Kaunas University of Technology

School of Economics and Business

The Role of Self-Organisation in Overcoming the Barriers for the Employee-Driven Innovation in the Swedish Multinational Company

Master's Final Degree Project

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Summary

The fast-moving, volatile pace of the world today requires organisations to be at the top of their game in capturing the market, keeping the market, and keeping up with the competition. Companies that are highly innovative are seen to have an edge over those that are not. Therefore, it is seen that every second company is trying to become innovative. Over the years, the idea of utilizing employees' experience and expertise to innovate has taken center stage on both organisational and policy levels. However, there are a number of barriers for companies to truly enable employee-driven innovation. Among the many solutions to overcome this issue, organisation innovations are also taking place. In this direction, self-organising firms are leading the restructuring of organisations to put employees at the center of operations and thereby innovation. Self-organisation is implemented in a number of different methods with some companies following holacracy, agile way of working, sociocracy and with some others implementing their own way of self-organisation. Each of these companies has seen a significant improvement in employee motivation and thereby innovation. However, there are very few studies that substantiate the claims made by organisations. Therefore, the **research aim** of this thesis is to ground the role of self-organisation in overcoming the barriers to employee-driven innovation.

Research objectives:

1. To conduct a comprehensive problem analysis of the research necessity concerning the role of self-organisation in overcoming the barriers to employee-driven innovation (EDI).
2. To carry out in-depth literature research,
    a. To comprehend and assimilate the concepts of innovation management and EDI.
    b. To understand and categorise the barriers to EDI.
    c. To explore the topic of self-organisation and delve into the intricacies of it.
3. To theorize a model based on literature to pragmatically comprehend the practical influence of EDI in firms practicing self-organisation.
4. To ground research methodologies to explore approaches to identify practical implementation of self-organisation and its role in overcoming barriers to employee-driven innovation.
5. To undertake empirical research, ground the findings, and summarise the results.

The **research methodology** designed to carry out this exploration begins with extensive literature research conducted to understand the concepts of innovation management, employee-driven innovation, barriers to employee-driven innovation, and self-organisation. Once the theory was reviewed, a theoretical model was ideated which served as the guideline for empirical research. Given the lack of research on this topic, the qualitative method is research was chosen to study and create

perspectives from the lived experiences of people. Case study and semi-structured interviews were chosen as the methods to carry out qualitative research. As part of the empirical research, case and interview sampling criteria were defined and interview guidelines were outlined. With the chosen candidates, interviews were conducted, along with desk research. Using the data gathered, MAXQDA was used for qualitative analysis. As part of this, data coding was done and codes were interpreted. Insights gathered were outlined in detail as the results of the study.

Key theoretical findings include carrying out a structured literature review to clearly and in detail define the barriers to employee-driven innovation and principles of self-organisation. The literature found on both barriers to employee-driven innovation and the principles of self-organisation is fragmented at the moment. This thesis puts together the concepts as seen from various authors' perspectives. A theoretical model is ideated that theorizes the possible role of self-organisation principles in overcoming barriers to employee-driven innovation. This model is used for empirical research to gather insights from the lived experiences of people working within self-organising systems. The insights gathered are in detail discussed and patterns are established. Overall, this research provides a comprehensive view of organistional innovation and its role in overcoming barriers to employee-driven innovation. Additionally, further areas of research were revealed by the interviews conducted.

Key practical findings include implications for organisations, teams, and individuals. The interviews provided significant insights into the principles that play a major role in overcoming organisational level barriers. Radical decentralisation of authority, formal rules, and having solid feedback mechanisms are seen to play a role in overcoming organisational structure, strategy, learning, and resource barriers among others. On a group level, team structures, and radical decentralisation of authority aid the creation of supportive and collaborative teams allowing the mitigation of barriers such as the creation of a hostile environment, departmental silos, lack of diversity, and fragmented innovation efforts. On an individual level, the influence of radical decentralisation of authority, high levels of involvement, and accountability amounted to empowered employees leading with confidence and clarity toward the vision of the company. They were able to overcome barriers such as micromanaging leadership, lack of adaptability, lack of motivation, etc. These findings could serve as guidelines to organisations that are looking to implement self-organisation and to those who are transitioning towards less hierarchical organisational structures.

Sheshadri, Supritha, Saviorganizacijos vaidmuo įveikiant darbuotojais grįstų inovacijų barjerus Švedijos tarptautinėje įmonėje. Magistro baigiamasis projektas. vadovė doc. dr. Jolita Čeičytė-Pranskūnė, Kauno technologijos universitetas, Ekonomikos ir verslo fakultetas.

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Santrauka

Dėl sparčiai besikeičiančio ir nepastovaus šiandienos pasaulio tempo organizacijos turi būti pačios geriausios, kad užkariautų rinką, ją išlaikytų ir neatsiliktų nuo konkurentų. Manoma, kad itin novatoriškos įmonės turi pranašumą prieš tas, kurios nėra novatoriškos. Todėl pastebima, kad kas antra įmonė stengiasi tapti novatoriška. Bėgant metams, tiek organizaciniu, tiek politiniu lygmeniu pagrindinį vaidmenį užėmė idėja panaudoti darbuotojų patirtį ir žinias inovacijoms diegti. Tačiau bendrovėms kyla nemažai kliūčių, trukdančių iš tiesų sudaryti sąlygas darbuotojų diegiamoms inovacijoms. Tarp daugybės sprendimų šiai problemai įveikti pasitaiko ir organizacinių naujovių. Šia kryptimi saviorganizuojančios įmonės vadovauja organizacijų pertvarkymui, kad darbuotojai taptų veiklos, o kartu ir inovacijų centru. Saviorganizacija įgyvendinama įvairiais būdais: kai kurios įmonės vadovaujasi holakratija, judriuoju darbo metodu, sociokratija, o kai kurios kitos taiko savo saviorganizacijos būdą. Kiekvienoje iš šių bendrovių pastebėtas žymus darbuotojų motyvacijos, o kartu ir inovacijų, pagerėjimas. Tačiau yra labai nedaug tyrimų, kurie pagrįstų organizacijų teiginius. Todėl šio darbo tyrimo tikslas - pagrįsti saviorganizacijos vaidmenį įveikiant darbuotojų skatinamų inovacijų kliūtis.

Tyrimo tikslai:

1. Atlikti išsamią problemos analizę, susijusią su saviorganizacijos vaidmeniu įveikiant darbuotojų inicijuojamų inovacijų (EDI) kliūtis.
2. Atlikti išsamų literatūros tyrimą,
    a. suprasti ir įsisavinti inovacijų valdymo ir EDI sąvokas.
    b. Suprasti ir suskirstyti EDI kliūtis.
    c. Išnagrinėti saviorganizacijos temą ir įsigilinti į jos subtilybes.
3. Teoriškai pagrįsti literatūros šaltiniais paremtą modelį, kuris leistų pragmatiškai suvokti praktinę EDI įtaką saviorganizaciją praktikuojančiose įmonėse.
4. Pagrįsti mokslinių tyrimų metodikas, kad būtų galima ištirti būdus, kaip nustatyti praktinį saviorganizacijos įgyvendinimą ir jos vaidmenį įveikiant kliūtis, trukdančias į darbuotojus orientuotoms inovacijoms.
5. Atlikti empirinius tyrimus, pagrįsti jų rezultatus ir apibendrinti rezultatus.

Tyrimo metodika, skirta šiam tyrimui atlikti, prasideda nuo išsamaus literatūros tyrimo, atlikto siekiant išsiaiškinti inovacijų valdymo, darbuotojų skatinamų inovacijų, darbuotojų skatinamų inovacijų kliūčių ir saviorganizacijos sąvokas. Apžvelgus teoriją, buvo sumanytas teorinis modelis, kuriuo vadovautasi atliekant empirinį tyrimą. Atsižvelgiant į tyrimų šia tema trūkumą, buvo pasirinktas kokybinis tyrimo metodas, kad būtų galima tirti ir kurti perspektyvas iš žmonių

gyvenimiškos patirties. Kokybiniam tyrimui atlikti buvo pasirinktas atvejo tyrimas ir pusiau struktūruotas interviu. Atliekant empirinį tyrimą buvo nustatyti atvejo ir interviu atrankos kriterijai ir nubrėžtos interviu gairės. Su atrinktais kandidatais buvo atliekami interviu, taip pat buvo atliekamas dokumentų tyrimas. Naudojant surinktus duomenis kokybinei analizei atlikti naudota MAXQDA. Atliekant šią analizę buvo koduojami duomenys ir interpretuojami kodai. Surinktos įžvalgos buvo išsamiai išdėstytos kaip tyrimo rezultatai.

Pagrindinės teorinės atlikti struktūruotą literatūros apžvalgą, kad būtų aiškiai ir išsamiai apibrėžtos kliūtys, trukdančios į darbuotojus orientuotoms inovacijoms ir saviorganizacijos principams. Šiuo metu literatūra, skirta tiek kliūtims, trukdančioms į darbuotojus orientuotoms inovacijoms, tiek saviorganizacijos principams, yra fragmentiška. Šioje disertacijoje sudėtos sąvokos, į kurias žvelgiama iš įvairių autorių perspektyvų. Sukuriamas teorinis modelis, kuriame teoriškai pagrindžiamas galimas saviorganizacijos principų vaidmuo įveikiant darbuotojų inicijuojamų inovacijų kliūtis. Šis modelis pasitelkiamas empiriniam tyrimui, siekiant surinkti įžvalgas iš žmonių, dirbančių saviorganizacijos sistemose, gyvenimiškos patirties. Surinktos įžvalgos išsamiai aptariamos ir nustatomi modeliai. Apskritai šis tyrimas pateikia išsamų požiūrį į organizacines inovacijas ir jų vaidmenį įveikiant kliūtis darbuotojų inicijuojamoms inovacijoms. Be to, atlikus interviu paaiškėjo tolesnės tyrimo sritys.

Pagrindinės praktinės įtraukti poveikį organizacijoms, komandoms ir atskiriems asmenims. Interviu metu buvo gauta svarbių įžvalgų apie principus, kurie atlieka svarbų vaidmenį įveikiant organizacinio lygmens kliūtis. Manoma, kad radikali valdžios decentralizacija, formalios taisyklės ir patikimi grįžtamojo ryšio mechanizmai, be kita ko, atlieka svarbų vaidmenį įveikiant organizacinės struktūros, strategijos, mokymosi ir išteklių kliūtis. Grupės lygmeniu komandų struktūros ir radikalus įgaliojimų decentralizavimas padeda kurti palankias ir bendradarbiaujančias komandas, leidžiančias sumažinti tokias kliūtis, kaip priešiškos aplinkos kūrimas, atskirų skyrių atskirtis, įvairovės trūkumas ir suskaidytos inovacijų pastangos. Individualiu lygmeniu radikalaus įgaliojimų decentralizavimo, didelio įsitraukimo ir atskaitomybės įtaka lėmė, kad darbuotojai įgijo daugiau galių ir užtikrintai bei aiškiai vadovavo įmonės vizijai. Jie sugebėjo įveikti tokias kliūtis kaip mikromanipuliuojantis vadovavimas, prisitaikymo stoka, motyvacijos trūkumas ir pan. Šios išvados galėtų būti gairės organizacijoms, siekiančioms įgyvendinti saviorganizaciją, ir toms, kurios pereina prie mažiau hierarchinių organizacinių struktūrų.

Table of contents

List of figures

List of tables

List of abbreviations and terms

Abbreviations:

DDI – Design driven innovation

EDI – Employee driven innovation.

Introduction

Research Relevance: Every second company in the EU engages in innovation activities (Eurostat, 2017). Among many issues, a prominent issue that underlies business strategy-making today is the need to reconfigure and innovate in the face of change (Covin & Slevin, 2002, 309–327). The European Commission has recognised employees to play a vital role in innovation activities (European Commission, 2009b). Even within organisations there is a notable shift in the approach towards innovation management. A systemic inclusion and participation of employees in activities related to innovation, centered around employees generating ideas and frameworks that enable the transforming of these ideas is seen (Sørensen & Wandahl, 2012). However, there are a number of external and internal barriers to employee-driven innovation (Hueske & Guenther, 2015). Self-organising firms have shown how they have restructured their firms to improve employee experiences and put the employees at the center of their operations (Lee & Edmondson, 2017).

Problem Analysis: Many industries are experiencing a rise in complexity and competition due to an increase in globalisation and fast-moving information, resulting in jobs needing high levels of expertise and own decision making ability along with effective communication enabled by improved IT solutions (Kostamo & Martela, 2017). It is no longer sufficient for innovation to be driven by technological advancements that improve products, processes, and services provided. The ever-changing culture, business models, and technology are driving companies to re-examine their processes, environment, resources, and behaviours to become innovative (Darroch & Miles, 2015). Innovation policy has gained more traction in the EU policy as it is identified as a critical factor in improving productivity, competitiveness, and sustainability. The findings from the panel discussion reiterate that a) "human capital and b) the support of knowledge creation, diffusion, and technology transfer" (European Commission, 2009a), are the two top challenges facing all industries. The European Commission now recognizes that 'innovation cannot be organized by decree. It comes from people, and only people – scientists, researchers, entrepreneurs and their employees, investors, consumers, and public authorities – will make Europe more innovative' (European Commission, 2009b).

In that direction, there is a new type of innovation called management innovation which moves away from management practices, processes, and principles that change the way traditional management work is carried out (Mol & Birkinshaw, 2014). The focus has shifted to utilizing the workforce for the development of the organisation, this is known as employee-driven innovation (Sørensen & Wandahl, 2012). This approach incorporates a systemic way to involve employees in the innovation process from the beginning stage of idea formation to the later stage of implementation (Sørensen & Wandahl, 2012). However, EDI faces several external and internal barriers such as organisational, group, individual, and external issues in implementation (Hueske & Guenther, 2015).

These barriers have merited the creation of new organisational innovation. Fast-paced change, a knowledge-based economy, and employees' search for meaning at the workplace are the three main trends motivating the creation of less hierarchical organisations (Lee & Edmondson, 2017). These factors have led to companies restructuring their organisations, with self organising firms putting employees at the center of their organisational structure. During the last decade, Sociocracy has been processed into two well-known and documented forms called Sociocracy 3.0 and Holacracy. The first version of Holacracy was published in 2009 (Robertson, 2014). Sociocracy 3.0 was "launched as an

open-source framework in March 2015" (Bockelbrink et al., 2017). Both of these documented full solutions offer a basis for an organization to start with and to modify. With hundreds of organizations adopting self-management with Holacracy as their basis have managed to avoid many trials and errors during their journeys (Lee & Edmondson, 2017). Still, many have started with their entirely own way of self-management (Laloux, 2014). Self-organising firms are seen to comprise high degrees of self-leadership among employees which in turn improves employees' skills and further empowers them (Houghton & Yoho, 2005). Self-organisations, on the whole, have been studied very little, further research in which the researcher is able to be in direct contact with members of self-organising firms is even less (Huovinen, 2020). Although research in organisational innovation is challenging to undertake, the proponents of self-organisation often cite increased responsiveness, increased innovativeness, and improved employee experience which merit exploring the topic (Hackman, 1986). Therefore, the main research focus of this thesis is set as follows,

Research Aim: To ground the Role of Self-Organisation in overcoming the barriers to employee-driven innovation.

Research objectives:

1. To conduct a comprehensive problem analysis of the research necessity concerning the role of self-organisation in overcoming the barriers to employee-driven innovation (EDI).
2. To carry out in-depth literature research,
    a. To comprehend and assimilate the concepts of innovation management and EDI.
    b. To understand and categorise the barriers to EDI.
    c. To explore the topic of self-organisation and delve into the intricacies of it.
3. To theorize a model based on literature to pragmatically comprehend the practical influence of EDI in firms practicing self-organisation.
4. To ground research methodologies to explore approaches to identify practical implementation of self-organisation and its role in overcoming barriers to employee-driven innovation.
5. To undertake empirical research, ground the findings, and summarise the results.

Research methodology:

The research methodology designed to carry out this exploration is depicted in the figure 1. It begins with extensive literature research conducted to understand the concepts of innovation management, employee-driven innovation, barriers to employee-driven innovation, and self-organisation. Keywords were defined for search criteria and iteratively improved with feedback from each search result. Initially, abstracts were reviewed to identify the right papers, from the chosen abstracts full papers were reviewed and the relevant ones were finally chosen for literature research. Once the theory was reviewed, a theoretical model was ideated which served as the guideline for empirical research.

Given the lack of research on this topic, the qualitative method of research was chosen so as to study and create perspectives from the lived experiences of people. Case study and semi-structured interviews were chosen as the methods to carry out qualitative research. As part of the empirical research, case and interview sampling criteria were defined and interview guidelines were outlined. The case company that satisfied the criteria was chosen and contacted. Next, the interview candidates were chosen, and interviews were conducted, along with desk research. Using the data gathered, MAXQDA was used for qualitative analysis. As part of this, data coding was done and codes were

interpreted. Insights gathered were outlined in detail as the results of the study. Implications were grounded for both theory and practical application. Further limitations were discussed and conclusions were drawn out.

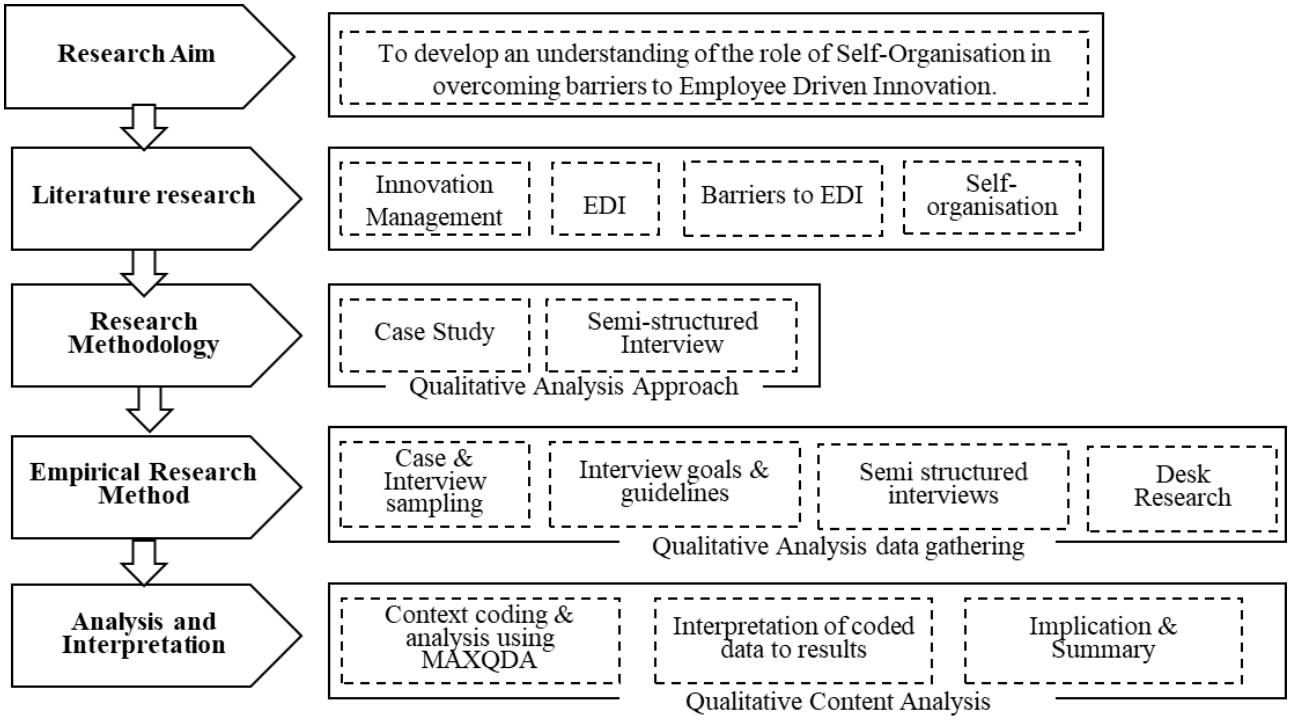

Figure 1 Research design (Own illustration)

1. Problem Analysis

1.1. Increased focus in European Policy Initiatives on workplace innovation management

Innovation is now being recognized as a key enabler of, the improvement of productivity, sustainability, and competitiveness by the EU (Møller, 2010). For two decades, policies, frameworks, guidelines, and programs have been developed by the EU, thereby supporting joint EU innovation policies and measures. The European Commission has launched an ongoing dialogue with stakeholders to identify regulatory barriers to research and innovation through the Europe INNOVA initiative. The Panel has concluded by identifying three key challenges among all sectors which are human capital, financial constraints, the support of knowledge transfer, diffusion, and creation (European Commission, 2009a). Furthermore, from the 2007 Innobarometer analysis survey, it was identified that R&D for innovation is not carried out by more than 50% of innovative companies. A distinction between user-driven, price-driven, market-driven, employee-driven, and research-driven innovation in the Danish report on innovation policy (Danish Agency for Science, 2008). The European Commission does recognize that "innovation cannot be organised by decree, it comes from people and only people - scientists, researchers, entrepreneurs and their employees, investors, consumers, and public authorities - will make Europe more innovative" (European Commission, 2009c). In a knowledge society, employees' key transversal competencies are of high significance. The importance of employees' knowledge was underscored when the European Innovation Scoreboard changed its assessment method in 2008 to also take human capital into consideration within its comparative analysis of competitive performance (European Innovation Scoreboard, 2008). In fact, employees at all levels are playing or have the potential to play a much more active role in innovation processes. Employee-driven innovation can be fostered when the management-employee relationship is built on mutual trust and when there is a climate of openness towards the ideas put forward by employees and towards the innovative potential found within employee collective bodies (Møller, 2010). "This is why the re-launched Lisbon strategy has placed the social partners' role in innovation and entrepreneurship at the center, calling for decisive and more coherent action not only by the EU but also by the Member States, regions, and the social partners" (European Parliament, 2005). While traditionally, having access to advanced technologies, significant R&D funding, and expertly skilled employment, were thought of as the major factors that have an effect on the competitiveness of European industries and their ability to innovate, recent research has identified that aspects such as creating learning organisations and improving the innovation competencies of employees, play an important role as well (Møller, 2010). The European Workplace Innovation Network (EUWIN), which started in 2013, describes workplace innovation as follows: "Workplace innovations describe new and combined interventions in work organisation, human resource management, labour relations, and supportive technologies." Thus, there is a high requirement to upskill and make use of both potential and existing workforce. As part of a knowledge-based and competitive global economy, this would create an increase in the added value (European Commission, 2014). In the year 2004, as part of the 6th EU Framework Programme ERA-NET, the "Work-In-Net" consortium (2004–2010) harmonised research in the field of "Innovation of Work Organisation"s (Alasoini et al., 2005; Work-In-Net [WIN], 2010). During this period, the Employee-driven innovation (EDI) network was ideated, in particular by the Norwegian and Danish trade union confederations and researchers in the field of work organisation (S. Høyrup et al., 2012). Policies catering to human capital development that facilitate workplace innovation result in an increase in

productivity. But it can only be effective when barriers in labour market are overcome. (European Commission, 2019).

1.2. Scientific and Business relevance of understanding Employee-Driven Innovation

In the year 1912, Schumpeter is credited for introducing the concept of innovation in academia. He developed 5 main concepts starting with the introduction of novel products, the adaption of innovative production practices, the exploration of new markets, the securing of other supply sources, and the implementation of novel organisational structures (Meng & Wang, 2009). Starting at this point innovation has been applied in a wide range of disciplines which have allowed the creation of a large number of perspectives on the concept. The main themes observed in the initial definitions of innovation are about innovation being tangible novel and bringing economic value as seen in "innovation is novelty that creates economical value" (Schumpeter, 1934). It is only in the 2000's the idea of innovation is seen extending into business concepts. The definitions "The successful introduction of new services, products, processes, business models and ways of working" (ESRC, 2008b) and "The introduction of new elements into a service - new knowledge, new organization, new management/skills" (Vries et al., 2014) capture well innovations entry into business and organization management world in literature. The trend in academia of seeing innovation as technology-driven to extend its definitions to business aspects is driven by firms in practice. Systemic and complete innovations are key to enterprises enhancing competition power and gaining a competitive advantage (Meng & Wang, 2009). Out of the different approaches to innovation, management innovation stands apart from traditional practices moving away from established principles, processes, and routines. They fundamentally alter the way work gets done and reshape organisations (Birkinshaw et al., 2008; Hamel, 2006). Discussions in this direction have given rise to a recent theory that focusses on utilizing employees for organisational development called employee-driven innovation (Sørensen & Wandahl, 2012).

Employee-driven innovation refers to "the generation and implementation of significant new ideas, products, and processes originating from a single employee or the joint efforts of two or more employees who are not assigned to this task" (Kesting & Parm Ulhøi, 2010). The essence of EDI is that employees have hidden abilities for innovation (Cohen et al., 1972; Ford, 2001), making them an important source of innovation in an organization. This in turn implies that employee knowledge is a crucial resource for innovation. Despite the significance, EDI is not a well-documented field of research in the general innovation literature. In fact, it is de-emphasised contrary to product and process innovation, as it is often seen in a greater innovation context (Steen Høyrup, 2010). However, it is regarded as a "key to innovative success" to minimize disruptions to innovation (J. K. Hall & Martin, 2005), as approximately 70 percent of planned organizational change initiatives fail (Pellettiere V, 2006). Therefore, by revealing, understanding, and overcoming barriers to innovation innovation barrier research re-establishes the flow of innovation (Hadjimanolis, 1999).

Despite the importance, as explained above, EDI faces external, organisational, group, and individual barriers in implementation (Hueske & Guenther, 2015). Hence, it is crucial to understand the drivers of innovation management and the barriers, in both academia and practise. Although managerial (nontechnological process) innovations are considered to be economically and socially important (Arrow, 1962; Edquist et al., 2001; Sanidas, 2005), their introduction is deemed necessary to rejuvenate organizational strategy, structure, and systems (Birkinshaw et al., 2008; Stata, 1989; Volberda et al., 2013), research is insufficient when compared to the technological innovation

(Fariborz Damanpour, 2017). That being the case, by researching types of innovation and the associated barriers, valuable insights to understand the management of innovation in strategy and other subfields of organization management, can be derived (Fariborz Damanpour, 2017).

1.3. The need to study the role of Self-Organising Firms in Employee Driven Innovation

Research over a long period has identified a pattern that shows managerial hierarchy to be functioning effectively within stable conditions but facing serious obstacles in dynamic conditions. (Burns & Stalker, 1961; Mintzberg, 1979). Furthermore, limitations of the managerial hierarchy have become increasingly apparent in management literature over the last half-century with managerial hierarchy being identified as an organizational design shortcoming that seems to be especially problematic for modern organizations (Lee & Edmondson, 2017). In such an uncertain climate employees are increasingly being relied upon to create changes to the way work is done, roles are created and tasks are executed (Grant & Parker, 2009). Therefore, the concept of employee-driven innovation is gaining center stage in keeping up with today's volatile world and economy. However, as discussed in section 1.2 employee-driven innovation faces a number of challenges, encountering external, organisational, group, and individual level barriers in implementation (Hueske & Guenther, 2015). As solutions to this workplace and organisational innovations have emerged. One upcoming method of putting employees at the center of its organisational structure is self-organisation. Operations within a self-managing system require remarkable amounts of self-leadership from employees (Markham & Markham, 1995). Self-organisation principles are seen to be creating the necessary conditions to enable self-leadership and thereby employee-driven innovation.

