



## **FREEDOM IN THE ROLE OF A PRODUCT OWNER**

A case study of the role and requirements of a Product Owner  
in a large-scale agile environment

Lappeenranta–Lahti University of Technology LUT

Master's Programme in Software Product Management and Business

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## ABSTRACT

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### **Freedom in the role of a Product Owner: a case study of the role and requirements of a Product Owner in a large-scale agile environment**

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112 pages, 15 figures, 10 tables and 3 appendices

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Keywords: Product Owner, role, large-scale, Agile, freedom, prioritization

The role of the Product Owner is given a mandate to build and advance the success of a product. A product can be anything that is placed on the market to meet demand or need of customer. Agile software development is often used in software development to support such an assignment. At a general level, the project framework defines the role, as well as events from which the everyday work of the Product Owner is built. However, the Product Owner works as a part of an organization, which is organized in the way the company wants. Thus the implementation of the role of the Product Owner may be varied and the implementation modalities vary according to the freedoms or restrictions given to the role.

The purpose of a Product Owner is to build a business with products. This role enables business success stories when the product or products succeed. How the role of Product Owner is seen from the outside gives a mandate to do the job. Freedom in this role determines the extent to which the Product Owner can fulfill his or her role. The Product Owner's operating area can extend around their own team or into multiple teams. Alternatively, the Product Owner can take their vision across tribal and segment boundaries to the top of the organization. The Product Owner strives to bring the benefits of the product holistically to the company's use and thus enable the emergence of new abilities.

The study has been carried out as a qualitative case study in a large company with a large-scale Agile organizational structure. For the research, 18 interviews in Finnish were conducted with video calls using a set of questions.

Ways to plan and prioritize the work of Product Owners are described in this study. Some Product Owners find their work as straightforward. In addition, some feel that their potential is not being exploited. In here, the obstacles are slowdowns or constraints imposed by the organization. The theme of the study is also decision-making power, i.e., to whom the Product Owner can say no, and in this way control the direction of the product. The role of the Product Owner is crystallized, and the content is guided by the entrepreneurial mindset of the Product Owner, and the aim of this analogy is to assist the Product Owner in the work. This study highlights how much entrepreneurial freedom Product Owners experience in their work.

## TIIVISTELMÄ

Lappeenrannan–Lahden teknillinen yliopisto LUT  
School of Engineering Sciences  
Ohjelmistotuotanto

Piret Niva

### **Vapaus tuoteomistajan roolissa: tapaustutkimus tuoteomistajan roolista ja vaatimuksista skaalatussa ketterässä ympäristössä**

Diplomityö

112 sivua, 15 kuvaa, 10 taulukkoa ja 3 liitettä

Tarkastaja(t): professori Sami Hyrynsalmi ja professori Maria Paasivaara

Avainsanat: tuoteomistaja, rooli, ketterä, vapaus, priorisointi

Tuoteomistajalle annetaan roolin myötä mandaatti rakentaa ja viedä eteenpäin tuotteen menestystä. Tuotteeksi voi kutsua mitä vain, joka viedään markkinoille täyttämään kysyntää tai tarvetta. Tällaisen toimeksiannon tueksi käytetään ohjelmistokehityksessä usein ketterää ohjelmistokehitystä. Projektin viitekehys määrittää yleisellä tasolla roolin, sekä osoittaa tapaamisia, joista tuoteomistajan arki rakentuu. Kuitenkin tuoteomistaja työskentelee osana organisaatiota, ja organisaatio järjestäytyy yrityksessä haluamallaan tavalla. Täten tuoteomistajan roolin toteutus voi olla kirjava ja toteutustavat vaihdella roolille annettujen vapauksien tai rajoitteiden mukaan.

Tuoteomistajan pyrkimys on rakentaa liiketoimintaa tuotteilla. Tämä rooli mahdollistaa liiketoiminnallisia menestystarinoita, kun tuote tai tuotteet menestyvät. Se, miten tuoteomistajan rooli nähdään ulkopuolelta, antaa mandaatin hoitaa työtä. Vapaus tässä roolissa määrittelee, kuinka suuresti tuoteomistaja voi rooliaan toteuttaa. Tuoteomistajan toiminta-alue voi ulottua oman tiimin ympärille tai useampaan tiimiin. Tai tuoteomistaja voi viedä näkemystään läpi heimo- ja segmenttirajojen organisaation huipulle asti. Tuoteomistaja pyrkii tuomaan hyödyt tuotteesta kokonaisvaltaisesti yrityksen käyttöön ja näin ollen mahdollistamaan uusien kyvykkyyksien syntymistä.

Tutkimus on toteutettu kvalitatiivisena tapaustutkimuksena isossa yrityksessä, jossa on otettu käyttöön suuren mittakaavan ketterä organisaatorakenne. Tutkimusta varten toteutettiin videopuheluilla 18 suomenkielistä haastattelua kysymyspatteriston avulla.

Tuoteomistajien työn suunnittelun ja priorisoinnin tapoja on kuvattu tässä tutkimuksessa. Osa tuoteomistajista kokee työnsä virtaviivaisena ja osa kokee, että heidän potentiaaliaan ei hyödynnetä. Tällöin esteenä on mm. organisaation tuomat hidasteet tai rajoitteet. Tutkimuksen teemana on myös päätösvalta, eli kenelle tuoteomistaja voi sanoa ei, ja tällä tavoin ohjata tuotteen suuntaa. Tuoteomistajan roolia kiteytetään ja sisältöä ohjataan tuoteomistajan yrittäjämäisellä ajattelutavalla, ja tämän analogian pyrkimyksenä on edesauttaa tuoteomistajaa työssään. Tämä tutkimus nostaa esille, kuinka paljon yrittäjämäistä vapautta tuoteomistajat kokevat työssään.

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## CENTRAL CONCEPTS

Agile	An iterative and incremental way to build software
Backlog	Contains prioritized list of requirements for product
Chapter	A group working in the same area of expertise
DevOps	Software development (Dev) and IT operations (Ops)
D&T	Development & Technologies
Event	Agile Event (formerly Agile Ceremony)
Feature	Function or service in a product
IT	Information Technology
PO	Product Owner
PO Sync	Product Owners' Synchronizing meeting
Product	Item or service which is delivered to customer
QBR	Quarterly Business Review
SAFe	Scaled Agile Framework
Scrum	A framework for software development teamwork
Story	Description of desired functionality
Tribe	Team including teams with different specialists

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## 1. Introduction

The role of a Product Owner is often looked at in many academic research and books from the perspective of what their role and requirements are; what are the critical responsibilities. The Product Owner is expected to participate in the communication, design, and agile events, i.e., to add to them with their own expertise. Using a roadmap, and in such way creating a vision, is also seen as an important task in this role. (Matturro et al., 2018) More research is needed into the potential of this Product Owner role. In order not to build boundaries for product development by just defining this role, but to accept in the Agile organizations, what each person with a Product Owner's mandate can add value to the company in terms of their own background and personality.

The Product Owner should own the product and sign the way for it. The requirements for the role include events defined by Agile. Yet, there are undocumented requirements and organizational pressures which also impact to the work of the Product Owner. Therefore, there is a need for this study, which examines the freedoms of the role of Product Owners: how freely Product Owners can carry out their tasks and vision. Studies indicates how much time is spent in the role's tasks and what they should do in everyday work. However, the role of the Product Owner is more than taking care of the day-to-day running of the workday. The Product Owner should understand the technology and software development, as well as be able to say no, because team cannot implement every idea (Kelly, 2019). This study seeks more information on what can really be done in a Product Owner's role; how the Product Owner works in the jungle of others and their own requirements and ideas. According to Kelly (2019), the role of Product Owner brings little value if it is just backlog maintenance.

Product Owner role is reasonably new in agile software development and organizations. The requirements of the role of the Product Owner leave room for interpretation and movement. Responsibilities have been defined for the role, e.g., in the form of events, but the name of the role alone refers to a broader whole: *product ownership*. The aim of this master's thesis is to study and analyze the role: how Product Owners' see their work, and which are the requirements, how Product Owners define their own work and how they position themselves in the Agile organization.

Robert Frost was an American poet who once stated:

“Freedom lies in being bold” (Frost, 1952)

Winged by the Frost’s definition, this master’s thesis contemplates freedom, because freedom speaks to philosophers, poets, and business creators from decade to decade. In addition, freedom comes from people. This master’s thesis will create a view, how free Product Owners perceive their job image and its possible boundaries, and how freedom is realized in practice. Agile environment seeks to support autonomy, especially in the way teams work. However, this study seeks to explore freedom, how Product Owners could, with good justifications and expertise, find more freedom to act in the role of Product Owner.

The remaining of this thesis is structured as follows. Section 2 reviews the literature used as a basis for the research. Section 3 introduces the research approach, research questions and the ways in which the data have been collected and validated. Section 4 presents the case company from financial sector, where this research is conducted, and the interviewees. Section 5 answers the research questions and presents the results. Section 6 discusses this research and section 7 summarizes the research in the form of conclusions.

## 2. Literature

The literature review reviews the history of the Product Owner role and the requirements of the role. The role of Product Owner has been implemented in many ways. This section opens what the Product Owner role is expected to take on. The role is also compared to the role of Product Manager, an old and well-known title with many similarities to the role of Product Owner. In addition, literature review creates a general overview what does large-scale Agile mean to companies and organizations.

### 2.1 Product Owner and product

As the name of the role suggests, the Product Owner owns the product. The Product Owner tries to get the most out of the product under development and add value to the product. The verb own has two meanings: 1. have legally; and 2. admit (“Meaning of own in English,” 2021). Product Owner have been given a mandate from the employer to take product development forward; legally owning the product. But Product Owners also take on this responsibility themselves when they choose to work in this role. So, Product Owner admits the responsibility for the product and makes the responsibility taking visible in the backlog prioritization. In this way, the Product Owner shows in which direction there is an intention to export the product. The product backlog is a list prioritized by the Product Owner of everything the product may contain (Dalton, 2019). The interpretation of the meaning of "own" is a matter of interpreting the meaning of the word. However, the role of the Product Owner has been documented e.g., in the principles of Agile development. One of the principles is that Product Owner takes care of the team’s backlog.

“The Product Backlog is an emergent, ordered list of what is needed to improve the product” (Schwaber and Sutherland, 2020).

In this case, the backlog is considered in terms of product needs. Product development is directed by the person who fills and prioritizes the backlog. Based on the backlog content developers build and modifies features, and fix bugs. (Sedano et al., 2019) Usually it is the Product Owner who directs the product development.

The Product Owner represents the customer and the customer's and her or his strategic needs (Bass, 2015). A product is one that leads to a consensus among stakeholders, i.e., product management, development, sales and marketing, and executives. It is important to define a product because product priorities and focus change over time: usage, user groups, functionality and quality factors, user experience orientation, compatibility, need for customization and delivery models. Creating a product requires developing and testing a product definition, as well as creating a roadmap. The core idea for Product Owners is that they need to have customers in order to have a business. (Kittlaus and Fricker, 2017) There will be always new needs for products and new trends in implementation methods. The Product Owner controls the direction of the product and identifies the needs of the product. The customer of the product can also be the company itself when the product is built for internal needs. Product can be understood as a variety of entities. The product can be a product or product package which the company has built itself. It can be a product purchased for the company, that is integrated into the company's systems and further development has done on top of it inside the in the company that bought it. Alternatively, a product can be, for example, a channel that includes several products: interfaces, integrations, and systems.

Customer value is condensed into what the customer wants and when the customer wants it. With customer value, the probabilities of making money with a product increase when the product is successful. The cost conditions must also be in place for the product to be successful. Success is an adaptive target, because what customers consider valuable today may change tomorrow. (Moreira, 2013) It is the job of the Product Owner to create value for the product. As The Scrum Guide (2020) states, together with the team, Product Owner is responsible for maximizing the value of the product. This is often achieved by striving to generate customer value through the product. There are a lot of ordinary consumers in the financial sector. In addition, the customers are companies and the case company's own internal users, e.g., system that use a certain interface, i.e., a product.

## 2.2 History of Product Owner

The title of Product Owner is introduced in the Scrum software development framework. Jeff Sutherland presented the idea of Scrum to Ken Schwaber in 1995. At the same year,

Sutherland and Schwaber formalized the Scrum development process at OOPSLA '95 (Object-Oriented Programming, Systems, Languages & Applications) conference. (Remta and Buchalceva, 2021) There are similar roles in other software development frameworks, but the content and responsibilities of the role vary. There have always been project managers, but they are not Product Owners. Scaled agile framework (SAFe) has also a role called product owner, but it has less authority than Product Owner from Scrum. Unlike SAFe, Scrum assumes that the Product Owner manages the product and its marketing strategy while being part of a team (Remta et al., 2020). The Product Owner must lobby, i.e., market the product at least within the company. In this case, the development of the product is promoted in a way by selling it to stakeholders so that users can be found for the product. But the external marketing strategy of a product is usually handled separately by marketing experts.

Scrum defines Product Owner as one of the key roles in software development. Product Owner acts as an interface between the stakeholders and the development team; Product Owner represents stakeholders and communicates their needs in software development, product creation. (Felderer et al., 2017) The Product Owner belongs to the team, but also works outside the team.

Product management as a concept was introduced as early as 1931 (Gorchels, 2000) and the title of Product Owner became available with the Scrum framework. Role of Product Owner is very similar to the role of product manager. The development of Software Product Management field began in the 1990s and the most significant related research dates from 2006-2007 (Hyrynsalmi et al., 2021). In the field of Software Product Management, this implementer role is responsible for the software, and the role is very similar in content and requirements to the product manager.

Maglyas et al. (2012) described product manager as a mini-CEO (Chief Executive Officer), who is responsible for its success by combining a technical and business perspective on the product, working closely with the technical team, and communicating with customers to define their needs. The description of the role is similar to the Product Owner. When Product Owner owns the product and negotiates, a product manager manages the whole project and gives commands how to proceed. In the responsibility of product manager is to implement

the company's strategy and goals (Springer and Miler, 2018). Product manager is more of a stakeholder when Product Owner handles the product behalf of stakeholders within a certain project management framework.

Product manager can have many profiles, of which stereotypical profiles are expert, strategist, leader, and problem solver. Expert product manager will provide for example technical or marketing knowledge. Strategist collects information to support a vision. Problem solver deals with dependencies. The role of product manager tends to grow in the organization. (Maglyas et al., 2013) The competency of a Product Owner is expected to grow into all these profile aspects over time, so it is very similar to the role of a product manager.

### 2.3 Role and requirements of Product Owner

The role of the Product Owner can be compared to a racing car sport, in which case the Product Owner is the navigator, and the Scrum Master is the driver. When Scrum Master's responsibility is the monitoring of Agile processes and putting them into practice with the team, the Product Owner is responsible for the overall picture which reaches beyond the team; the Product Owner maps and designs the business plan, functional specifications, and backlog content as well as prioritization. (Remta and Buchalcevova, 2021) Also parable of the symphony orchestra reveals the way how the Product Owner operates. The symphony is conducted by a conductor. Software developers can be thought of as symphony musicians. The Symphony Orchestra will certainly be able to play without a conductor. But while musicians can play without leadership, they need to be in sync with others. The musicians make the choice to follow the conductor. The conductor helps to synchronize and makes the performance consistent. Conductor does not direct, but orchestrates the symphony. (Tiwana, 2013) The Product Owner has a similar role as the symphony conductor. The Product Owner orchestrates the software development team. In this case, the musicians, i.e., the developers, act independently. But the Product Owner takes the development forward in the direction in which it benefits the product, i.e., the music experience, which the whole team provides.

This study is not about project managers nor the role of the product manager. A Product Owner has supervisors and finding role capabilities in an organization can sometimes be challenging. Product Owners must have a mandate to play their part. Product Owner's

collaboration is much about collaboration within networks. The literature does not place upper roles to Product Owner, that the Product Owner should have. Companies form their own internal organizational structure, which means that there may be more than one organizational model in use. Kelly's statement below is a good starting point for considering how to own a product.

“In the real world, managers' report to owners. So surely Product Managers should report to Product Owners?” (Kelly, 2019)

Two creators of Manifesto for Agile Software Development, Ken Schwaber and Jeff Sutherland, wrote the Scrum Guide, which defines basic rules for Scrum. Scrum guide defines that Scrum requires a Scrum Team, which contains Developers, Scrum Master and a Product Owner. The Guide warns that if Scrum guidelines are not followed, problems and benefits are not reached. Or in worst case: Scrum becomes useless. The method of implementation can vary greatly between organizations, teams, and persons. It is the responsibility of the Product Owner to backlog the product, in which case the Product Owner takes the necessary tasks and communicates that forward, prioritizes, and takes care of the transparent development process.

Although, in the end, the Product Owner is liable, still Product Owners can share the responsibility as they wish. For a Product Owner to succeed in work, an organization must respect the decisions made by the person performing this role. The Product Owner should not be a committee, she or he is one person. (Schwaber and Sutherland, 2020) Product Owners are also used by companies that may use a software development method other than Scrum, such as Kanban. But the role of Product Owner is still largely implemented using the Scrum's teachings as the role's model. In addition to creating customer value, the Product Owner takes care of the technical guidelines in development through the backlog and drives business agendas for the product. Depending on the Product Owner, one of these three may be emphasized over the other: business, technology, or customer value. But usually, all these factors are strongly present in the work and job description of the Product Owner.

