy?

In welcher Weise/Aufgabe habe Sie mit Scrum/Holacracy zu tun?

Welche Art von Scrum/Holacracy-Ausbildung haben Sie erhalten?

- Firmenintern
- Professionelles Training
- Zertifizierung
- Keine Angabe

Welches ist Ihre höchste Schulbildung?

- Pflichtschule
- Matura
- Universität
- Keine Angabe

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