Trends that are motivating the creation of less-hierarchical forms of organising are,

Fast pace of change: In today's world of ever-accelerating change fueled by disruptive technological advancements and rapid flow of information poses significant challenges to hierarchical structures. In a fast-moving, volatile world with changing customer demands it could be inefficient to have rigid managerial controls and reporting chains when employees are required to be agile (Lee & Edmondson, 2017).

Knowledge-based economy: Along with the production and distribution of material goods, ideas, and expertise are becoming the cornerstone of value creation, and the idea of knowledge-based economy is rising (Blackler, Reed, & Whitaker, 1993). In such systems, it is essential to harness knowledge and information from every employee within an organisation, which poses a unique challenge to leaders.

Mans search for meaning at the work place: There is a renewed focus on improving employee experiences at the workplace as there is a trend observed of employees seeking purpose and fulfillment from work and the organisations they belong to (Podolny, Khurana, & Hill-Popper, 2004).

Building on the trends explored above, the shift in perspective concerning innovation is evident with employees being considered as an important source of ideas which is the basic concept of employee-driven innovation (Cohen et al., 1972; Ford, 2001). Self-managing organizations have completely redefined the roles and tasks of managers within these systems (Lee & Edmondson, 2017). There are several forms of self-organisation beginning with sociocracy, holacracy, agile way of working, etc. Over the last decade, the concept of sociocracy has grown and evolved into two distinct forms called holarcracy and sociocracy 3.0 (Robertson, 2014). The agile way of working has moved to the business

world from the world of coding and development. A number of firms have started their self-organisation journey with holacracy as their basis (Lee & Edmondson, 2017) while others follow the agile way of working whereas there are more that follow their own way of self-management (Laloux, 2014). In a well-known self-organising company Morning Star an employee is said to have described the self-management style as every member stepping up when they are the closest to the occuring issue (Bernstein et al., 2016). Self-manageing firms require employees to have self-leadership skills while it is also seen that these firms facilitate empowerment in workers (Houghton & Yoho, 2005). "Management is the least efficient activity in your organisation" argues Gary Hamel (2011) which is why in self-organising firms, there are no employees whose role is to ensure others perform their tasks (Bernstein et al., 2016). Organisations are seen citing increased responsiveness and improved employee experiences within self-organising firms which merits the need to study these organisation structures although such studies are a recognised challenge (Hackman, 1986). Exploring research in new and creative ways to understand the theoretical and practical implications of such radical new changes is both possible and essential (Fariborz Damanpour, 2017).

1.4. The need to study the role of self-organisation in overcoming barriers to employee-driven innovation.

The following section of the problem analysis summarises the perspectives discussed regarding the need for researchers to study and understand the role of self-organisation in overcoming barriers to employee-driven innovation.

From the **economic perspective**, Europe's industrial dominance has come from relentless innovation of its products, processes, the world's most well-connected supply chain, and high levels of stability with a diversely skilled workforce (McKinsey Global Institute, 2024). Corporations play a vital role in keeping up this dominance by making strategic investments, creating and supporting growth-oriented ecosystems, and by nurturing a skilled work force (McKinsey Global Institute, 2024).

From **regulatory point of view**, the EU, realising that the creation, communication, and implementation of innovation are enabled by the people has acknowledged the need to move towards a more human-based approach to innovation. (European Commission, 2009b).

From an **organisational standpoint**, companies are striving to maintain their competitive edge by incorporating innovation from various perspectives, especially in this fast-changing global world. For firms trying to cultivate a competitive advantage and enhance competition power, systemic innovation is key (Meng & Wang, 2009). Over the years, the role of employees in a company's ability to innovate has gained more prominence. This has led to the rise of the concept of employee-driven innovation. However, due to EDI barriers related to freedom, time, trust, physical spaces, organisation culture, managerial support, among other factors, a lot of organisations are facing immense challenges in enabling EDI (Aaltonen & Hytti, 2014). The study by Laitinen & Hiltunen, 2021 shows that EDI needs support in various forms: time, space, processes, and communication. Higher levels of talent retention is observed in organisation that harness learning (McKinsey & Company, 2023). In this direction, self-organising firms are putting the employees at the center of their organizational structure and enabling systems that are adaptive. As this concept is gaining traction in both practice and research, hundreds of organizations have begun self-management with Holacracy and other practices (Lee & Edmondson, 2017), and several others adopting their own way of self-management

(Laloux, 2014). Therefore, it is imperative and valuable to understand the influence of these radically new organisation structures on the innovativeness of the firms.

In **conclusion**, there is a clear directional shift in workplace innovation research, policy and practice that substantiates the need to explore and understand these new structures and their implications. As of this moment, there is a gap in academia that merits research on the concepts of organisational innovation management. Therefore, this thesis sets out to empirically draw insights into understanding the nuances of the role of self-organisation in overcoming barriers to employee-driven innovation.

2. Theoretical Background

This section begins with the theoretical foundations of Innovation Management. It discusses in detail the definitions of Innovation Management, Innovation blueprint, Sources of Innovation, Employee-Driven Innovation, and Barriers to Employee Driven Innovation. This is followed by the theory of Self-Organisation.

2.1. Innovation Management

One of the dominant issues that underlie business strategy-making today is the need to reconfigure and innovate in the face of change (Covin & Slevin, 2002). To remain competitive and survive in the market firms need to ideate innovation strategies, especially with the advances in technology, reduced product life cycles, and competition driving industries today. Due to the ever-changing culture, business models, and technology firms are under high pressure to re-examine their processes, environment, resources, and behaviors to become innovative (Darroch & Miles, 2015). The concept of Innovation was first introduced by Schumpeter in 1912, including five types such as introducing a new product, adopting a new production approach, exploring a new market, acquiring a new supply source, and taking on a new organization (Meng & Wang, 2009). From then on, the influence of innovation has widened to various disciplines and sectors which has led to a large number of perspectives about the concept. Table 1 provides a comprehensive overview of the definitions of innovation.

Table 1 Definition and focus areas of innovation (own creation)

Definition	**Focus Area**	**Category**	**Year**	**Primary Resource**
"innovation is novelty that creates economical value"	Newness and value creation	Innovation as new and value creating	1934	(Schumpeter, 1934)
"any thought, behavior, or thing that is new because it is qualitatively different from existing forms"	Tangible or intangible aspects adding value that is different from what is existing	Innovation as something new	1953	(Barnett, 1953)
"the generation, acceptance, and implementation of new ideas, processes, products, or services…. for the first time within an organization setting"	Steps of innovation defined. Emphasis on newness and within organizations	Innovation as a process	1971	(Aiken & Hage, 1971)
"a creative process whereby two or more existing concepts or entities are combined in some novel way to produce a configuration not previously known by the person involved"	Use of existing ideas in a new way	Innovation as invention	1973	(Zaltman et al., 1973)
"all those scientific, technical, commercial and financial steps necessary for the successful development and marketing of new or improved manufactured products, the commercial use of new or improved processes or equipment or the introduction of a new approach to a Social service. R&D is only one of these steps"	The steps to innovation with regard a product, process or service. Internal company focus	Innovation as a process	1981	(OECD., 1981)

"Innovation is the specific tool of entrepreneurs, the means by which they exploit change as an opportunity for a different business or a different service. It is capable of being presented as a discipline, capable of being learned, capable of being practiced"	Creation of new opportunities by identifying change	Innovation as a conduit of change	1985	(Drucker, 1985)
"the process whereby ideas for new (or improved) products, processes or services are developed and commercialized in the marketplace"	The utilizing ideas to develop and commercialisation	Innovation as a process	2003	(Rasul F., 2003)
"Innovation is the creation and implementation of new processes, products, services and methods of delivery which result in significant improvements in outcomes, efficiency, effectiveness or quality"	Improving the outcome of product or process	Innovation to improve outcomes	2003	(Mulgary & Albury, 2003)
"the implementation of a new or significantly improved product (good or service), or process, a new marketing method, or a new organizational method in business practices, workplace organization or external relations"	Expanded use of innovation to improve marketing, organizational and business practices	Innovation to improve business aspects	2005	(OECD., 2005)
"The successful introduction of new services, products, processes, business models and ways of working"	focus on implementation and success by innovating products, business models and operations	Innovation to improve business aspects	2008	(ESRC, 2008b)
"The application of practical tools and techniques that make changes, large and small, to products, processes, and services that results in the introduction of something new for the organization that adds value to customers and contributes to the knowledge store of the organization"	Use of innovation to add value to customer and knowledge management for organizations	Innovation as a conduit of change	2009	(O′Sullivan & Dooley, 2009)
"Innovation through infusion of new products and services, and provide impetus to emerging economies by opening up opportunities of international trade"	Use of innovation to drive economic changes	Innovation as a driver	2009	(Wang C. & Kafouros M., 2009)
"The introduction of new elements into a service - new knowledge, new organization, new management/skills"	focus on knowledge, organization and management innovation	Innovation in business	2014	(Vries et al., 2014)

From the above table, we can see that over the years innovation has taken many meanings due to the expansion of its influence to a number of disciplines. In the initial understanding, the main themes observed are about innovation being new and bringing economic value as observed by J.A.

Schumpeter's and Aiken & Hage's definition, "innovation is a novelty that creates economical value" (Schumpeter, 1934) and "the generation, acceptance, and implementation of new ideas, processes, products, or services…. for the first time within an organization setting" (Aiken & Hage, 1971). This is largely because innovation was driven by technology that improved products, processes, and services provided. Prominent in business policy, technology management, and economics, this view assumes that innovations are driven by technical invention (Benoit, 2008). The focus was mainly on optimizing efficiency and improving product capabilities that allowed organizations to capture larger market shares and thereby improve their economies. In 1985, Innovation was seen as a conduit of change that enabled companies to identify changes as opportunities to expand their existing business areas or services. The definition by Drucker and O'Sullivan & Dooley emphasizes this aspect well, "Innovation is the specific tool of entrepreneurs, the means by which they exploit change as an opportunity" (Drucker, 1985) and "The application of practical tools and techniques that make changes, large and small, to products, processes, and services" (O'Sullivan & Dooley, 2009). It is only during the 2000's, that innovation can be seen extending into the business aspects. The definitions "The successful introduction of new services, products, processes, business models and ways of working" (ESRC, 2008) and "The introduction of new elements into a service - new knowledge, new organization, new management/skills" (Vries et al., 2014) capture well innovations entry into business and organization management world in literature.

2.2. Innovation Blueprint

This section discusses an innovation blueprint outlined by Dobni, 2006 that explains the intricacies of innovation management. The innovation blueprint is said to allow organisations to create an innovation zone. The author emphasizes that organizations that prioritize innovation understand the connection between strategy and innovation. This in turn enables them to identify the right configurations that are well suited to them, thereby allowing innovative organizations to remain competitive in a changing market landscape. These observations are outlined in the innovation blueprint that highlights the eight areas of focus that explain the necessary integration of behaviours and context within an organization to drive operational innovation.

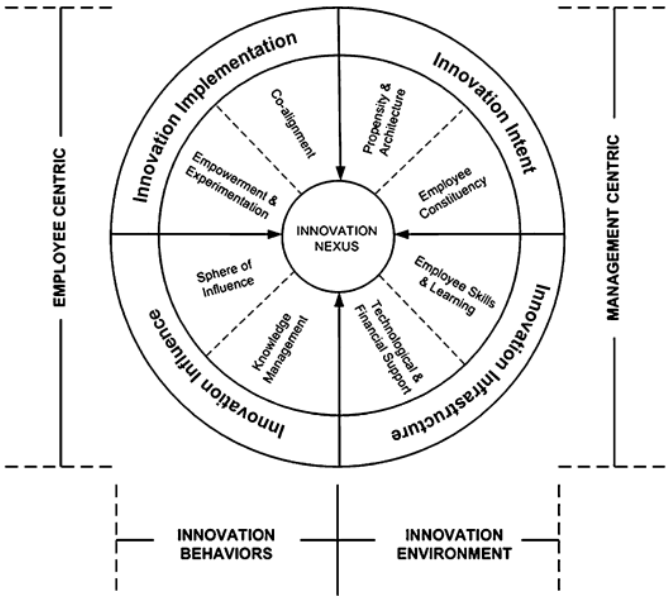

Figure 2 Innovation Blueprint, sourced from Dobni, 2006

The blueprint consists of four quadrants each with two areas of focus. The first quadrant is the innovation intent in which innovation is seen as a mindset that requires organizations to commit to themselves and their employees in doing new things. This commitment is assessed in terms of the propensity and architecture of the company and employee constituency. Emphasis is laid on the organization's ability to develop and sustain innovation efforts. In this attempt, organizations may have to potentially change a large number of their current practices or even the architecture of the firm. The architecture of the firm should allow the intent of innovation to seep into its processes which will create the necessary environment for its employees to be innovative. The firm's architecture should be positioned to utilize current and emergent opportunities so as to balance between current and future strategies. Employee constituency is then defined as the way employees see themselves with respect to their colleagues. Employee constituency is largely shaped by the organization's intent. Continuous innovation occurs when employees view their colleagues as competent, reliable, and equal participants in innovation activities. Employees then serve as catalysts for innovation. The second quadrant comprises the innovation infrastructure. The two essential factors constituting a company's innovation infrastructure are employee skills & learning and technology & financial support. In the context of employee learning & skill improvement, emphasis is laid on not just providing creativity or other training but ensuring employees are empowered to be creative. This means, that organizations should strategically define the goal and objective of training sessions and ensure they are linked to the innovation objectives of the company. They must ensure training equip their employees with actionable knowledge. This in turn will affect how technology and financial resources are distributed in the company. Due to the interconnectedness of these two aspects, it is essential that companies pay attention to the impact resource allocation has on influencing employee behaviour to support innovation. The third quadrant is innovation influence, comprising knowledge management and the sphere of influence as focus areas. The foundation of innovation is knowledge, which is gained and shared by the employees within the company. Management of knowledge is a driving factor that enables employees to create and share knowledge within their space of influence. The amount of knowledge shared has a significant impact on the extent of innovation inside the organization. It is imperative that organizations develop clear and significant knowledge management processes so as to equip employees to assimilate and integrate them into their decision-making processes. The sphere of influence of an employee determines the rate of flow of ideas and information. Organizations must create an environment and actively encourage their employees to be agents who proactively expand their sphere of influence. Ideas generated by an employee who works directly with customers should be able to reach the stakeholders needed to evaluate and implement them. The last quadrant touches upon the implementation of innovation which naturally comprises empowerment & experimentation and co-alignment as its focus areas. The journey from ideation and implementation is arduous enough for many organizations to not undertake it. It is in this sphere the organization's ability to empower its employees to experiment and collaborate determines the success of the idea or innovation. In order to ideate, employees should have access to shared information. In order to experiment, employees must be free to fail, try, and collaborate to evaluate the ideas and the impact of its execution. While experimentation must be encouraged, it should not become the root cause of diverging from the strategic goals of the company. Co-alignment of employee-driven ideas to the competitive environment ensures there is a good fit between new ideas and the company's strategic goals. As the market & business conditions change, the company should be able to adjust accordingly. Therefore, it is essential to ensure the processes and structures are fluid enough to allow for the necessary adjustment. This can be achieved by employee-driven initiatives instead of directives and policies.

In conclusion, the above innovation blueprint sheds light on the various aspects that an organization needs to focus on in order to remain innovative. An innovative organization must have the intent to innovate and follow through with the necessary changes that enable innovation. It must encourage and educate its employees to become catalysts of innovation. It must evaluate the goals and objectives of its training processes to enable creativity and action-oriented knowledge transfer. This can be driven by ensuring its financial and technical resources are used to support innovative behaviour. The organisation must pay keen attention to knowledge management and enable knowledge sharing. It should lay the foundation to utilize this knowledge to expand the employee's sphere of influence to collaborate and evaluate ideas gained from knowledge shared. Alignment of ideas with the company strategy, along with the freedom to experiment would enable employees to implement new innovative ideas. Although there is much work to be done by organizations to stay within the space of innovation, it is evident that employees play a significant role. Employees could serve as the source of ideas, collaborators who evaluate the worth, and alignment of the idea and implementors who see the execution of the idea. Therefore, understanding the barriers and drivers to employee-driven innovation is a significant imperative for an organization to remain innovative.

2.3. Sources of Innovation

Innovation is frequently defined as the successful exploitation of new ideas. An EU report gives the following formulation: “Creativity generates ideas and innovation exploits them” (European Commission, 2009a). Understanding Innovation requires understanding its sources. The sources of innovation are categorized into two main categories, demand-side innovation and supply-side innovation.

In demand-side sources of innovation, the focus is on customer unmet needs and preference trends that are often driven by social, technological, or regulatory shifts which serve as opportunities for new products and services (kotler & keller, 2006).

Supply-side sources of innovation, take a more technology and product-driven approach. It begins with the creation of a product or service for which customer demand is created via marketing (kotler & keller, 2006).

Other sources of innovation as discussed by Drucker, 1985 lie in the conscious exploration of opportunities via unexpected occurances, process needs, incongruities, industry and market changes, demographic changes, changes in perception, and the discovery of new knowledge (Drucker, 1985).

The following chapters discuss the two main sources of innovation, demand-side and supply-side innovation.

2.3.1. Design Driven Innovation (DDI)

Verganti defines design-driven innovation as “an innovation in which the novelty of a message and of a design language prevails over the novelty of functionality and technology” (Verganti, 2003). It focuses on the innovations of “product meanings.”

This section introduces the main aspects of design-driven innovation as defined by Angèle M. Beausoleil, 2022. A four-stage framework comprising the initiation stage, investigation stage, integration and implementation stages are used to explain the concept. Innovation is most often associated with successfully bringing a new and improved product or service to market, resulting in

consumer adoption and with it, profits in this type of innovation practice (Angèle M. Beausoleil, 2022). The framework given by (Angèle M. Beausoleil, 2022) has four clear stages. The first stage is the initiation which consists of creating a problem hypothesis, ideating design briefs, and research plans to evaluate a theoretical problem. The second stage is investigation, in this stage validation of the hypothesis is done along with collection and analysis of data to identify the exact need and the correct problem. The third stage is integration which integrates ideas and insights to frame and reframe the problem at hand, creates prototypes and tests them. The fourth stage is implementation. From the insights from the initial prototype, inputs are gathered for designing, creating, testing and implementing the final prototypes. Then the final solution is designed and delivered, which is further used to evaluate if the problem is solved or not. This four-stage model's first two stages focus on defining the right problem to solve. The last two stages focus on designing the right solution (Angèle M. Beausoleil, 2022). Each of the stages acts as an evaluation gate wherein reflection is done before making a decision, allowing both leadership and the innovation teams to firmly decide if they want to continue with the process or stop it.

Figure 3 DDI Framework, sourced from Angèle M. Beausoleil, 2022

2.3.2. Employee-Driven Innovation (EDI)

Employee-driven innovation falls under the umbrella of supply-side innovation. EDI refers to the generation and implementation of new ideas, processes, and products that originate from employees individually or collectively going beyond the regular scope of their tasks (Kesting & Parm Ulhøi, 2010). The foundation of EDI rests upon the belief that employees have hidden abilities for innovation (Ford, 2001); Cohen et al., 1972). which means, they are an important source of innovation in an organization. This implies that employee knowledge is an important innovation resource. Given their close proximity to customers, users, materials, and markets, employees develop a rich blend of practical skills and experienced knowledge that keeps them updated to date with industry trends (Steen Høyrup, 2010). Then having employees as the center of the flow of information exchanging practical knowledge and know-how via internal networks could close the feedback loop (Steen Høyrup, 2010). The main reasons to include employees in the design process are, first, it can generate a flow of additional information and enable their (partly tacit) knowledge to be utilized. Employees can often point out opportunities or draw attention to the consequences of decisions for day-to-day business that management cannot. Second, participation is an important means of increasing employee satisfaction and identification with a firm's activities.

In the following section, the framework defined by (Kesting & Parm Ulhøi, 2010) shown in Figure 4 defining the drivers that enable employee-driven innovation is discussed. According to the Author, five driving factors play a significant role in enabling employees to be creative and apply their ideas to solve problems. Firstly, the need for management support could be of two types, one where the decision-making authority is centralized and another where the decision-making authority is decentralized. In centralized decision-making, employees will require a license to expand the boundaries of their defined jobs and participate in innovation decisions. In decentralized decision-

making, employees would need mentoring at the idea-generation and decision-making stages. Employees will not be encouraged to take initiative if they don't receive support (Amabile et al., 2004). The second factor is the creation of an environment for idea generation. Innovation is the result of the dynamic exchange of ideas among diverse individuals via an iterative process of social interaction (Kesting & Parm Ulhøi, 2010). An effective line of questions is an important aspect of idea generation for asking the right questions unlocks creative problem-solving (MacCrimmon & Wagner, 1994). This means that organizations should consciously encourage asking questions, and provide platforms for discussions and collaboration. The third factor is the decision structure of the organisation. The decision structure can be defined as the way employee ideas are filtered, the boundary levels that ideas should stay within, and the decision-making process. Each of these factors determines whether an idea moves along to become an innovation or not. The fourth factor is incentives as it determines the motivation for an employee to go beyond their job description. However, there are minute intricacies when it comes to company culture, cultural differences might either benefit or hamper EDI processes. Therefore, it is important for organisations to consciously create a culture that fosters employee creativity while also continuously monitoring the factors that hamper employee creativity and correcting those aspects.

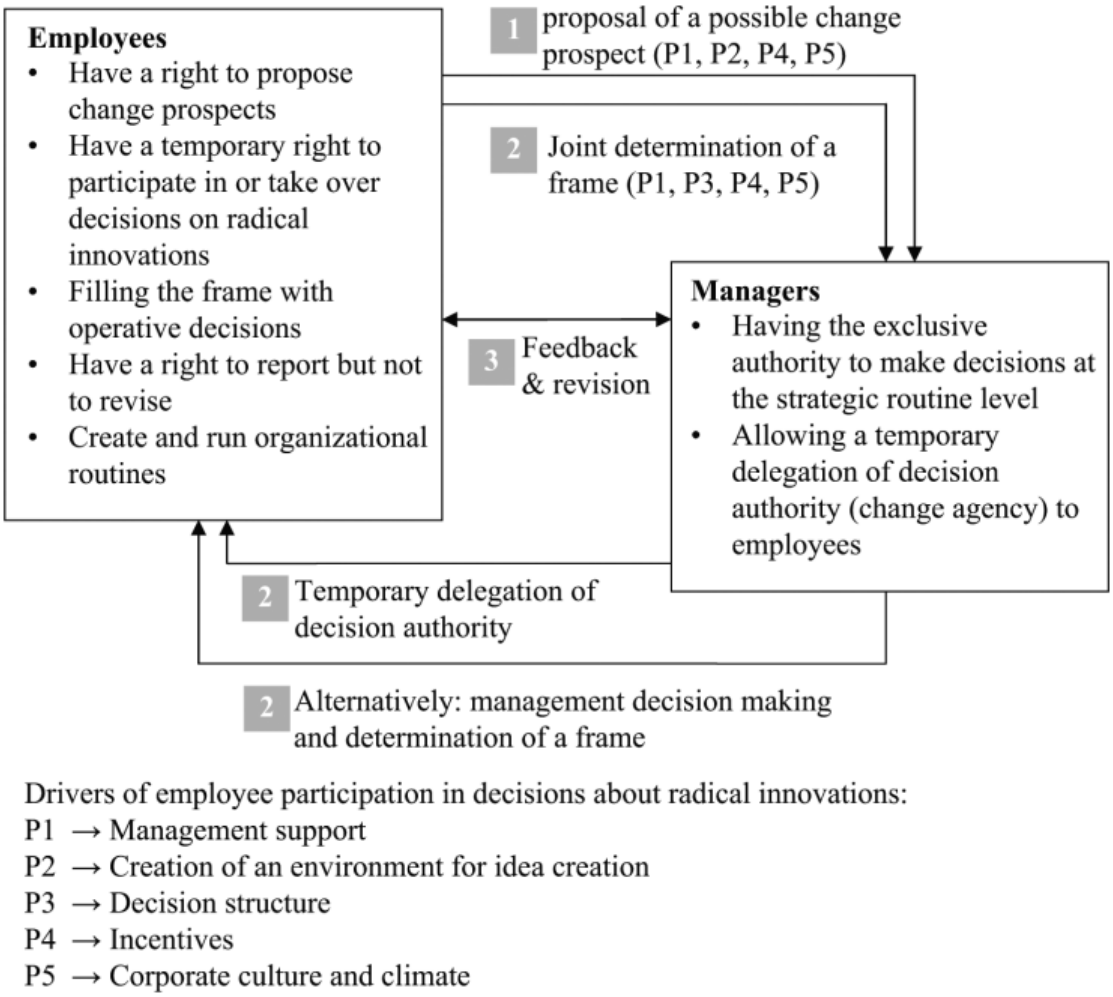

Figure 4 EDI Framework, sourced from Kesting & Parm Ulhøi, 2010

2.3.3. Differences between EDI and DDI

Table 2 Difference between EDI and DDI (own analysis)

Theme	Employee Driven Innovation (EDI)	Design Driven Innovation (DDI)
Main focus on	Empowering employees to lead the innovation process by contributing ideas in a collaborative culture	Strategic integration of user-centred design principles in the innovation process
Approach to ideation	Promotes bottom-up approach - employees are encouraged to ideate and innovate	Incorporates design thinking methods for idea generation
Input type	Diverse input - Employees from any functional areas can contribute to innovation	Focused input - User feedback is the main source of input
Adaptability approach	EDI encourages adaptability through continuous improvement	DDI encourages adaptability through an iterative design process

As discussed in the sections about EDI and DDI, the two innovation practices are used by many innovative companies however the fundamental approaches are different. It can be observed that EDI mainly focuses on enabling the company's employees to take the lead on innovation by identifying the areas that can be improved whereas, DDI the main focus is the strategic integration of user-centered design principles. The path taken to realize these innovations is also different in both practices, EDI promotes a bottom-up approach. Here, employees are encouraged to ideate and come up with solutions. In DDI, design thinking methods are used for idea generation and creating solutions. The sources for these ideas also differ, in EDI the input could come from employees across the organization irrespective of which department they belong to. This allows the input to be quite diverse. In DDI, the input is more focused as it mainly comprises user feedback that is solved for. The approach to adaptability also differs, with EDI encouraging it through continuous improvement whereas DDI encouraging adaptability via an iterative design process.

2.4. Barriers to Employee-Driven Innovation

While understanding the factors that enable us to manage innovation is essential, it is also critical for progress to learn from impediments and failures (Pisano, 2006). It is seen that approximately 70% of initiatives ideated to bring in organisational changes fail, minimizing barriers to innovation is regarded as a key to successful innovation (J. Hall & Martin, 2005). Therefore research on barriers to innovation serves to reinvigorate the innovation process by uncovering, comprehending, and surmounting the barriers to innovation (Hadjimanolis, 1999).

Figure 5 illustrates the various barriers to innovation. The authors use the External environment Organization Group Individual barrier model (EOGI barrier model) aiming at a more comprehensive identification of barriers that puts together previous findings, acknowledges different levels of analysis, and draws on theories such as stakeholder theory, and managerial levers of dynamic capabilities. The framework described by Hueske and Guenther identifies the four most frequently researched innovation barriers primarily, starting with the external innovation barriers comprising of investors, customers, state, society, potential employee, supplier and competitor. Secondly, at the organizational level comprising of strategy, structure, size, resource, organisational culture, organisational learning. Followed by, the group level consisting of team structure, team climate, team process, member characteristics, leadership style and at individual level manifesting as manager and employee attitudes.