In Scrum Guide (Schwaber and Sutherland, 2020), the first letters in role of the Product Owner are always written in capital letters. Which suggests that the roles of agile software development that follows Scrum, capital letters in the first letters are used for this role. For

clarity, the Product Owner is capitalized when it comes to the title derived from Agile software development framework. In this thesis, written in lower case, agile is an adjective instead of a development methodology.

## 2.4 Agile development

Agile Manifesto and Scrum Guide are generally known publications in the software industry, which should serve as the foundation stone for Agile teams. Project Owner has guidelines for the role's practice and values. Although, these guidelines leave much room for freedom of choice in this role. Product Owner is one of the key roles in Agile development, especially when done with Scrum framework. Manifesto for Agile Software Development declares the basic principles of Agile development. Manifesto tries to create an Agile mindset by giving values which Agile development should follow ("Manifesto for Agile Software Development," 2001). Scrum is a framework, which provides practical processes for Agile way of thinking and doing software development. Manifesto for Agile Software Development emphasizes the minimization of processes and documentation in software development work, in which case the work is primarily a response to change, rather than compliance with the plan. According to the manifesto, working with the customer is one of the most important factors in making a product that satisfies the customer.

General Agile design is, at least in Scrum, that usually there are 5 to 9 people on the team (Jyothi and Rao, 2011). It means that medium team size is 7, two less or more. Agile is implemented in software development organization on a very large-scale, when there are at least six teams, or 50 or more people (Dikert et al., 2016).

### 2.4.1 Large-scale agile

There are several large-scale Agile frameworks, for example, SAFe (Scaled Agile Framework), LeSS (Large-Scale Scrum) and Spotify. Bringing agility to a large scale involves a lot of challenges. The principle in the agility of an organization is that the name of the agile method does not matter, but the goal is to shorten delivery times. Agility needs to be defined at an early stage in the organization so that all parties implementing it



understand and are motivated by the goals. Developers' autonomy is one challenge because autonomy is difficult to maintain when the scale gets larger. (Conboy and Carroll, 2019) Software development is a people-to-people collaboration which seeks the same direction. This is one of the reasons why companies try new frameworks and customize them to their own needs. The Product Owner is also not sitting in an ivory tower, but the role is to collaborate (Saddington, 2012). Cooperation is a perspective for scaling this role.

The purpose of enterprise architecture is to connect IT and business together. There are defined four stages that companies go through when shaping a company's architecture to design business processes. The first step is business silos, the next standardized technology and the remaining steps are optimized core and business modularity. (Ross et al., 2006) The maturity of a company is determined by how far it gets in these steps.

#### 2.4.2 Spotify model

This study introduces Spotify model, because the case company uses an agile way of working adapted from the Spotify model. Financial sector has much stricter regulations than, say, Spotify the audio streaming provider, which has much more freedom to implement in its platform. The organizational structure also varies by industry. In the financial sector, the business is different than in the music sector of Spotify. According to Conboy and Carroll (2019), the organization should be receptive and willing to change. Thus, it makes sense that the financial sector also seeks to learn from the implementation of organizational structures of the music industry and other industries.

Spotify is a scaled agile organization, which Agile culture has been replicated for use by many software development companies and even financial sector operators. Spotify is a music service that allows you to listen to music streaming over the internet.

The base unit at Spotify's agile is a squad. Squad is like a Scrum team that which is self-directed. Each Squad has a Product Owner. Tribe is a collection of squads. It is desirable that tribal squads are close to each other, in one way or another. The chapter unites people from the same competence area. Chapter crosses squad boundaries and connects people with similar skills within a company. This Spotify's organizational matrix is focused on delivery.

Spotify model strives to make squads independent. Tribes unite the squads, allowing the squads to take responsibility for their own output and not to push problems to next squad. In addition, the chapters bring together a set from a competence perspective. So, Spotify model supports the idea that even when an Agile company is large, people want to know each other and be in networks. (Kniberg and Ivarsson, 2012) Spotify also has operating models that help squads and individuals develop.

In Spotify's agile model, squads are asked what kind of interdependencies they have with each other. The aim is to reduce tribal interdependencies. Spotify has allocated 10% of the working time to learn something new, so that the employee can try things as they please and study what they want. (Kniberg and Ivarsson, 2012) Attempts are being made to reduce dependencies by making them visible. In addition to the tasks of the employee's squad, the individual is given work time to study and experiment.

The Spotify model has been criticized e.g. that on a large-scale in Agile, the teams were not autonomous enough, matrix management was ineffective, and the teams lacked Agile competence. ("Spotify Doesn't Use the Spotify Model," 2020) It is also pointed out that the leaders must clearly define company's priorities for autonomy to work. Success is defined by how people can negotiate across team boundaries. There were problems in cooperation when people lacked a common language to talk about things effectively. In that case, it was no longer possible to speak of the Agile way brought by the Spotify model, but it was a non-waterfall. (Lee, 2020) Thus, there are many pitfalls in the Spotify model that, if realized, could make the companies large-scale Agile more difficult to operate. The means of management and the opportunities provided by cooperation were emphasized the most in the discussions of the Spotify model.

### 3. Research approach

This study has been carried out as case study research by interviewing several Product Owners or people working in a product owner-like role. This thesis is a qualitative research which aims to understand meanings and experiences (Fossey et al., 2002). Qualitative data gathering is done by interviews. Qualitative analysis interprets the data which is gained from interviews. The interviews were held in a Microsoft Teams video call according to a pre-built question body. Three initial interviews were conducted at the managerial level to seek a deeper understanding of the case company and roles within it. After initial interviews, 15 in a product owner-like role from two different cities were interviewed.

#### 3.1 Research Questions

The starting point for this study was the role, requirements and freedom of the Product Owner. The answer to the main research question (Figure 1) of this study is obtained with the help of three auxiliary questions, so the first research question has three sub-questions.

<b>RQ 1</b>	How does the freedom and power concretize for the Product Owner?
<b>RQ 1.1</b>	How does the Product Owner prioritize?
<b>RQ 1.2</b>	How do other roles affect the work of the Product Owner?
<b>RQ 1.3</b>	What does the Product Owner need from the organization?
<b>RQ 2</b>	What is the entrepreneurial mindset of the Product Owner?

Figure 1. Research questions.

##### 3.1.1 RQ 1: How does the freedom and power concretize for the Product Owner?

The role of the Product Owner is important for the team and the organization because Product Owner helps products to find customer value and the goal is to get the most out of the product. This can mean that the product is created with the high quality and that many

uses are found for it in addition to the original use of product. To succeed anywhere, there usually must be power and freedom. This research question delves into the way power and freedom are present in the work of the Product Owner.

### 3.1.2 RQ 1.1: How does the Product Owner prioritize?

The work of a Product Owner is defined as prioritizing, i.e., maintaining the backlog and modifying the order of priorities and visions of its tasks. The Product Owner receives implementation wishes from the company's management, house level, various segments, tribes, and other teams. In the case of large-scale Agile, then the organization around Product Owner is large. Although the main tasks of the Product Owner include prioritization, often the priorities are also affected by goals that cannot be influenced by the Product Owner. This study wants to find out what matters affect how the Product Owner prioritizes.

### 3.1.3 RQ 1.2: How do other roles affect the work of the Product Owner?

Usually, business works together with the IT department. The Product Owner has a wide range of colleagues around in daily work: e.g., developers, architects, analysts, business leaders and decision makers like directors. The dynamics of collaboration in Product Owner's role can affect to the role's management of prioritization and product's direction. This research question sheds more light on which roles Product Owners perceive as important aids and how other roles affect how Product Owner handles their work.

### 3.1.4 RQ 1.3: What does the Product Owner need from the organization?

The Product Owner needs support from their organization because the role of the Product Owner is the role of social collaboration. This role has been given a mandate to take the product forward, but there are still issues that Product Owners has to balance with. This research question highlights issues that Product Owners consider important to the organization in terms of performing their own work.

### 3.1.5 RQ 2: What is the entrepreneurial mindset of the Product Owner?

In addition to consulting companies and start-ups, the quality of the entrepreneurial mindset is also admired among employees. Although the Product Owner is not an entrepreneur, but an employee enjoying the company's monthly salary, the role, and requirements of the Product Owner in this case company and in many other companies are attempted to be expressed through an entrepreneurial attitude. This research question tries to find answers to what Product Owners themselves think about an entrepreneurial mindset.

## 3.2 Case study

Case study studies a modern phenomenon, in this case by empirical qualitative methods, where the connections between the context and the phenomenon under study are not clear in advance. Interviews are the main source of data for this study. The advantage of interviews as a source of evidence is that the sources are targeted and thus focus directly on the research questions in this case study. Interviews are also an advantage when making it possible to find cause-and-effect relationships. (Yin, 2003) This master's thesis work started with structuring the questions by looking at the relevant literature, before creating the questions and starting the interviews.

## 3.3 Data collection

All interviews were conducted in Finnish language, transcribed and then the citations were translated into English for this master's thesis. This study has sought to create good structures e.g., by carefully organizing and coding the material with using a software, for which the university provided a license.

Instead of good constructs, it is more important to tell a good story! Traditional case study researchers have not sought a tabula rasa as a basis but have given room for analysis to evolve. The distinguishing feature of the traditional approach to case study research has been to focus on the context and describe the phenomenon richly. (Dyer Jr. and Wilkins, 1991)

So, the aim of this study was to allow room for an increase in perceptions of the role of Product Owners.

The interviews were conducted remotely with Microsoft Teams application as video calls. Partly because of the prevailing corona pandemic. But also, for practical reasons: the interviewee and the interviewer were often physically in different cities. Recordings of Teams' video calls were the main material from which the transcripts were created. A video interview held with a Teams app is kind of a telephone interview: in all interviews, audio was in the lead and in most interviews, video was also included, because the interviewee was contacted by video call.

Benefits of telephone interview are that human resources are used efficiently, so it is a good interview method when participants are geologically far apart, as in the case of this study. Problem with telephone interviews is to maintain the involvement of participant. Also, it has also been stated that building a relationship between the participants in an interview is important for conducting a successful interview. (Musselwhite et al., 2007) In three of the 18 interviews of this study, the interviewee was reluctant to keep a video connection on throughout the interview. This was due to slow internet connections or for other unknown reasons. Because the majority of those interviewed in this study used video in addition to the audio connection, it helped to build a connection with the interviewee. At the beginning of the interview, there was chit-chatting, and the atmosphere was leisured. Interviewer usually asked deepening questions throughout the interview about what the interviewee said. Deepening questions led to even more interesting discussions, which are used in analyzes.

The interviewer also had a traditional voice recorder that was used for creating backup recordings. The recorder recorded Teams calls on a laptop computer as an audio file when the recorder was physically located next to the laptop. In a few interviews, a recorder was used for transcriptions, after the Teams app had left the audio of the call unrecorded for short moments. The author of the thesis transcribed the first eight interviews. The rest of the ten interviews are transcribed out by a Finnish company specialized in transcription called Tutkimustie Oy.

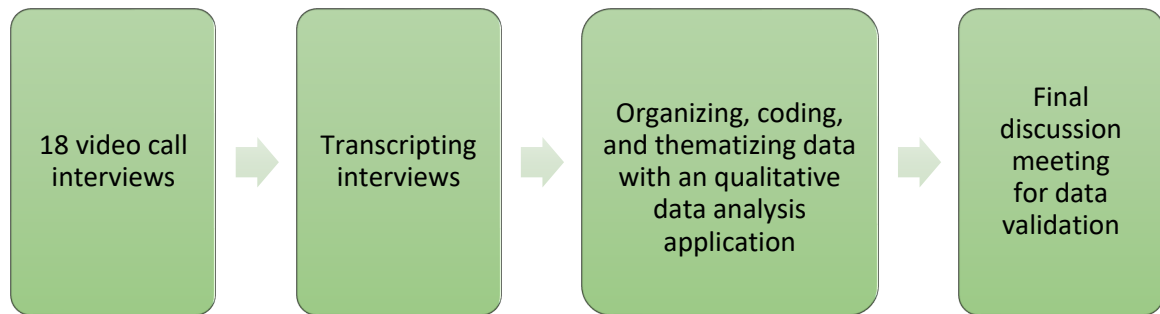


Figure 2. The data collection process for the research.

The data collection process and methods are described in Figure 2. This qualitative study sought to follow systematic data collection. All data was recorded, transcribed to written form and then organized in NVivo application by QSR International, which is a qualitative data analysis software package for organizing and analyzing qualitative data like interviews. This application-based approach provided a unified and clear framework for the data. Also, final discussion was transcribed and coded, but the coding for the final discussion is not presented in this work, unlike in the case of the interviews.

### 3.3.1 Interviews

Two types of interviews were conducted. At first, three initial interviews were held to gather information about case company: mainly about company's practices and insights. In this way, the aim was to get a deeper understanding of the case company, to outline the research agenda and to get direction to the interview questions. For the initial interviews, the directors to be interviewed were selected based on their extensive knowledge and insight into the case company and Product Owners, and some were recommended for interview. Number of interviews on Figure 3. The initial interview questions are in Appendix 1. The questions asked from rest of the interviewees are in Appendix 2. Questions in Product Owner interviews were asked from Product Owners and those in roles like Product Owners; from a Business Developer, who can work in practice in Product Owner role, and from a Business Lead.



Figure 3. Breakdown of interview types.

Data was collected from June and August 2021 in initial interviews. The data of Product Owner interviews was collected from September to October 2021. The questions in the initial interviews varied somewhat with the need. The initial interviews did not attempt to drill deeper into the same questions with each interviewee. But the themes remained the same. The questions in initial interviews became more specific as the interviewer's information about the company accumulated. All the interview questions in Appendix 1 were not asked of every participant in the initial interviews, as the questions sought background information and insights into the agenda, it was not necessary to ask all the same questions to all those who participated in the initial interviews, when the background information was already perceived to have been acquired.

Product Owners interviewed were in two organizations of the company: Development & Technologies, and Business (Table 1). In the Business organization, Business Lead is the supervisor, a.k.a. line manager, of the Product Owners. In Development and Technologies, line manager of Product Owners is Competence Lead. Competence Lead is responsible for ensuring business results in his or her own competence center: this role leads the experts in that competence area. Business Lead is responsible for doing business and has responsibility for business results. Product Owner is responsible for the product and monitors and modifies its business development.

Table 1: Number of interviewees in organization.

<b>Organization</b>	<b>Number of interviewees</b>
Development & Technologies	11
Business	7
Total	18

The interview questions asked to Product Owners remained unchanged over time. But the interviewer asked a lot of deepening questions during the discussions, depending on what



the interviewee said. Appendix's 2 question template for Product Owners was also used in an interview with Business Lead and Business Developer. In practice, only role changed in questions, but the content of the questions remained the same. A few small changes to the questions came with role-based questions, but those were mostly grammatical modifications. Mainly the name of the role in the questions was targeted according to the interviewee in Appendix 2 questions. Transcriptions from all interviews were created in everyday language so that dialect words were edited into everyday spelling and filler words were omitted.

Interview identifiers and durations of the interviews are reported in Table 2. Each of the interview participants received their own random identifier. The interview identifiers do not describe the order of the interviews. This ensures that the identities of the interviewees remain anonymous. All interviews were conducted in Finnish. The target length for the interview was 50-60 minutes. The time reserved from calendars for the interview was max 70 minutes, which was sometimes exceeded during the interview. Table 2 collects the number of minutes of transcribed section. In addition to transcribed sections, interviews also included some introduction and general conversations, so, some interviews lasted longer than reported here, but the irrelevant part is cut from interview durations.

Three initial interviews asked questions about the organization, the definition of roles, and the goals of Product Owners. Initial interview questions are in Appendix 1. The initial interviews aimed to deepen the understanding of the role of Product Owners in this case company's organization, as well as to seek direction and agenda for this master's thesis.

Table 2: Identifiers and lengths of interviews.

<b>Interviewee ID</b>	<b>Length of Interview [min]</b>	<b>Educational background</b>	<b>Organization in case company</b>	<b>Interview type</b>
H1	41	Business	Development and Technologies (D&T)	Initial
H2	82	Technology	D&T	Initial
H3	56	Business	D&T	Initial
H4	66	Technology	Business	PO
H5	78	Technology	D&T	PO
H6	60	Business	Business	PO
H7	58	Business	D&T	PO
H8	62	Technology	D&T	PO
H9	42	Business	D&T	PO
H10	65	Business	Business	PO
H11	62	Technology	D&T	PO
H12	76	Technology	Business	PO
H13	54	Technology	D&T	PO
H14	64	Technology	Business	PO
H15	59	Business	Business	PO
H16	53	Business	D&T	PO
H17	54	Business	Business	PO
H18	71	Technology	D&T	PO
Total	1103	Business: 9 Technology: 9	Business: 7 D&T: 11	Initial: 3 PO: 15
	18 hours and 23 minutes			

Most of the interviewed Product Owners had experience working with the title of Product Owner in the case company from the beginning of 2019, when the Agile organizational reform came into force. Reform practically brought the role of Product Owner as a new title. However, several of the interviewees had years of experience working in a case company before acting as a Product Owner, at best even decades of experience. Many had experience in the role of Product Owner working in previous workplaces. Many of the Product Owners had been in a case company in the role of Development Manager before the role of Product Owner, which was a similar but more limited role than the current title of Product Owner.

Table 3 lists the roles of those who participated in the interviews for this master's thesis in the organization of the case company. In the initial interviews, persons in the roles of director and supervisor were interviewed to gain more understanding and more background information for future interviews. The Product Owner interviews for the study were mainly Product Owners. The view was also sought by interviewing other roles in roles such as the Product Owner. Half of Product Owners interviewed had business background education, and the rest had technical education. Accurate withdrawals are challenging because, for example, some had attended in a business-based degree, with a strong emphasis on IT training.

Table 3: Number of interviewees in each role.

<b>Role</b>	<b>Number of interviewees</b>
Product Owner	6
Senior Product Owner	6
Expert Product Owner	1
Business Developer	1
Business Lead	1
Competence Lead	1
Director	2
Total	18

The Product Owners interviewed have three levels of titles (Table 3). Those working with the title of Product Owner in this case company are generally experienced in their field. There were as many senior titles as there were general titles. The title of Expert had gained a certain amount of additional expertise. Business developers in this case company are often equated with Product Owners and they are completely business oriented. Some of the Business Developers in this case study work as product owners: in which case they work full-time as a product owner, but the role of Product Owner is a hat role for them. The hat role is a way to divide the organization and the role's contribution into tasks.

Interviewees for this thesis were selected from several sources. The case company's supervisor of this thesis provided suggestions from two tribes where could be selected to the Product Owner interviews. Also, leader-level roles in the initial interviews are listed in Table

4 under Other Tribes. The activities of all tribes in this table were at the core of the financial industry. As the case company is a financial company; interviewees from this tribes work on the economy, cash flow, and capital.

Table 4: Number of interviewees in case company's tribes.

<b>Tribe</b>	<b>Number of interviewees</b>
Tribe 1	7
Tribe 2	4
Other tribes	7
Total	18

The two tribes are itemized as Tribe 1 and 2 in Table 4. In the selection of Tribes 1 and 2, attention was paid to difference of the tribes, because it was assumed in advance that the Product Owners in the Tribe 1 had been able to implement the Product Owner's role more freely than in Tribe 2, and the operation of the role there was more established. Tribal differences were examined in this work from the perspective of how freely the Product Owners can exercise their roles. In addition to the Helsinki headquarter, interviewees were also taken from Northern Finland, Oulu (Table 5).

Table 5: The city where the interviewee works.

<b>City of the interviewee</b>	<b>Number of interviewees</b>
Helsinki	12
Oulu	6
Total	18

Proposals for the identities of the interviewees from Oulu were received from within the case company. The case company is doing in-house software development on a very large scale, so there were a lot of Product Owners and a choice of them for this study in the case company. There are cultural differences between Oulu and Helsinki, so to diversify the interview material, the interviewer included interviewees from Oulu to obtain an extensive sample of the Product Owners and other interviewees. Cultural differences refer to Oulu's long history from large-scale experience of an internationally successful mobile development company Nokia, from which Product Owner expertise has been moving to the case company in the region. There may also be cultural differences between Northern

Finland and Southern Finland, as well as around the head office. In this work, product ownership was studied, so the diverse qualitative research material was perceived as an advantage for the research. It was discussed in advance with case company's master's thesis supervisor, that employees from Oulu would also be involved in the work. The Product Owner interview questions (Appendix 2) were also discussed and modified in advance with the case company's master's thesis supervisor. In addition to the tribal perspective, some Product Owners were selected for the interviews on the basis of preliminary recommendations known as highly experienced Product Owners. Some of the interviewees were selected almost randomly with less preliminary information, which was hoped to bring unpredictable perspectives to the study. Names and background information were collected from interviewees, and the interviewer selected the interviewees based on these. As background information, e.g., case company's internal organization, title of role, description of area of responsibility and gender. In addition to the Product Owners, a couple of roles working in a role similar to the Product Owner were selected for the interviews (Table 3).

As summarized in Table 6, seven women and eleven men were interviewed for this study. An attempt was made to obtain a flat sample of the gender distribution, but some choices were guided over gender by tribal choices and areas of responsibility, for which variation was desired. As with gender, a similar effort was made in selecting the interviewees from the Development & Technologies and Business organizations (Table 1).

Table 6: Gender of interviewees.

<b>Gender</b>	<b>Number of interviewees</b>
Female	7
Male	11
Total	18

The level of education of the interviewees is listed in Table 7. The educational background of the interviewees was evenly divided, 50% of the interviewees had an educational background in business, and the remaining 50% had a technical education. This supported the goal of this master's thesis: the analyses sought to look at differences in technical and business perspectives and how Product Owners themselves perceived their own educational background to influence their role. The educational data provided a good indication of the strength of the Product Owner or other role in terms of background. Those whose

background was technical education, experienced technical expertise as their strength, and supplemented their business knowledge by studying or collaborating with colleagues. Those with a background in business education felt that business expertise was their strength and complemented other parts of competence in the same way as the previous group. Educational data were not combined with the interview identifiers in Table 2, because the anonymity of the interviewees was secured in this way.

Table 7: Education of interviewees.

<b>Education</b>	<b>Number of interviewees</b>	<b>Educational background category</b>
Doctor of Science	1	Technology
Master of Science in Technology	4	Technology
Master of Science in Economics	7	Business
Master of Science in Computer Science	1	Technology
Bachelor of Business Administration	1	Business
Bachelor of Business Information Technology	1	Technology
Bachelor of Arts	1	Business
Business College graduate, computing programme	2	Technology
Total	18	

### 3.3.2 Thematic coding

According to Fossey et al. (2002), typical procedure to analyze data is done in two levels. The first is to identify and code recurring themes for each interviewee, i.e., from transcriptions. And then the themes that are repeated in all the interviews are identified. All 18 interviews were transcribed from the recordings into written form (Table 3). The transcriptions were imported to application called NVivo. Interviews were coded into headings and subheadings. The purpose of the coding was to find the themes of the material and structure the interview comments. Coding in the study refined the themes and clarified how many of the interviewees talked about certain subject categories.

The coding was initiated by auto-coding the interviews, so that only the comments of the interviewees were picked for coding. A collection of People, with sub-collection Interview

Participants, was created to Cases. And the responses of the interviewees were inputted to the collection. The interviews were then coded by creating several different Code Nodes and subheadings. Case Classifications were also created for the Cases, in which the background information of each interviewee was collected: e.g., city, gender, educational background, job descriptions and team size (Figure 4).

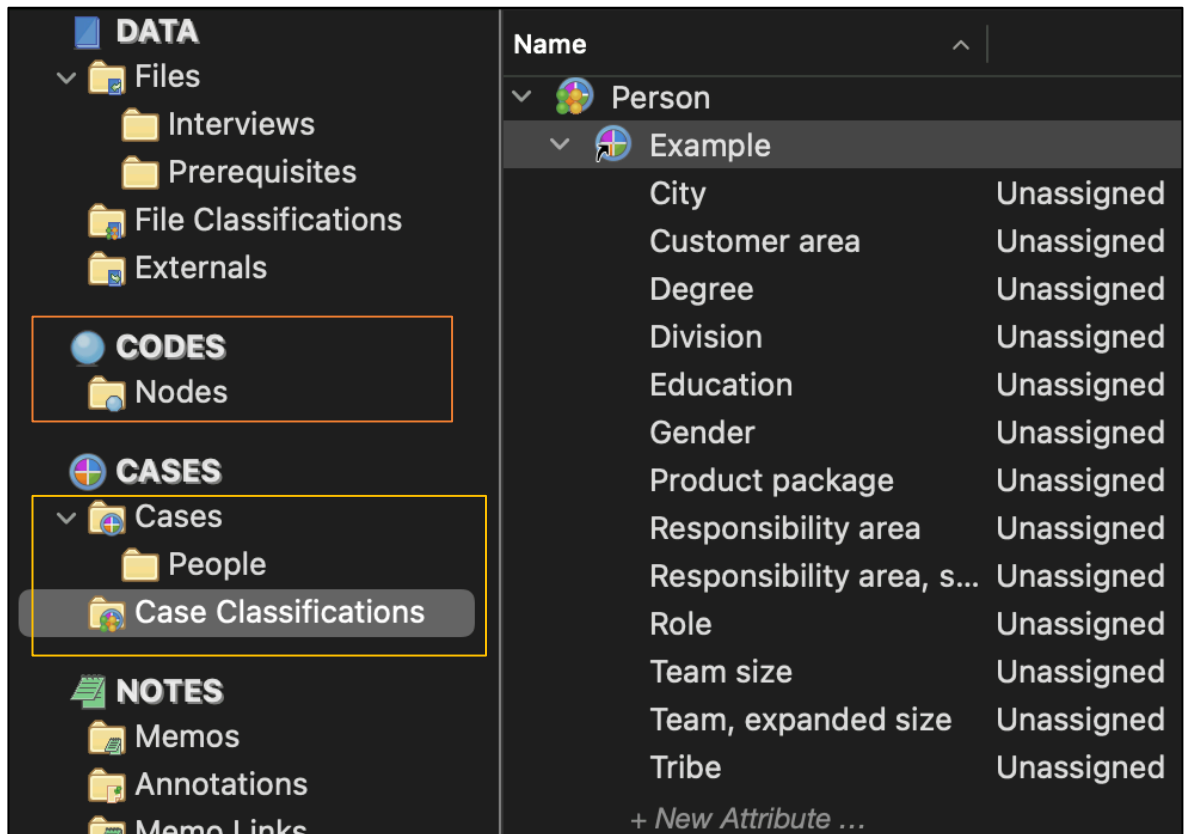


Figure 4. NVivo's data structure and case classifications

The main headings and subheadings of the Code Nodes were created according to the types of topics raised in the interviews. The coding was done in three levels of nodes. When the coding was in progress, the Code Nodes selected seemed appropriate for the interviews for this study, because the citations found places swimmingly and the themes emerged from the material. In Figure 4, Case Classifications is circled with yellow, of which the classifications are shown on the right in the figure under the Person topic. Code Nodes is circled in orange: codes have been created in the nodes folder for quotes collected from the interviews. So, the themes for this master's thesis have been made with NVivo's Code Nodes.

In Appendix 3 is listed how many mentions of interviewees have been taken from the interviews under that main heading of Code Node. The coding of the data was started with the creation of top-level headings. Below these, sub-level headings were created as needed. As the coding progressed, the headings were modified, and the references were moved under more appropriate codes. This Appendix 3 shows how the results of the interviews are categorized and how often the themes occur. Quotations collected and coded from interviews were usually paragraph-long, that is, longer than one or two sentences. For example, the headline Organization from Code Nodes contained a lot of hits from interviews under the subheadings: Problems, Solutions, and Large-Scale Agile node. The main headline node Objectives included different cycles according to which the entire company, Product Owners and teams plan their work. The themes emerged in the coding and were linked to each other. The research questions were formed from the themes. Not all coded material could be included in this study, so some smaller coded areas were left unaddressed. The quotations added to this work were sought to be kept several sentences long to make the expressions of the interviewees visible.



## 4. The case company

The author of this master's thesis suggested the research of Product Owners for the case company. Author works as a software developer and this topic was suggested because of her interest in the role of a Product Owner. The author has seen many examples how the role is implemented and wanted to deepen her understanding of the potential of the role. Case company is an excellent ground for this research, because in there are a lot of Product Owners and the role is sought to be developed.

The case company is a large Finnish financial company. The company is not mentioned by its name but is referred to as a case company in this master's thesis. Case company has development units in few large cities in Finland. In the past, the company's software development worked largely with SAFe (scaled agile framework), but a couple of years ago, the entire company reshaped its organization to be Agile. In practice, this means large-scale Agile. In this company, software development is mainly internal, it can be development of a new products, channels, and systems (e.g., applications, SaaS, interfaces, core systems etc.), or integration of a purchased product and the addition of a new one. Developed systems are used by mainly by own internal needs or customers. The customer base is large by Finnish standard. Case company has a wide range of products and entities perceived as products. Its portfolio has been extensive. Customers, accounts, and payments are its core business. Also, insurances. The company also recently experimented with the automotive and healthcare industries.

### 4.1 Product Owner and other roles

This case company's Product Owners worked in following roles, before the company switched to Agile model: Project Manager, Development Manager, Product Manager, Head of Unit or Team Manager. It has been a usual path in case company to move from some of these roles as Product Owner because of organizational change. For example, role of the Development Manager was very similar to the role of Product Owner, but it was considered in the case company a much smaller role than the corresponding and current role of Product

Owner. Product Owner must manage more areas: business, technical and customer value aspects.

This case company was perceived as a good research object for Product Owners because it has strong product owner expertise. Some Product Owners were very senior in their field, partly because of this work history, had a long experience in similar role since the days of Nokia, which is known for being once at the top of software development. This case company have invested in creating and refining the role of Product Owner, as it was considered an important role. As an unofficial in-house requirement of case company, the role of Product Owner included the requirement that those entering the role would be senior by some measure. Seniority can be determined, for example, by long work experience. Or a work history where the desired skills have been accumulated for the task. For example, in a company in the financial sector, it is an advantage to have expertise from the financial sector. A longer working history with the company can create a senior Product Owner. In this case, for example, the software developer may, over time, move on to the tasks of the Product Owner, perhaps even through different tasks. The educational background also boosts senior-level positions. In the case company, Product Owners had different educational backgrounds and work histories and they had taken on the role of Product Owner. Each interviewee contributed to the role by bringing their own supplement.

In the case company, it is hoped that every Product Owner will have an entrepreneurial mindset or attitude. Case company defines Agile roles with definitions, which are summarized in Table 8. Random selection of other roles (which are not listed in this Table 8), in the Agile environment of a case company include, e.g.: Developer, Lead Developer, System Product Owner (technology, continuous services), Product Specialist, Test Engineer, Tech Lead, IT Area Lead, Tribe Lead and Agile Master. The Tribe Lead is the line manager for Business Lead and Product Owner in the Business organization. The tribal lead is also the supervisor for Business Lead in the Development & Technologies organization, but not directly for the Product Owner. Tech Lead role is somehow comparable to an old role called Solution Architect. IT Area Lead is responsible for the systems in his or her area of responsibility.

Table 8: Case company's definitions for roles.

Role	Description in case company
Product Owner	<ul style="list-style-type: none"> <li>• Leads the development and profitability of his or her own product area.</li> <li>• Development of optimal solutions from a business and technical perspective.</li> <li>• Responsibility to backlogs content and priorities, and clarification of the vision. Understands customer needs.</li> <li>• Coordination between teams.</li> </ul>
Business Developer	<ul style="list-style-type: none"> <li>• Evaluates and develops business.</li> <li>• Designs concepts, strategic and tactical plans, and implements.</li> <li>• Calculates business figures.</li> </ul>
Solution Analyst	<ul style="list-style-type: none"> <li>• Solving challenges in products and processes.</li> <li>• Describing and refining development issues and requirements.</li> </ul>
Business Lead	<ul style="list-style-type: none"> <li>• Management of a significant product or business area, as well as responsibility for customer value.</li> <li>• Business goals and calculations.</li> <li>• Helping teams with vision.</li> </ul>

Most Product Owners from case company interviewees had one team. The team could also include additional resources that had been shared among other teams. Some Product Owners had more than one team under their control. Two Product Owners whose teams included Product Owners, were also interviewed. Business Lead had such a large number of people in the organization chart below this role, that it corresponded to the size of one tribe, when it had over 100 people. The usual team size for case company's Product Owners interviewed was more or less of 10 people. The smallest team size was 4 people and the largest 30 people. Inter-team resources increased team size by an average of about three people. For those Product Owners, who had multiple Teams, the total number of people in teams was several dozens.

In case company, according to a diary survey conducted by the case company in 2020, Product Owners spend most of their time on customer experience and backlog. The diary was kept by six Product Owners for two weeks. The next most time was spent on vision, direction (e.g., communication and influence) and leading. And third on meetings and

disruptions. The least time of Product Owners' time in case company is spent on personnel management, as well on regulation and surveillance.

Business Developers are also working closely with Product Owners. But sometimes in case company's organization, Business Developer acts as the Product Owner. In this case, she or he is considered as a Hat Product Owner. In this case, the team has only one Product Owner, i.e., the Business Developer. The work of a Product Owner and a Business Developer can resemble each other. The Business Developer approaches the team's work mostly from a business perspective and his or her main job is to bring new features to the team's backlog. In which case Business Developer looks at development work mainly from a business perspective. Hat Product Owner is then an illustrative term, meaning that the hat on the head of the Business Developer makes she or he a Product Owner. Business Developer in the hat role is Product Owner from the team's point of view, but in this case the Hat Product Owner may, for example, belong to a business organization, in which case the title of Product Owner is not registered in his or her employment contract. In other words, Hat Product Owner is an organizational practice where a business representative is brought in as a Product Owner. There are other cases where a role can be the owner of the hat role. For example, if one of the team members, for example developer, works part-time in addition to his or her role as Product Owner, then her or his role is in the Hat Product Owner category. Most often, however, the Business Developer acts as the Product Owner's business partner, providing business content to the Product Owner. Hat roles were not interviewed in this study, but their impact on the operating environment is visible, as even direct business representatives are perceived as Product Owners.

## 4.2 Agile in case company

The company in this case study has introduced a custom Agile culture for this company in early 2019. The taxonomy for this company's software development projects can be assessed at the level of a very large-scale Agile. To create a new Agile culture, this case company has sought to learn from the Spotify's tribal model and use it as a template. Case company also sought teachings mainly from two other foreign companies in the field, that had adapted the Spotify model to suit their financial sector needs. So, the case company's Agile model also draws on influences and practical lessons from these two major foreign

players in the financial sector. These companies, used as agile examples, were visited, and their doctrines and experiences were used in this case company to build their own Agile culture. Case company previously used SAFe. Later, the case company implemented an organizational change to Agile, which is based on the Spotify model. Case company has similar functional environment than Spotify model defines; tribes and teams inside the tribes (which Spotify calls as squads), and also chapters. The case company prefers team size a max of 10 people, the max tribe size as 150 people and the chapters 5-10 people. In practice, some of these basic elements are larger in size, e.g., large tribe in case company can be the size of 200 people. Each tribe has a strategic purpose. Teams are mainly development teams. Chapters are goal-oriented structures through which competence is developed in an organization. Figure 5 is adapted from the case company, and it illustrates, the tribal structure, which is very similar to the Spotify model.