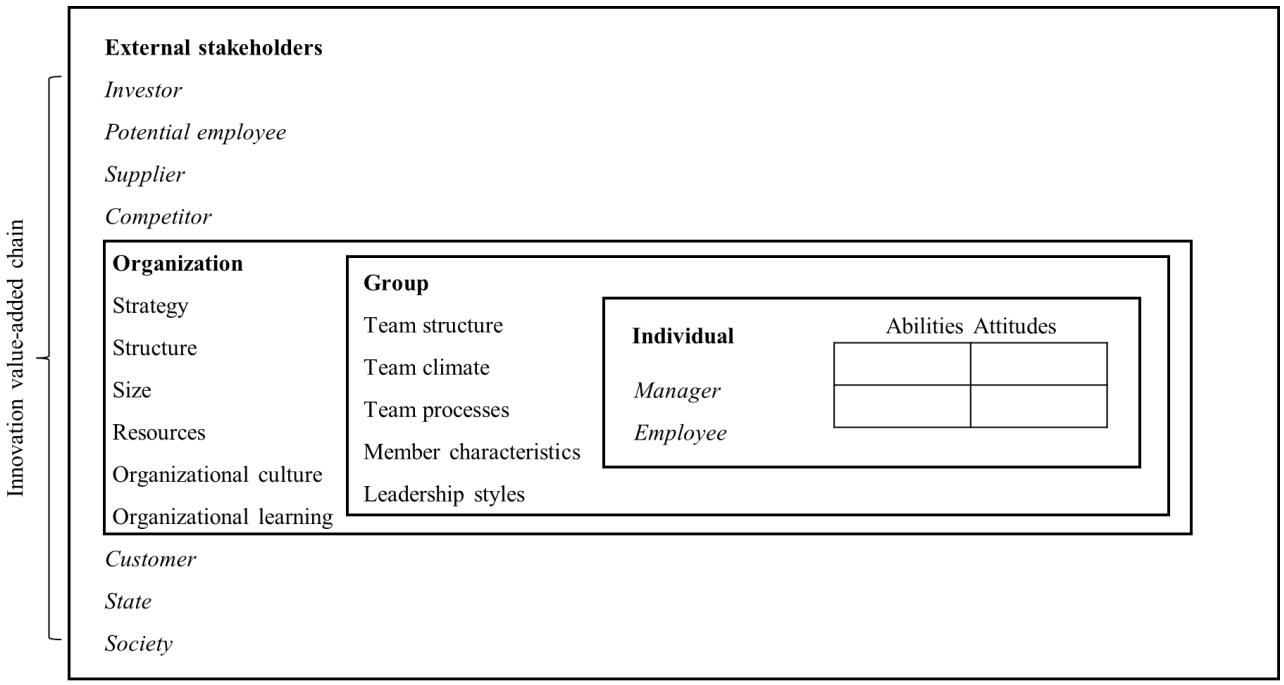

Figure 5 Barriers to IM, sourced from Hueske & Guenther, 2015

Starting with the **external environment** the authors draw on stakeholder theory to identify barriers from the external environment. Innovation is composed by the involvement of many actors, or stakeholders, and a multiplicity of interactions from which potential barriers may arise. Stakeholders are broadly defined as "key actors" who are affected by the firm or have the potential to affect it. This approach allows a more precise understanding of the influence on and of those stakes and their characteristic as innovation barriers. Potential employees as suppliers of human capital and investors as suppliers of financial funds emerge as further external stakeholders (Hueske & Guenther, 2015). The external stakeholder's level is not within the scope of the current study and therefore not further explored in this thesis.

The authors, Hueske and Guenther reason that at the **organisational level**, the absence of dynamic capabilities presents itself as a hurdle to innovation. Consequently, the authors delineate a distinct differentiation of the organisational level barrier by pointing to the managerial mechanisms of dynamic capabilities: mission, objectives and goals, strategy, structure, resource allocation, knowledge management, organisational learning, and organisational culture (Hueske & Guenther, 2015). Additional prior exploration of innovation research found strategy, structure, size, resources, and organizational culture as elements influencing innovation on an organisational level (Hueske & Guenther, 2015). The below section discusses the instances of how these barriers could manifest within the organisational level,

Organisational Strategy barriers could be seen to manifest in the form of failure to align innovation objectives into the strategic planning process which could result in fragmented innovation efforts or misalignment of innovation goals and strategy planning leading to inadequate allocation of resources. It could be lack of adequate and clear communication regarding priorities resulting in confusion and ambiguity among employees. It could present itself as a short-term focus on profitability that could overshadow long-term investment in innovation or resistance from upper management to deviate from established strategies impeding experimentation and innovation.

Organisational Structure barriers could manifest as hierarchical organisation structures that could create a bureaucratic environment that stifles creativity and autonomy among employees. These rigid organisation structures could further cause silos between departments causing strict reporting lines that could hinder cross-functional collaboration and knowledge sharing. Centralisation of decision-making could result in front-line employees not being heard, and lack of flexibility in organisational structures may render these organisations incapable of adapting to quickly changing markets.

Organisation Size barriers may take shape as lack of agility and responsiveness due to bureaucratic and hierarchical structures in large organisations. This may also reduce the risk tolerance of large organisations as they could be more risk-averse to disruptive innovation. Smaller orgnisations may lack the scale and resources required to invest in research-based experimentation and innovation.

Organisation resource barriers could be seen as insufficient support for innovation efforts could demotivate employees from actively engaging in implementing innovative ideas. Failure to invest in infrastructure, and lack or access to tools, technology, or training could hinder employees' ability to ideate innovative solutions. These resource constraints would result in organisations prioritizing short-term profits over long-term investments in innovation.

Organisation culture barriers could appear as a risk-averse culture within firms that impedes employees from taking initiative and exploring innovative ideas. This could lead to the absence of psycological safety that would inhibit open communication and the sharing of unconventional ideas. The lack of a collaborative and supportive climate within the firm would discourage cross-functional teamwork and knowledge sharing. Organisational rules that prioritize conformity and efficiency over creativity would stifle innovation.

Organisation learning barriers might take shape as failure to implement feedback mechanisms for information gathering from all levels within the organisation to disseminate and learn from past attempts. This could lead to repeated mistakes and reluctance to take informed risks. It could also be a lack of knowledge sharing leading to a loss of continuous learning which would result in fragmented innovation attempts.

Group settings, comprised of individuals working together are characterised by their team structure, team climate, team processes, member characteristics, and leadership style. These aspects determine the level of innovation of the group (Hueske & Guenther, 2015). As per sociology, the macro-level perspective includes the external environment and the organisation where the focus is on patterns in social behaviour and contextual factors (Hueske & Guenther, 2015). These behavioural aspects are by individual members which is then examined in the micro-level research. Organisations are shaped by its member and therefore, before examining the micro-level it is important to acknowledge the meso-level perspective of group dynamics (Hueske & Guenther, 2015).The below section discusses the occurrences illustrating how these barriers could manifest within the group level,

Team Structure barriers could manifest as complex or tight team structures that could hinder the flow of innovative ideas thereby hindering communication and collaboration. Team size and composition could influence the group dynamics, and lack of diversity could limit the number of perspectives and approaches toward innovation efforts. Insufficient allocation of roles and responsibilities within teams may lead to ambiguity and conflict, hindering innovation.

Team Climate barriers might appear as the creation of a hostile environment due to conflicts, competition, and mistrust leading to negative team dynamics that don't allow for open communication. The absence of psychological safety could inhibit good feedback and the ideating of innovative solutions. The lack of a shared goal could lead to divergent ideas and conflicting priorities within group settings. The inability to celebrate success and learn from failure could bring down team morale, and motivation hereby hindering continuous improvement.

Team Process barriers could be observed as the creation of bottlenecks due to inefficient decision-making processes, and failure to establish clear timelines and milestones for innovation initiatives leading to procrastination and ambiguity. A lack of structured systems for idea generation, evaluation, selection, and implementation could lead to inconsistent innovation efforts. Limited knowledge exchange or collaboration could be caused by insufficient communication channels for sharing ideas.

Member Characteristics barrier could be evident in the form of disparities in the contribution to innovation efforts due to varying levels of experience, skill, and knowledge. Resistance to change or risk aversion could impede innovation. A Lack of diversity in perspectives could limit the range of innovative ideas generated. Improper distribution of work and responsibilities could lead to dissatisfaction.

Leadership Style barrier is seen as having authoritarian leadership that could lead to a lack of empowered employees. Not having visionary leaders could stifle innovation efforts. Inconsistent leadership could cause uncertainty and ambiguity. Not having clear communication of expectations and boundaries could leave employees frustrated and demotivated.

Recognising that groups and thereby organisations are comprised of individuals, research on this level, called micro-level research focuses on different individual characteristics. (Hueske & Guenther, 2015). As per this point of view, an individuals ability and attitude determine innovation. At this level, barriers to innovation can originate from poor knowledge, individual attitude like resistance to change, useless efforts, etc. In accordance with stakeholder theory, employees and managers are classified as internal stakeholders therefore, barriers on this level are classified as individual and managers' attitude and abilities (Hueske & Guenther, 2015)**.** The below section discusses the examples of how these barriers could manifest at the individual level,

Manager Attitude barrier manifests as a manager's skepticism or aversion to change or focus on short-term goals could leave employees discouraged from propose ideas or discussing their issues. This could lead to the loss of innovative ideas. The absence of support for innovation activities might signal to employees that their efforts are not valid. Micromanagement and extreme control leaders could take away an employee's creativity.

Employee Attitude barrier could show up as hindrances to employee engagement due to negative experiences or perceptions. Low confidence in themselves or lack of intrinsic motivation could deter employees from actively participating in innovation activities. Inertia or resistance to change could lead to apathy and disengagement of employees.

2.5. Theoretical Background on Self-Organising Firms

This section reviews in detail the existing theory on self-organising systems starting with the need for self-organising firms followed by the discussion on the principles and characteristics of self-organisation.

2.5.1. The need for Self-Organisationing Firms

Within stable, slow-changing, and predictable environments, traditional hierarchical systems thrive however, in today's volatile, uncertain, complex, and ambigious world flexibility and adaptability are essential (Paju, 2017). In this thesis, traditional or hierarchical organization means an organization that has a hierarchy of formal authority which is distributed in a classical pyramid way that fewer people on the top have authority over the lower levels (Lee & Edmondson, 2017). Research over the last century has revealed a number of limitations of traditional hierarchies (Burns & Stalker, 1961; Mintzberg, 1979). The flow of information within the managerial hierarchy is from top to bottom which is suitable for the execution of simple tasks but not for complex problem-tsolving (Burns & Stalker,1961; Hamel, 2007). Given the structure of the managerial hierarchy, the status differences are reinforced among its employees (Kegan, 1998; McGregor, 1960). In response to these obstacles created within organisations, a more radical approach that puts the employee experience at the center of its organisation structure are self-organising systems.

The concept of employees or teams managing and monitoring their own work is self-management (Manz and Sims, 1980). In this thesis, a self-managing organisation is an organization that "radically decentralizes authority in a formal and systematic way" (Lee & Edmondson, 2017). Self-managing systems have managed to redefine the role of a manager within their organisations. There are no formal reporting and monitoring relationships between managers and employees (Lee & Edmondson, 2017). A number of organisations have started self-organisation practices based on the Holacracy model (Lee & Edmondson, 2017), agile way of working, etc. There are more companies that have adopted their own way of self-organisation (Laloux, 2014).

2.5.2. Characteristics and Principles of a self-managing organization

The below section explains the elements of self-organising teams as seen in Lee & Edmondson, 2017.

Radical decentralization of authority: A core characteristic of self-organising systems is the radical distribution of power and responsibility thereby eliminating the traditional reporting structures (Lee & Edmondson, 2017). Unlike in managerial hierarchies, there is no single person that takes broad control of work allocation, tasks performed, and career progression in self-organising firms. These responsibilities are distributed among individuals in such a way ensuring they are not permanent, vested in hierarchical rank, or unbounded (Hackman, 1986). Team leads or process leads exist to manage specific projects or processes however, their roles are temporary, easily changeable, and lack the power associated with traditional systems (Bernstein, Gino, & Staats, 2014).

Formal Systems or Programs: An essential characteristic of self-organsing systems are the formal systems that explicitly define the way authority is distributed within these systems. This goes beyond the pyramidal hierarchy or information empowerment of individuals. Self-organisation relies on formal employee handbooks or constitutions to establish clear rules and recommendations. Especially in the early stages, these formal rules act as a safeguard against reverting to traditional ways of

working. Furthermore, they provide clear guidelines for new members onboarded into self-organising systems.

The following section is explained based on the findings of Harder & Robertson, 2014.

Part of Ecosystem: Self-organising systems function within interconnected systems. This interconnection necessitates a consideration of their shared purpose beyond functioning as isolated functionalities. These systems are believed to work in such a way that each contributes to the overall health and stability of the organisation while minimizing potential harm (Harder & Robertson, 2014).

Coordination: Self-organising systems operate as a complex network of interactions and interdependencies within the organisation. This requires timely information sharing within the network to facilitate agile decision-making and coordinated action. Unlike traditional structures, these firms achieve co-ordination by mutual adaptation (Harder & Robertson, 2014).

Involvement: An important principle within self-organising firms is the design of mechanisms that facilitate meaningful involvement of members by ensuring that individuals align with the collective good in mind. The idea of focussing on resiprocal advantage fosters collaborative relationships and discourages self-serving behaviours (Harder & Robertson, 2014).

Adaptability: Self-organising systems possess the necessary environmental sensitivity that allows them to respond to continuous external and internal changes. This ability constitutes the adoption of novel inputs, the integration of new transformative processes, and the generation of innovative outputs (Harder & Robertson, 2014).

Consciousness: Self-organising firms exhibit a sense of collective intelligence that arises from combining individual abilities of its members. These systems are able to maintain a shared moral compass that possessesa the capacity to address challenges. This guides the shared goal purpose, vision, and mission principles fostering a sense of collective identity and ethical decision-making (Harder & Robertson, 2014).

Interdependence: There is a high degree interdependence among member's within a self-organising firm as each members actions have a direct impact on others. A member's decision to remain involved is dependent on their commitment to the collective well-being of both the organisation and its members (Harder & Robertson, 2014).

Complexity: Self-organising firms are made up of a diverse set of members interms of knowledge, skills, experiences, and perspectives which are harnessed and effectively integrated. This is achieved via a shared sense of purpose and vision. They find a balance by fostering practices that capitalize on those differences in viewpoints (Harder & Robertson, 2014).

Organisational Adaptiveness: For organisations to be able to keep up with changes, it needs to have effective feedback mechanisms that evaluate the alignment of its strategy with those that are directly affected by their operations. This could be in the form of fostering the network relationships necessary to obtain comprehensive and timely feedback from all those who are involved (Harder & Robertson, 2014).

Overall Health: Self-organising systems have the ability to connect the teams that are working on core deliverables with shared goals so as to ensure alignment and shared accountability. This way, all

members involved in an activity collectively own responsibility for its success. This fosters collaboration, knowledge sharing, and a sense of collective ownership in the organisation (Harder & Robertson, 2014).

Collective Effort: An essential principle of self-organisation is the equitable distribution of efforts, benefits, and returns generated by the collective efforts of its members. Resources and benefits are not withheld and shared equally allowing flexibility to foster collaboration, and knowledge sharing, and ultimately enhances the organisations performance (Harder & Robertson, 2014).

Edge of Chaos: Self-organisation represents a delicate balance between stability and flexibility. Just enough order and structure exist to maintain the organisations core operations while allowing sufficient unpredictability to spark creative solutions (Harder & Robertson, 2014).

Maximised output: Operational efficiency is a cornerstone of self-organising firms' operations. This translates to implementing mechanisms that maximise the ratio of valuable outputs to wasteful outputs generated by their operations (Harder & Robertson, 2014).

2.6. Proposed Model for Emperical Evaluation

Based on the literature, the below model is conceptualised to understand the role of the principles and characteristics of self-organising firms on the barriers to employee-driven innovation.

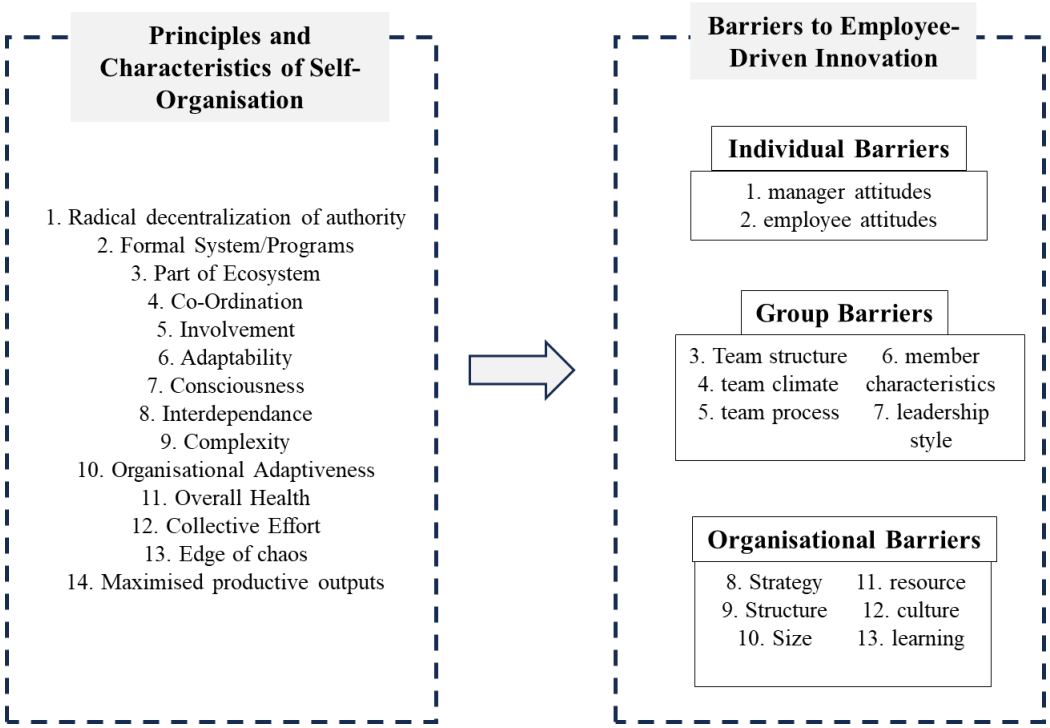

Figure 6 Principles and characteristics of self-organisation to overcome barriers to EDI (own creation)

The above model is ideated by the author based on the inferences made from the literature outlined in sections, 2.4 and 2.5.2. Here, the innovation barriers considered are at an organizational level (Strategy, structure, size, resource, organisational culture, organisational learning), group level (Team structure, team climate, team process, member characteristics, leadership style), and individual level (manager and employee attitudes) (Hueske & Guenther, 2015). Since the scope of this thesis is to

understand the role of self-organising principles in overcoming barriers to EDI, external barriers are not considered.

Considering the emphasis on the employee role in self-organising systems, the individual barriers might have the highest interaction between the self-organisation structure and the barriers to EDI. Drawing on the micro-level perspective with its psychological origins, research on the level of the individual focuses on different individual characteristics and recognizes the fact that an organization consists of individuals (Klein and Kozlowski 2000). According to this perspective, innovation depends on the ability and the attitude of individuals (Anderson et al. 2004). It can be argued that characteristics like, radical decentralization of authority, formal systems and programs, and principles such as part of ecosystem, adaptability, co-ordination, involvement, and collective efforts play a significant role in the individual barriers of EDI.

Along similar lines, one could imagine, group level barriers characterized by their team structure, team climate, team processes, member characteristics, and leadership style (Anderson et al. 2004), could to some extent be mitigated in a self-organising system. Mainly due to the characteristics and principles such as coordination, interdependence, collective efforts, involvement, adaption, coordination, and part of the ecosystem respectively.

Finally, it could be deduced that since not having dynamic capabilities manifests as an organisational barrier for EDI, self-organising systems having the characteristics of radical decentralisation of authority, formal systems & programs, involvement, coordination, a collective effort which could overcome the organisational barrier to some extent. Moreover, since the self-organising systems operate on the principles of adaptability, part of the ecosystem, co-ordination, and complexity, they would be well structured to have the highest levels of dynamic capablities.

In summary, the aim of this thesis is to understand the role of self-organising principles in overcoming the barriers to EDI, based on the above literature. Further empirical analysis was conducted to test the pragmatic applicability of the above model which is discussed in the upcoming sections of this thesis.

3. Research Methodology

3.1. Research Design

Having recognised the research gap in the field of innovation management and organizational innovation, literature research was conducted to understand various concepts outlined in section 2. To begin with, literature research is conducted to provide a detailed outline of the main concepts concerning the topic of this thesis. The main data collection method employed in this study is the review of existing literature. The author began with an extensive review of the existing literature including journals published, reports from business consulting firms, and books. The databases most used in gathering data are Google Scholar, Scopus, Research Gate and KTU Library. The search criteria developed over time during the research to include the topics of innovation management, Barriers to innovation management and Employee-Driven innovation, Employee-Driven Innovaiton, EU regulations on the above topics, Organisational innovation, Self-Organising firms, Living Organisations, Holocracy, Sociocracy, etc. Results from the search were further filtered by abstract reviews. Only the writings that were closely related to the topic were further reviewed. With this, patterns were identified and the storyline was constructed. All the sources used are cited using the APA 7th ed method of citation.

Upon laying the theoretical foundation, the next step is to conduct empirical research to validate the literary findings. The research method chosen for this purpose is **qualitative research**. The following criterion was used to determine qualitative research as the right approach, 1. the relatively little research conducted on the topic of Self-Organising firms and Employee-Driven Innovation, 2. the goal of studying and creating meaning from perspectives of individuals who have lived the experience on this topic, 3. the goal of understanding particularly complex processes involved in Self-Organising teams and its role in overcoming barriers to Employee-Driven Innovation. Due to the infancy of the topic and lack of existing research conducted on the topic, the qualitative analysis approach is chosen to identify themes, gain in-depth knowledge, and understand the nature of the topic. Inductive reasoning is employed to identify the relationship between EDI and the principles employed in Self-Organising firms. Along these lines, in order to practically understand the topics via qualitative research, case study method was used. Case study analysis is a "suitable research method in order to investigate contemporary phenomenon in real-life context and is suitable for exploratory work" where the research context is immature and primarily "why" and "how" questions are supposed to be answered (Yin, 2014). In order to ensure triangulation, secondary data was gathered via desk research, and primary data was gathered by conducting semi-structured interviews conducted. Multiple interview analysis form is chosen to increase the probability of reaching saturation as well as a more compelling, vigorous, and robust perspective on the research context (Yin, 2018). The interview questions were based on the guidelines outlined by (Harvard, n.d). The previously defined research objective was taken into account while preparing the interview guide: *To undertake empirical research, ground the findings, and summarise results.* The primary objective of the interview guideline is to understand how self-organising principles are implemented in teams practicing self-organisation. Secondly to understand the role of self-organising principles in overcoming barriers to employee-driven innovation. The interview guideline has been developed based on the findings in the literature research. Along these lines, the pattern begins with an tintroduction, interviewee introduction, reassure ethical practices being followed, employee-driven innovation, barriers to employee-driven innovation, self-organising principles, the role of self-organising principles in overcoming barriers to EDI, and closure.

3.2. Case and Interviewee Sampling

While defining the scope of research, geographical context was identified and Europe was chosen as the geographical constraint due to the author's familiarity with the region. It was also decided that it would be interesting to choose a multi-national company for the case study in order to really understand the practical implementation of self-organising systems as opposed to studying this in a start-up. Mainly because the environment within a start-up is more likely to be close to self-organising whereas most multinational companies tend to be hierarchical. Desk research was conducted to identify multinational companies that were within Europe, were practicing self-organisation, and were within the professional network of the researcher. Furthermore, this thesis employs purposeful sampling to identify the company and interviewees that would give the most accurate insights to gain in-depth knowledge of the research topic.

Table 3 Case company sampling criteria (own creation)

Must sampling Criteria	**Could sampling criteria**
Must be a Multinational Company	Company has established innovation management teams
Must have global operations	Company is completely non-heirarchical
Must have atleast one type of Self-Organisation practice in place	Could be practising more than one type of self-organising practise.
The company must be founded in Europe	There is secondary data publicly available.

Researchers have vouched for single case studies especially while researching topics that are in the beginning stages of research as they provide valuable data for theory testing as long as the object under study possesses qualities that align with the objectives of the research (Gaya H. J., Smith E. E., 2016). In this direction, the sampling criteria for the case study were defined as shown in Table 3. Both must and could criteria were defined. Must sampling criteria served as the minimum requirements for sampling which included that the company under study had to be a multinational company operating in at least two different countries, it must have at least one type of self-organisation practice in place and the company had to be founded in Europe as the geographical scope of the study was within Europe. Added to this, could sampling criteria was defined as a best-case scenario. For could sampling criteria, the company could be completely non-hierarchical in structure, the company could have an established innovation management team, the company could be practicing more than one type of self-organisation practice and secondary data had to be publicly available. In total 4 companies were screened, 1 company that met all the must-have criteria and two could-have criteria were chosen from the author's professional network as the best fit for the case study. Having identified the company for a case study, next the criteria for interviewee sampling was defined to identify the right persons that would be best suited for interviews.

Table 4 Interviewee sampling criteria (own creation)

Must sampling Criteria	**Could sampling criteria**
Must be a representative of the company being studied	Could be a subject matter expert in self-organisation or innovation management
Must be knowledgeable in self-organisation	Could be part of innovation team at the Company under study
Must be part of a self-organising team within the company under study	Could be have held leadership position in self-organising team

At the least, the must sampling criteria had to be fulfilled for selecting interviewees best suited to interview. Candidates must be representatives of the company under study, candidates must have

knowledge about self-organisation and must be part of a self-organising team within the company under study. Additionally, candidates could fulfill could-have sampling criteria which included, candidates who were subject matter experts in self-organsiation or innovation management, candidates who held leadership positions in self-organising teams, and candidates who were part of the innovation team at the company under study. About 19 participants were identified who fulfilled all the must-have criteria and few could-have criteria and were contacted via teams. While contacting potential company representatives a pre-read document that provided the research context, interview setting, and standard interview request was provided. Any queries about uncertainty regarding the fit were solved over teams. 15 out of the 19 participants responded, and 3 out of the 15 could not participate due to timeline mismatch, therefore 12 interview candidates were chosen and interviews scheduled.

3.3. Data Collection and Analysis

With the defined criteria serving as the guideline, interview candidates were chosen, and interviews were scheduled and conducted. In total 12 interviews were conducted via MS Teams and Google Mteet in the English language. 11 out of 12 interviews lasted between 45-60 minutes, and the 7th interview lasted for 90 minutes as the participant had interesting anecdotes and requested to extend. The interviews were conducted within the period of 2nd April to 27th April 2024.