The chapter for Product Owners may be wider in the case company than described in Figure 5. In this case, the common denominator of the chapter is the same business area, in which case the chapter has Product Owners from more than one tribe. In this case an attempt is made to break tribal silos.

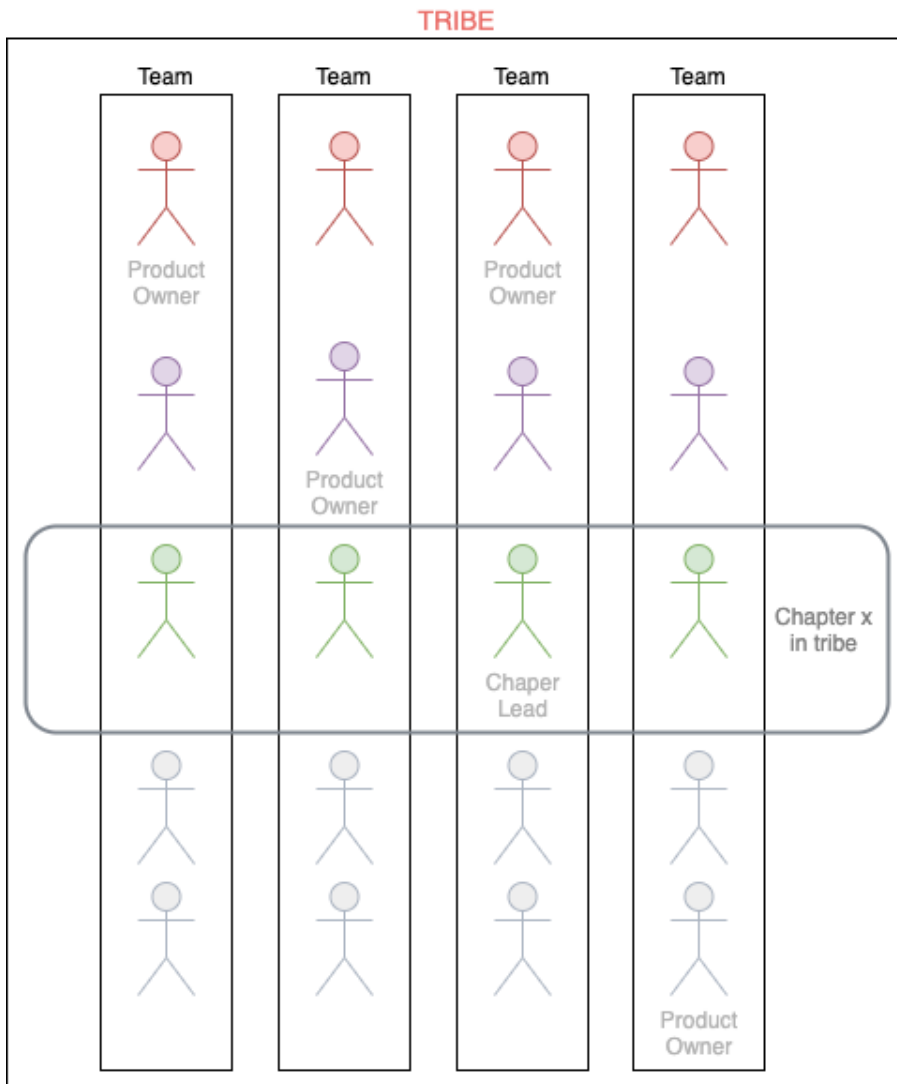


Figure 5. Case company's Agile tribe model.

The case company is a large company, and like large companies, employee information is updated to several different systems. From the intranet, each employee can search for the information of another employee, and find there e.g., contact information and organizational information, i.e., who is above the employee in question in the organizational hierarchy, and colleagues with the same supervisor. Case company also has an internal employee profile system where the employee can view and edit their own information, e.g., their vacations. In the organization chart, employee can view his or her own position in the organization tree and open employee lists for different tribes. In this way, employees are to some extent able to find and create networks with their own initiatives within the organization.

On a team scale, case company has a 70-20-10 model, where 70 percent of the time is spent on business-oriented day-to-day work, 20 percent on improving day-to-day work for example in the form of technical debt reduction, and 10 percent on in-house learning and experimentation, which increases the team's ability to innovate.

Objectives in the whole case company are determined in the strategy process and annual planning. The goals to be done and the prioritization of these objectives are specified in the Quarterly Business Review (QBR) process, used by tribes. QBR is usually a process of one tribe. The board sets goals for the entire company. The leader of the segments sets the goals of the tribes. And the tribal leader sets goals for the tribes. QBR targets should be in line with annual targets; QBR is the core process for setting goals and dependency management. The budget is distributed to the tribes.

## 5. Results

Product Owner can have a great deal of influence on this role's responsibilities and freedom. The interviews made visible, how much the role of the Product Owner is shaped by the person and background of its holder. The interviews highlighted the prioritization in the role of the Product Owner: how it is done and what kind of support the Product Owners need for implementing product ownership and related responsibilities and ideas. Interviewed Product Owners had a wide range of ideas and wishes on how the organization could better support prioritization. Product Owners felt that they were members of the work community, for whom support in the form of the expertise of colleagues was important. The collaboration is a large part of the Product Owner's work and certain colleagues had become particularly important everyday partners in this case study's company. Regardless on the area of responsibility in company's products, the Product Owner is expected to manage and lead the product, in which case the freedom of the Product Owner under the magnifying glass of this work appeared in many different lights. Some Product Owners felt that their desks were so full that they would not be able to take on more responsibility in addition to their current product essential work. Some Product Owners felt that they had the freedom to implement their own visions product or more widely around their product; even though it required a lot of extra effort addition to daily work.

Product Owners who had a business background in their education and felt that their strengths were particularly in business skills complemented their expertise by relying on a team of technical experts and gaining additional technical training or certificates, for example through Web Services cloud service training. However, most Product Owners felt that the Solution Analyst of team, who acted as specifications maker, tester, and system connoisseur, to be a great technical right hand. But there were also Product Owners with technical background, who relied on Solution Analyst's business expertise. These Product Owners supplemented their business expertise by acquiring business experts close to them.



“I’ve acquired around me people who will fill those weaknesses of mine. Like I said that I perceive myself as part of a team, as a team member, so I have tried to acquire that kind of people also to the team, who support the kind of competence that I do not have. In general, for example, it may be more the case that the Product Owner is a businessperson, and the Solution Analyst is really technical, while in our team the situation is the opposite. I’m really technical, and our Solution Analyst is able to look at a lot more of that business, the figures, and then we’ll discuss it together.” (H8)

## 5.1 Power and freedom of the Product Owner

This section and its sub-headings answer the research question “RQ 1: How does the freedom and power concretize for the Product Owner?”. Everyone can, to some extent, create their own environment. Companies have tried to facilitate this by creating an organization. This master's thesis goes through how the role, requirements and environment defined for the Product Owner allow freedom and what are things which the Product Owner can influence.

In the role of Product Owner, it was generally felt that their goal is to take forward business objectives. Product Owners felt it was important to prioritize the jointly agreed goals. And those above in the organization agreed, that the main goal is to do business. The role of the Product Owner and the employees who carry it out are mainly trusted. The role of Product Owner is seen as an expert role that is an important part of the team. Sometimes the role of the Product Owner and its Agile environment is not understood and is therefore unnecessarily restricted. Sometimes the role is micromanaged.

“That freedom is that no one comes to micromanagement, and I can decide for myself how to use my time, how to orchestrate the team and what the team does within their own goal or sandbox. The sandbox in Agile can be quite tight. But I think that freedom is that inside that sandbox you can do things as you see best.” (H6)

If freedom is defined by courage, then some Product Owners meet the definition when they step outside their sandbox and take the product and new ideas forward. This opens opportunities for the company through goals other than those defined by business roles. Some of the interviewees felt that the role of the Product Owner is focused on the work of the team and supporting its self-direction. Although the Product Owner is the role of the

business too, it was still felt in the internal organizations of the case company that there is a so-called old business structure and customs. In part, it is due to the rigid structures in the financial sector, which are largely regulated by regulation and thus by traditional viewpoints. However, while the financial sector is in the middle of a more digital world, so large players like this case company also have to adapt to the direction dictated by software companies.

“Team is self-directed, it also means that the team is really self-directed, and it’s not in the hands of the Product Owner to guide that team or do things. I do not think that the role of the Product Owner should be in any way really experimental. The team needs to be self-directed and then is seen where and what is needed.” (H16)

“When we are an financial application and in a certain way in that business of trust, however, I feel in a certain way that we cannot publish incomplete stuff in our actual product. However, in our main channel or application, it may not be the place for such a radical experimenting: so we cannot go too far in experimenting in these products. [...] In those, however, we have to go a certain way with the quality ahead and can’t leave things too unfinished and start experimenting with customers. In a way, it also brings a bit of constraints. If we were in a different business or somewhere where we would made a game application or some kind of communication application, then the case and the playing field would be quite different from this one, where we are dealing with people's money.” (H12)

The financial industry is a tightly controlled and therefore trusted business, as customers need to have a sense of security when using the services, thus limiting the Product Owner’s ability to experiment. However, it was felt that the Product Owners are free to modify the role in the direction they want. And implement guidelines which interests themselves, whether it is a product managed by the Product Owner or with co-operation. The role of Product Owner is also limited by many factors, which will be addressed next in following research questions.

“But in the sense that it is perhaps a blessing and a curse in the role of Product Owners that it is quite free to modify and do... On the other hand, the playing field can be so wide that it can also overload. If you are involved in all of that.” (H4)

The sub-questions of this research question (RQ1) delve into the essence of freedom and how it manifests itself. Freedom is explored in these sub-questions to find out how the Product Owners can express themselves. Freedom provides opportunities to prioritize, so these sub-questions will also deepen prioritization, organizational practices, and budgeting.

Enablers of intrinsic motivation are highlighted in these research questions and thus those factors that give Product Owners freedom in their work.

## 5.2 Prioritization in Product Owner's work

This section answers the research question “RQ 1.1: How does the Product Owner prioritize?”. Product Owners prioritize the entities and tasks that are put into the backlog and then prioritized to work queue of teams.

### 5.2.1 Internal prioritization in the Product Owner role

Product Owners bring a variety of perspectives to the role with their own expertise and personality. By the educational background of Product Owners, they can be roughly divided into technical or business. But this division is too stark, as the Product Owners interviewed strive to implement both business and technical aspect in their daily work. Product Owners interviewed implement business goals, work closely with the business, and create new business themselves. In addition, Product Owners work within a technical software development team, making it difficult to prioritize teamwork if they do not understand what the team is doing. The Product Owner makes sure the team can do their tasks under construction: that enough resources, time, and peace has been allocated to the team's development work. Product Owner prioritizes what the development team does next. And equally important, the Product Owner makes sure that the construction of the product is also technically sustainable, and that it also enables the implementation of future features.

Product Owners usually wants to extend their expertise. Like many other professions, the role of Product Owner almost requires continuous learning. But still the background always determines to some extent what kind of additional education or training they are looking for. Some supplement their skills with what they feel is missing. The Product Owners interviewed, who felt that they had a strong business background, supplemented their skills, for example, by completing the certificates used in the development work. Product Owners with technology backgrounds strive to learn about business. And as described, they surround themselves with colleagues whose skills they feel they need to supplement their own skills. Some Product Owners deepen their own areas of strength, business or technology knowledge

and understanding, and learn new things from needed areas through work. Also, Product Owners are selected for projects and teams based on their background and expertise: in case company, the team was built by adding a suitable Product Owner to the task. So, there was also a need for highlighted expertise.

“More of a question is, whether we will be able to put the right Product Owners in the right teams. Anyhow, the know-how is exactly that and how to get things done. But of course, the Product Owner must also have some business substance expertise, and then it will have a limited ability to throw financial expertise into insurance. In the short term and in the long run, of course, [Product Owner] can be learn anything and develop. After all, these always have these short-term limitations. [...] It's a tough place that a good Product Owner is one that manages these three [competence] perspectives in the right way for that team and product. And as I stated that can be thought of, that this our way how we divide Product Owners in business and more technical Product Owners, then everyone should emphasize those three [competence] areas. But some then emphasizes their development and more technical capabilities, and then he or she must manage his or her product and customer side. And then with some Product Owners, it is overemphasized in the opposite direction.” (H3)

“Of course, that business side has been one that I am developing more of myself all the time, because it still requires more effort from me. Because of course I have started more from a more technical and customer perspective. [...] I am actively monitoring whether our products are competitive, whether they meet the needs of our customers, where we have the biggest pain points, how our returns are built, whether our returns are on a sustainable basis, or whether those are easily challenged by someone else with some other service.” (H5)

Product Owners talk about their background and strive to combine three main strands in their work: business, technology, and customer value creation (Figure 6). All interviewees leaned to claim that they implement all aspects of Figure 6 in their work. All these three: business, technology, or customer value, were factors what the Product Owner should consider in his or her agenda.

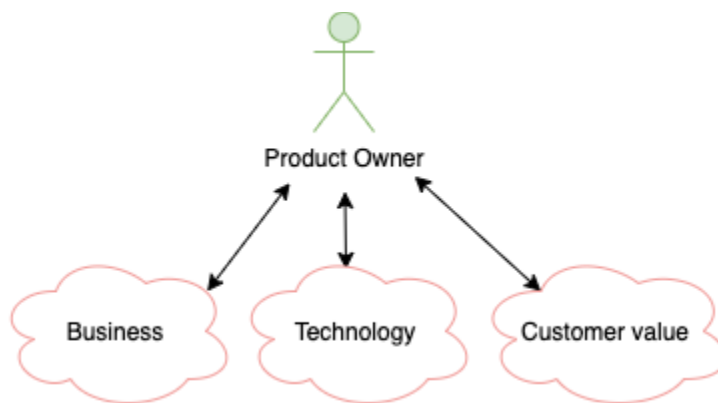


Figure 6. Competence areas of a Product Owner.

If perfection existed, then the Product Owner would have all the areas of Figure 6 as very strong areas of expertise. But in general, they deal with all areas, and contribute to them in the way they see fit. The needs of the product also determine what the Product Owner must emphasize about the product. Some emphasize business, others technical expertise, customer value creation or even marketing a product for example within a company.

“If we receive requirements, then I will have to look the business case creation in the same way as other business Product Owners, even though I am such a technical team; Product Owners of our [company’s] development teams are often considered to be technical Product Owners. But yes, I’m dealing with all those things. Maybe when I create these requirements, I might look more at that customer value in it. It is a priority for things to do, so it comes from all of those, or we can say, from business side and from customer value. The technical side is then the solution to how this will be done.” (H11)

“I see that my own work experience helps a lot in product marketing. Background is important, one of the things that belongs in the role of the Product Owner. And also, business management. Then the Scrum Master and Agile skills like that, are what I’ve had to learn through the hard way, learning at work and following other Product Owners.” (H6)

From case company, 46 percent of those interviewed, excluding initial interviews, highlighted the creation of customer value in their own role as Product Owner. Almost as many, 40 percent, highlighted business in the own role’s operations. Orchestrating technical aspects as prominent part of the role was highlighted by 20 percent of interviewees, mainly because those interviewees perceived it as their greatest strengths. A small section raised two aspects to the forefront of their operations. Despite the main area of expertise stated by the Product Owner, the interviewee also felt that all three areas of competence were important in their work and role. When there are internal organizations within the company,

Business and Development & Technologies, then there is also an emphasis by organization on different competence. Competence development should be systematic so that the organization is able to look at the overall picture of competence: one or more areas in the Product Owner's competence should not be overemphasized, instead competence in product ownership should be holistic to maintain Product Owner's overall visibility.

“By day by day, I notice that I start looking more and more through business and customer value. And in a way, those are starting to gain more emphasis in daily work [of Product Owner]. But if I think about this moment, then most of all I look at it through the technical side. But yes, those are all important in a way. And those are reflected in my daily decision-making. After all, it kind of makes that decision-making a little more challenging, when you try to think about all three. You can't just think about doing as much customer value as possible, so that our technology dies from below. Or doing as much business as possible, but customers are suffering from it. In a way, however, it is about finding the center of all three in its best possible state.” (H8)

The Product Owner cannot be a mere technical Product Owner. The maturity of a Product Owner, that is unable to prioritize product factors from a business perspective, is considered low. However, it is good to remember that software development is made for products that are technical. So, the technical part should not be underestimated. According to the interviews, it is important for the Product Owner to at least understand the technology they are working on in a team. In this way, the Product Owner can take care of quality factors in their prioritization and build a product, and products, that really works. In this case, customer value is also created by noticing and highlighting technical capabilities.