Prior to the conduct of the interview, an interview guideline was created based on desk research considering details about the company, the theory reviewed, and the type of self-organising practice the interviewee followed. If sensible, the interview guidelines were adjusted iteratively. Interview questions were outlined that served as a guide based on the literature research (Harvard, n.d). These questions were categorised into primary and secondary questions. The primary questions guided the flow of conversation, the conversational style of the interview was followed based on the interviewee's experiences, and secondary questions were discussed if time was available. In the event that new topics emerged in the conversation, the interview questions were adapted accordingly.

During each interview, the research ethics were reiterated and respondents were asked permission to record the interview. The interviews were then transcribed using the Microsoft Word 365 transcription tool. The transcribed data became the basis for the empirical analysis. The transcribed interview documents were then coded using the software MAXQDA which is one of the most popular tools for qualitative analysis. The theoretical analysis conducted in section 2 served as the basis for the coding system. Code indicators were based on the 13 barriers to EDI and the 14 principles of self-organisation. Both inline and paragraph coding methods were employed to ensure detailed analysis of the data. Data was exported and further analysis was conducted through inductive iterative processing of code patterns.

3.4. Research Ethics and Quality

In order to ensure the qualitative research was ethically conducted, a pre-read document explaining the research context and interview process was sent to each potential candidate. At the start of every interview, research ethics were reiterated and audio was recorded only upon interviewees' consent. The transcribed data has been anonymised to ensure there is no breach of data confidentiality.

As for ensuring research quality, although it is difficult to reach saturation while exploring emerging research topics, saturation was taken into account while determining the number of interviews.

Interviews were conducted till no new information was obtained and saturation of data was relatively reached. By collecting data from both primary sources such as semi-structured interviews and secondary sources such as desk research, data triangulation aspects were considered. Additionally, the use of MAXQDA which is the most used software for data analysis, and the transparency in coding improves the reliability of research conducted.

4. Empirical Findings on the role of self-organisation principles in overcoming barriers to EDI.

The following chapter will present the empirical data analysis and discuss its results.

4.1. Overview of case study

A Single case study method was adopted to explore the phenomenon of self-organisation and employee-driven innovation in practice. The multinational company Vattenfall was chosen as the case study as it fulfills 7 out of 8 criteria defined in section 3.2. To the best of the author's knowledge, there are no companies that are completely non-hierarchical, meaning at least a CEO is present within companies.

Vattenfall is one of Europe's largest manufacturers and retailers of heat and electric power. Vattenfall AB the parent company of the Vattenfall group is 100% owned by the Swedish State (Vattenfall, n.d–b). The organisation has a 100-year history in electrifying industries, supplying energy to people's homes, and modernising the way of living through innovation and cooperation (Vattenfall, n.d–b). The main markets where it operates are, Sweden, Germany, Netherlands, Denmark, and the United Kingdom. As of today, the company has 21000 employees working across the world.

The company operates with a vision to become fossil-free within one generation (Vattenfall, n.d–a). Among its 5 fold strategic objectives to achieve fossil freedom, relevant for this thesis is the strategic focus area, "Empowering our people". As part of this objective, the focus of the company is on securing the required competence while enhancing employee journey and providing a safe working environment (Vattenfall, n.d–b). As part of this strategy, although the overarching structure consists of centralised staff functions that steer the business, there are business areas within which business units have begun to adopt a non-heirarchical ways of working. On the whole, there are 6 business areas, organised into 5 operating segments. Out of these business areas, two have business units within them that follow self-organisation practices. In these, one of them follows an agile way of working with approximately 800 employees operating based on agile principles. The other business unit follows a holacratic way of working with about 250 employees operating in this system.

Table 5 Overview of practioner interviews (own creation)

Interviewee	Position	Interview duration in Mins
Interviewee 1	Junior Analyst & Holacracy Expert	60
Interviewee 2	Medior Analyst & Scrum Master	55
Interviewee 3	Product Owner & Agile Coach	60
Interviewee 4	Sr.Market Analyst - Innovation Lead & Agile Practitioner	45
Interviewee 5	Competence Area Representative & Scrum Master	50
Interviewee 6	Self-Management & Holacracy Coach	60
Interviewee 7	People coach & Agile Coach	90
Interviewee 8	Technology Lead & Holacracy Practitioner	50
Interviewee 9	Project Engineer & Holacracy Practitioner	45
Interviewee 10	Product and Market Development Lead & Product Owner	60
Interviewee 11	People coach & Holacracy Coach	60
Interviewee 12	Head of algorithms & Product Owner	60

4.2. Analysis and Interpretation of Interviews

This chapter conducts provides details of the interview excerpts for each self-organising principle and ways these principles overcome barriers to EDI via the qualitative data analysis of the interview content.

The Role of Radical decentralisation of Authority on barriers to EDI.

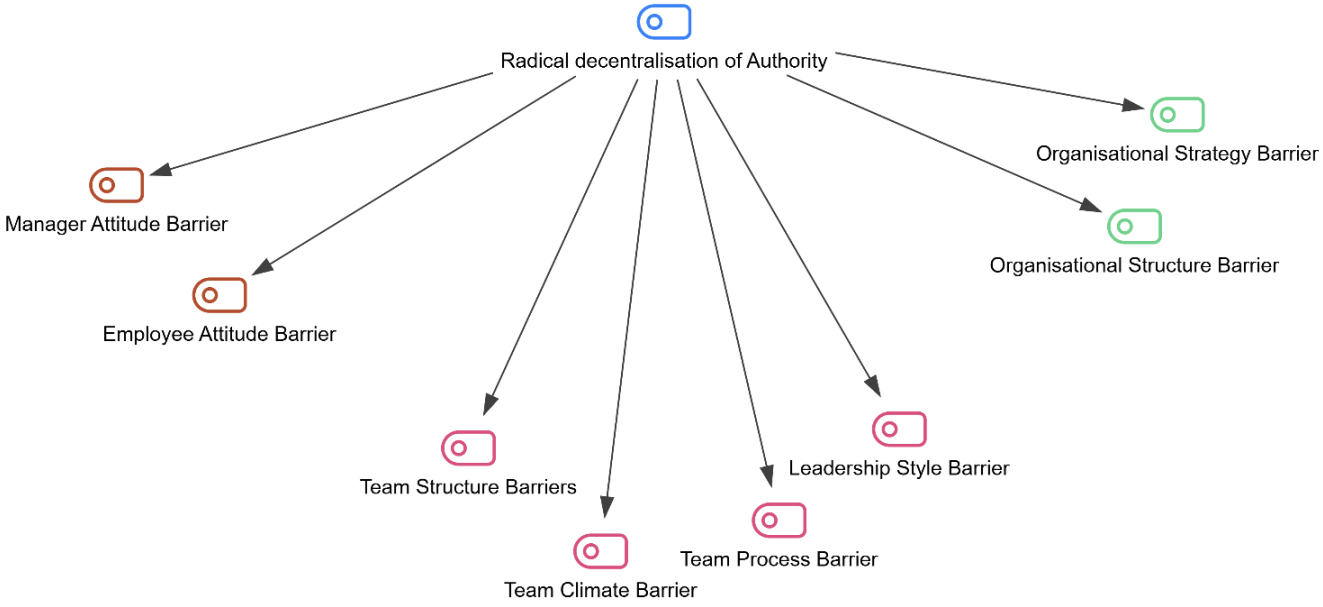

Figure 7 The Role of Radical decentralisation of Authority on barriers to EDI (own creation)

Figure 7 depicts the self-organising characteristic, radical decentralisation of authority, and the barriers to employee-driven innovation it overcomes as seen in the interviews. Here, we can see that decentralisation of authority can overcome *organisational strategy barriers* and *Organisational structure barriers* at the organisational level barriers. Next, On the group level, it can to overcome team structure barriers, team climate barriers, team process barriers, and leadership style barriers. Further, manager attitude barrier and employee attitudes barrier on the individual level. the following sections will discuss in detail the interview excerpts and findings.

Added in Table 6 are the exemplary excerpts of the interviews conducted to understand how radical decentralisation of authority is implemented within Vattenfall and its role in overcoming barriers to EDI. The analysis of interview excerpts in Table 6 shows that, on the organisational level, radical decentralisation of authority is seen to overcome *organisational learning barriers* by creating a safe space within these self-organising teams that encourages experimenting. By empowering individuals to make informed decisions and learn from the results. It is seen that when every member of the organisation is given the authority to make decisions that fall within the scope of their roles, they can align with the purpose of the organisation. This overcomes the *barrier of organisation strategy* alignment. Distribution of authority creates the necessary sense of ownership within individuals who are then able to innovate creative solutions. Additionally, since the authority to execute these solutions lies within individuals and they are not required to get permission from their managers or so on, there is no bottleneck where their idea is stuck. This way, self-organising teams can over the *organisational structure barrier*.

Table 6 The role of radical decentralisation of authority on organisational barriers (own creation)

Exemplary Quotes	Meaning Unit	Code	Category
Provide a safe space for employees to experiment. And give **give them the mandate to take decisions and make mistakes and learn from this**. So it's a lot of learning, learning, is always possible. [Agile Coach, pos 79]	Decision making via learning	**Organisational Learning Barrier**	**Organisational Level Barrier**
radical decentralization of authority, I think, is a key element built into the whole Holacracy operating system. Actually like **every member of the organization** or the team, **gets the authority to make any decision or take any action** that is helpful in their interpretation towards the purpose of the circle. That's the purpose of the organization. [Holacracy Coach, pos 77]	Purpose oriented decision making authority	**Organisational Strategy Barrier**	
It's the decentralization of authority that makes it possible to be innovative as an employee. If there is not a decentralization then there's this bottleneck of innovation because it's very hard if I need to convince my manager and they need to convince their manager so definitely. When **authorities decentralized, then every little idea or innovation has more chance of getting realized because I have the authority to make it happen**. [Holacracy Coach, pos 89]	Decision making is not centralised	**Organisational Structure Barrier**	

Table 7 tabulates the analysis of the radical decentralisation of authority on the group-level barriers. Interesting insights were uncovered as interviewees mentioned, 4 different barriers to EDI that radical decentralisation of authority can overcome. When every member is considered a leader in the self-organising system, individuals are empowered to lead their work and roles. When every member is a leader, there is no room for authoritarian leadership which overcomes the *barrier of leadership style*. Within such teams, there is a strong focus on team culture and knowledge exchange which in turn distributes power to each individual to take the lead as subject matter experts. This creates a climate of collaboration and cohesion, thereby overcoming the *barrier of team climate*. Simple, clear team processes where every member of the team contributes to defining accountabilities are seen to have to overcome *team process barriers*. The horizontal team structure allows for more equal connections, removing the traditional employee-employer relation barriers and thereby the *team structure barriers*.

Table 7 The role of radical decentralisation of authority on group level barriers (own creation)

Exemplary Quotes	Meaning Unit	Code	Category
*if you're **head of the unit, you don't get out of doing certain things, just because you're the boss**. Like you also have accountabilities, and they could be small accountabilities, they could be big [Holacracy Coach, pos 69]*	Non authoritarian leadership style	**Leadership Style Barrier**	**Group Level Barrier**
leadership is traditionally thought of ohh someone is a leader and others are not. In a self organized system we try to **think of everyone as a leader leading their own bit of work**, their own roles. [Holacracy Coach, pos 188]	Everyone is a leader, leading their own work		

*The strategy of the battery circuit, is strong team culture and knowledge exchange, even over business success. So that gives a lot of authority from the organization to the individual and say, of course, business success is very important. But **team culture and knowledge exchange**, which is the basic or a basic for **innovation** is even more important and it gives the belief to the individual from the organization. Yes, and that's in line with our strategy [Holacracy Coach, pos. 261]*	Strong team culture gives authority from organisation to individuals	**Team Climate Barrier**	
*[In the Holacracy team] what is very important and democracy is that **everybody in the organization can contribute to define the accountability of roles**. And then depending on anybody in the organization can ask anybody else to do a certain activity to perform a certain task, but the **receiving side is always, always allowed to reflect whether it really is part of the accountability that are assigned to the role**. So you can reject anything and say I don't feel that this is my decision to take and that sometimes. [Holacracy Practitioner, pos. 73-74]*	Individuals are required to take accountability for their roles	**Team Process Barrier**	
*One aspect in Holacracy is that its very much a non paper driven system, its like a **non-get written approval for certain things**. I think this has to do with **your authority to make decisions so like I think that overcomes the barrier of going through bureaucracy by not going through multiple different steps** to get approval for something and even just like filling out forms to get approval for decisions and what not. Yes we have forums where we need formal approval but its not so written and that was one of the concepts of Holacracy. Its like processes over paper work, processes over written information and I thought that was good.[Holacracy Coach, pos 109]*	Individuals do not need to go through bureaucratic processes for decision making		
Basically they have their their own authority the team structure is really different in the sense of like, not so pyramidical and also like **the connections are more like equal and or equal at one hand, but also varied and diverse on the other hand, they aren't prescribed by these employer, employee relationships or manager employee relationships anymore** and it can be much more natural. [Holacracy Coach, pos 97]	Equal connections within Teams	**Team Structure Barriers**	
Team structure, **there's nobody higher or lower in the team**. Everybody is treated by me as equal. And I also see that the team members themselves treat each other also as equals. [Scrum Master, pos 97]	Team Members treat each other also as equal		

Table 8 captures the essence of the radical decentralisation of authority and its role in overcoming individual barriers. It was seen that all interviewees agreed that the distribution of responsibility to individuals within self-organising teams has a significant impact on employee attitude. When organisations trust their employees to be competent to define the accountabilities for their roles and take on responsibility, employees' motivation levels increase. When employees are given the flexibility to ideate their way of working to fulfill their roles, employees are empowered to innovate.

This leads to higher levels of confidence while making decisions, facilitates learning, gives a sense of purpose, and overcomes *employee attitude barriers*. With employees having high levels of autonomy to make decisions, managers or leaders take on the role of facilitators within self-organising teams. They are seen to be operating from a place of trust in their employees to innovate, overcoming *manager attitude barriers*.

Table 8 The role of radical decentralisation of authority on individual barriers (own creation)

Exemplary Quotes	Meaning Unit	Code	Category
*So we have relatively radical decentral authority, which means the decision making on what to prioritize, what to do and also how to specify your **accountabilities comes from the people fulfilling those roles** and also anyone else can make role changes. [Holacracy Practitioner, pos. 69]*	accountabilities comes from the people fulfilling those roles	**Employee Attitude Barrier**	**Individual Level Barrier**
*I would say that I like this (Holacracy) way of working. [...] So I would say that I have also realized not just me that but everyone else in the team I feel are very quite more **motivated to work to towards whatever accountabilities** they're having and **they're quite competent on that**. So yeah, I think I think everyone **likes that way of flexibility that they're self organizing firms give**. [Holacracy Coach, pos. 83]*	Employees are motivated to work in the self-organising method		
If we have empowered teams that take decisions and they are, you know very much involved and and we also understand **that empowering people leads to higher level of of motivation,** so **people want to take decisions they want to learn. They want to have a purpose. They want to be autonomous**. [Agile Coach, pos 53]	Empowerment and Autonomy via decision making		
because we work in a Holarctic organization, we do have distributed decision rights in the sense that **when you have a role, you have the full power to make decisions via that role**. You don't need permission of your boss. [Holacracy Coach, pos 23]	Decision making through self-accountability		
But in the end, the good thing of those managers that was on both sides was that they were giving the **trust to their employees** and they were not as you, as you said before, they were not micromanaging, nudging. They were not trying to be in place of those people making decisions, but they were keeping the full trust to those things. They had a really great freedom coming from the group, from the managers, from their surrounding to do their job in a proper way. [Agile Coach, pos. 15]	People Oriented managing style	**Manager Attitude Barrier**	

In Summary: In the self-organisation system the characteristic of radical decentralisation of authority is an attribute that distributes power among all members. With this in place, both teams operating under the agile way of working and the holacracy model has been able to empower their employees to make informed decisions and feel psychologically safe to exercise their autonomy.

The Role of Formal Systems/Programs on barriers to EDI.

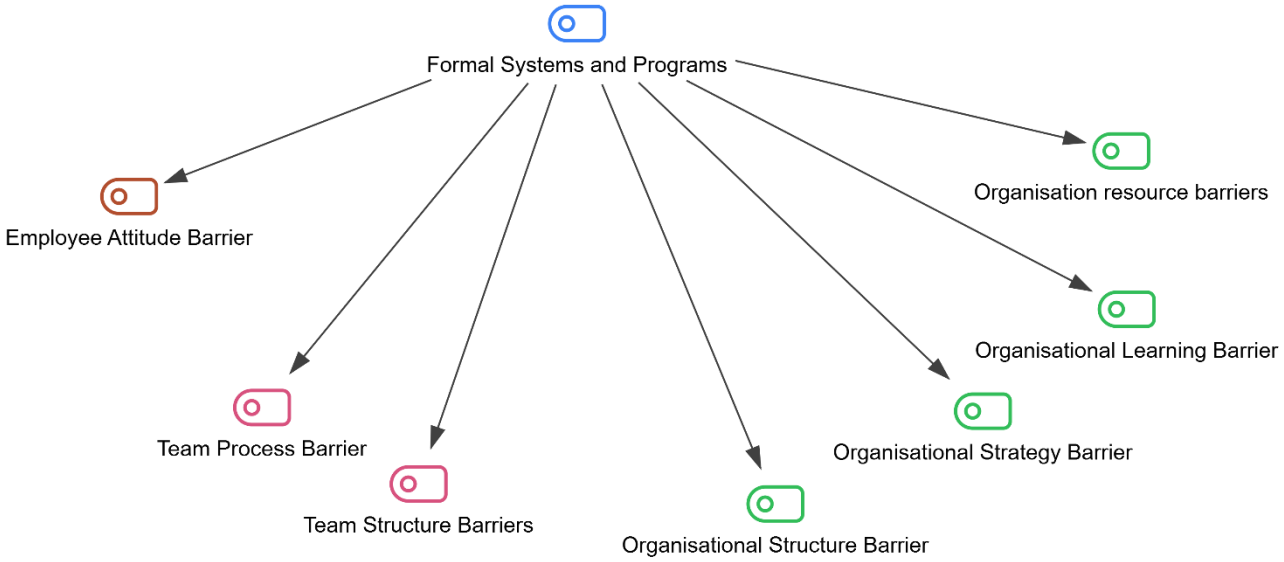

Figure 8 The Role of Formal Systems/Programs on barriers to EDI (own creation)

Figure 8 depicts the self-organising characteristic, formal systems or programs, and the barriers to employee-driven innovation it overcomes as discussed in the interviews. Formal systems and programs that are in place within self-organisation systems can overcome *organisational resource barriers, organisational learning barriers, organisational strategy barriers,* and *Organisational structure barriers* at the organisational level barriers. Next, on the group level, it can overcome team structure barrier and team process barriers. Additionally, employee attitudes barriers are overcome on the individual level. The following sections will discuss in detail the interview excerpts and findings.

Table 9 summarises the qualitative analysis of the interview excerpts showing that on an organisatoin level, having formal rules for decentralisation of authority creates the necessary transparency on how the organisation functions. The transparency created works as a resource for employees to identify the right stakeholders to make informed decisions. This *overcomes organisational resource barriers*. The strict rules and processes within self-organising systems enable the translation of the company's strategy into operations. Sharing of resources is done via transparency of work and cross-functional collaborations which align the shared objectives with the vision of the organisation breaking down any *barriers to organisational strategy*. There are processes for efficient feedback gathering and implementation which overcomes the *barrier to organisational learning*. The organisational structures with self-organising systems take an elegant and liberating form that harnesses the energies within groups. This enables groups to work together seamlessly becoming a sum of its parts. Some tools clearly depict the organisation structure, roles, and responsibilities that it's easy to form connections and increase the quality of these connections overcoming the *barrier to organisational structure*.

Table 9 The role of formal rules or programs on organisational level barriers (own creation)

Exemplary Quotes	Meaning Unit	Code	Category
*Key points of Holacracy is that it aims at **creating utmost transparency** on how the organization really works, so there is one of the tools we use in order to work on the platform. [..] **you can easily find your way to the right stakeholders**. [Holacracy Practitioner, pos 166]*	Tools providing transparency to find stakeholders	**Organisation resource barriers**	**Organisational Level Barrier**
*The reviews is one key element where people are invited to join, everybody can join every review. This **cross functional work and to share transparency** what the teams are doing **overcome the barriers and align on shared objectives** is very important. Then the product visions are aligned. So we have product visions that are connected to the business strategy. [Agile Coach, pos. 99]*	Alignment of shared objectives via transparency	**Organisational Strategy barriers**	
*That there is the advantage again is on the Holacratic side, I would say because there are **better tools to translate the company's strategy** into what we really do and what we not do in an holacratic environment it. [Holacracy Coach, pos. 241]*	Tools to translate Strategy		
*In the holographic way, Holacracy is a common purpose and under that purpose you can contribute with different specialities. I think we will have **very strong teams in holocracy because it starts with the purpose** and that way it is ensured that you don't have random team structures, but team structures that are standard about an explicit purpose that everyone in the team can connect to and also feels on a somewhat emotional level ties to. [Holacracy Practitioner, pos 183]*	Circles based on common purpose		
*It in the particular case of Holacracy, So there is a **very strict process around the governance**. Very explicit. [Holacracy Practitioner, pos 227]*	Strict governance process in place		
*Through the **Sprint reviews,** we were looking what we did, what we change, what we propose, what are the measurements of the results that we were trying to look for or **listening to the feedback in terms of case and then address those pain points** that those those clicks had. [Agile Coach, pos 44]*	Listening to feedback and addressing pain points	**Organisational Learning Barrier**	
*I see that in practice as well that the **structure of Holacracy is actually there to help and guide towards the purpose of the organization** rather than it's just sort of the rigid structure that is most of the time in the way and that makes resources sort of flow in the in those channels. [Holacracy Coach, pros 135]*	Structure present to guide towards purpose of the organisation	**Organisational Structure Barrier**	
*Sort of elegant, **liberating structure which is what self-organisation brings in the organizational space can sort of channel the energy of the Group** of the all the individuals comprising the group into yeah, **becoming more than the sum of its parts**, whereas without the structure or again with that abrasive structure then groups don't tend to either grow above like just a loosely scattered collection of individuals. [Holacracy Coach, pros 229]*	Structure that aids group work		

There is one of the tools we use in order to work on the platform. [..] you can easily find your way to the right stakeholders. And that's a lot, more powerful than in traditional organizations where you need to call somebody that can tell you who the expert on XYZ is. That ***increases*** *on the one hand side* ***the speed to connect across the organization*** *and* ***it also increases the quality of the connections across because you are typically directed straight to the point.*** *[Holacracy Practitioner, pos 166]*	Reach the right stakeholder through transparency		

Table 10 effectively captures the crux of the formal systems in self-organisation and its role in resolving group-level barriers for EDI. On a group level, the team structures are formed keeping the purpose of the team in mind. Teams with different specialties can work together as they are all working towards a shared purpose which is the core idea behind forming the team. This enables self-organising teams to resolve their *team structure barriers*. There are also formal systems in place to create space for diverse and a large number of ideas and inputs to add value to the decisions made.

Table 10 The role of formal rules or programs on group level barriers (own creation)

Exemplary Quotes	Meaning Unit	Code	Category
I think ***more ideas, more input, more value is generated out of the decisions*** *that we're making,* ***because of our formal system****. [Holacracy Coach, pos 77]*	Formal systems adding value	**Team Process Barrier**	**Group Level Barrier**
In the holographic way, Holacracy is a common purpose and under that purpose you can contribute with different specialities. I think we will have very strong teams in holocracy because it starts with the purpose and ***that way it is ensured that you don't have random team structures, but team structures that are standard about an explicit purpose*** *that everyone in the team can connect to and also feels on a somewhat emotional level ties to. [Holacracy Practitioner, pos 183]*	Team structures based on shared purpose	**Team Structure Barriers**	**Group Level Barrier**

Table 11 provides insights into the role of formal systems in mitigating barriers on an individual level. Interviewees explicitly mention that the rules within self-organisation are both simple and clear which creates a sense of ease and peace to follow them. Having clarity in the way of working is seen to make individuals feel more empowered to do their jobs right. It creates space for creativity and innovation. Formal systems that translate the company's strategy to everyday operations are also in place which gives meaning to the work done by employees, further improving their levels of motivation.

Table 11 The role of formal rules or programs on individual level barriers (own creation)

Exemplary Quotes	Meaning Unit	Code	Category
when the ***rules are clear and simple enough****, then it can actually become liberating. Right. And then I see* ***individuals actually****, and I see the teams I work with* ***feeling more at peace more at ease more empowered****. Because I know what the structure is and I have these simple guidelines to follow in within those, I can actually free my creativity. [Holacracy Coach, pos. 231]*	Simple rules empowering individuals	**Employee Attitude Barrier**	**Individual Level Barrier**

there are better tools to translate the company's strategy into what we really do and what we not do in an holacratic environment. It ***pushes things closer to the individual*** *or to the circle. [Holacracy Coach, pos. 241]*	Autonomy given to individuals		

In summary: Organisations working in both the holacratic way and the agile way have been able to simplify their formal rules and systems while moving away from the traditional way of operating. This has equipped employees with the necessary clarity and simplicity to function with higher levels of freedom, creativity, and motivation.

The Role of part of the Ecosystem on barriers to EDI.

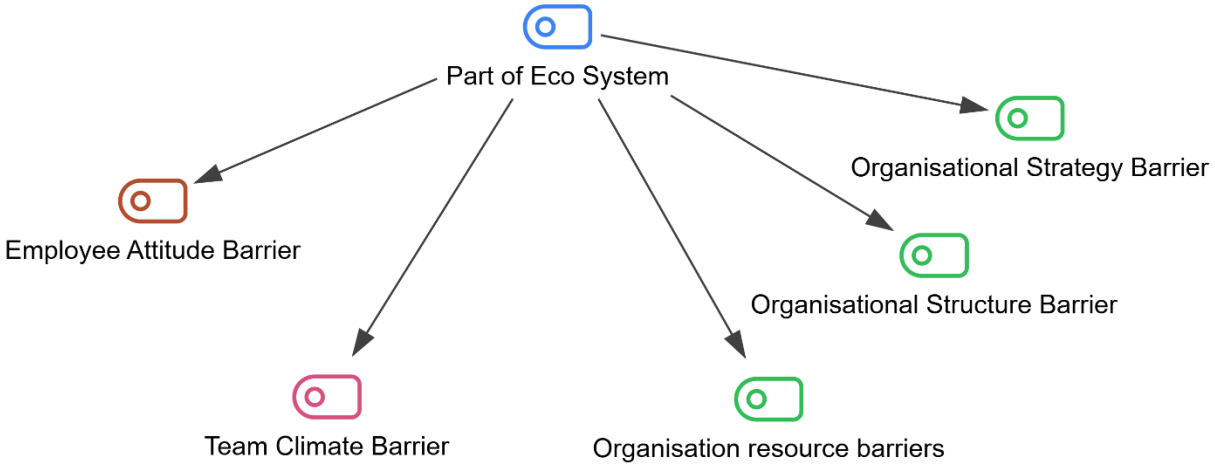

Figure 9 The Role of part of the Ecosystem on barriers to EDI

Figure 9 depicts the self-organising principle, part of the ecosystem, and the barriers to employee-driven innovation it mitigates as discussed in the interviews. It can be seen that interviewees explicitly mention the emphasis self-organisation puts on contributing to overall goals and how this enables them to address the limitations of *organisational strategy barrier*, *Organisational structure barrier* and *organisational resource barrier* within the organisational level barriers. Further, on the group level, it can overcome team climate barriers. Additionally, employee attitudes barriers are dealt with on the individual level. The following sections will discuss in detail the interview excerpts and findings.

Table 12 serves as a comprehensive portrayal of the implementation of the self-organising principle part of the ecosystem and its role in mitigating barriers to EDI. Interviewees mention the presence of structures or processes within self-organisation that feed the purpose of one operating structure to the overall operating structure. Each individual is aware of how their work is contributing to the overall organisations strategy, which provides the necessary clarity to align with the overall firm's strategy. There are even processes in place where cross-polination and knowledge is possible between two different sections of the organisation. This way, there is an overall alignment of the strategy that enables the organisation to overcome *organisational strategy barriers and organisational structure barriers* where parts of the organisation do not just work in silos. Additionally, there are processes in place to provide clarity on the resource allocation and responsibilities shared between resources which helps in navigating difficulties with *organisation resource barriers*.

Table 12 The role of part of the ecosystem on organisational barriers (own creation)

Exemplary Quotes	Meaning Unit	Code	Category
Because **each circle has a purpose that should feed the purpose of the overarching circle**, and so on, it (contribution to overall goals) is even better documented in a holographic environment and easier to live up to it than in a traditional one. [Holacracy Coach, pos. 327]	Each circles purpose is to contribute to the overarching circle	**Organisational Strategy Barrier**	**Organisational Level Barrier**
Part of ecosystem I definitely see that we have this **we all have a contribution to overall goals**, for example, in our self organizing firm, not a part of holacracy but it works well with it, we do the OKR system objective and key results. So this helps to this **shapes the strategy** so It's overcoming, like strategic barriers. [Holacracy Coach, pos. 69]	All members contribute to overall strategy alignment		
There is one team working on AI models [..] those models might be also interesting for other departments, other analysis teams, other product teams, and this is open. So this is a **continuous cross pollination of things that could be very useful**, everybody can join every review. This **cross functional work and to share transparency what the teams are doing overcome the barriers and align on shared objectives** is very important. Then the **product visions are aligned**. So we have product visions that are connected to the **business strategy**. Also, the backlog of each team is synchronized, leading to what this vision should be and this is being reviewed regularly. So the product visions are reviewed at least once a year to see if it's still on track. If it's still useful, if it's still valuable for the organization. [Agile Coach, pos. 99]	Transparency between teams enable alignment of product visions to organisation strategy		
We have this retrospective sessions also part of of Scrum where also the collective efforts are. [..] So we **the group as itself is also reflecting on the efforts** that they delivered in the in the last Sprint. That for me is also **part of the ecosystem because it is really in our DNA.** [Scrum Master, pos. 117]	Group reflections keeping the team aligned with vision		
They had to actually, together figure out how to sometimes solve the problems, how to make a decision, architectural ones product wise collaboration wise, etc. And basically because they learn that they can experiment within their scrum teams. They also **start experiment across between the scrum teams** and they came out with **some interesting solutions.** [Agile Coach, pos. 110]	Experimenting across scrum teams leading to solutions	**Organisational Structure Barrier**	
Part of ecosystem I definitely see that we have this we all have a contribution to overall goals, [..] we do the OKS - system objective and key results.[..] I would also say, resource barriers, hindrance of allocation and management of resources, because **we know who is going to be allocated to the OKR**. [Holacracy Coach, pos. 69]	Mechanisms to manage resources in place	**Organisation resource barriers**	

Table 13 represents the summary of the code assigned to the interview excerpts discussing the role of the principal part of the ecosystem in mitigating the team-level barriers to EDI. The Interviewee talks about having processes where collaborative problem-solving is encouraged in self-organising teams. In this process, team members come together to work on an overall goal, creating the space to bring in different perspectives, and ideas and work together to achieve a common purpose in a collaborative environment.

Table 13 The role of part of the ecosystem on group barriers (own creation)

Exemplary Quotes	Meaning Unit	Code	Category
We have pair programming, a key element. In a Sprint planning meeting, [..] the person can raise up and work together with someone who's more expert or more experience on the topic to learn. You have two people working on it and **two different ideas and two different people solving the same thing, which is again, the solution could be far more innovative than what one person could have done.** [Agile Coach, pos. 111]	Collaborative problem solving leading to innovative solutions	**Team Climate Barrier**	**Group Level Barrier**

Table 14 summarises the influence of the self-organising principle part of the ecosystem in overcoming barriers on an individual level. Having structures that allow individuals to contribute to the overall strategic development of the company provides a sense of purpose and accomplishment for employees. This creates a sense of accountability which enables them to become more motivated.

Table 14 The role of part of the ecosystem on individual barriers (own creation)

Exemplary Quotes	Meaning Unit	Code	Category
Individual attitude, I like this, I like the part of the ecosystem, we can all contribute to goals, we're not just like stapling, papers and whatnot, **we all have a say in the strategic development of our company**. So this is nice. [Holacracy Coach, pos. 67]	Each individual contributes to strategic development of the company	**Employee Attitude Barrier**	**Individual Level Barrier**

In summary: The principal part of the ecosystem allows self-organising systems to work together for a common purpose and goal. There are organisation structures, processes, and resources in place to create this space for contributing to overall goals. This way of working enables teams to create a collaborative environment where each person can learn from the other. Additionally, having structures that allow individuals to contribute to the overall organisations strategy provides a sense of purpose and accomplishment.

The Role of Co-ordination on barriers to EDI.

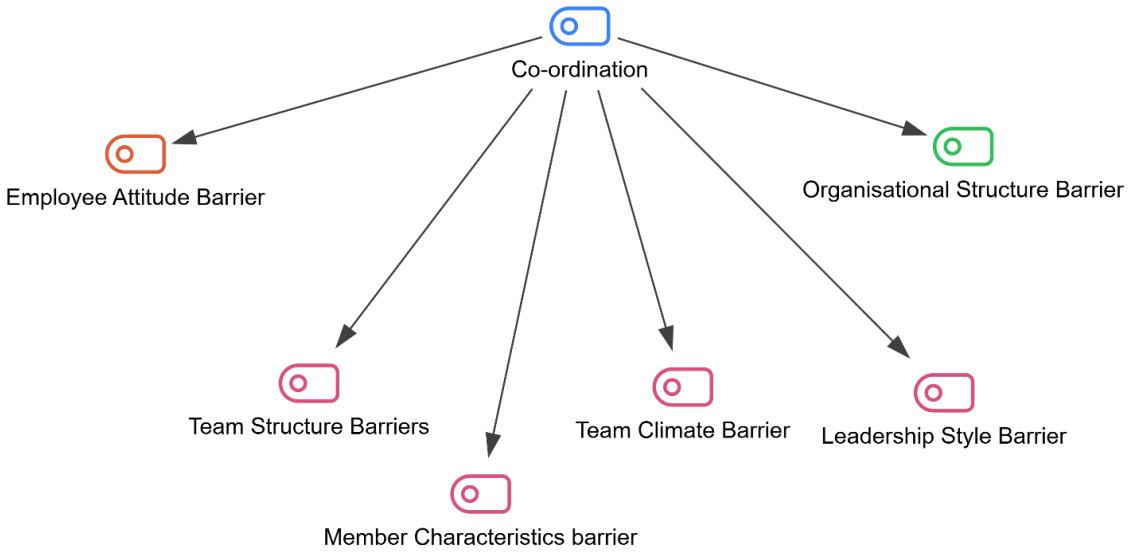

Figure 10 The Role of Co-ordination on barriers to EDI

Figure 10 depicts the self-organising principle, coordination, and the barriers to employee-driven innovation it mitigates as discussed in the interviews. It can be seen that coordination plays a role in addressing the pitfalls of *Organisational structure*. Next, on the group level, it can overcome the limitations of *member characteristics barriers, team climate barriers, team structure barriers, and leadership style*. Furthermore, employee attitudes barriers are mitigated on the individual level. The following sections will discuss in detail the interview excerpts and findings.

Table 15 highlights the experiences of interviewees working in self-organising systems where the principle of coordination addresses the barriers to EDI. On an organisational level, different teams are seen working together across departments overcoming barriers to *organisational structure barriers*. More so, there are structures within the self-organisation system that allow clear communication which further facilitates corss-functional operations between departments.

Table 15 The role of Co-ordination on organisational level barriers (own creation)

Exemplary Quotes	Meaning Unit	Code	Category
*In our organization we have a product vision which gives the direction. [..]So we **need people from different directions, maybe also from different departments** most of the time that come, we can **work together here in, a group**. [Agile Coach, pos 66]*	Different departments working together	**Organisational Structure Barrier**	**Organisational Level Barrier**
*There's also different roles that we have called **crosslinks, where their job is to communicate out information** to other circles. [..] So they can also help me **resolve conflicts, questions, doubts**, and things like this, I like this in the self-organizing role.*	Crosslinks for clear communication		

Table 16 serves as a comprehensive portrayal of the implementation of the self-organising principle co-ordination having a notable influence in overcoming group barriers to EDI. All interviewees are seen to mention the importance of co-ordination within self-organising firms. Some tools offer a clear picture of the organisation structure and roles of each member within the team that makes it easy for colleagues to identify and reach out to the right stakeholder to conquer *team structure barriers*. Employees are seen to empower each other through mutual collaboration and support. Interviewees highlighted the presence of diverse group members coming from various backgrounds working together with openness and listening to each other to solve problems and overcoming *member characteristics barriers*. Working with the right tools and people with the right mindset allowed members to build on each other ideas and overcome *team climate barriers*. As all members are considered to be leaders leading their accountabilities, the leadership style was that of servent leadership. This allowed team members to operate with trust, openness, and courage surmounting leadership style barriers.

Table 16 The role of Co-ordination on group level barriers (own creation)

Exemplary Quotes	Meaning Unit	Code	Category
*coordination is in place in our team, because we have a hollow spirit web page so we can understand or we know what person or which person works on which project or which role what are the accountabilities. We can contact them and because we are self organizing, we don't have to reach to any manager and ask them if they need to reach out to them or **I feel that it's always just a call away for all of us.** [Holacracy Coach, pos 185]*	Easy to reach out to colleagues	**Team Structure Barriers**	**Group Level Barrier**

[..] It is a good example of not only the autonomy of an individual because and they can decide, shall I help him, or shall I help her, or shall I ask for help? ***There is openness and creates a group structure*** *I think. That's a really good example how individuals* ***empower them not only themselves, but also others in the team****. [Scrum Master, pos 92]*	Empowerment through mutual collaboration		
In our organization have a have a product vision which gives the direction. [..]So we need people from different directions, maybe also from different departments most of the time that come, we can work together here in, a group. So you basically have a ***team collaborating need to put on their tools onto the table and need to figure out together****. [Agile Coach, pos 69]*	different members collaborating to achieve vision	**Member Characteristics barrier**	
It was collaboration and of course developer had a different role. Scrum Master had a different role and product owner, had a different role but in the end all the all those, ***all those roles were listening to each other and trying to understand each other****. [Agile Coach, pos. 76]*	Different roles trying to listen to each other		
the ability to work together was building the team and it was building the individuals *and they all fit into that way (agile) of working. And it was like it was beneficial for all of them. The speed that they were able to learn from each other was great. [Agile Coach, pos. 80]*	Agile way of working together built teams	**Team Climate Barrier**	
So this team [..] they were working together from the office, from the open space. They were collaborating. [..] so ***generally the environment, they were working in was quite supportive****. [Agile Coach, pos 58]*	Supportive environment		
In the daily stand ups a person is asking for help. [..] ***there's always, always one or two persons and not always the same person (that helps)****. [Scrum Master, pos 91]*	Willingness to help others is high		
Group and the personal check in checkout is for the coordination because it was not easy for everybody that if you don't feel well to drop it in a stand up. [..] So that gives everybody more sort of that you feel better to share it and the ***team can then work with more empathy and help eachother****.[Agile Practitioner, pos 123]*	Approaches to work with empathy and help eachother		
Very collaborative and open minded in having other people come join their meetings and have discussions. ***The leadership style*** *you see in the group dynamics is* ***servant leadership****. This is also the* ***team leader in an agile teams, scrum master who are helping in enabling*** *the team to perform at their best* ***creating a culture of openness, trusts, courage, focus and all the agile values.***	Servant leadership seen within agile teams	**Leadership Style Barrier**	

Table 17 puts summarise the effect working in self-organising firms has on individuals within these teams and shows its role in overcoming individual barriers to EDI. Employees are seen operating from a space of respect and understanding allowing clear communication and creating a space for open discussion. This in turn enables them to become more innovative and mitigate *employee attitude barriers*.

Table 17 The role of Co-ordination on individual level barriers (own creation)

Exemplary Quotes	Meaning Unit	Code	Category
Team members respects each other, understand each other. That ***enables individuals to be innovative because these individuals are reacting on each other*** *the way they do now. [Scrum Master, pos 127]*	Enabling individuals to become more innovative	**Employee Attitude Barrier**	**Individual Level Barrier**

In summary: The principle of co-ordination allows self-organising systems to operate in a collaborative environment where individuals work with mutual respect and understanding for each other. This creates a safe space a supportive team climate, easily navigatable team structures, and collaborating team members from diverse backgrounds. This further enables them to become creative and innovative. This breaks silos between departments and allows for cross-functional operations that align with the organisation's vision.

The Role of involvement on barriers to EDI.

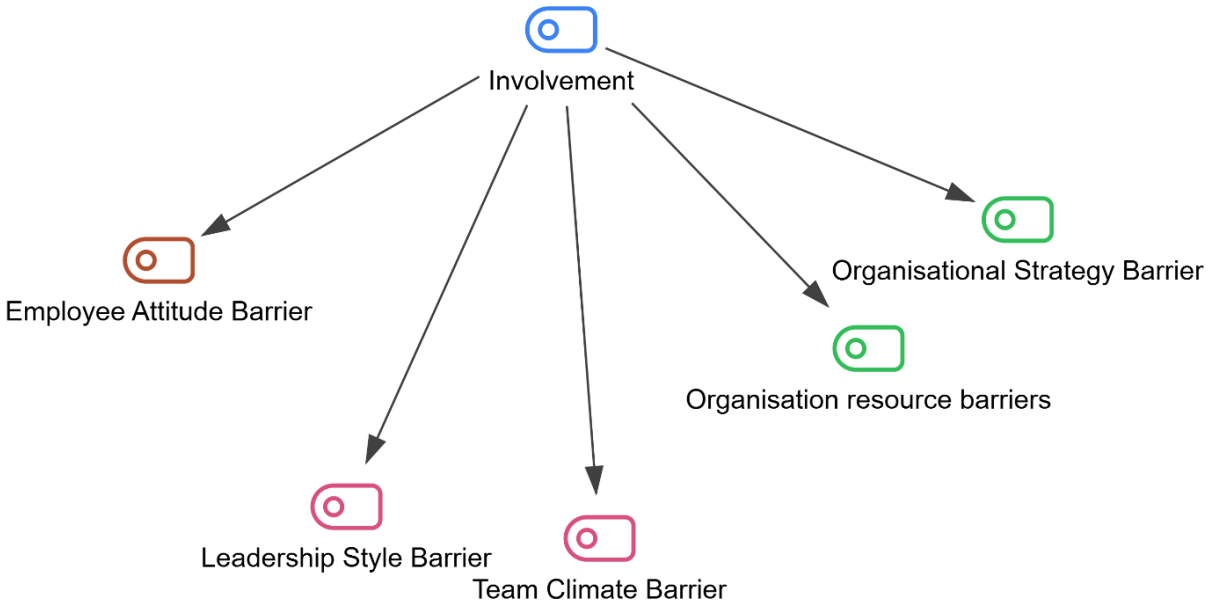

Figure 11 The Role of involvement on barriers to EDI

figure 11 depicts the self-organising principle, involvement, and the barriers to employee-driven innovation it overcomes as discussed in the interviews conducted. It can be seen that involvement plays a role in addressing the pitfalls of *Organisational strategy and Organisation resources*. Further, on the group level, it can overcome the limitations of *leadership style barriers and team climate barriers*. Furthermore, *employee attitudes* barriers are mitigated on the individual level. The following sections will discuss in detail the interview excerpts and findings.

Table 18 effectively captures the crux of involvement in self-organisation and its role in resolving group-level barriers for EDI. Involvement is seen as an essential aspect of self-organising, authority distributed to individuals enables them to take the lead on their deliverables. This drives up the motivation to take up responsibility as it is up to each individual to deliver results and keep alignment with the overall strategy of the organisation. Thereby overcoming *organisational strategy barriers*. There are resources overcoming *barriers to organisational resources*, in place to explore interesting roles and take up more than one role within the organisation, empowering individuals to operate with higher freedom and enthusiasm.

Table 18 The role of involvement on organisational level barriers (own creation)

Exemplary Quotes	Meaning Unit	Code	Category
The **involvement part is also very important**. We want to bring the individual team members that are working in scrum teams in agile teams closer together with business. [..] In an agile setup, this is very much close. Now **I'm talking to a manager and I still I am responsible for taking lead content driven decision**. [Agile Coach, pos. 53]	Motivation to align decision with business	**Organisational Strategy barriers**	**Organisational Level Barrier**
we work with holacracy, you're taking on multiple roles, I have six roles, it's going to be seven by the end of the month. So you definitely, **you can be motivated to take up responsibility**. And it's **very easy to get more responsibility** way easier than a non self organizing firm in my opinion, **because the barriers to explore different projects and take up different roles are a lot lower**. [Holacracy Coach, pos. 35]	Reduced barriers to explore responsibilities increases motivation to take more	**Organisation resource barriers**	

Table 19 summarises the role of involvement in mitigating group barriers. Individuals are seen as leaders who show up with high levels of motivation ready to exercise their responsibilities, all while seeing their colleagues as equals. This ensures equal and high-quality connections that collaborate mitigating *team climate barriers*. Leaders within these teams are seen to empower their colleagues and create space for experimentation. Mistakes are seen as short-cycle learning opportunities that allow for higher levels of innovation. This helps in overcoming *leadership style barriers*.

Table 19 The role of involvement on group level barriers (own creation)

Exemplary Quotes	Meaning Unit	Code	Category
It can create a **completely different group dynamic** from a more traditional organization when people show up with more consciousness, **involvement** and adaptability, and they can own their authority. [..] the team structure is really different in the sense of like, not so pyramidical and also like the connections are more like equal. I think I see that happen in most of the teams I work with that creates a much healthier team climate as well. [Holacracy Coach, pos. 97]	Involvement creates a new group dynamic	**Team Climate Barrier**	**Group Level Barrier**
Good example is the **willingness to to help each other and then actually that I see it happening both ways**. [Scrum Master, pos. 91]	Helping one another creates a supportive climate		
By **empowerment what I mean is allowing the people to make decisions and to course correct.** In a short cycle, so don't do a lot of mistakes for longer period, but try something out and give the **team members the autonomy which would lead to innovation**. [Agile Coach, pos. 79]	Empower people to make and learn from mistakes	**Leadership Style Barrier**	

Table 20 encapsulates the core elements of involvement and its role in overcoming individual-level barriers within self-organising systems. The levels of motivation of individuals within self-organising teams are seen to be high as they are owners of their ideas, they have the space to experiment and they are confident to take responsibility. These aspects further allow a high willingness to help each other as each query is seen as a learning opportunity where the ability to ask questions and experimentation is encouraged. This ensures that *employee attitude barriers* are mitigated.

Table 20 The role of involvement on individual level barriers (own creation)

Exemplary Quotes	Meaning Unit	Code	Category
That's how self organizing systems can work well,[..] **I had the idea means I'm motivated to do it.** I have a reason to do it because thats my idea. So if it becomes easier for me to just do it myself and implement it myself and start working this new way and then to spread that to my colleagues. [Holacracy Coach, pos. 129]	Ownership of ideas creates motivation	**Employee Attitude Barrier**	**Individual Level Barrier**
Almost every team member is on a really high professional level, so yeah, I don't see any seniority so to say and the **involvement is quite huge** even on a Sunday I get sometimes chat messages in teams.Then they say were **experimenting an approach.** [Scrum Master, pos. 85]	Experimenting leads to high involvement		
Good example is the **willingness to to help each other and then actually that I see it happening both ways**. [Scrum Master, pos. 91]	High willingness to help each other		
If we have **empowered teams that take decisions and they are, you know very much involved** and we also understand that **empowering people leads to higher level of of motivation**, so people want to take decisions they want to learn. They want to have a purpose. They want to be autonomous. [Agile Coac, pos. 35]	Empowering people leads to higher motivation		
I think for sure in the beginning it was really like that people were searching for how they can achieve it (agility). But now **when we are at a certain level of working as a self organizing firm**, we see that **everybody is more motivated actuall**y. And also I think actually people feel more self confident. [Scrum Master, pos. 75]	Self-organisation leading to higher motivation		

In summary: The principle of involvement is essential providing clear resources that motivates individuals to take up responsibilites. It is seen empowering individuals to take ownership of their ideas, operate in a collaborative environment with high willingness to help each other and overcome become more creative.

The Role of adaptability on barriers to EDI.

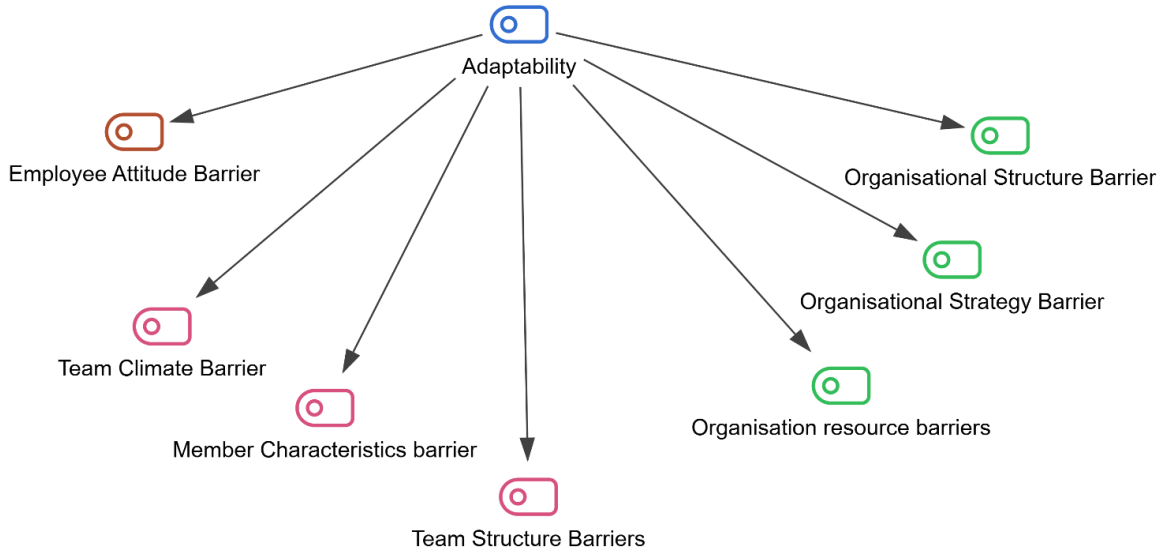

Figure 12 The role of adaptability on barriers to EDI

Figure 12 depicts the self-organising principle, Adaptability, and the barriers to employee-driven innovation it overcomes as discussed in the interviews. It can be seen that adaptability plays a role in tackling the barriers of *Organisational structure, Organisational strategy, and Organisation resource barriers*. Next, on the group level, it can overcome the limitations of *member characteristics barriers*, *team climate barriers, and team structure barriers*. Furthermore, *employee attitudes barriers are* surmounted on the individual level. The following sections will discuss in detail the interview excerpts and findings.

Table 21 captures the essence of adaptability and its role in overcoming EDI barriers in self-organising systems. Interviewees unanimously agreed that individual adaptability is an essential aspect within self-organising firms. Self-organising firms have the necessary tools in place to learn and understand the agile way of working or holacratic way of working overcoming *organisation resource barriers*. Adaptability is seen to be very helpful in ensuring alignment with strategy shifts and the resulting consequences for individuals which helps in overcoming *organisational strategy barriers*. Individuals are seen to be able to adapt to changes within organisation easily as there are structures in place to ensure both continuity of operations and tackling the *organisational structure barriers*.

Table 21 The role of adaptability on organisational level barriers (own creation)

Exemplary Quotes	Meaning Unit	Code	Category
And so this (Agile way of working) comes as a big change. Teams members have not worked agile before because it was in the past. It was the team manager directing them, giving them tasks here do this. In an Agile setup it's it's turned, upside down. It's like ok, this is the vision and so you guys decide how to do it. Yeah. And **you have the tools you need to learn as a team, how to work together, how to collaborate.** [Agile Coach, pos. 69]	Tool in place to figure out Agile way of working	**Organisation resource barriers**	**Organisational Level Barrier**
It (adaptability) probably also really helps with like, strategy. Because if you have an **organizational strategy shift, you can adapt to that very quickly**. [Holacracy Coach, pos. 43]	Keeping in line with changing organisational strategy	**Organisational Strategy barriers**	**Organisational Level Barrier**
I worked six months to on a project. And now we don't have the resources for it. [..] And I definitely felt bad that we're not going forward with it. But **I have other opportunities. It's not like that was my only thing**. And I'm stuck. Like I'm not stuck, and obviously was the disappointing, **but I feel like able to more quickly shift focus and go to something else rather than dwell on the point.** [Holacracy Coach, pos. 47]	Quickly shift focus to another project	**Organisational Structure Barrier**	**Organisational Level Barrier**

Table 22 highlights the role of adaptability in overcoming group barriers within self-organising systems. Within group settings, adaptability is seen as creating a strong group dynamic due to individuals ability to adjust to changes. This overcomes *team climate barriers*. Self-organisation is seen to provide individuals with frameworks to work in diverse group settings overcoming *member characteristics barriers*. There are structures in place that allow for smooth changes in roles and responsibilities which enable individuals to become highly flexible overcoming *team structure barriers*.

Table 22 The role of adaptability on group level barriers (own creation)

Exemplary Quotes	Meaning Unit	Code	Category
It has a big impact, it can **create a completely different group dynamic** from a more traditional organization **when people show up** with more consciousness, involvement and **adaptability**, and they can own their authority. [Holacracy Coach, pos. 97]	Adaptability creates a different group dynamic	**Team Climate Barrier**	**Group Level Barrier**
Self-autonomy towards adaptability. So we have **different characters in the organization**. [..] (Agile way of working) **provides them with a framework or leadership principles that help them to not have the fear** and the anxiety of losing control. [Agile Coach, pos. 53]	Principles in place to handle different types of people working	**Member Characteristics barrier**	**Group Level Barrier**
We do have a **lot of adaptability**, [..] in terms of people taking on new roles, responsibilities, people shifting their job titles, and so on. We see this a lot. And it (Holacracy) definitely helped because it's, **definitely overcoming the team structure barrier**, because there's not a hindrance, we dont to go through HR to change these roles. [Holacracy Coach, pos. 43]	High adaptability to changing team structures	**Team Structure Barriers**	**Group Level Barrier**

Table 23 summarises the value of adaptability in overcoming barriers to EDI on an individual level. Within self-organising systems, individuals are seen to have higher levels of adaptability due to the radical distribution of power to each member. This enables employees to mitigate barriers to *employee attitude barriers*.