“If we would do product management correctly, then that Product Owner would have to expressly manage that product, and in a certain way not just run the business. Of course, business is what you want to improve in the end. But it should be done in a way that the product is managed. And in managing a product, its Product Owner needs to think about what is most important to its customer value at any stage. Through it, always think about the fact that... Of course, reliability and dependability, which are such a quality factor, which is always for the customer such a factor, that these just have to work. It should always be, in a way, the number one priority to make sure these systems work.” (H2)

“I might phrase it: it is important to understand [the technology]. I don't have to know how to write a single line of code myself, I don't have to know how to draw that architecture image myself, I don't have to know how to do that specific configuration or anything in a technical way. I don't have to know that. But when someone says we need to fix that configuration, you kind of know [what it takes to fix it]... That you can make prioritization based on it. [...] And in the end of the day, the moment you work with a sufficient team, you are part of a development team, then if you are not able to discuss to team members as equals, it is much more difficult. But then if you can discuss about it, whether it is your developer, the Product Specialist or the Solution Analyst, kind of who speaks a very different language, so if you can't talk to your developers at all, then it remains rather weak in a way it is management.” (H8)

It was felt important that the Product Owner be able to speak the same language with the experts with whom the product is being built. In addition, although the case company operates in the financial sector, its competitors are largely in the software sector. So, to keep up with development, it must be possible to speak the same language as the subject matter.

“That purely business-minded person, does not see all the capability you could do for things. If that development weren't so technical, then it would be okay, it would be enough. It may have been enough in the past. But now that we are competing in the same series of Apple and Google... And all the other players, their rhythm of technical development and that level is quite different from what it was before in our financial industry. We won't keep up in that race, unless we have an understanding of how we are leveraging all of this new technology to harness it to serve our customers and reduce costs.” (H5)

In addition, that the product works technically, or that it can be used to sell things; customer value is also a success factor for product. Creating customer value is a part of making a product a success. And it is the job of the Product Owner to create at least enough customer value and good customer experience, so that the product will attract customers to use the product.

“If we talk about a disco, then basically that customer experience determines how good that disco is. In a way, whether people want to go there. Whether the conditions and services are in order there. And then that business is what’s being sold there, be it the tickets or drinks in there. Those determine if enough people will come and whether the goods can be sold to them. And in the way, that’s always the starting point, that if you don’t get people there to the disco, then you can’t sell anything to anyone. The customer experience is that those people will come there, that’s where it starts, and then after that you have a chance to sell. It is like a basic thing in a way, that if you go to the street and then you just think that should I set up a kiosk here, well it is not worth it, if no one passes by.” (H15)

“It would be wonderful to answer this that we produce customer value. Because that's what I'd like to do. Yes, we do it, but I's not all that we do. Because we have a lot, let's say technical debt, for example. In other words, there are updates and upgrades, from which customer value cannot directly get out of it. Of course, we have modern technical systems that works, so there is a certain amount of customer value in the services that works. But on the other hand, it is a bit like the default value. [...] Of course, if a customer buys a service, she or he thinks that it works. That customer value comes in a way through the twists and turns of these that I don't think it is more of a technical upgrade. It has to be done, just like in these Agile models always do. This kind of development team, there is always a lot more to it than just customer value.” (H10)

Technical debt usually comes at a time when, because according to the Agile model, the overall picture takes shape through iteration rounds. So, one or more iterations are needed at the end of the whole to eliminate technical debt. Such customer value is difficult to verify, but it was clearly expressed in interviews, that producing customer value on a good technical footing is the work of the Product Owner. Product Owner has a lot of freedom and with it the responsibility to choose the focus points, what is prioritized internally in the product at given time.

It must be borne in mind that business is a risk-benefit analysis. In other words, it can be considered profitable, for example, that the technical debt is not reduced, and the time saved from it is invested in building new features. Finding a balance is challenging, as the Product Owner runs the risk that if the technical debt is realized and the services do not work for the customer, then such a situation is much more problematic than the fact that the business could not make a profit with the new features.



### 5.2.1 Prioritization of tasks

The most important task for a Product Owner is to prioritize the tasks of their own team, because prioritization is perceived as one of the most important tasks in the role of the Product Owner according to the literature and the case company's own material. Priorities come from many different directions, so often creating a team backlog is a large amount of work and the sum of many factors. Objectives are collected from many different organization levels and from different stakeholders, e.g., annual objectives, tribes' dependencies and customers, which can be internal users of the product. The goal is for the Product Owner to agree on the visions by conversations with stakeholders and decision makers. Some product decisions or changes may affect the company's balance sheet in such a way that those product decisions require permission from the company's executive board. Prior to Product Owner's prioritization, objectives are documented and grouped into specific categories into work tasks, for example into issue tracking system. Even then, attempts are made to ensure transparency in the collection of tasks. The business wants statuses and reports at a different level than what the development team is figuring out for the job. It is not always easy to get tools to adapt to a variety of needs, so that the Product Owner can enter the big picture and link all the parts of the product agenda. After all of this, with a long Product Owner experience, the Product Owner still states that the linking of entities and tasks is happening within the Product Owner's head.

"It's kind of, that linking is happening now more and less in people's heads."  
(H18)

"Because we're not building our own visions as Product Owners and then arguing about them, but rather it is that we're doing that vision work together."  
(H16)

The Product Owner has large entities to manage, which will receive a lot of new requests from business and other stakeholders. Although there are tools in place and the goal is to be transparent in many different directions, the threads of prioritization are still in the hands of the Product Owner.

“In my opinion, it is enough for the Product Owner to understand the technology itself, that’s how big a job they are, and how much team’s time it takes. When it is understood at that level, and then upon top of that understand its business and customer value, it is then possible to make it a prioritization. What is the main thing in the Product Owner role! There is a terrible desire to do things, and everyone would want to get that and that, but all of those need to be done one at a time, or two at a time. That prioritization ability is the most important of all.” (H4)

“We are focusing more on that; you could say today to the implementation side about how those business requirements will then be implemented and how the implementation can be taken forward.” (H13)

The Product Owner prioritizes teamwork and their own work in this case company on various ways. At the team scale, prioritization is done through a backlog: the Product Owner decides what will be taken on the backlog and how to prioritize the entities and tasks in there. In the overall picture, prioritization is effected by the company's strategy. Annual targets are created at the house level for one year. The work of Product Owner is most affected by the company’s annual goals, which are broken down into smaller entities at the Quarterly Business Review forum, where dependency management takes place. Dependencies can be on the order of priority of the annual goals. Then several teams in the tribe build sub-entities according to the annual goals. Or team can focus to an implementation, which case progress and schedule depends on what the team needs from other teams. Or the dependency may be the team's current work queue, which may have work in progress which required by for example regulation, in which case the Product Owner will not yet be able to prioritize other tasks higher. Creating and draining goals is illustrated in Figure 7.

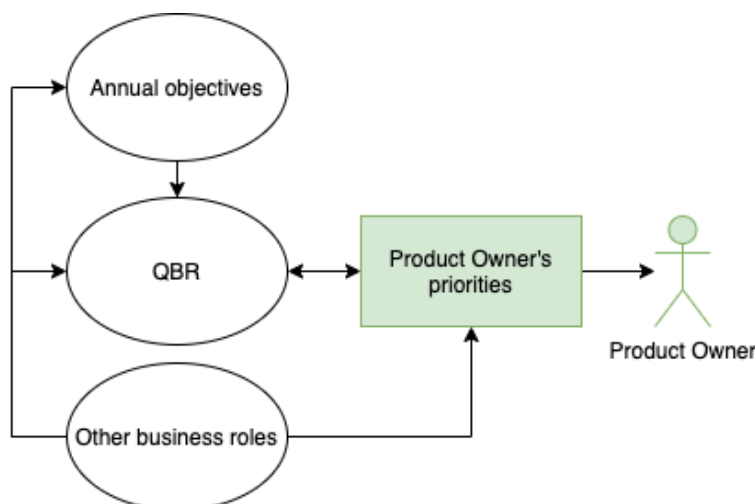


Figure 7. Draining priorities.

The business plays a big role in what functionalities to products are expected from teams. Most of the goals are derived from the annual goals and are formulated to suit the tribes in the Quarterly Business Review process. Product Owners also get a lot of feature suggestions to products from other business roles. For example, from Business Developers, among others. And Business Lead is an important business channel for Product Owners when they want to take their own ideas forward. In addition, depending on the tribe, Product Owners interviewed told that Business Lead may be involved the decisions about the direction and detailed decisions of development work.

“The priorities and bigger things that are done comes more through Business Developers. In the team we will then do the smaller things in under my leadership and decide that what will be fixed and the technical that will be eliminated and, in part, some small development will be made, so to speak, by the team's own decisions. [...] We will focus more, on what could be said today, to the implementation side, how those business requirements will then be implemented, and implementation will be taken forward.” (H13)

The direction of development work largely determines the features of which are taken to the backlog. Some interviewed Product Owners feel that they have no say in what comes backlog, that there are situations where they disagree but expressing it or refusing is not an option. So-called normal situations where the Product Owner receives the submitted work as it is and possibly quickly prioritizes it high are for example, when regulations change, in which case products and systems must be updated to comply with the renewed legislation. Or especially if a production disruption occurs that always requires a quick response and, in the worst case, rapid development work in the form of creating fixes.

“Those [setbacks] have to be treated a bit like the weather conditions, nothing can be done about it if it starts to rain. Then all you have to do is pull on the raincoat and continue the work. And the fact is, that it starts to rain, it can lead, for example, to situation that the sandcastle that you have built crumbles completely, that is quite possible. But you can't think like that. You can't do anything about the rain, and those situations cannot be treated fatalistically: that this is dull that someone came to break intentionally. It is a different thing than that someone comes to kick the sandcastle.” (H15)

But experiences emerged from the interviews, the visions of the case company, or even more ideas of business for features or development work, intersect with what the Product Owner

sees to make sense. And in these cases, the opinion of the Product Owner was ignored. These examples will be discussed later in this work.

“My view is that a business requirement... Sure, it is good to understand. Technical people understand it just as well what business Product Owners do. But in a way, the business requirement should come from outside the team. The team and the Product Owner then think about what is most important at any stage. Whether to implement new features that the business wants. Or whether, for example, customer value and customer experience are implemented. Which can be just about improving usability. Or wanting to create stuff to an emotional level. Which is not quite that raw business. All these things should be understood. If we talk about it too business-driven, then these others will start to suffer.” (H2)

However, Product Owners thought the goal is to work together where the business produces work for the teams. When the cooperation is successful, the other internal organization will not walk over the work of the Product Owner. And the product development considers also other aspects than business.

### 5.2.2 Product thinking

In the environment of development, old model of operation is, that business is on top of everything and telling directions by unilateral decisions. Some of the interviews revealed that a thought pattern like this still lives strong beneath the surface. Despite the fact that the business has been brought close to IT with a huge Agile organizational change.

“If we were to do product management correctly, then the Product Owner would have to manage that product, and in a certain way not just run the business. Of course, business is what you want to improve in the end. But it should be done in a way that product has leadership.” (H2)

Current desired state is, that product thinking is at the center of everything. Product, channel, integration or other Product Owner’s responsibility area must also take into account on the technical quality requirements: repayment of technical debt, refactoring and product reliability. And in addition to these traditional and technically important aspects, also in customer expectations and innovation.

### 5.3 Influence of other roles on the role of the Product Owner

This section answers the research question “RQ 1.2: How do other roles affect the work of the Product Owner?”. Majority of interviewed Product Owners emphasized that collaboration is an integral part of their job. Those Product Owners who wanted to implement their views and visions on a larger scale stated that lobbying is also an integral time consumer of the Product Owner’s time.

“And of course sometimes my own views along the way take shape when I have those conversations with Business Leads and others. There are situations where I have quite persistent... With this project I started a couple of years ago... [...] I have been really persistent, strongly held my view and received support forces, so with that I have moved forward, although some have not been on the same line. It takes perseverance and a little bit of taking that not-so-encouraging feedback. Along the way, a little thicker skin needs to be developed. But basically, options are being discussed through Business Leads. If its ended up to solutions that I am not happy with, I know I have done my best to bring out those alternative solutions.” (H5)

Some of the Product Owners worked hard with their own product and felt that most of the time was spent developing the specific product and system around it. So that in figuratively speaking: their desk was full of the current amount of work. Some of the Product Owners felt that they had a lot of additional ideas and visions that could benefit their own product, other products, and the entire company. Responsibility was also divided between different roles, for example Business Developer could take responsibility for creating customer value.

“A Business Developer has, you could say, the vision of how to do it: what should be done. But how to do it again, then in general, I [as a Product Owner] have a pretty strong role then played that how to actually implement that vision. [...] Pretty much that customer value then comes much from there through Business Developers, after all, they run it and tries to measure and evaluate it.” (H13)

Most Product Owners felt the role of Solution Analyst was a close help and working couple from them. Product Owners describe Solution Analyst role as a data bank of product, that is close to the team and the Product Owner. The job description of Solution Analyst, or a similar role, was varied, but usually, the main functions of the role were defining requirements and testing. At times, this role was called Business Analyst. At times, the tasks

of Solution Analyst were felt to be handled by a Business Developer. What was similar to these job descriptions was that they were perceived as the right hand of the Product Owner, who is thoroughly familiar with the system. In the interviews, the Architects and Lead Developers were perceived as close colleagues whose support the Product Owners felt they needed. These roles are technically very skilled with the system. But the mentioned right hand was mainly the Solution Analyst, which was also perceived as a comprehensive entities-knowing in the product and its system.

“And here in our model it is the Solution Analyst, which is kind of the technical hand of the Product Owner. In a way, Solution Analyst is able to form those technical requirements.” (H4)

“In fact, he or she [Business Developer] does the work of Solution Analyst, it knows the system upside down even eyes closed, it installs configurations there and does everything in there. And it supports the business in the processes.” (H7)

If the team has a Product Owner as well as a Business Developer, then the interviewers felt that it was up to the Product Owner to make the decisions about what the team does next. The role of the Business Developer turned out to be diverse, as it could only be a business-focused assistant to the Product Owner, or a business-oriented Product Owner.

“In my team, it works well. But then outwardly, what’s expected that Business Developer does... Business Developer really doesn’t decide what the team does next, instead it supports that customer service and sales in the making of that product or selling the product. And then they may have different expectations in the business for that role of Business Developer, but yes, team has understood that this is not the case. It is an interesting dichotomy in this system. I would like to rely on that old-fashioned, real, Agile mold. While business would like to do it another way. But on the other hand, there has been a lot of discussion in the team about how we are handling these tasks and what these tasks are.” (H7)

“As a Product Owner, I am not fully responsible for that business aspect, the content, of course, and so on. More through Business Developers comes the priorities and the bigger things we do.” (H13)

According to the interviewees, Business Lead is a close support that drives visions and entities: an engine that takes the business forward in the organization. For some, Business Lead is also a supervisor. Business Lead pursues greater business policies and, as she or he

has responsibility for results, as a business responsibility bearer; Business Lead's words also carry weight in the choices of Product Owners. Product Owners are also responsible for the business results, and they are the business representatives among other responsibilities. It is difficult to draw the line in the current model between where the Product Owner's liability ends and whether the liability holder is just the business owner, i.e., the Business Lead.

“The absolute precondition for the Product Owner is that he or she cooperates really closely with Business Lead, which in general has a certain business area for which he or she is responsible, i.e., there has to be a really dynamic duo: Product Owner and Business Lead. [...] We have received a lot of praise from Business Leads, that it is nice that there comes more proactive different scenario options in the business sense as well. (H1)

“The problem is that if we start to export such themes through mere Business Leads, then when they only look at a certain business, they only look at the business of payment or the business of everyday economy. They may not be so interested in thinking about this kind of ability, which is much broader again.” (H5)

Product Owners also receive help from elsewhere inside the company, such as the Product Synchronization Meetings (PO Sync), where Product Owners from multiple product areas and different teams come together. Representatives of all products from one of the company's business areas may be present at PO Sync. Other roles are also welcomed in these meetings: for example, Business Developers, Business Lead, Tribal Leader, IT Area Lead, Business Analysts, and Process Owners. In this case, those who are willing, are also invited. It is not exceptional that Product Owners are in the minority at the PO Sync meetings. The fact that Product Owners are in the minority at the Product Owners Sync meeting confuses the entire concept's agenda. In the case company's Tribe 2, interviews revealed that some Product Owners were subordinated, inter alia, by taking away opportunities to influence in meetings such as PO Sync, and in this way their influence and freedom to steer the product was narrowed.

“It slows down [in PO Sync] that we usually go through only two product areas and all the others are listeners [frustrated laughter]. Business Lead wants to be involved in it terribly intensively, then the discussion takes place under the leadership of that Business Lead. Then there are comments that “now we will do like this and that”. It doesn't happen that Product Owners think with each other, which is the most sensible thing to do. But there is this management very strongly.” (H7)

Case company transformed the practices throughout the house to be Agile, to which the modified Spotify model was applied. In addition to the IT departments, the business began to engage in Agile methods: i.e., events and practices. As well as engage to technology, development, and business as a common front. However, there have been booting problems after the change to current large-scale Agile model and difficulties to comprehend roles after the change. The business entered later to the change and Agile model, which interfered the deployment of roles. According to interviewees, the Agile vision did not brighten for all parties during the change process, and more work is needed to bring the whole together. Interviewee quoted below described being under control of the business rather than being in partnership. This description also described the feelings of several other Product Owners interviewed about how the business may have stuck to its old role.