Table 23 The role of adaptability on individual level barriers (own creation)

Exemplary Quotes	Meaning Unit	Code	Category
I think the part of the organization that I mainly around is that **we are a lot more adaptable to both internal but also external changes a lot faster** than traditional organizations with a hierarchical Power Distribution that I've been previously working in. [Holacracy Practitioner, pos. 73]	Adaptable to change due to power distributed to Individuals	**Employee Attitude Barrier**	**Individual Level Barrier**

In summary: The principle of adaptability is seen as fundamental to self-organising systems. Within these systems, organisational barriers have tools in place to ensure there are resources for individuals to easily access. There are structures in place to quickly change direction and align with changing strategy of the organisation. Groups are seen adjusting to different group dynamics and willing to work with a diverse set of individuals. Each member of the group is seen owing their power and making the necessary changes as and when changes occur.

The Role of consciousness on barriers to EDI.

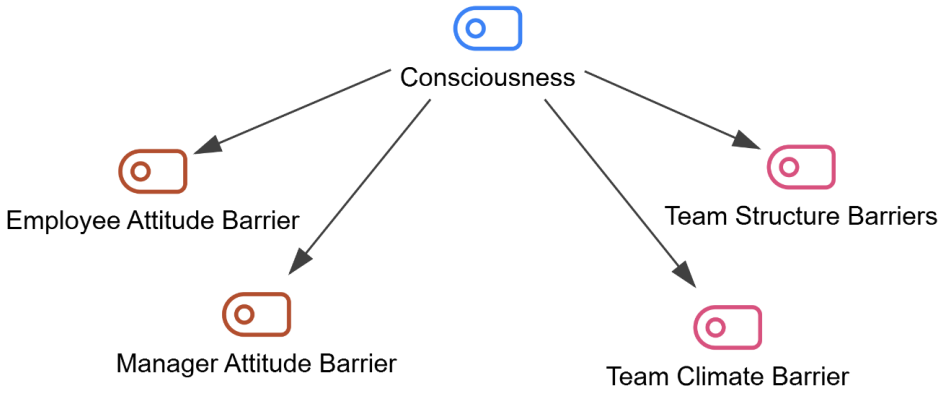

Figure 13 The role of consciousness on barriers to EDI

Figure 13 shows the self-organising principle, consciousness, and the barriers to employee-driven innovation this principle overcomes as discussed in the interviews conducted. It can be seen that consciousness plays a role in addressing the pitfalls within group settings, it can overcome the limitations of *team climate barriers and team structure barriers*. Furthermore, *employee attitude barriers* are tackled on the individual level. the following sections will discuss in detail the interview excerpts and findings.

Table 24 effectively captures the crux of consciousness in self-organisation and its role in resolving group-level barriers to EDI. Groups are encouraged to come together as a team to take ownership of experimentation and learn from misses. Individuals operating within these groups are capable of high levels of ownership that create the necessary environment for safely owing authority and exercising accountability for all actions. This helps teams create a healthy team climate overcoming *team climate barriers*. As individuals are free to take the course of action they see fit to achieve their goals, they can create strong connections to collaborate with other team members working towards the successful completion of projects. This tackles *team structure barriers*.

Table 24 The role of consciousness on group level barriers (own creation)

Exemplary Quotes	Meaning Unit	Code	Category
Obviously it has a big impact, i**t can create a completely different group dynamic** from a more traditional organization **when people show up with more consciousness**, [..] **they can own their authority**. [Holacracy Coach, pos. 97]	Better group dynamics when people show up with more consciousness	**Team Climate Barrier**	**Group Level Barrier**
Maybe it is in consciousness, I would also add here is like psychological safety. I think more on an individual level because not only do I feel motivated to take up responsibility and not only do I feel accountable but I also feel in terms like this **safety in like having the authority and having the accountability** even though I am on a lower level or a lower job title. This also goes for what we were talking about like the whole team work stuff. **We will come together as a team and mistakes are encouraged its okay, its all part of the learning**. So therefore **I feel happy to work, I also feel the safety but I also feel like I can try out new things**. [Holacracy Coach, pos. 106]	Psychological safety allows for experimentation within groups		
It can create a completely different group dynamic [..] when people show up with more consciousness. Basically **they have their their own authority the team structure is really different** in the sense of like, not so pyramidical and also like the **connections are more like equal** [..]. On the other hand, they aren't prescribed by these employer, employee relationships or manager employee relationships anymore and it can be much more natural. [Holacracy Coach, pos. 97]	Connections are more equal	**Team Structure Barriers**	
I think because you let **people feel free**, so that you feel yourself that you, can manage your own work or **you feel like ownership of your thing**. So I would say it's also easier for you to ask for help or to say if there's something wrong, but also to say if something is good. And I think **this brings bigger success for the team as a whole** and also of course for the company. [Agile Practitioner, pos 69]	Freedom facilitates individual and group responsibility		

Table 25 depicts the role of consciousness in overcoming individual-level barriers to EDI. It can be seen that most interviewees mentioned that their self-organising team's consciousness played an important role in instilling confidence in all members to take up ownership. For a person to make decisions autonomously it is imperative to have self-accountability which is the norm in self-organising systems. Every member of the organisation is required to contribute to define this

accountability which gives them the freedom to be creative in their operations. The rules within this system are simple and clear, providing clarity of roles and thereby enabling individuals to be accountable. Furthermore, there is psychological safety due to servant leadership that allows individuals space for experimentation. These aspects enable self-organising teams to conquer the employee attitude barrier and manager attitude barrier.

Table 25 The role of consciousness on individual level barriers (own creation)

Exemplary Quotes	Meaning Unit	Code	Category
I think both consciousness and involvement (are) high, so I think the part of the organization that I mainly around [..] what it what is very important and democracy is that **everybody in the organization can contribute to define the accountability of roles**. [Holacracy Practitioner, pos. 73]	Accountability is defined by everyone	**Employee Attitude Barrier**	**Individual Level Barrier**
Now when **we are at a certain level of working as a self organizing firm**, we see that [..] **people feel more self confident to really make those conscious decisions** and saying like, hey, I am taking ownership of this part and I will achieve what we need to make, so that's really nice to see. [Scrum Master, pos. 75]	Self-Organising instills confidence to take ownership		
if I compare we first [in traditional heirarchy] had more like a structure where there was just a couple of persons which really took like the leadership role and the other people didn't really feel like they were responsible for anything. But now (with self-organisation) it's more that everybody's really like sharing authority and also, yeah taking more the leads. So that's **quite nice to see that changing of the structure within the team can also lead to such things**.[Scrum Master, pos. 165]	Change in structure leading to change in employee behaviour		
Self-accountability with the consciousness, this one I would also say that we have in our self-organizing firm, because you have **autonomous decision making rights, but that means that you're also accountable for the decisions that you make. So it's, you have to take ownership for the decision making.** [Holacracy Coach, pos. 27]	Autonomous decision making requires accountability		
In Holacracy **consciousness is part of the like operating system** like **it asks quite a bit of consciousness from people** it tries to sort of like help that actually tries to sort of help allocate consciousness **by creating a lot of clarity about roles and accountabilities**. And it asks of people who work with it to use their consciousness to make good judgment and to like behave like, basically like an adult with common sense to help that decentralized authority come to fruition. [Holacracy Coach, pos. 79]	Enables people to become more accountable by providing clarity		
I personally find is a nice attitude to have, although it is more of a risk for the employee, because you have to take full ownership and accountability for the decisions you make. But it's the price you pay to have this type of power in an organization. So overall, **I feel empowered. And I feel like I can actively sort of accept the risk and accept the accountability for any decisions** I make in my roles. [Holacracy Coach, pos. 29]	Empowered to accept the risk and responsibility for the role		
Maybe it is in consciousness, I would also add here is like psychological safety. I think more on an individual level because not only do I feel motivated to take up responsibility and not only do I feel accountable but I also **feel in terms like this safety in like having the authority and having the accountability** even though I am on a lower level or a lower job title. This also goes for what we were talking about like the whole team work stuff. We will come together as a team and mistakes are encouraged its okay, its all part of the learning. So therefore I feel happy to work, I also feel the safety but I also feel like I can try out new things. [Holacracy Coach, pos. 106]	Feeling safe to have the authority and accountability		

Now when we are at a certain level of working as a self organizing firm, I really see the benefit of it, that **it's not that you just follow a certain person** which he or she is saying like, hey, we need to go this way or that way and now it's more that **people think for themselves and come up with cool innovative ideas. Take that ownership**. That's really nice to see. I think also people are more happy in general because of that. [Scrum Master, pos. 75]	People are able to rely on themselves instead of their leaders for direction	**Manager Attitude Barrier**	

In summary: Consciousness plays a vital role in making individuals and teams operating within the self-organising system responsible for their roles by creating the necessary setting. Individuals operate with a higher degree of freedom, clarity and confidence to take accountability. This creates healthy teams wherein members are able to operate with openess and collaborate for the success of the team.

The Role of interdependance on barriers to EDI.

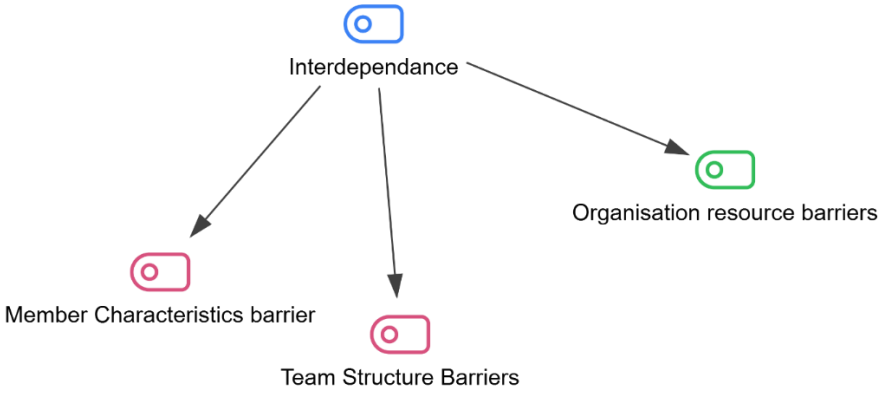

Figure 14 The role of interdependance on barriers to EDI.

Figure 14 shows the self-organising principle, interdependence, and the barriers to employee-driven innovation this principle overcomes as discussed in the interviews conducted. It can be seen that interdependence plays a role in addressing the pitfalls of organisational barriers, it can overcome the limitations of *organitaion resource barriers*. Furthermore, *member characteristics barriers and team structure barriers* are tackled on the group level. The following sections will discuss in detail the interview excerpts and findings.

Table 26 effectively captures the essence of interdependence in self-organisation and its role in resolving group-level barriers to EDI. Within self-organising firms, there are tools and resources for members to identify the right resource person and connect with them easily. This enables strong connections and also increases the quality of connections as team members do not have to go through managers to reach out to a person. This helps to overcome *organisation resource barriers*.

Table 26 The role of interdependance on organisational level barriers (own creation)

Exemplary Quotes	Meaning Unit	Code	Category
*I think inter-dependence is really in place in our team, because let's say if we have to reach to anyone, we have a hollow spirit web page so we can understand what are the accountabilities that also helps us to know what might be the Gray area and what might not be in their accountability. We can contact them and because **we are self organizing, we don't have to reach to any manager and ask them if they need to reach out to them or I feel***	Easy to identify the right resource	**Organisation Resource Barrier**	**Organisational Level Barrier**

***that it's always just a call away for all of us**. [Holacracy Coach, pos. 185]*			

Table 27 summarises the role of interdependance on group-level barriers to EDI. It can be seen that diverse groups are encouraged to bring in different perspectives to successfully complete projects. This overcomes the *barrier of member characteristics*. There are structures in place that support different specialties to work together for a common purpose that tackles the *team structure barriers*.

Table 27 The role of interdependance on group level barriers (own creation)

Exemplary Quotes	Meaning Unit	Code	Category
*We have some people who are really like super technical, you know, programming. But we also have people that are into documentation agreements, sort of the legal sides to it or very good in stakeholder management, you know and these kind of things. So yeah, **there is a lot of diversity**. [Agile Practitioner, pos 97]*	Diverse member team working on a project	**Member Characteristics barrier**	**Group Level Barrier**
*we expect the different skills, **the different experts from different departments working together in an agile team**. So the definition of agile teams, we break the silos of the classical hierarchies. [Agile Coach, pos 95]*	Different experts working together		
*In the holographic way that we work the starting point or a team, we call it circle and Holacracy is a common purpose. So and that's something that everybody can agree on that our common purpose is XY. That and under that purpose you can you can **contribute with different specialities.** [Holacracy Practitioner, pos 183]*	Different specialities working for common purpose	**Team Structure Barriers**	

In summary: Interdependance plays within self-organising teams is supported by the necesary team structures, resources and member characteristics. This allows for cross functional teams to work with each other more easily and understand each others contribution to the overall vision of the organisation.

The Role of complexity on barriers to EDI

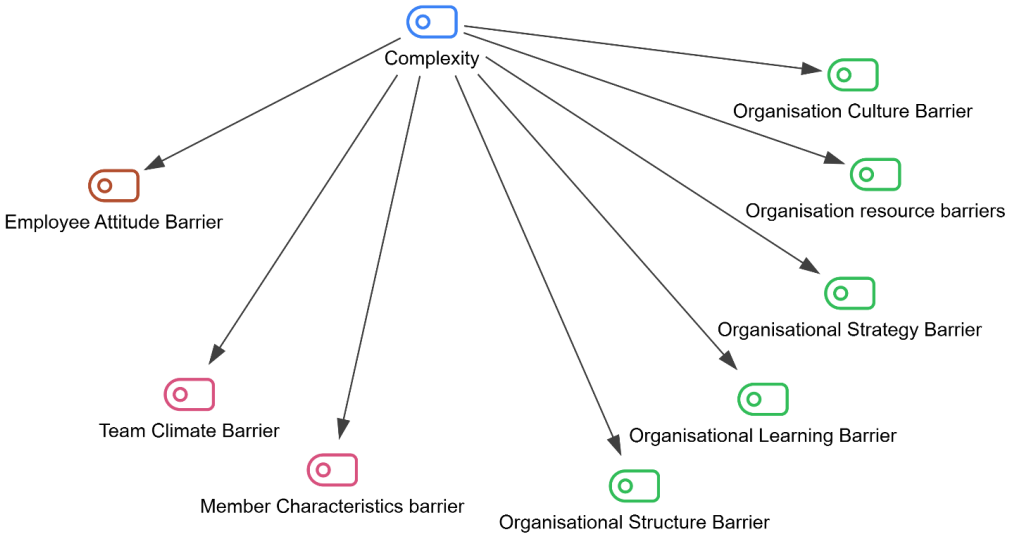

Figure 15 The role of complexity on barriers to EDI

Figure 15 depicts the self-organising principle, complexity, and the barriers to employee-driven innovation it mitigates as discussed in the interviews. The interview summary clearly shows the role of complexity and how it addresses the limitations of *organisational strategy barrier*, *Organisational structure barrier*, *Organisational learning barrier*, *Organisational culture barrier*, and *organisational resource barrier* within the organisational level barriers. Further, on the group level, it can overcome *team climate barriers and member characteristics barriers*. Additionally, *employee attitude barriers* are dealt with on the individual level. In the following sections will discuss in detail the interview excerpts and findings.

Table 28 serves as a comprehensive portrayal presence of complexity in organisations operating on self-organising principles and its role in mitigating barriers to EDI. Complexity is seen to be present in the way the agile or holacratic teams operate in the beginning, however with practice the structures and rules in place ease this barrier. The rules in these firms help members make their work more transparent and understandable overcoming *barriers to organisation resources and organisational learning*. Given the focus on the interaction between teams and departments, these teams are set to align their purpose with the vision of the organisation overcoming *barriers to organisational strategy*. Working within self-organising teams requires learning in the initial days but with practice and time, the complexity is seen to reduce and creates a healthy working environment that overcomes the *barrier of organisation culture*. The complexities with having many different structures of departments and cross-functional teams is mitigated by having clear communication. This helps to overcome the *barrier of organisational structure*.

Table 28 The role of complexity on organisational barriers (own creation)

Exemplary Quotes	Meaning Unit	Code	Category
There is quite some interaction with others, but also quite some complexity, because we need to understand basically the whole chain. If we look on that, I think ***it's really nice that we work agile basically because we can make our work more understandable and transparent*** *by doing so. [Scrum Master, pos 155]*	Agility allows for more transparency	**Organisation resource barriers**	**Organisational Level Barrier**
You´ve worked through the ***Holacratic system in order to achieve like strategic goals*** *and whatever, you can align to the firms strategy as you have that written down and everything. [Holacracy Coach, pos. 68]*	System allows alignment with strategic goals	**Organisational Strategy Barrier**	
we are quite working on a complex environment. [..] I think it's really nice that we work agile basically because we can make our work more understandable and transparent [..]and also ***learn because we have everything transparent because now we can see****. [Scrum Master, pos 156]*	Agility allows for learning	**Organisational Learning Barrier**	
This is a high learning curve in the first three months of working here but once everyone understands sort of the Holacratic model and they are able to sort of participate then I think that barrier goes down. Then I think that the complexity gets simpler because you are able to work within that system you are able to overcome the barriers that we are talking about, it creates a nice climate, [..] ***This is a nice culture.*** *[Holacracy Coach, pos. 46]*	Creates a nice culture	**Organisation culture barriers**	

*If you look, if you compare the old world with the new world, the old world is may look from the outside clearer, more structured, the new world maybe not looking a little more dynamic moving around a lot of information popping up and a lot of things happening. So you need to really get your head around where. So you have so many different agile teams, so it can be overwhelming for some to find the right information. This is **why we stress on being very good in communication in agile teams**. [Agile Coach, pos, 103]*	Communication as a mechanism in agile teams	**Organisational Structure barriers**	

Table 29 summarises the role of complexity in overcoming the group-level barriers to EDI. There are structures in place for members to learn about other parts of the organisation and the work of other groups that adds to the learning curve. This enables them to take better decisions that overcome the *barriers to member characteristics*. Working within teams that are open to learning and are supportive of each other overcomes the *team climate barrier*.

Table 29 The role of complexity on group barriers (own creation)

Exemplary Quotes	Meaning Unit	Code	Category
*I think that the complexity gets simpler because you are able to work within that (Holacracy) system you are able to overcome the barriers that we are talking about, **it creates a nice climate**. [Holacracy Coach, pos 75]*	creates a nice climate	**Team Climate Barrier**	**Group Level Barrier**
*our people embrace this work in cross functional teams a lot because they **learn a lot about other parts of the organization** that they were not be aware of, which helps them to **understand and breakdown complexity and take better decisions**. [Agile Coach, pos 127]*	Structures in place to breakdown complexity	**Member Characteristics barrier**	

Table 30 depicts the role of complexity in overcoming individual-level barriers to EDI. An interviewee highlighted that, given that we live in a world where most of the institutions, organisations and firms operate on a hierarchical model, it would require an individual to learn the ways and rule within non-hierarchical models. This is one of the main reasons why self-organising systems are perceived as complex initially, however, it is seen that with time and practice the complexity reduces and participants can work well. Once they understand the system, participants within self-organising systems are seen to have higher levels of motivation and dedication.

Table 30 The role of complexity on individual barriers (own creation)

Exemplary Quotes	Meaning Unit	Code	Category
*(Holacracy) It is complex. But the learning curve is very high to start Holacracy. [..] This is a **high learning curve** in the first three months of working here but once everyone understands sort of the Holacratic model and **they are able to sort of participate** then I think that barrier goes down. [Holacracy Coach, pos 74]*	High learning curve for participants	**Employee Attitude Barrier**	**Individual Level Barrier**
*I think for sure in the beginning it was really like that people were searching for how they can achieve it. But now **when we are at a certain level of working as a self organizing firm, we see that everybody is more motivated** actually. And also I think actually people feel more self confident to really make those conscious decisions. [Scrum Master, pos 75]*	Practicing self organisation leads to higher levels of motivation		
*In general, once you have **understood the system it's easier**, but conditioning from a hierarchical organization into a non hierarchical organization that can be quite complex, [Holacracy Practitioner, pos 245]*	System needs to be understood		

In summary: Given that most organisations, institutions, and other everyday environments are hierarchical in nature, it would require a good amount of learning and unlearning to shift to a non-hierarchical system. This is where the complexity aspect within self-organising systems are seen in practise. However, with time, these complexities are overcome as individuals learn and practice the rules of these non-hierarchical systems. This further allows for groups to work with diverse sets of people in collaborative environments. Overall, contributing also to organisational learning.

The Role of organisational adaptiveness on barriers to EDI

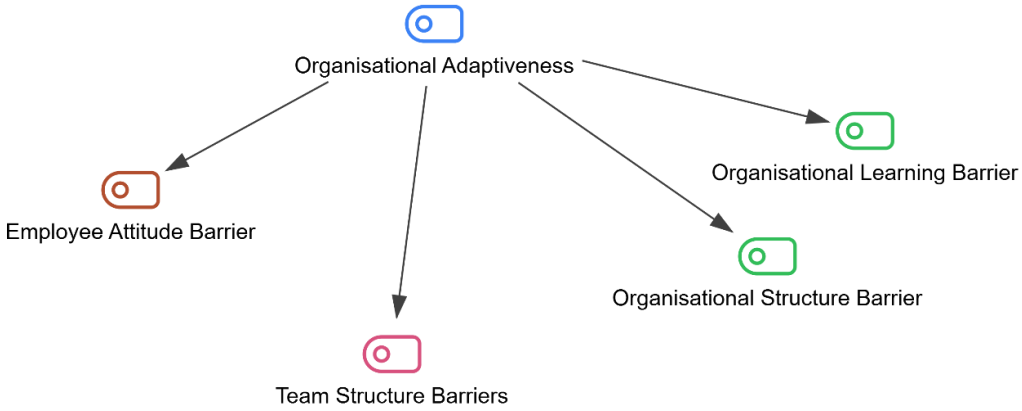

Figure 16 The role of organisational adaptiveness on barriers to EDI

Figure 16 depicts the self-organising principle, organisational adaptability, and the barriers to employee-driven innovation it overcomes as discussed in the interviews. It can be seen that organisational adaptability plays a role in tackling the barriers of *Organisational structure and Organisation learning barriers*. Next, on the group level, it can overcome the limitations of *team structure barriers*. Furthermore, *employee attitudes barriers* are tackled on the individual level. The following sections will discuss in detail the interview excerpts and findings.

Table 31 captures the essence of organisational adaptability and its role in overcoming EDI barriers in self-organising systems. Interviewees discuss the presence of strong feedback mechanisms within self-organising teams that enable change and learning. Continuous improvement processes that evaluate the alignment of the work done within teams and across teams provide the necessary material for course correction and implementation of change. These are the aspects that help self-organising teams overcome the *barriers of organisational learning* and *organisational structure*.

Table 31 The role of organisational adaptiveness on organisational level barriers (own creation)

Exemplary Quotes	Meaning Unit	Code	Category
*Let me start with the feedback structure. I think the m**ost radical and powerful way of giving feedback in a self organization is that you can change the governance**. And basically anybody in any team that is governed under the Holacracy principles can. [Holacracy Practitioner, pos 187]*	Enabling change through feedback	**Organisational Learning Barrier**	**Organisational Level Barrier**
*And then I do have a established a **regular monthly meeting** with Scrum masters and all the product owners. I call them exchange meetings where we come together and it's basically a **chance of open space**. Where people like product owners come together and bring up their*	Self-help groups to identify improvements		

*topic, their issue. It's like a **self guiding self-help group**. [Agile Coach, pos. 83]*			
*So I as an agile coach see myself as an **enterprise scrum master**. Where you help the **organization to overcome barriers towards more agility**. And this reflection is done with the product owners, the Scrum Masters, and inside the Agile teams. And from there I do get a lot of inside information. That I take with me and bring to the in our case the operations management team, where I basically reports news from the agile transformation side. And if there are **any blockers any hindering us any any issues that I can report to stakeholders to take care of it.** [Agile Coach, pos. 83]*	Regular reports to stakeholders for improvement		
*I remember there was one guy who was in that team he was kind of not the best fit and the rest of the guys just **in a really polite way**, said, hey, it looks like it's not working for us cooperation with you. [..] **especially with the feedback thanks to the mentoring from the from the scrum master** that actually helped them to understand **what the feedback is and how to work with feedback.** They were brave enough to actually speak about also like difficult things. [Agile Coach, pos 21]*	Understanding feedback to give right feedback		
*We have of course the **retrospectives which is part of the agile methodology** and also quarterly sessions. So we do that. We **really pick up also the ideas that are coming from there to really implement**. Next to that we also sort of look into how can we improve ourselves like in general as a team, so also with the group. For us, we can look into the organizational perspective in that way. [Agile Practitioner, pos. 107]*	Idea generation and implementation process in place		
*We don't just have one day of feedback day. You can make a proposal anytime asynchronously anytime on our platform or you can bring it up in a biweekly meeting. But it can be anytime brought up and you don't have to go through your boss which is going to help us **learn and grow as an organisation**. [Holacracy Coach, pos 81]*	Mechanisms to learn and grow as an organisation		
*And every once in a while when we have this **retrospective sessions**, we yeah, **we tweak these process a little** so actually it's also a bit like **total quality management constantly improving plan** do check act constantly. Asking ourselves, OK, are we still doing the right thing and are we doing the things right? [Scrum Master, pos. 169]*	Processes for continous improvement in place		
*Yeah, I could put it in a way of saying you can call for a revolution at any time. **Voice my feedback and get heard**, but I can also at any point propose alternatives. This **overcomes a big barrier found in the structure** of the traditional orgnanisations were I would have to go through different levels of managers. [Holacracy Practitioner, pos 187]*	Voice feedback and get heard	**Organisational Structure barriers**	
***Feedback is regularly provided on all levels**. I would like to to point to highlight we do have cross functional agile teams that come to bring to together people from different business units which are going to the direction on our organizational adaptive processes. [Agile Coach, pos 188]*	Feedback is provided on call levels		

Table 32 puts together the picture painted by the principle organisational adaptiveness in overcoming the barriers to *team structure barriers*. There are feedback mechanisms within teams and cross-function units that anyone who observes the need for can bring up. This enables team members to have their voices heard and feel empowered to see the suggested changes implemented.

Table 32 The role of organisational adaptiveness on group level barriers (own creation)

Exemplary Quotes	Meaning Unit	Code	Category
In terms of organisational adaptiveness, we do have **effective feedback mechanisms**, anyone can bring up a change they want to make – this is individual employee attitude, team structure	Effective feedback mechanisms	**Team Structure Barriers**	**Group Level Barrier**

Table 33 iterates that the presence of organisation structures that allow for individual, team, and organisational level learning empowers individuals to feel heard and empowered to see the difference their work makes. This further fuels their motivation and creativity to become more innovative. This way, the *barriers to employee attitude* are tackled.

Table 33 The role of organisational adaptiveness on individual level barriers (own creation)

Exemplary Quotes	Meaning Unit	Code	Category
In terms of organisational adaptiveness, we do have effective feedback mechanisms, **anyone can bring up a change they want to make** – this overcomes individual employee attitude	Anyone can bring up a change	**Employee Attitude Barrier**	**Individual Level Barrier**

In summary: Organisational adaptiveness is the higher level of individual adaptiveness, one without the other would hinder the implementation of both. Individuals who are can adjust to changes quickly would be motivated to have channels to implement these changes within their teams and organisations. Self-organising systems have the necessary structures and resources in place to implement these changes.

The Role of Overall Health on barriers to EDI

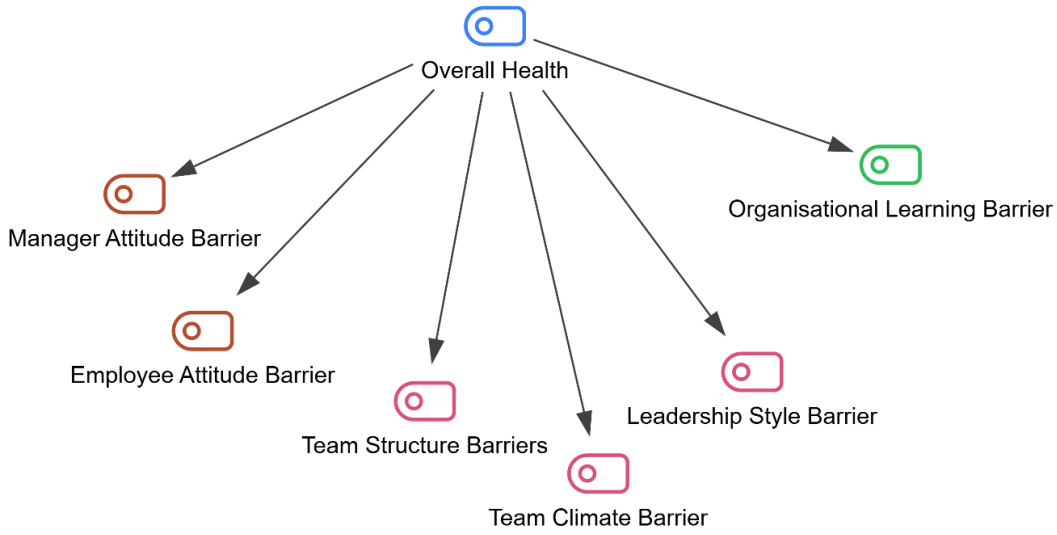

Figure 17 The role of overall health on barriers to EDI

Figure 17 shows the self-organising principle, overall health, and the barriers to employee-driven innovation this principle overcomes as discussed in the interviews conducted. It can be seen that overall health plays a role in addressing the pitfalls of organisational barriers, it can overcome the limitations of *organitsaion learning barriers*. Next, group level barriers such as team climate *barriers, leadership style barriers, and team structure barriers* are tackled on the group level. Furthermore, on the individual level, *employee attitude barriers* and *manager attitude barriers* are mitigated. The following sections will discuss in detail the interview excerpts and findings.

Table 34 effectively captures the essence of overall health in self-organisation and its role in resolving group-level barriers to EDI. Within self-organising teams, experimentation is encouraged and mistakes are seen as an opportunity to learn. This fail-fast attitude empowers individuals, departments and cross-functional teams to ideate, test their ideas and determine the best possible solutions. This approach creates a safe space that overcomes the *barriers of organisational learning*.

Table 34 The role of overall health on organisational level barriers (own creation)

Exemplary Quotes	Meaning Unit	Code	Category
*Agile way of working gives employees the mandate to take decisions and **make mistakes which allows them lots of learning.** [Agile Coach, pos. 57]*	Empowerment through learning and experimentation	**Organisational Learning Barrier**	**Organisational Level Barrier**

Table 35 summarises the role of overall health in overcoming barriers to EDI. Self-organising systems are seen to bring the necessary structure within organisations to involve all the right stakeholders in decision-making. In this way, all the people affected by the decision have a say in the project. This creates a nice environment of motivated people to really tackle the *barriers of team structure, team climate, and leadership style.*

Table 35 The role of overall health on group level barriers (own creation)

Exemplary Quotes	Meaning Unit	Code	Category
*Sharing of authority for an activity. Yes, I think we have this, [..] it overcomes the team structure, barrier. Because we are more **shared in authority, it depends on your role**. So **if your role is involved in a decision or a project, that you would have the authority** to do certain activities, you don't have to wait on the boss. [Holacracy Coach, pos. 68]*	Authority to make decisions to all those involved in the project	**Team Structure Barriers**	**Group Level Barrier**
*we are more shared in authority, this makes also overcoming the barrier of team climate nice, **because this is a nice environment to work**. [Holacracy Coach, pos. 70]*	Shared authority creates a nice work environment	**Team Climate Barrier**	
*the leadership style barrier is overcome, because it **overcoming this like, top down leadership approach** in the sense that we have also authority for the activity. So it's **more bottom up**. [Holacracy Coach, pos. 67]*	Bottom up leadership style	**Leadership Style Barrier**	

Table 36 illustrates the role of overall health in overcoming the barriers to manager and employee attitudes. All members within self-organising teams are considered leaders leading their responsibilities. In this sense, leaders approach their roles with a servant leadership style and are willing to distribute power throughout the organisation. Leaders are capable of trusting their team members to do their jobs well and are willing to create a safe space for experimentation and learning. Each individual within these structures is therefore empowered to bring their voice, ask the right questions, and deliver results. These attributes overcome the *barriers to manager and employee attitude*.

Table 36 The role of overall health on individual level barriers (own creation)

Exemplary Quotes	Meaning Unit	Code	Category
*overall health as last one, **sharing of authority for an activity**. Yes, I think we have this, I think this overcomes that manager individual barrier. [Holacracy Coach, pos. 62]*	Distribution of authority for an activity among members	**Manager Attitude Barrier**	**Individual Level Barrier**
*we don't need somebody who will think everything through like some sort of solution architect or designer and then just somebody needs to implement the task. **People are clever enough to figure out how to do things** and its also safe to experiment and sometimes fail. [Agile Coach, pos. 36]*	Leadership that trusts its employees		
*Provide **a safe space for employees to experiment.** And give them the mandate to take decisions and make mistakes. [Agile Coach, pos. 79]*	Experimentation is encouraged	**Employee Attitude Barrier**	

In summary: Overall health serves as a fundamental principle that enables the distribution of authority within self-organising firms. With this mindset, leaders can exercise their authority with empathy and create safe spaces for fast failing and learning. This further enables employees to bring their most creative and innovative selves in sharing responsibilities for their roles.

The Role of Collective effort on barriers to EDI

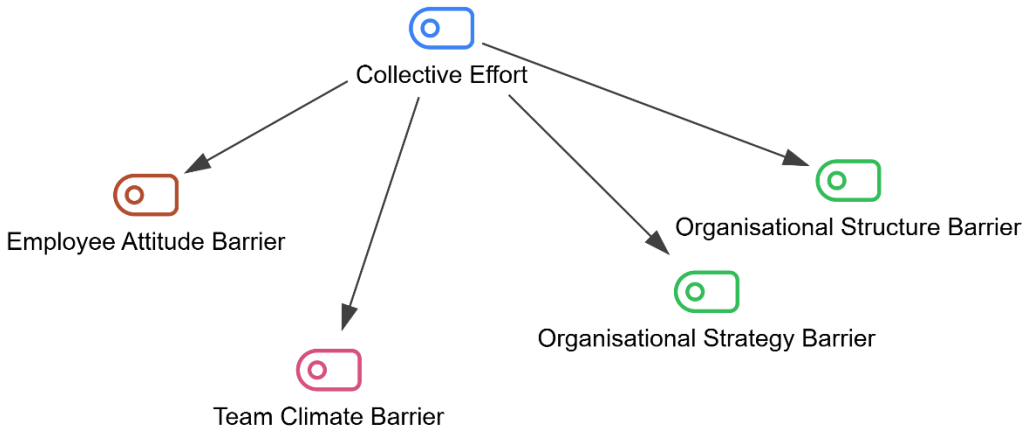

Figure 18 The role of Collective effort on barriers to EDI

Figure 18 shows the self-organising principle, collective effort, and the barriers to employee-driven innovation this principle overcomes as discussed in the interviews conducted. It can be seen that collective effort plays a role in tackling the barriers of organisational structure and organisational strategy on the organisational level. Within the group setting, it can overcome the limitations of *team climate barriers*. Furthermore, *employee attitude barriers* are mitigated on the individual level. The following sections will discuss in detail the interview excerpts and findings.

Table 37 summarises the role of collective effort in self-organisation and its role in resolving group-level barriers to EDI. Self-organising teams have flexible mechanisms for the distribution of responsibility, individuals within these structures can define new roles and assign them to individuals. Individuals are allowed to accept or reject the new roles created. There are additional frameworks in place to ensure the new responsibilities created are aligned with the overall vision of the company. This way, self-organising systems overcome the barriers to *organisational structure and organisational strategy*.

Table 37 The role of Collective effort on organisational level barriers (own creation)

Exemplary Quotes	Meaning Unit	Code	Category
*So right now in Holacracy, it's a **whole circle and then each circle has different roles**. [..] **then not necessarily the one person would only be assigned to one role.** It could be that if I am a battery engineering bookkeeper, I would also or I could be also a part of electrical engineer role or I might also be an engineering manager. [Holacracy Coach, pos. 115]*	Distribution of responsibility in terms of roles	**Organisational Structure Barrier**	**Organisational Level Barrier**
*Anybody in the **organization can ask anybody else to do a certain activity to perform a certain task, but the receiving side is always, always allowed to reflect whether it really is part of their accountability** that are assigned to their role. So you can reject anything. At first glance, he looks like being negative and saying well, it's not my business.But it triggers innovation to the extent that you need to be laser sharp in the organization to define. [Holacracy Practitioner, pos. 73]*	Flexibility in role assigning		
*Because we have this retrospective sessions also part of of Scrum where also the collective efforts are. [..] So we the **group as itself is also reflecting on the efforts that they delivered in the in the last Sprint**. [Scrum Master, pos. 117]*	Group alignment to vision	**Organisational Strategy Barrier**	

Table 38 captures the influence of collective efforts in overcoming the barriers to EDI on the group level. Self-organising teams have mechanisms in place for collaborative problem-solving. This enables members within and across teams to come together to work on projects allowing diverse perspectives to ideate solutions. This way the *team climate barriers* are overcome.

Table 38 The role of Collective effort on group level barriers (own creation)

Exemplary Quotes	Meaning Unit	Code	Category
We have pair programming, a key element. In a Sprint planning meeting, [..] the person can raise up and work together with someone who's more expert or more experience on the topic to learn. You have two people working on it and **two different ideas and two different people solving the same thing, which is again, the solution could be far more innovative than what one person could have done.** [Agile Coach, pos. 111]	Collaborative problem solving leading to innovative solutions	**Team Climate Barrier**	**Group Level Barrier**

Table 39 depicts the role of collective effort in overcoming individual barriers to EDI. Within self-organising teams, one employee would be able to take on more than one role and responsibility. This allows team members to diversify their expertise and contribute to more than one aspect of a project. Further, it allows for personal career growth which serves as a great motivation for each individual. This way the *barriers to employee attitude* are overcome.

Table 39 The role of Collective effort on individual level barriers (own creation)

Exemplary Quotes	Meaning Unit	Code	Category
*So right now in Holacracy, it's a whole circle and then each circle has different roles. [..] then not necessarily the one person would only be assigned to one role. so I think it is a good way to start in a team **I am happy that I'm able to contribute to different roles** because I will give a **background that I am an electrical engineer, but I had this vision that as my career goal I wanted to go towards more project engineering or project manager**. [Holacracy Coach, pos. 115]*	One employee can contribute to more than one role	**Employee Attitude Barrier**	**Individual Level Barrier**

In summary: Collective effort is a principle that creates the necessary channel for bringing together the right stakeholders within self-organising firms to make the right decisions. This way, the distribution of power is done which enables individuals to see their contributions to the overall vision of the company while also focussing on personal growth.

The Role of edge of chaos on barriers to EDI

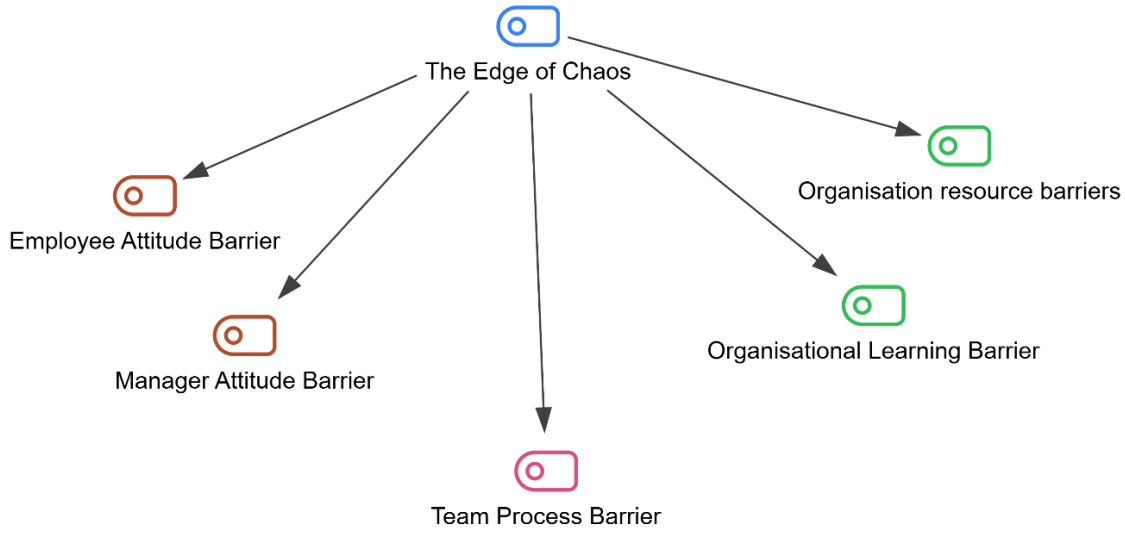

Figure 19 The role of edge of chaos on barriers to EDI

Figure 19 shows the self-organising principle, the edge of chaos, and the barriers to employee-driven innovation this principle overcomes as discussed in the interviews conducted. It can be seen that edge of chaos plays a role in overcoming the obstacles of organisation resource barrier and organisational learning barrier. Within group settings, it can overcome the limitations of *team process barriers*. Furthermore, *employee attitude barriers and manager attitude barriers* are tackled on the individual level. The following sections will discuss in detail the interview excerpts and findings.

Table 40 clearly illustrates the essence of the edge of chaos in self-organisation and its role in resolving organisational level barriers for EDI. Given the fluidity within self-organising teams, there could be complexity in operations. It is for this reason, that there are resources and structures in place to keep the wheels running. These resources make the complexity more transparent and understandable with time, creating the space for creativity and experimentation. This further helps in overcoming barriers to *organisation resources and organisational learning barriers*.

Table 40 The role of edge of chaos on organisational level barriers (own creation)

Exemplary Quotes	Meaning Unit	Code	Category
*we are quite working on a **complex environment**. [..], there is quite some interaction with others, but also quite some complexity, because we need to understand basically the whole chain. If we look on that, I think it's **really nice that we work agile basically because we can make our work more understandable and transparent** by doing so. [Scrum Master, pos. 155]*	Agile way of working has mechanisms that make complex environments understandable	**Organisation resource barriers**	**Organisational Level Barrier**

*We have other models that help to support the decision making. And **there's checks and balances that we've built into our self organizing firm**, so that if a mistake does happen, well, okay, but this was checked, like, for example, if you make a poor investment decision, well, okay, but there was a whole other **external sort of task force that overlooked that decision. And there's other parties that confirm that decision. So that it was we all made a mistake, we can all learn from this.** [Holacracy Coach, pos. 31]*	Mistakes are taken as an opportunity to learn	**Organisational Learning Barrier**	

The table 41 iterates the role of edge of chaos on the group level and the barriers to EDI it overcomes. To structure the flow of infomation within teams and across teams, self-organising systems have frameworks for communication and collaboration that overcome the *barries to team processes*.

Table 41 The role of edge of chaos on group level barriers (own creation)

Exemplary Quotes	Meaning Unit	Code	Category
*If you compare the old world with the new world, the old world may look from the outside clearer, more structured, the new world maybe be looking a little more dynamic moving around a lot of information popping up and a lot of things happening. So you need to really get your head around where. So you have so many different agile teams, **it can be overwhelming for some to find the right information**. This is why we stress on being very good in **communication in agile teams**. This also is why you see there's people getting more motivated because they have a feeling they can always contribute to something. [Agile Coach, pos. 103]*	Communication serving as mechanism to handle the chaos	**Team Process Barrier**	**Group Level Barrier**

Table 42 puts together a clear picture of the edge of chaos and its role in overcoming barriers to EDI on the individual level. A number of diverse individuals with different backgrounds, experiences and approaches are meant to cause some level of complexity, however, within agile teams, these differences are seen as strengths. There are mechanisms in place to bring an individual's authentic self to ideate and implement solutions. This way, there is space for mistakes, there is space for discussions and there is freedom for creative thinking. This enables both *employees and managers to overcome individual-level barriers.*

Table 42 The role of edge of chaos on individual level barriers (own creation)

Exemplary Quotes	Meaning Unit	Code	Category
*[..] you have so many different agile teams, it can be overwhelming for some to find the right information. This is why **we stress on being very good in communication in agile teams**. This also is why you see there's **people getting more motivated because they have a feeling they can always contribute to something.** [Agile Coach, pos. 103]*	Agile processes serving as motivation to individuals	**Employee Attitude Barrier**	**Individual Level Barrier**
***We challenge each other** like, hey, is this something which we really need to do or not and then we challenge each other more and also **learn because we have everything transparent** because now we can see. [Scrum Master, pos. 155]*	Challenging each other to learn		
*I **felt pretty empowered** to go ahead and **fully work through my role** and maybe **make more mistakes**, because **mistakes are seen more as an opportunity for growth** and learning rather than, hey, we're gonna penalize you [Holacracy Coach, pos. 32]*	Mistakes are viewed as learning opportunity by leaders	**Manager Attitude Barrier**	

In summary: Having individuals with diverse experiences, capabilities, and approaches work together in systems that offer high levels of flexibility could be complex however, this complexity is overcome by the simple and clear rules within self-organising systems. These systems allow

individuals to feel motivated and empowered to exercise their power within their roles in teams and departments.

The Role of maximised productive outputs on barriers to EDI

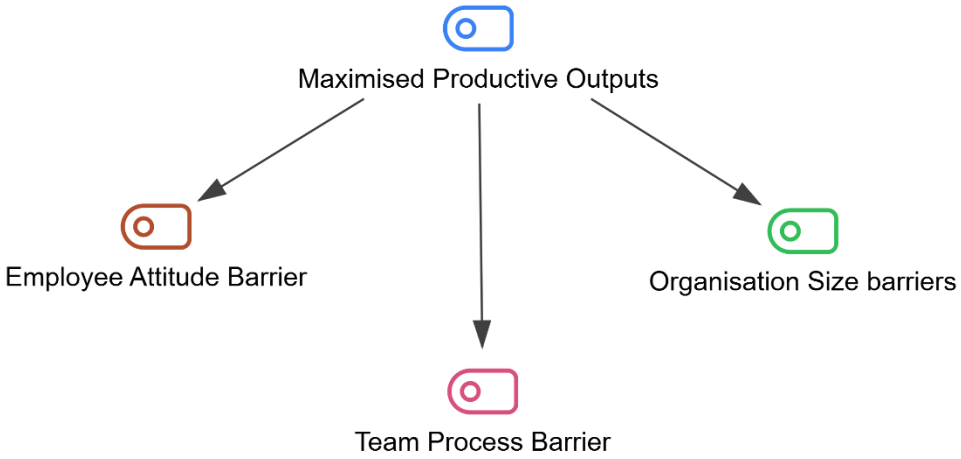

Figure 20 The role of maximised productive outputs on barriers to EDI

Figure 20 shows the self-organising principle, maximised productive outputs, and the barriers to employee driven innovation this principle overcomes as discussed in the interviews conducted. It can be seen that maximised productive outputs play a role in addressing the pitfall of organisation size barriers on the organisational level barriers. Within group settings, it is able to overcome the limitations of *team process barriers*. Furthermore, *employee attitude barriers* are tackled on the individual level. In the following sections will discuss in detail the interview excerpts and findings.

Table 43 summarises the role of maximised productive outputs in self-organisation and its role in resolving organisational level barriers for EDI. There are mechanisms in place within self-organising teams to oversee the reduction of double work done. The teams evaluate the resource allocation as there are clear roles and responsibilities defined. This way these systems are able to overcome the barriers of organisation size.

Table 43 The role of maximised productive outputs on organisational level barriers (own creation)

Exemplary Quotes	Meaning Unit	Code	Category
*It overcomes like the size of the firm so if we **don't have resource** in some place and **we have an over abundance of resources in one project** and you **work is double then you can switch and go work on something else.** [Holacracy coach, pos.]*	Reducing occurance of double work	**Organisation Size barriers**	**Organisational Level Barrier**

Table 44 effectively captures the crux of maximised productive outputs within self-organising systems and its role in overcoming barriers to EDI on the group level. There are mechanisms in place for continuous learning through feedback, iterative evaluations of work being done, and priority setting which overcome the *barriers to team processes*.

Table 44 The role of maximised productive outputs on group level barriers (own creation)

Exemplary Quotes	Meaning Unit	Code	Category
*I do believe definitely that **Holacracy creates a big better chance for processes to be sort of continuously updated** and to **evolve in the right level of detail.** [Holacracy Coach, pos. 101]*	Processes are able to evolve at the right level	**Team Process Barrier**	**Group Level Barrier**
*if the team starts working and it becomes more clearer, whether we need to be doing in the direction that they are **with every iteration in agile. There will be aligning more and more and there will stop doing things that are not necessary.** [Agile Coach, pos. 101]*	Iterative checks for optimisation		
*We have forums where we need formal approval but its not so written and that was one of the concepts of Holacracy. Its like **processes over paper work, processes over written information** and I thought that was good. [Holacracy Coach, pos. 109]*	Process over paper work		

Table 45 illustrates the influence of maximum productive outputs in overcoming barriers to EDI. Individuals are given the freedom and flexibility to figure out the way to achieve a goal. This enables people to identify the productive and efficient way to achieve their vision. This allows space for experimentation which overcomes the *barrier to employee attitude*.

Table 45 The role of maximised productive outputs on individual level barriers (own creation)

Exemplary Quotes	Meaning Unit	Code	Category
*If you give a lot of **degrees of freedom to employees** that are that also have a clear understanding of their purpose and the organizational aims. Then employees will naturally **figure out how to be most productive and how to kind of best achieve those goals,** because then they they don't have to adhere to the one fits all solution of of what the organization provide us a framework so they can. They can kind of everyone can gravitate towards their optimum in performing best. [Holacracy Practitioner, pos. 253]*	Freedom enables optimisation	**Employee Attitude Barrier**	**Individual Level Barrier**
*It overcomes like the size of the firm so if we don't have resource in some place and we have an over abundance of resources in one project and **you work is double then you can switch and go work on something else**.*	Flexibility to understand fit of employee		

In summary: Within self-organising teams, there is freedom and flexibility for individuals to figure out the most optimised way to carry out their responsibilities. There are processes to ensure feedback is heard and implemented within these projects. Resource allocation is evaluated based on the clear roles assigned so as to ensure no double work is done.

5. Summary and Discussion of Results

The following section summarises the results of the empirical research while carrying out a comparison with theoretical constructs and adds to the barriers to EDI designed in theory. As part of the empirical research, Vattenfall AB, a Swedish multinational company was chosen as the case study. Vattenfall AB is transitioning from a traditional structure to self-organising way of functioning with Business Units employing Holacracy and Agile way of working as their self-organising methods. Interviews with employees working in both holacratic teams and agile teams were conducted to understand how self-organisation is implemented and its role in overcoming EDI. 12 interviews were conducted, below is the summary of the findings.

All interviewees within self-organising teams at Vattenfall AB mentioned that the principles of self-organisation enabled them to become more creative and innovative. Each of these principles on their own and the combination of them eased the everyday operations to create a better environment within teams and aligned the goals of the organisation. Figure 21 summarises the role of self-organising principles in overcoming barriers to EDI at Vattenfall.

Radical decentralization *of authority.* An important characteristic of self-organising firms is the distribution of authority among its members thereby eliminating the manager– employee relationship Lee & Edmondson, 2017. This is seen to be true at Vattenfall where each member gets to define their own role, employees do not have managers who allocate work and dictate execution of tasks. With both self-organisation practices, it is seen that authority is distributed among its members with whom lies the accountability to fulfill their roles. There is a sense of empowerment and autonomy among employees as they see their roles providing them the freedom to make informed decisions. This overcomes the barrier of lack of experimentation as the are structures in place to create a safe space for making mistakes and learning from them. As every member of these teams is considered a leader (Hamel, 2011), leading their own work, a strong team culture that gives authority from the organisation to the individual is created. This overcomes the barrier of the absence of psychological safety, lack of open communication and creation of a hostile environment.

Formal Systems and Programs. The second important characteristic of self-organising systems is the presence of formal rules and a clear set of instructions for all frameworks (Lee & Edmondson, 2017). This is evident in the way the holacratic and agile teams work within Vattenfall. Interviewees explicitly mention that there are tools that provide utmost transparency to the individual roles and responsibilities creating a repository for easy connections, and mitigating lack of resource barriers (Hueske & Guenther, 2015). There are structures enabling group collaborations that are formed based on a shared purpose. The simplicity of the rules within these systems makes it easy to follow and provides clarity of operations overcoming barriers such as rigid organisational structures, departed silos, and lack of cross-functional collaborations.

Part of Ecosystem. This principle serves as a purpose for aligning the individual goals to the overall goals of the system. Within Vattenfall, both holacratic and agile teams have structures in place that ensure group work is aligned with the overall strategy of the company. This way, each individual is contributing to the overarching group which is contributing to the organisational goal via effective feedback mechanisms. These feedback mechanisms also provide learning opportunities and enable alignment with the strategy of the company. These aspects are able to mitigate barriers such as lack

of flexibility, lack of adaptability, organisational silos, lack of alignment to overall strategy, inadequate allocation of resources, and lack of knowledge sharing.

Coordination. For an organisation the size of Vattenfall having different departments work together is an essential part of operations, which can be achieved by effective coordination. Coordination is seen as the successful cooperation between two different entities via interdependence and interaction (Harder & Robertson, 2014). Within the self-organising teams at Vattenfall, their roles that function as bridges between different departments and enable teams to work with each other overcoming the barriers of departmental Silos, Lack of Cross-Functional Collaboration, and lack of flexibility. Diverse members within these teams are seen to collaborate with each other to achieve a common goal. There is a high willingness to help each other which creates a supportive environment overcoming barriers such as Lack of diversity, Lack of risk appetite, Lack of flexibility in leadership, Lack of open communication, and Absence of psychological safety.

Involvement. Involvement is defined as the idea of mutually benefiting the system and the individual by collaborating to thrive (Harder & Robertson, 2014). Self-organising teams have reduced barriers to exploring and taking on the responsibility which enables individuals to become very motivated and ease collaboration. This overcomes the barriers of lack of knowledge sharing and lack of experimentation (Hueske & Guenther, 2015). Individuals within these teams are seen to have a ahigh willingness to work in teams, and experimentation and are motivated to take ownership of their ideas. This overcomes the barriers of lack of engagement, lack of motivation, lack of accountability, and lack of shared purpose.