“There [in bi-weekly meeting] is no more talk about objectives, but there is talked about the details of the team. It confuses doing it instead of clarifying it. The point would be to look at those objectives and make sure the teams are going toward that objective, so there they might go, the business management might go a little on the side of micromanagement and then take a stand on the team’s single stories on the backlog. Yes, I think it messes up the making. There is clearly no trust for that from the business comes targets and the teams will then independently make a proposal on how to reach the target, but there may come some things with quite a detailed level like in the order-supply chain. [...] There may be a feature, or it may be that the discussion will go to the story level of the feature. It is desired that we will start defining requirements to the business management, or they want to give a very precise opinion of how the functionality appears or works in the system. Another thing is that it may be that an individual business representative thinks the priority is so high, that there will come such assignments from under the counter, which will then, of course, spin the backlog. Especially if there are dependencies on other teams, not always but often, cause more hassle than clarification.” (H9)

A mature organization is expected to merge business and IT, so that the Agile model, common practices and events work together to create direction. The Agile practices help the Product Owner to prioritize when the requirements come from joint objectives and are not pressed from the side. There is still work to be done in the organization so that the Agile model blends into the daily routine of different roles and internal organizations. To shed the old model and ways that business organization works, so that Product Owners are free to implement the benefits of their role.



### 5.3.1 Organizational boundaries between roles

The organizational background of the Product Owners appeared several times between the lines during interviews. Product Owners in the Business organization of a case company usually have a Business Lead as their supervisor, which belongs to the same tribe as the Product Owner. The Development & Technologies organization in the same company has organized differently, so the supervisor is a Competence Lead and not in the same tribe as the Product Owner. This organizational model is described in Figure 8.

Organizational dynamics and the boundaries of internal organizations were repeatedly raised in the interviews. Regardless of how satisfied or dissatisfied the interviewees were with their operating environment, e.g., cooperation with business or supervisors.

”It easily goes to the point that the business wants to take a stand on field-level issues that happen in the application. [...] Currently, in our tribe, Product Owners are a little bit like hostages of business. Quite frankly, I would have a terrible big longing and a desire to do a more demanding tasks. I feel that what I’m doing right now, you could almost take someone from school bench to that, who would definitely do the work a lot cheaper. Given work’s level of difficulty, if you look at my role description or salary, you [as Product Owner] should be able to do more. But for some reason, it has been stated, that it is if permission is not given, so it is a bit like that.” (H9)

Interviews revealed that more problems are perceived to be in collaboration when Product Owner and business ownership are in different organizations. The atmosphere was inflamed in places due to dysfunctional interactions. Of course, personalities and personal chemistry always affect the atmosphere to some extent. But the Product Owners of the tribe felt that it was difficult for them to do their work in an Agile way outside the team.

When the Product Owner and the business owner are in different organizations, even so that the boundaries of the organizations appear artificial, it creates confrontation and dynamic problems that affect how the Product Owner takes the product forward. Case company has also tribes whose business in the tribe is technical activities. In that light and in addition to dynamics problems internal boundaries seem even more questionable.

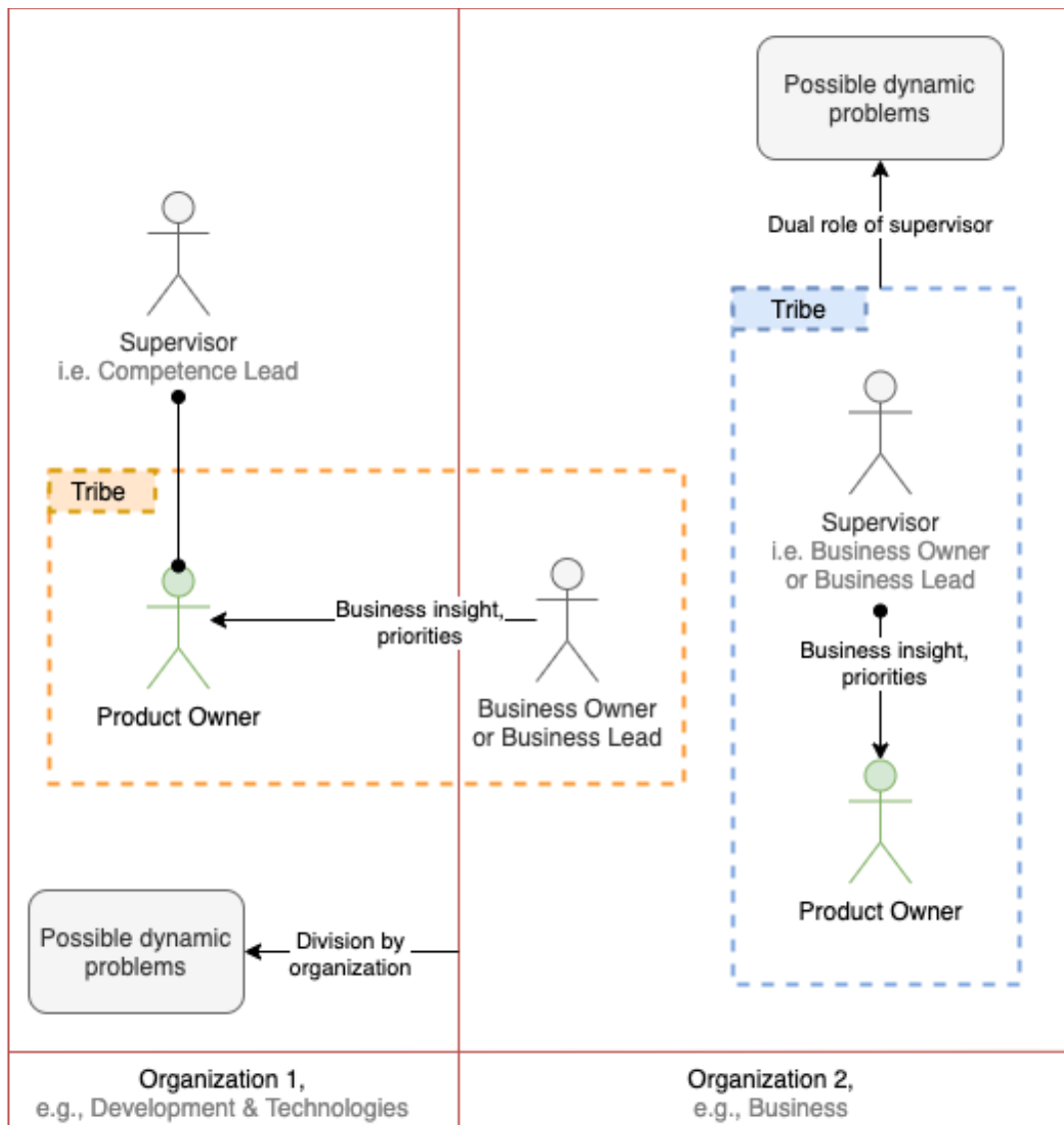


Figure 8. Organization of the internal organizations.

In particular, the boundary between organizations 1 and 2 in Figure 8 should be considered when looking at dynamic problems. Implications of organizational boundaries emerged more strongly in the interviews, than the dynamic problems with supervisor!

It was felt that the organizational division made it more difficult to implement Agile practices when representatives of another organization did not fully understand the Agile approaches. As discussed earlier in the results of this master's thesis work, the business was sometimes felt to be too far away. And this is partly due to these organizational boundaries that cause dynamic problems.

### 5.3.2 Collaboration

In addition, experiences emerged as described in Organization 2 in Figure 8. There are a lot of big roles in the big company like this case company. In the Business organization, the Product Owner collaborates with a supervisor, which poses dynamic challenges to whether the Product Owner collaborates and draws lines with someone with whom he or she has equal decision-making power. In this case, supervisor is usually the Business Lead, but this dynamic set up applies to other business owners than Business Lead as well. However, the Product Owner is a monthly wage earner, where the supervisor has a great deal of influence over her or his salary. The structure of the organization creates an initial layout of how the Product Owner treats the requests from the Business. It was raised by the interviewee, that it would be good when the line manager is separate from the tribe, where the Product Owner is. Because for example, if the line manager wants new features and the Product Owner does not implement the desired functions to the product, there is a risk that the line supervisor will feel that the Product Owner is not doing his or her job. And this can affect the Product Owner's salary. In this case, the dynamics of the organization are distorted due to how the roles in the organization are positioned. The Product Owner should be given the power to do the job where Product Owner role is made to. Such a dynamic problem creates problems that are difficult to see, making it more difficult for a company to identify what the company has missed out.

“Our organizational structure is such that the supervisor of the Product Owner is a business manager, who is responsible for the business more broadly. And then this business manager’s supervisor is a tribe leader, who is responsible for the business of the entire tribe. That whole path, in the way that the supervisor dictates what needs to be done, is really bad for its dynamics. And if there comes a Product Owner who, in a certain way, throw a spanners in the works, that “hey, that’s not us, we cannot move on like that, we have to take these other things into account also when we do these things”. Yes, the Product Owner puts itself in a difficult position. But if the Product Owner gets through that opinion and desire, then I believe it will be reflected in the fact that product will be better. And through it, Product Owner finally gets his or her credibility for his or her own message, but it is hard work to get that credibility and thereby the influencing power to do it.” (H2)

Several Product Owners saw Business Lead as an important help and channel when they want to take their visions forward. But some felt that Business Lead or other business roles were micromanaging and interfering too much with the work of the Product Owner, which had a suffocating effect on how the Product Owner could take things forward. In this case, the IT and development team was seen only as an implementing party to whom precise instructions were sought. This, of course, is not a fruitful way. In this case, competence and, above all, motivation are reduced. Product Owners need to be able to show their expertise holistically, including business expertise. Even when Business Lead was seen as a very important and fruitful help to the Product Owner, it was felt that Business Lead was the route along which things need to be taken forward. The importance of collaboration and trust between the roles of Product Owner and Business Lead was emphasized.

“[The Product Owner’s ideas and priorities] discussion takes place at that tribe - Business Lead level. So, that’s where I can as well go to present things that I feel would be important to do, but it may then be that those other things take precedence over that, because they play a more significant role in the channels or for customers.” (H11)

“In fact, recently there has come a Business Lead in between, who doesn’t understand this product area, who needs to be told really accurately and really a lot of information, why this isn’t the right direction that “this is the better direction”. It may have recently raised its head that there has become a Business Lead that does not understand this business and this system.” (H7)

“There is clearly no genuine trust in our product development area, that teams are able to provide solutions to top-level objectives. If we strive to deliver those, then yes, those may sometimes go through. But still the last word comes from the business, and it comes at such a precise level, that it always goes that point that, goals are further refined from the business side. Then there come those assignments, where it is typically thought that the IT department will execute this”. (H9)

When the business wants the solution to work in a certain way and gives the teams goals at such a precise level, that if the solution does not work at the desired way, then the Product Owner will have to justify, why the solution is not implemented as the business requested. In such cases, for example, the business has defined the outlook for the user interface. It is the responsibility of the Product Owner to look at the overall picture of the product and to choose a suitable route, that serves all the goals related to the product: business, technology and customer value. When business roles does micromanagement in a way which is described by interviewee above, the Product Owner is deprived of the opportunity to achieve the goals. In this case, there is a danger that the best implementation will not be found, when an iteration of ideation process is missing from the Product Owner, who is responsible for the success of the product, and from the process.

### 5.3.3 Product Owner saying no

The Product Owner prioritizes, arranges the backlog for prioritization, negotiates with stakeholders what is taken for the backlog and how it will be prioritized. The Product Owner must also act as a buffer for the development team so that the development team gets work peace. Such prioritized desires are usually new functionalities.

“If there is no production disruption... So to speak, to it [production problem] the Product Owner cannot say no. If it is in our context, the fact that services are up, so of course that is always at the top of the list. But then to other parties or demands, the Product Owner can say no if there is a reason for it.” (H4)

The Agile model was sometimes felt unnecessary much to decentralize decision-making. In this case, company-wide intentions with a lot of dependencies, over which neither Product Owner has full influence power. Goals like these come as not prioritized, so Product Owners feel that decisions are draining too low in the organization. The Product Owner does not

have the opportunity to do everything with the resources and the mandate given to him or her, but those will still be a priority for Product Owner. So, business requirements are presented, and new features are hoped to be put into work, but it is difficult for the Product Owner to refuse to include them on the backlog. Some Product Owners feel that they have a set of peers, for example other Product Owners, where they can have an equal say. But they felt that there are also those situations where the business has not understood the Agile way of operating, and rolls over the Product Owner. Decision-making flowed down and yet things were sometimes difficult to implement in the Agile model.

“And it is kind of like an analogy that a bit lies in here, that responsibility with this Agile, making these choices, making these choices is drained downward here to on our level. And it is said that: “John, all of these have to be done, you prioritize!” It is like after all: ”Hell we can't do all these, why you have not decided whether to do this or that.” It is a bit like that, maybe the kind of Achilles heel of such an Agile, self-steering model, that it can kind of drains unnecessarily low the decisions about what to do and what not to do. Yes, there could be such an optimization of resources there at a higher level, and then give more clearly that this is what we want.” (H15)

Saying no can be equally difficult for superiors of the Product Owner. It is felt that when the superior higher in the organization’s hierarchy has greater decision-making power, it is difficult to give a negative or opposite opinion. Or it won’t even help if the next step in the organization is facing the same dilemma.

"In a way that... ”This kind of functionality has to be done right now”. It may be that that Product Owner sees that it has no value. But since the Product Owner can't directly tell it to him or her, and then the person above the Product Owner doesn't dare to say it up there, then it kind of doesn't help anything." (H8)

“Basically, the higher you go in an organization, the harder it gets, in a way you’ll have a sort of view, that you always have to respect and think about the position of the supervisor and his supervisor and his supervisor. But under certain conditions you can say no to them. It is basically [a situation] where you can at least ask why you say that.” (H15)

When Product Owners were asked, who the Product Owner could say no to, then seven of the fifteen interviewees (excluding the initial interviews) said that to anyone. But the answer came with laughter. The physical reaction was similar with each interviewee. So, 47% of interviewed Product Owners said, accompanied by laughter, that they can say no for anyone

in the organization. But Product Owner's own disbelief is manifested in a stir of laughter. When a Product Owner is asked who he can say no to, less than half say that to anyone. And even then, they are not quite behind this opinion. It is difficult to be responsible for the success of a product, if its direction is not determined by who is responsible for it.

“I tried to say no to my supervisor in some project, but the supervisor stated that it just has to be done. And then we did it [says the interviewee with a resentful sneer]. I think it is needed to be able to say no, if it is justified.” (H6)

“Not really for anyone. To the supervisor. You can't really say no, it must be expressed differently in that situation.” (H17)

The Product Owner has people above him or her in the organization chart. And if the Product Owner wants to make changes, then in the current model, the message must be taken up one step at a time. In this case, the next step in advancing the cause or vision may be a business owner, followed by a tribal leadership, one or two higher superiors, and finally the leader of the entire company. At every step, a new role takes the message forward. In this case, each step acts as an interpreter for each other. The risk is that the perception of a product's needs or capabilities will shape along the way. Technical issues are interpreted into business language in different ways by different people in these steps. Misunderstandings or message-modifying summaries are generated. Although the Product Owner takes the message up a certain hierarchy, the common supervisor of the people on these stairs, and the Product Owner, may be far away from each other in the organization's hierarchy. That is, not everyone above the Product Owner in the organization chart is superior to each other. The companies have intentionally created hierarchies, but hierarchies should also be viewed in terms of how those could be enabling factors of product development.

It emerged also from the director level in the interview that, the Product Owner is expected to resist, in which case he or she holds the side of the product and in such a way makes it better. The case company assumes that the Product Owner will stick up for oneself and explains how or not to proceed, and what should be prioritized for the product at that time.

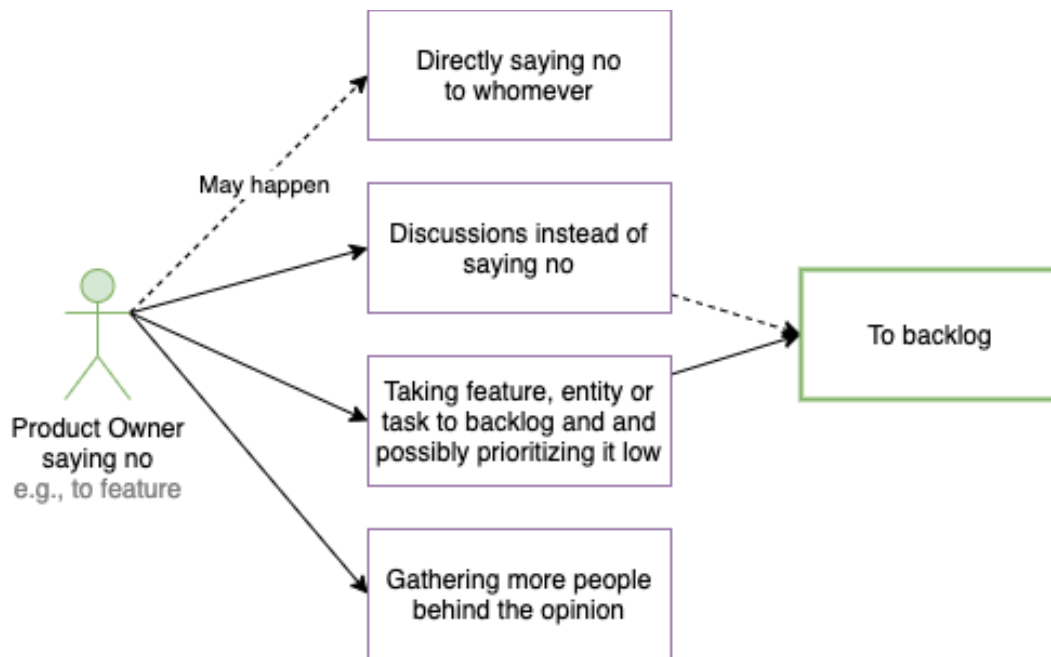


Figure 9. Ways for the Product Owner to say no.