Adaptability. The need for individuals to be able to adjust to ever-changing environments is essential for survival. In this sense, the self-organising teams have tools in place that enable individuals to keep up with changes which helps in tackling the barriers of lack of tools, lack of adaptability, departmental silos, and inadequate allocation of resources.

Consciousness. The ability of an individual to hold themselves responsible for their duties translates into the group and thereby organisational responsibility (Harder & Robertson, 2014). This is the experience of members working within self-organising teams at Vattenfall. Individuals are able to exercise their authority while seeing each other as equals which creates collaborative group dynamics. This provides the necessary psychological safety for employees to experiment both on individual and group levels. These attributes overcome barriers such as the careation of a hostile environment, Lack of open communication, Absence of psychological safety, Lack of experimentation, Lack of shared goal or purpose, Creation of Bottlenecks, Inefficient decision-making, Absence of support¸ Lack of engagement, Lack of flexible mindset and Lack of accountability (Hueske & Guenther, 2015)..

Complexity. The ability of the organisation to integrate diversity and utilize the diverseness of its employees via cohorent unity adds to the complexity (Harder & Robertson, 2014). Within the self-organising teams at Vattenfall, there is a large degree of diversity in experiences, backgrounds etc which is brought together in cross functional teams to work on shared goals. This overcomes barriers such as lack of diversity, lack of risk appetite, creation of hostile environment, lack of open communication, absence of psychological safety, lack of experimentation, lack of motivation, lack of adaptability and lack of flexible mindset

Interdependance. Self-organising teams allow for the addition or removal of responsibility and dependance still remains on those that are directly affected by the task. This is acknowledged to be

true by interviewees who mention that there are different specialities working on shared goals who have the flexibility to decide their own responsibilities. This tackles the obstacles of lack of tools, lack of knowledge sharing, lack of diversity, lack of risk appetite, lack of distribution of authority, lack of information flow, lack of communication facilities and lack of equal connections.

Organisational Adaptiveness. Individuals ability to adapt to changes can be hindered if the organisation is rigid without any mechanisms to listen to and implement feedback (Harder & Robertson, 2014). Self-organising systems are structured such that both with individual and in an organisation, the flow of feedback is high with each voice being heard. There are frameworks in place for improvements to be heard, evaluated with the relevant stakeholders and implemented. This helps overcome barriers of lack of adaptability, lack of flexible mindset, lack of accountability, lack of feedback mechanisms, lack of structures to implement feedback, lack of cross-functional collaboration, lack of flexibility and lack of adaptability.

Overall Health. Shared authority contributes to the success of the shared goal in self-organising systems (Harder & Robertson, 2014). This is the norm within both the holacratic and the agile teams within Vattenfall. They are able to practise servent leadership style where individuals operate within group setting based on trust and mutual understanding. This over comes barriers such as absence of support, micromanaging leadership, lack of flexible mindset, lack of engagement, lack of open communication, absence of psychological safety, lack of experimentation and lack of shared goal or purpose.

Collective Efforts. The idea of responsible distribution of resources and returns is the guiding principle of self-organising teams. This is seen to be true at Vattenfall as employees have flexibility in deciding their roles, responsibilities and execution of tasks. Collaborative problem solving is enouraged and supported. This overcomes barriers such as, rigid organisation structures, departmental silos, lack of cross-functional collaboration, lack of alignment to overall Strategy, inadequate allocation of resources, lack of motivation, lack of adaptability and lack of flexible mindset.

Edge of chaos. Self-organising firms allow for enough chaos via flexibility and freedom but just enough order via rules and frameworks. As seen in the interviews this is true for the two self-organising practices within Vattenfall. The rules within these complex systems are simple enough to provide clarity but flexible enough to enable creativity and innovation. This overcomes barriers such as lack of change mindset, absence of support, micromanaging leadership, lack of engagement, lack of motivation, lack of adaptability, lack of flexible mindset, lack of knowledge sharing, lack of experimentation and lack of feedback mechanisms.

Maximised productive outputs. Self-organising firms are seen as open systems that maximise the product outputs and reduce the useless outputs produced (Harder & Robertson, 2014), this is true for all self-organising teams within Vattenfall. Both holacratic teams and agile teams have frameworks in place to evaluate the resource and responsibility allocation that works to reduce useless work. This overcomes barriers such as, creation of bottlenecks, inefficient decision making, lack of structured systems, lack of optimisation, lack of adaptability, lack of flexible mindset, lack of accountability, lack of agility and bureaucratic structures.

Based on the above findings, the barriers to EDI originally identified in literature can be expanded as follows as Self-organising teams are able to specifically overcome these,

Table 46 Revision of barrier categorisation and labelling

Category	Theoritically categorisation	Empirically revised categorisation
Organisational Barriers	Organisational Strategy Barriers	Lack of alignment to overall Strategy
		Inadequate allocation of Resources
		Fragmented innovation efforts
	Organisational Structure Barriers	Rigid Organisation Structures
		Departmental Silos
		Lack of Cross-Functional Collaboration
		Lack of flexibility
		Lack of adaptability
	Organisational Size Barriers	Lack of Agility
		Bureaucratic Structures
		Lack of risk taking affinity
	Organisation Resource Barriers	Lack of tools
		Lack of knowledge Sharing
	Organisational Culture Barriers	Lack of experimentation
	Organisational Learning	Lack of experimentation
		Lack of feedback mechanisms
		Lack of structures to implement feedback
Group Barriers	Team Structure Barriers	Lack of diversity
		Lack of information flow
		Lack of communication facilities
		Lack of equal connections
	Team Climate Barriers	Creation of hostile environment
		Lack of open communication
		Absence of psycological safety
		Lack of experimentation
		Lack of shared goal or purpose
		Lack of feedback mechanisms
	Team Process Barriers	Creation of Bottlenecks
		Inefficient decision making
		Lack of structured systems
		Lack of simple rules
	Member Characteristics barrier	Lack of diversity
		Lack of risk appetite
		Lack of distribution of authority
	Leadership Style barrier	Lack of flexibility in leadership
		Lack of empowered employees
		Lack od clear communication
Individual Barriers	Manager Attitude barrier	Lack of change mindset
		Absence of support
		Micromanaging leadership
	Employee Attitude barrier	Lack of engagement
		Lack of motivation
		Lack of adaptability
		Lack of flexible mindset
		Lack of accountability

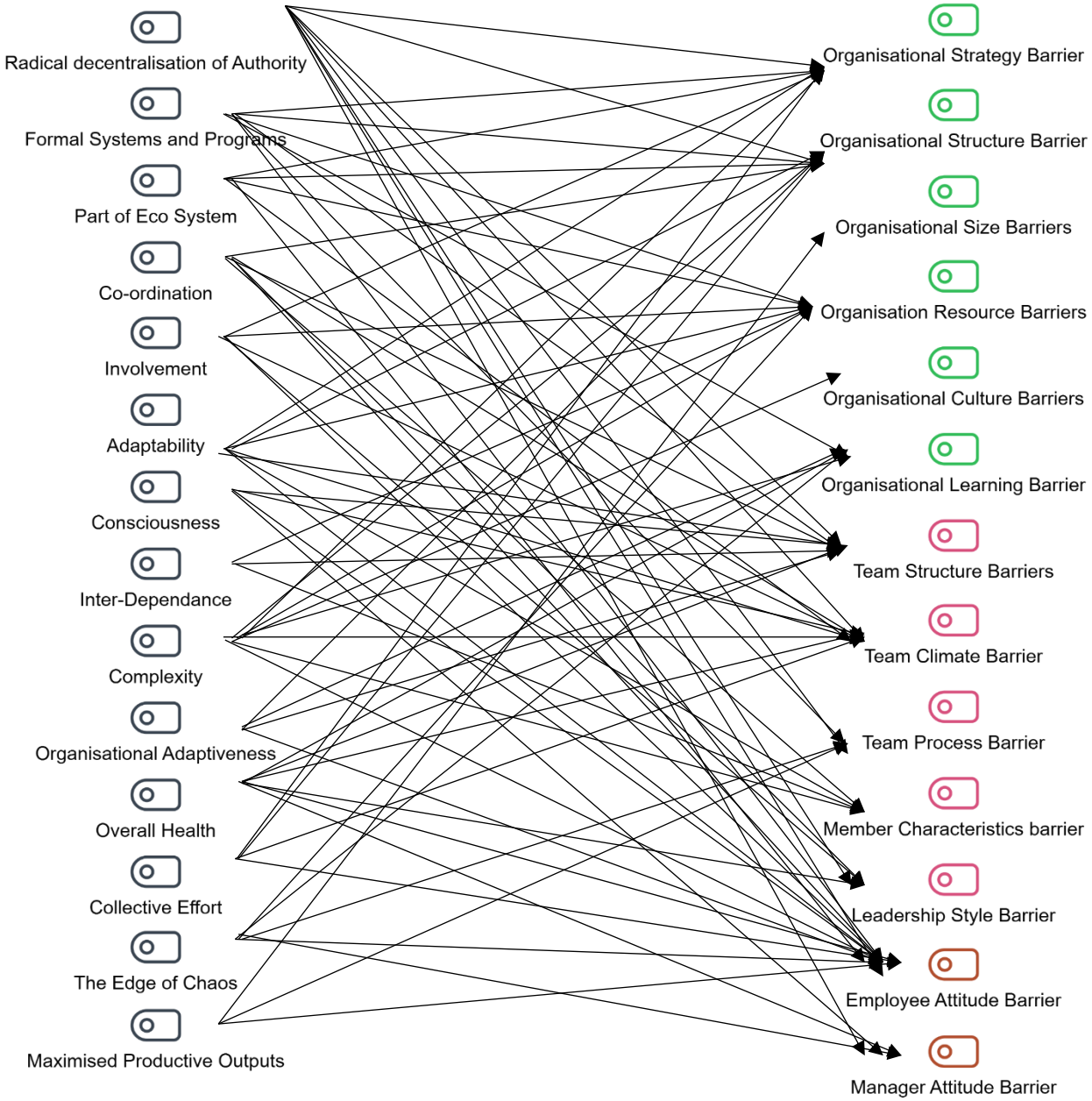

Figure 21 the role of self-organising principles in overcoming barriers to EDI

5.1. Theoretical Implications

The research conducted in this thesis contributes to a number of open research topics existing in the literature today. Firstly, even though, assessing the impact of organisational designs is perceived to be difficult (Hackman, 1986), it is essential to design studies that understand the consequence of radically new forms of organisations and the changes they bring. Analysis of existing research has shown significant differences in antecedent–innovation relationships in various types of organisations (Camisón et al., 2004; F. Damanpour, 1991) however, there are no existing studies to the best of the author's knowledge that explore the role of self-organising principles on the barriers to employee-driven innovation. In this sense, this thesis provides a comprehensive analysis that closes this gap. The literature research carried out is structured to understand the concepts of innovation management, employee-driven innovation, self-organising principles in depth. The theoretical model ideated theorizes the possible connection between the two concepts. This model is used for empirical search.

The qualitative analysis method, chosen to study the topic discussed from the lived experiences of the participants provides detailed examples that add value to understand the operations within self-organising firms and the role of these principles in over coming barriers to EDI. By choosing the EOGI barrier model for the barriers to innovation management (Hueske & Guenther, 2015) a comprehensive study is conducted to understand the concepts from three different perspectives as applicable to EDI. The principles as described by (Lee & Edmondson, 2017) and Harder & Robertson, 2014 provide a detailed understanding of self-organising firms. These aspects put together are used in the interview to understand the influence of the roles in overcoming the barriers. In general, the research begins a discussion about organisational designs and their role in innovation management, specifically in self-organising firms which is at this moment an under-exposed field of reserach. The interviews revealed further areas of research that can be taken up by researchers such as the interdependencies between self-organising principles and their role in employee-driven innovation, the practical impediments in restructuring a traditional organisation into a self-organising firm, and many more.

5.2. Practical Implications

In addition to providing theoritical insights, this thesis provides valuable information to leaders and organisations that are practising or looking practise self-organisation. The interviews with employees within holacratic and agile way of working provide evidence that self-organising principles play a significant role in empowering employees to take accountability and responsibility. There are structures in place to translate this accountability to successfully align to the company's strategy. The empirical research is proof that even a multinational company that operated as a traditional heirarchy can adapt to changing times and shift to non-heirarchical structures.

Implications for organisations: The principles identified in theory are seen to be true in practice within the self-organisng teams at Vattenfall which can be extended to other organisations. Among all the principles, firstly, distribution of authority from the organisation to individuals while putting structures in place to guide towards the purpose of the organisation has enabled the company to work towards its vision as a whole. Stakeholders within organisations can evaluate ways to incorporate this principle to overcome barriers such as lack of alignment with overall strategy, inadequate allocation of resources, rigid organisational structures etc. Second, putting formal rules that are simple and aid the governance while operating in complex environments are seen to create transparency. This then serves as a resouce to identify the right stakeholders, align with the overall strategy of the company and overcome barriers such as lack of knowledge sharing, lack of tools and creation of bottle necks. Third, creating robust feedback mechanisms that allow open communication aid individuals to make deicisions via learning and create alignment between cross-functional teams. In general, each firm can evaluate its current organisation structure and adopt principles of self-organisation that suit them the best. Additionally, it is essential for organisations to note that in the initial transition phase, the complexity of the change bears the highest burden, but with time, the self-organising practice seems to bear fruit.

Implications for groups level: On the group level, the self-organising principles that have made the difference on a group level are to begin with, a strong team culture is created by giving authority to individuals from organisation. This enables team members to take responsibility for their roles. Since each member is a leader leading their role, equal connections are formed. In order to aid collaboration team structures and tools are in place that allow for transparency, easy communication and

collaboration. Furthermore, diversity is seen as a positive virtue within self-organising systems enabling collaborative problem-solving. As supportive teams are formed, there is a high willingness to hear each other out, provide open feedback, align with product visions and adapt to changes contributing to overall vision. These attributes help teams overcome barriers such as departmental silos, creation of hostile environment, lack of diversity, fragmented innovation efforts etc.

Implications for invididuals: On an individual level, the recurring theme in the interviews were the influence the self-organising principles have on the employes lived experiences. The distribution of authority to make decisions that contributes to the strategic development of the company not only empowers individuals, it also provides their work meaning which in turn improves their motivation. Individuals with high levels of motivation are willing to help each other, take accountability for their roles, are open to accepting the risk and are adaptable to change. This creates a supportive environment where experimentation is encouraged leaving space for higher levels of creativity and innovation. Since every member is considered, a leader leading their roles, they operate with mutual trust and understanding that facilitates a people-oriented leadership style. These attributes within self-organising teams have been able to tackle the lack of change mindset, lack of accountability lack of engagement, lack of motivation, lack of adaptability, absence of support and, micromanaging leadership.

5.3. Limitations and Further Research

As is the case with most qualitative research, the broad generalisability of this thesis is limited for a number of reasons. Firstly, given the nascent stage of research on the topic of self-organisation and employee-driven innovation, a single company was chosen for the case study to obtain rich descriptions and understanding of the phenomenon via multiple interviews. Along with the initial insights obtained in this thesis, the author recommends further exploration of concepts identified in other firms practicing self-organistion principles. Secondly, only two forms of self organisation area being studied here due to time and scope constraints, an expanded research could be conducted on the other forms of self-organsiation practices. Thirdly, with the initial insights gained in this thesis, it would be valuable to conduct quantitative research to further quantify the weightage of each of these principles and the barriers to EDI they overcome. Additionally, with respect to the methodology, qualitative research methods other than a case study and sample interviews can be used for example, observational method or focus groups to get more real time data.

Furthermore, for a comprehensive study following research topics can be explored,

1. Implementation complications of self-organising principles is a reality that is not considered in this thesis which could be explored qualitatively.

2. Understand the new barriers to EDI self-organising principles cause within self-organising teams and determine methods to overcome them.

3. Explore the interdependencies between the self-organising principles and their role in overcoming barriers to EDI.

4. Conduct a quantitative study to understand which of the principles play the most significant role on which barriers, for example: How does radical decentralisation of authority impact employee attitude?

6. Conclusion

1. Although organisations are putting employees at the center of their innovation management activities, traditional hierarchical systems have a number of barriers that impede employee-driven innovation. Self-organisation systems have rules and structures in place that create an environment that empowers employees thereby enabling organisations to become more innovative. However, research on both self-organisation and employee-driven innovation is at the moment in a very nascent stage. This thesis provides an overview of the problem analysis and the need for conducting research on these topics. The research aims and objectives are defined to understand the scope of the research. Theoretical concepts such as, innovation management, sources of innovation, employee-driven innovation, barriers to employee-driven innovation and, self-organisation are discussed in detail. Information on these topics is quite fragmented in literature and this research provides a comprehensive overview.

2. By conducting detailed literature research, upon getting a clear understanding of the concepts discussed above, a list of barriers to EDI was identified from the findings of Hueske & Guenther, 2015. The 13 barriers identified were on an organizational level - Strategy, structure, size, resource, organisational culture, organisational learning. On the group level - team structure, team climate, team process, member characteristics, and leadership style, and on an individual level - manager and employee attitude. Further research on self-organisation offered a list of 14 principles and characteristics that served as the basis for the empirical model to be tested. Additionally, a theoretical model was ideated.

3. In order to empirically test the model, a research methodology was designed. Given the nascent stage of research on this topic is, qualitative analysis was chosen as the best fit for research. Further to understand how the concepts identified in theory are practically implemented a single case study approach was chosen. Case sampling criteria were defined and Vattenfall was chosen as the best fit for the case study as it fit 7 out of the 8 criteria defined. Semi-structured interviews were chosen as the path for primary data gathering and interview guidelines were defined along with interviewee sampling criteria. Further following ethical rules of research interviews were conducted and primary data was obtained.

4. Primary data gathered was then uploaded in the QDA analysis software MAXQDA and coding of data was done. With the codes obtained, qualitative data analysis was conducted to obtain themes and insights. It was noted that as identified in theory the structures and rules within self-organisation systems do play a significant role in overcoming barriers to EDI. Implications were derived for both theory and practice. This thesis contributes to a number of open research topics in existing literature starting with providing comprehensive information on concepts such as Employee-driven innovation, barriers to employee-driven innovation, and self-organisation. Currently, research on these topics is fragmented information in different publications and articles. There are very few studies conducted to understand organisational innovation specifically there are no studies on the role of self-organisaiton in overcoming barriers to employee-driven innovation to the best of the author's knowledge. This gap is closed by the comprehensive research conducted in this thesis. The qualitative analysis method chosen provides insights from the lived experiences of employees in self-organising systems. There are a number of practical implications of this research, beginning with, the barriers identified in theory being further extended and a more detailed list of barriers that were overcome by self-organising systems was documented. Each of the principles and characteristics of self-organisation systems is seen to play a significant role in overcoming barriers to EDI which are discussed in detail in the results and implications sections and serves as a guideline to companies trying to understand organisational innovation.

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Appendices

Appendix 1. Pre-Read document for interviewees

PRE-READ INFORMATION

This informational brief is crafted to supply relevant research insights to interested interview candidates.

My name is Supritha Sheshadri. I am a working student at BA Markets, currently pursuing my masters degree at the Hamburg University of Technology. I am working on my master thesis at the moment. The topic being researched is in the field of Innovation Management.

Research setting: The interview is part of the empirical research of my master thesis on the topic, "The Role of Self-Organizing Firms in Employee-Driven Innovation". The thesis is supervised by Dr. Jolita Čeičytė-Pranskūnė at Kaunas University of Technology and is the final project of the international double degree master "Global Technology & Innovation Management and Entrepreneurship" organized by Kaunas as well as Hamburg University of Technology.

Research relevance: In the EU every other company engages in innovation activities. The need to reconfigure and innovate in the face of change is one of the dominant issues that underlies business strategy making today. Globalisation and rapidly moving information are making many industries more complex and competitive. The high pressure on firms due to the ever-changing culture, business models, and technology are driving companies to re-examine their processes, environment, resources and behaviours to become innovative. A more recent theory, in using employees in the development of organisations, is Employee-driven innovation (EDI). This approach adapts a systematic involvement of employees in the innovation process, centered on idea generation from employees, and a framework that can transform these ideas into new tools or working processes. The old hierarchical system is excellent for stable, slowly changing circumstances, but rapidly changing environments often call for more flexibility. In that direction less hierarchical organisations are being formed. The three main trends motivating the creation of less hierarchical organisations are fast pace of change, knowledge based economy and employee's search for meaning at the work place. This has led to companies restructuring their organisations. One popular method putting employees at the center of its organisational structure are Self-Organising firms. While the stated rationale for adopting self-managing organizations is often to increase organizational responsiveness and improve the employee experience at work, assessing the causal impact of organizational designs is notoriously challenging and therefore scarcely explored. Research on Self-Organising firms is in its infancy. Research on the role of Self-Organising firms in Employee-Driven Innovation is in its very beginning stage.

Research aim: The aim of the research is to develop an understanding of the role of Self-Organising Firms in overcoming barriers to Employee Driven Innovation.

Research design: Beginning with a semi-systemic literature review, relevant theory on the topics, Innovation Management, Employee-Driven Innovation, Barriers to Employee-Driven Innovation and principles of Self-Organising firms were reviewed. Problem analysis was conducted from economic, organisation, regulatory and research perspective. Based on the literature a theoretical model was ideated to comprehend the role of Self-Organising firms in Employee-Driven Innovation. As the next step, empirical research is being conducted with an aim to generate and analyse practical insights from practitioners. To realise this aim, semi structured interviews with industry practitioners within Self-Organising firms are being conducted. The empirical insights derived from these interviews will be synthesized with theoretical findings collected earlier for comprehensive analysis.

Having read the above context, if you are interested in participating in the interview process, please read the consent form that contains information on the details of the interview.

CONSENT FORM: PARTICIPATION IN INTERVIEW

This form concerns your participation in an interview on the research topic, "The Role of Self-Organizing Firms in Employee-Driven Innovation".

1. Your participation in the interview is voluntary. You may withdraw and discontinue participation at any time or decline to answer any question. You will not receive any (financial) compensation for your participation in this research. However, the results of this study can be made available to you upon request.
2. The interview will typically last approximately 30-45 minutes. Interviews will be conducted between 01.04.2024 - 12.04.2024 via Microsoft Teams.
3. Notes will be taken during the interview, an audio recording of the interview will be made, and the audio recording of the interview will be transcribed.
4. To protect your privacy, your name will not be included in the recording. Other potentially identifying information will not be included in the transcription of the audio recordings when this information is irrelevant for research purposes.
5. It will be ensured that you are not identifiable in publications that follow from this interview, by changing your name and disguising or not disclosing any details that reveal your identity. Disguised extracts from the interview may be quoted in future publications.
6. You are entitled to access the information you have provided at any time while it is in storage. You are also free to contact me to seek further clarification and information.
7. Your consent indicates that you are at least 18 years of age; you have read this consent form; your questions have been answered to your satisfaction and you voluntarily agree that you will participate in this research study.

Researcher: I – as a student enrolled in the master's program "Global Technology & Innovation Management and Entrepreneurship" at Kaunas University of Technology & Hamburg University of Technology – commit to strictly adhering to all the points listed

Participant: At the beginning of the interview, you will be asked to indicate your consent by verbally agreeing on the content of this form.

Having read the above information, if you are interested to participate in the interview kindly write to me via one of the below communication channels,

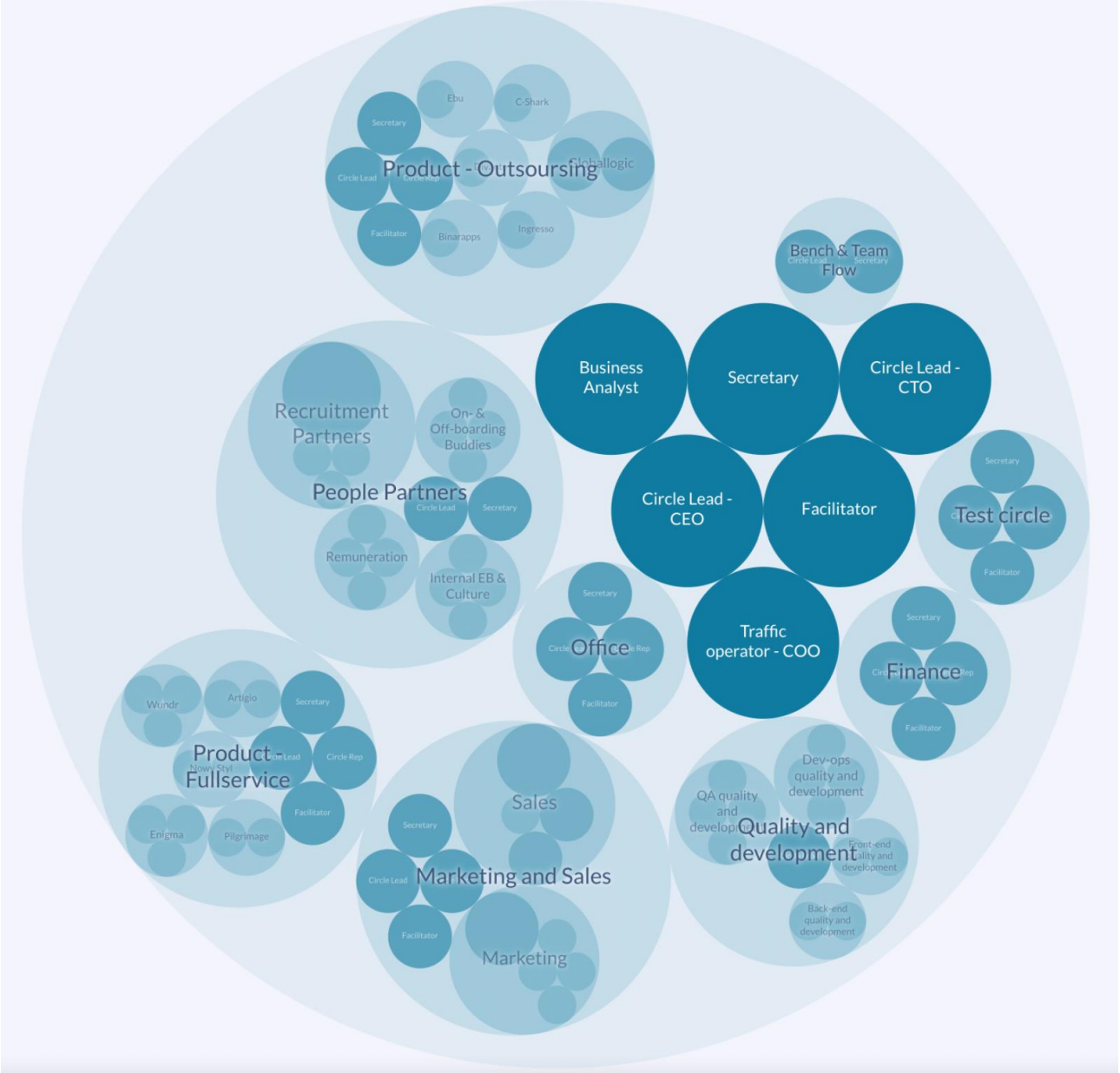
Email: [redacted]

Teams: Supritha Sheshadri

I would be happy to answer any questions you have regarding the interview via the above communication channels as well.

Thanks in advance.

Appendix 2: Example of holacratic organisation structure using the holaspirit platform



Appendix 3: Example of the structure of an Agile organisation based on the famous spotify model