Figure 9 shows the ways in which the interviewees felt that the Product Owner could say no. It was uncertain whether the Product Owner could say no to anyone. Usually, the Product Owner handled the situations through discussion, after which the matter was usually taken backlog and prioritized according to its necessity or urgency. Some of the interviewees felt that they were under pressure from the business side, that the tasks had to be taken backlog, even though the Product Owner did not think they were reasonable choices for the whole of the product. In this case, there is a risk that the new task may be left behind the backlog for a long time. Negotiating is a work where sometimes has to be said yes instead of no, so that other treat the ideas with open minds and returns the favor with also saying yes. However, not all decisions can be traded.

Gathering opinions behind Product Owner's appeared to be an effective way of saying no. In this case, the Product Owner gathered a few agreeing experts to a meeting to justify his or her own position, in which case the Product Owner's opinion was perceived to have more power, and a stigmatizing choice to oppose did not apply to the Product Owner anymore. Interviewees felt that the Product Owner is too far away from top management. Messengers were needed. When a messenger, who is also an interpreter, is needed, it was felt that the help of the tribal leadership or Business Lead was needed for the Product Owner to say no.



“If you’re in a situation, where you can’t really get ahead between the two of you, then maybe you can take a few people or the issue owner, and look at the whole thing together. Then it will always be easier to make that decision and the big lines, when more than one opinion agrees.” (H4)

“Yes, I feel that in the current situation [I can say no] to Business Developers, a more detailed level of work is being done with them. At that point I can say no, when it comes to planning. I can also say no to other Product Owners if needed. If we go through dependencies, then I can make a stand. This [Business Developers and Product Owners] is perhaps the group where I feel I can say no without causing some resentment. If somewhere else, for example, if I would want to take a position on the orders which are coming from Business Leads and question that model, then yes, I feel like I can say no. But I know it is not far-reaching, because there are such a strong personalities, that it comes back pretty quickly as a boomerang. It is not constructive, at least in that tribe. That kind of conversation cannot be discussed in a constructive spirit. Although I can say no, it doesn't make sense in that environment.” (H9)

Some interviewees felt that saying no is not constructive because the Product Owner does not have enough say and the role is rolled out. In that case, the Product Owner would need the help of upper roles in the hierarchy to say no, but these higher roles then do not take a position on behalf of the Product Owner for some reasons.

“Let’s say like this that we have such a certain culture, that top management can dictate. That “this is done like this” and no one can say anything about it. No one dares to say to top management. If we talk about that top management, the Product Owner is so far away from that, that he or she has no chance of saying anything up there. It would require that in a way our Business Leads and tribal leadership, would say no.” (H8)

Several comments revealed that it is felt that Agile roles needs clarification from a higher level of management. The clarification of the company's management was longed on how the role of the Product Owner is seen, how it is positioned and what kind of power and freedom the role of the Product Owner has. The fact that in the change large-scale Agile has been given directions and the internal intra defines the roles in the PDF slides is not enough, at least a repetition of the bigger guidelines was desired. In addition, in the interviews came to the fore, that more channels would be needed to empower the Product Owner. In addition, clarification is wanted on how IT and business should work together in Agile way.

The interviews revealed how the word no is not said, but the matter is instead handled by discussions. Sometimes, the result was that when no was not said, then the suggested things

will be taken to the backlog, even if it does not seem sensible to the Product Owner. Discussions before this may include reviewing whether the requester understands what the team would need to prioritize in order to take on the requested entity. Sometimes such matters involve regulatory changes, forcing the team to prioritize such tasks on a schedule over the rest. Company-wide changes, such as system reforms, were also such issues because they had a lot of dependencies on different teams.

When the requests concern new features, and if the Product Owner cannot say no, but through the discussion or pressure, the features and tasks end up on the backlog for the Product Owner to prioritize, the situation would be handled without anyone being told no. In this case, the Product Owner may prioritize new tasks over other tasks. It is somewhat beneficial for the team that the backlog has a lot of entities and tasks, so that the team has a lot of work. Backlog should include the things that are deemed necessary to implement for the success of the product. New tasks cannot be on a low priority indefinitely, because then the Product Owner's time in everyday work is also spent on these backlog tickets. And the product is not under the control of the Product Owner, but product is a subject to additional tensions, then business expectations for the team may not meet reality.

“It can be said that if you say no enough times, and even if you justify that fact even by moving to this Agile model. Then enough times you say no, you will be blacklisted. If you say once or two say so, it may not be blacklisted. But it sometimes resembles some junior high school frankly. There, really, in some group meetings, the volumes may rise and swear words are thrown. You don't want to along to that intentionally when you know what will follow. I prefer to swallow my disappointment and say that this is how it is done here.” (H9)

“It shouldn't be this HiPPO-style, that the highest paid person decides. We make these products for customers. Through it, we reflect on those outcomes. But that's it. This is often a matter of making compromises.” (H11)

Some interviewees also had very colorful experiences of how opinions and know-how can be rolled over. Shouting at a meeting crosses boundaries that would not generally be wanted to be crossed in companies. If the benefits and potential of the role of Product Owner cannot be seen, then some roles may abuse their power and customers may not get the best possible products.

“Of course, there must also be decision-making ability and not everything can be discussed in Swedish style until the end. Or endlessly. But it is good to go through things. Then, if there are differences of opinion as to which direction to take, then of course the role of the Product Owner is to make decisions and, in a way, show direction.” (H4)

“[When visions are at intersection] I feel that I have been able to communicate quite well in that direction that what we are doing here, and that is because there will probably not be such contradictions, that the big picture is understood there, that what is being done here, not through it as , the smart people out there are that yes they realize that they are not suggesting anything that is completely different from it. Sometimes there has been something smaller, that has been said to be a really important thing to get, and then I have pointed out that okay we will do, but you realize that this will then cause a delay in these other things.” (H15)

To a certain point, the way to say no is to discuss. Communication skills are strongly emphasized in the work of the Product Owner. Although, of course, progress in the negotiation also always depends on the goals of the discussion’s counter party.

#### 5.4 Product Owner and organization

This section answers the research question “RQ 1.3: What does the Product Owner need from the organization?”. This section reviews the organization’s objectives, operating models, budget creation, and the role of Product Owners among these.

"These are, in my opinion, the three things that I have pain a lot: kind of the priorities, money and objectives." (H8)

Case company has made efforts to change the goal setting so that it will go more Objective and Key Result (OKR) type of goal setting. In this OKR model, it is not a top-down decision on how to solve problems and what to do, but it is up to the team to decide. In this case, top management sets the target level. The goal can be, for example, market leadership. The development team will consider what steps will be taken to accomplish this and then makes Key Results. The Key Results determine what needs to be accomplished. The intention is that the goals set by the top management will be met by achieving concrete things.

“I think we still have those Key Results. But then if we kind of have annual company goals, where we have something like euro-denominated goals, that it is more random than whether those are fulfilled or not. We just believe then that those [key results] are met, but there is a lack of consistency in it. And if I think about that every task we do, we should look at how well this work planning, sprint planning... Whether this really contributes to our annual goals or not, and the business goal or not, or what it contributes.” (H18)

Interviews revealed that when it comes to technically large entities, the wish was that it would be good for the Product Owner to have some other way to take things forward than their own business owner. Otherwise, the promotion of things is personified by one person and the area he or she represents. Responsibility and competence of the Product Owner may be at the same level as Business Lead has for the business, so company should take advantage of. It is a loss, if Product Owner’s good ideas and the know-how created by expertise is hidden or unused due to a lack of bureaucracy or bandwidth.

“It feels at times that it’s not always understood over there that if it is said from there that I want this, then it may not be ready in two days or a week or even a month. And then that, of course it is, we’re working hard all the time, of course, to make this work transparent, but it’s quite a challenge. I still notice this after a couple of years, as if to really make people understand that what it means to have a quarter four full.” (H17)

“I would rather then take a positive attitude towards that change and set out to explore how we can do it as efficiently as possible yet remember that neither this company’s Agile and this current agile model or DevOps model is some happy place, and that development stops here, but that in twenty years it will be completely different, something completely different.” (H18)

No matter what kind of organization is created around the Product Owner, even this attempt to make products with a certain type of organization with the large-scale Agile model, is the fruit of its time. But it is still worth honing it to work even better to find the means that best support company’s operations and business.

#### 5.4.1 Product Owner’s sandbox

The illustrative term sandbox reflects an operating area: limitations and boundaries that the Product Owner may experience. Product Owners plan their work according to different cycles. Meetings for shorter cycles support day-to-day work and larger planning processes

culminate in quarterly or annual decisions. The Product Owner objective creation cycle is illustrated in Figure 10. The design of the Product Owner's roadmap is drawn in Figure 10 slightly outside the design cycle, as it is in a way a separate process and with a longer time span than the other cycles in the image.

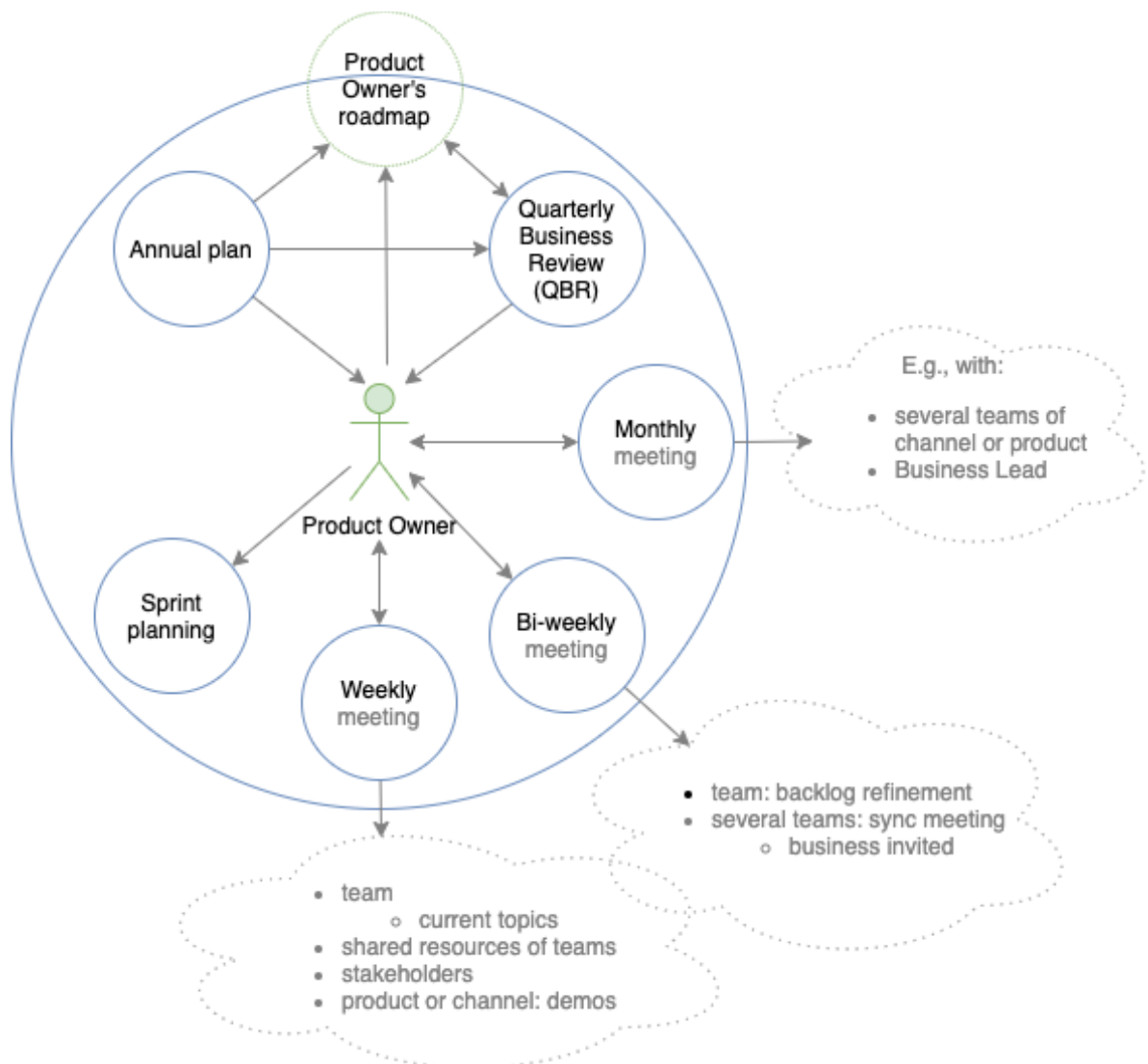


Figure 10. Objective creation cycles.

The interviews included a strong influence of different roles and organizations, sometimes in product decisions. Product Owners felt that they in some cases, they did not have enough say in decisions (Figure 11). More discussion was needed so that the Product Owner would also be seen as a representative of the business.

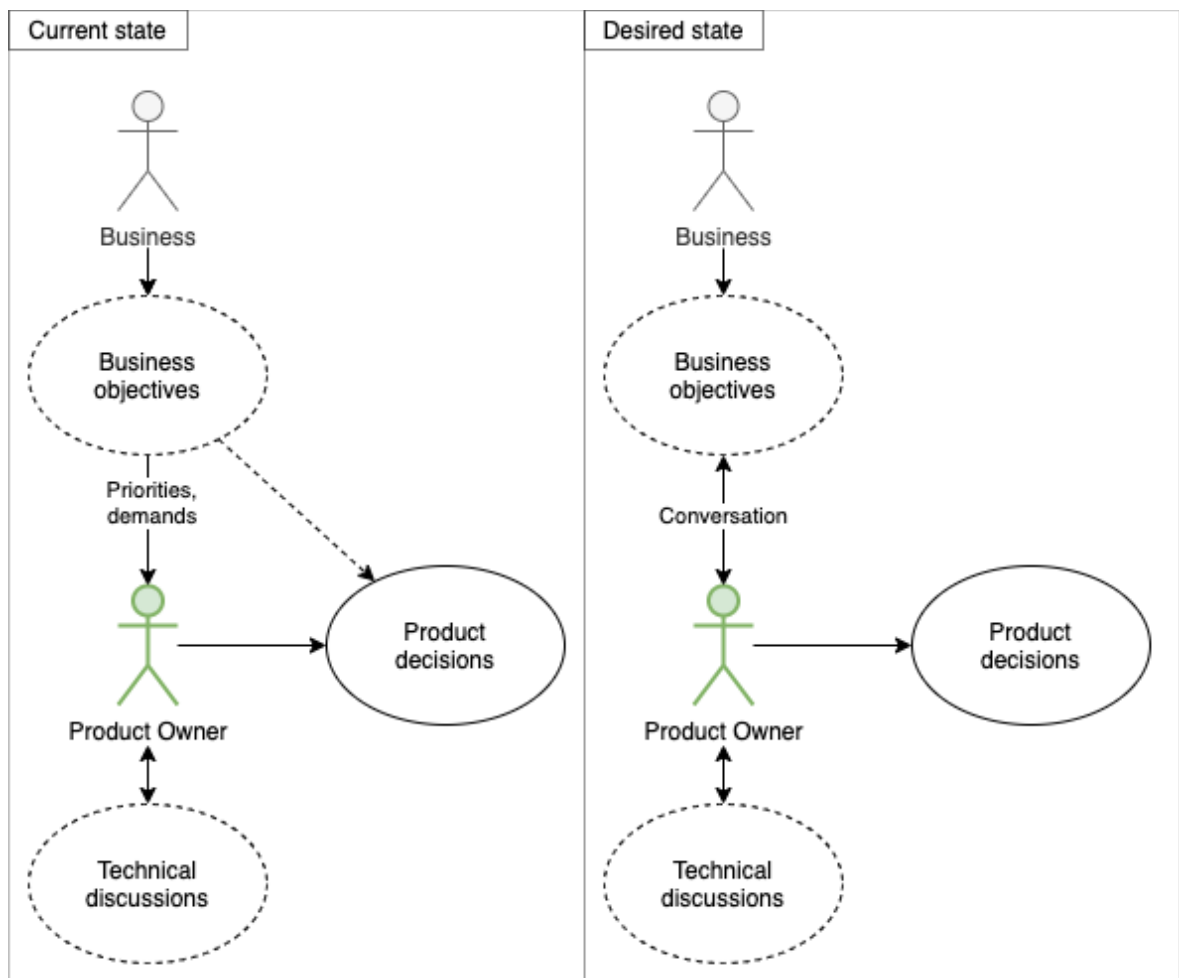


Figure 11. Current and desired state of Product Owner's expertise and decision making.

The Product Owner acts as a link that must also have own decision-making power. Because then the Product Owner knowledge is available to the company. As the interview below shows, the Product Owner has good visibility into the product choices. If the common denominator in product development is technology, then the product is no longer considered as a whole, e.g., also from the perspective of creating customer value or business.

“I don't think that role is unclear, but what those product responsibilities are, they could be in a way... If those were thought differently and the organization would give in, it would make life easier. My own responsibility is also fragmenting, there will be such service development projects where the only congruent factor is really the technology we use. I don't think it makes a lot of sense, we should think more about the value to be created for the customer or the process or value stream that will be developed.” (H6)

Also, some ideas were perceived to stop at a hierarchy, in which case in which case certain higher-level roles could not be by-passed, because there was only one route for communicating. If there would be more platforms to technical discussions, where listeners would understand the technical talk and ideas more deeply, the easier it would be to take them forward. The Product Owner's strict product responsibility areas and organizational boundaries were felt to make product development more difficult.

“I have tried everything. I have suggested, for example, that our team could be transferred to another organization. No dice. I have suggested that we could start developing new products. Has not succeeded. That is not easy. As I said, those organizational boundaries, customer relationships and products set too many boundaries.” (H6)

As is well known, software development is an abstract construction method. Although Product Owners felt they could well explain the matter to different groups of listeners, simplify and explain things from a business perspective, these experiences had also raised a longing and need for a technical forum, where decision and budget makers would also understand the technical discussion (Figure 12).

“If something is missing, then that level of technology management is missing. In other words, we have the level of a business director and structures for that. But then when it comes to technology management: at least I haven't gotten to those forums yet. But it is not being done so actively in our company, that also technology would be managed, other than through architects. So that the Product Owner would be part of that technology management. [...] If you would go and work to Google or to somewhere else, they are very technology driven there. That's how they're focused, and what kind of role and responsibility there can get. I would see that tech-savvy Product Owners are hard currency in there. They are probably listened to differently versus... Somehow it feels at times here that listening to business may be a little more emphasized. Maybe it's because executive teams and managers can't speak the language that the more technical Product Owners can. Because we have to simplify and filter so much to the higher level.” (H5)

“I think it should be that exactly the product management... Modern product management thinking that we should do more. That we would manage products and manage that value, value creation. And not necessarily lead to work too much from business, as we may have traditionally done. But to really put the customer's products at the center of development, and that would be the priority, how to prioritize things and doing. And we should think about creating customer value, because if we think about such digital development and services that we have, then those competitors and solutions, so many times those come from other industries, and that's how customers are used to how services work in the digital world and how smoothly they work. Those are also a challenge that we should be able to keep up with these different technology houses, so that we can really create that value for the customer with digital services and bring a modern service experience, and that challenges us a lot as a company.” (H12)

It was felt that a financial company can be more than just a business. Because to a large extent it is also a technical know-how and software development nowadays. Interviewees felt that more could be taken example from the world, from technological market leaders, and thus move on from the traditional way of doing business.

In addition, it was felt that organizational boundaries could dictate the boundaries of doing. But not every Product Owner had the need to expand their reach, some felt that they already had their hands full in the current daily work in their product area. Then Product Owners felt that they did not have to implement their own visions, but that the visions were made together, and they have only time to implement common objectives.

“I would have needed a forum here, or even a role, that I could have acted as a kind of Tech Business Lead for this capability of mine. Because this ability is so huge already that it is as big as a subdivision of any Business Lead in other tribes. We have a really big area of responsibility for payment Business Leads. But there are a lot of tribes with much smaller responsibilities for Business Leads. It would be great if a Product Owner with such a more technical entity also had some own responsibility for it, and would be able to have a little higher level discussion with those who understand it, and are able to go ahead and take it forward. In a certain way, those would also be a combination of the technical and business, customer experience. After all, I can't take things forward in a certain way other than through my Business Leads. If you think there is a management team, then there are still leaders above. So now I have no route other than through the Business Leads. Fortunately, I have had pretty good support [from Business Leads]” (H5)



The Figure 12 below illustrates how to better exploit the benefits of Product Owners' technical competence. The technical forum could be built through Tech Lead and IT Area Lead. However, this model has sought a way to take technical discussions to an even higher level, where technical directions are decided by the business.

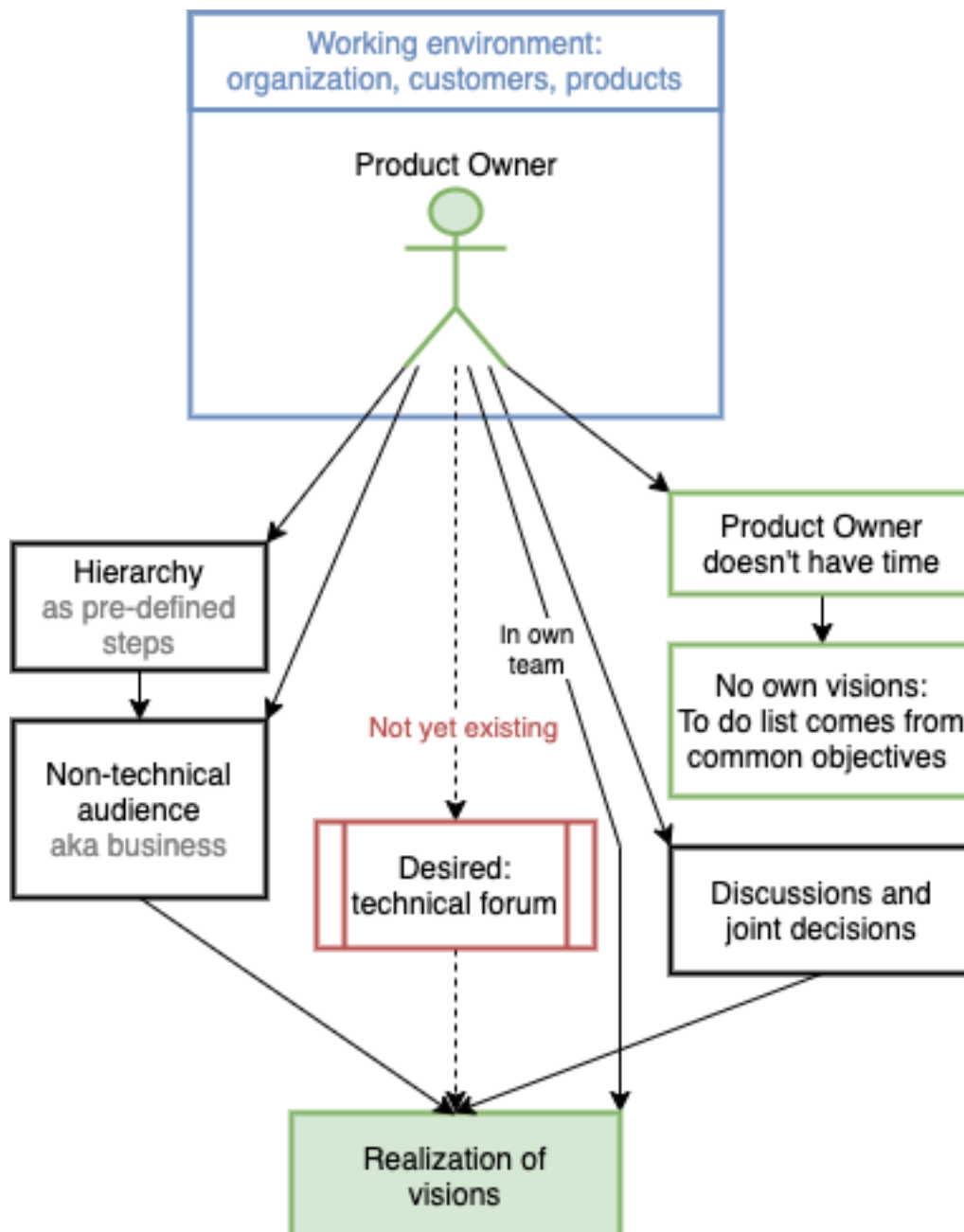


Figure 12. Realization paths for visions and the desire for a technical forum.

When a Product Owner proves his or her skills successfully, more responsibility and mandate is trusted for Product Owner to take the ideas forward. But it is not facilitated when

the role of the Product Owner in an organization is unclear for other roles or some parts in organization. In these cases, the mandate for the Product Owner is weaker and it is difficult to get to show off talent and successful visions. Interviews revealed that Tribe 2 (Table 4) faces greater challenges than Tribe 1 in outlining the role of Product Owner in parts of a company's organizations. Tribe 2 exhibited greater dynamics problems with the Business organization: collisions and micromanagement, when the Product Owner is in a different organization.

“Some Business Developers will certainly understand, but they too are under the pressure of the tribal leadership and the Business Lead ladder. I don't really believe that the role of Product Owner is understood in that tribe.” (H9)

There were interviewees from other tribes with whom cooperation with the business and its owners worked better. But while the collaboration with the business owner worked so that the Product Owner and the business owner could be perceived as an effective duo, it still emerged that the Product Owner has a certain hierarchy along which ideas are taken and no exceptions should be made. In other words, those above the hierarchy act as enablers as well as potential bottlenecks. When a business provides new objectives or tasks, the Product Owner will negotiate with the business to agree on what will not be done instead of this new higher priority task. However, efforts should be made to clarify in the organization, what is the business responsibility of the Product Owner. The Product Owner is seen as a business role, but still the business is a separate organization or roles, leaving it unclear how far the Product Owner has the power to fulfill his or her business role.

#### 5.4.2 Objectives in the work of the Product Owner

Case company makes an annual budget, from which Product Owners receive funding for their own making. In addition, an annual plan is made at the company level, with the aim of outlining the broad lines of the objectives and draining those down. Product Owners felt that the given annual targets are not prioritized, that what can be left out due to lack of time.

"It is said that those [annual targets] has been prioritized, but nowhere is said that what will not be done." (H16)

“Of course, this prioritization of work is always, that what we do is strongly guided by the priorities of the company and the tribe, and then we may not always be able to implement things that we would find important ourselves. Then a lot of good stuff has to be pushed into the future.” (H11)

“The general problem with those is, in my opinion, that we set goals for a year, and then we should be able to predict whether we will do the same thing by the end of the year. However, the world is changing at such a pace, so what we planned at the end of last year, then is not what we will do at the end of this year. Although that is what we tried to plan. Now, however, we are attached to our performance salary and annual targets of that world which was set a year ago.” (H8)

The annual targets are to be broken down into quarterly targets. Product Owners work to interpret the content and order of importance of annual goals. And try to adapt them to dependencies and schedules. Although the Product Owner felt that it was his or her job to implement the given quarterly goals, it was still not straightforward.

“I think it’s been problematic that we have annual objectives and those may not be at all related to our quarterly objectives. We have a goal floating there for which we may not work. What is the significance of that target then? A year is also a pretty long time, in those goals. If we think we are in an Agile world, and if we still have those quarterly objectives, then I would feel that these are the things we want to do now, and it is more important to follow them. When those annual objectives that may not be related to those strategic themes in any way.” (H10)

Tribes come together and agrees on goals and dependencies. When the work of the teams is guided through Quarterly Business Review (QBR) planning, then the most important things that the team plans to produce in is planned on a quarterly basis. Several Product Owners felt that the annual and quarterly targets were inconsistent, and cross-prioritization between annual and quarterly objectives does not work as intended. It was felt that the QBR process is closer to the purpose and implementation ways of Agile method, than annual plans. Several interviewees felt that the annual plan does not keep up with Agile developments, but plans expire in the middle of the year.

“We have QBR goals, annual objectives and certainly longer-term goals; so those are really a lot at odds. In which case those are not good objectives. [...] [Visions on Product Owners] should affect [to the distribution of money], but I do not think it will affect. We should have a house-level vision, from where comes a retail level vision, from where comes a tribal-level vision, from where comes a troop-level vision, and from where comes a team-level vision or a product-level vision. And then, on that basis of that, it should kind of prioritize how much money is being allocated, but we have very little of these different level visions, especially so that those would be in line with each other.” (H8)

“Of course, there can be such factors that limit visions. More so they come from these everyday constraints that there is no unlimited budget. Or there is an existing product and customer base, which you have to work with.” (H3)

A big company has a big budget, which is never an unlimited budget. Money and resources must be allocated to each product and team to be able to promote operations on a small or large scale. The interviews raised the question of whether the budget is shared too much evenly for everyone. Although the process also gained an understanding that the distribution of money is challenging. However, the general line from the interviews highlighted that although budget planning was participatory, there was still too little ways for Product Owners to influence.

“Even though we are in Agile, we still have annual budget planning, which is started right after the summer holidays. [...] It is an annual process and then influencing team line-ups for next year that what kind of teams we have funding for. It is very challenging in a way then to make such an annual plan without having that ongoing funding and thus resourcing for teams. Those things kind of make this pattern more difficult. And then you must do this kind of annual planning, tell what will be done with that money, what will be done with that resourcing, guess the to-do lists for a year, which is not in the Agile spirit either. [...] Basically, when we only have funding for one year at a time with the teams. And from that, at some point, there may always come discussions throughout the year about whether we need to reduce it.” (H16)

As the entire company strives to become Agile, Product Owners struggle with annual budgeting, which is not perceived as an Agile process. In this case, it is felt that the creation of objectives is not synchronized with the budget, but when they are different processes, they become detached from each other (Figure 13). It was felt that the annual plan, as well as the roadmap, had to be made by guesswork as it was separate from the budget planning. The Product Owner cannot know are the money and resources enough for Product Owner’s roadmap, because creating an annual budget is a separate process from annual planning. In

that case, prioritizing next year's objectives is challenging, and creating and following a roadmap.

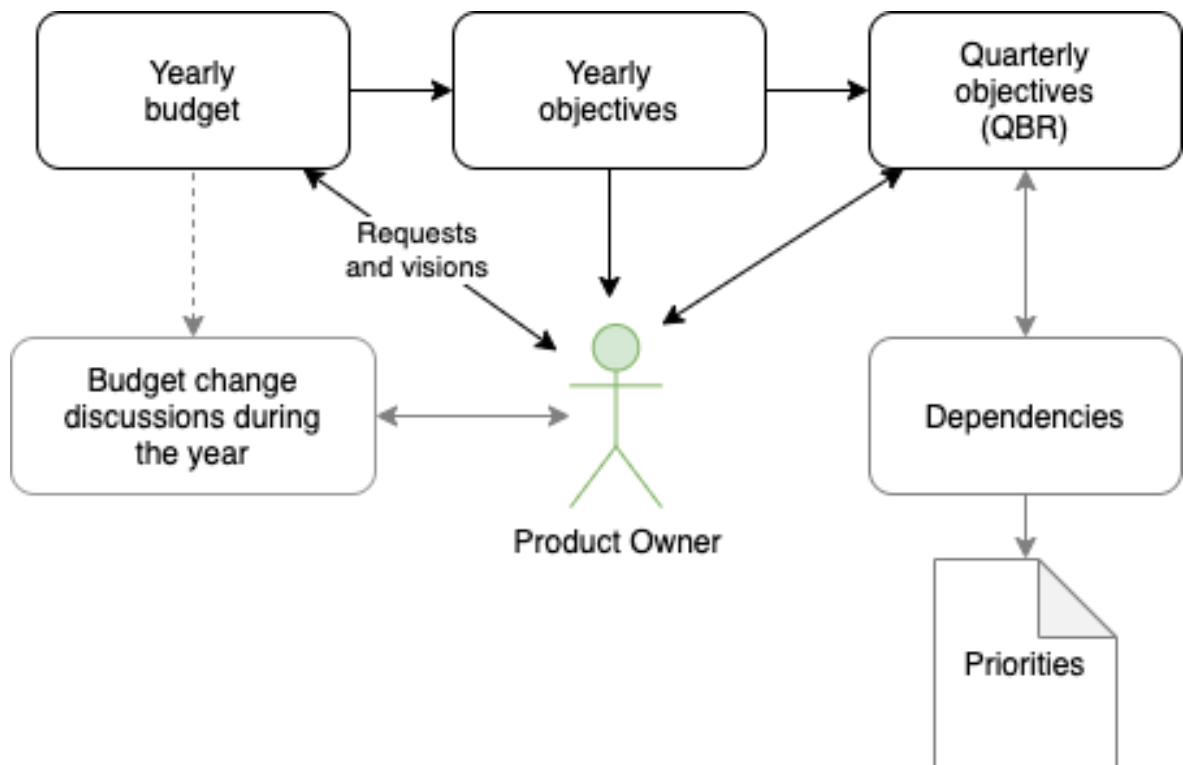


Figure 13. Yearly objectives and priorities creation.

In addition to perceiving the annual budget as a separate process from the planning of annual objectives, once the annual budget was decided and locked in, superiors had minor discussions with the Product Owner throughout the year about whether they really needed that number of resources and money. This increases uncertainty in planning and makes prioritization for the Product Owner more difficult.

## 5.5 Entrepreneurial mindset

This section answers the research question “RQ 2: What is the entrepreneurial mindset of the Product Owner?”. There has been discussion and sparring in case company about how an entrepreneurial mindset benefits the work of Product Owners. Any small or large company can create its own product and therefore an entrepreneur owns its own products. In example case, the entrepreneur takes the product forward so that it will be reasonable business, justified by its technological solutions and creates customer value. This study

provides more information on how Product Owners feel an entrepreneurial mindset is reflected in their work.

"I don't know how to rationalize [entrepreneurship as a goal], but yes you have to be truly independent and forward-looking in the best possible way relative to your own product or area." (H7)

"Absolutely! And this [entrepreneurial attitude] is one element that I personally love above all else." (H1)

There were also a lot of discords in the interviews about the entrepreneurial mindset. Although it was understood by the interviewees, why the role of the Product Owner is considered and wanted to be an entrepreneurial mindset, it was felt that there were many factors why the work of the Product Owner cannot be said to be entrepreneurial. It was felt that the Product Owner's activities as a private entrepreneur are different from those employed by a large company. The environment is different. Product Owners should have the same kind power as an entrepreneur to be entrepreneurial. If the Product Owner is seen more as a performer of tasks than as an orchestrator of the whole, then product ownership and thus entrepreneurship will not materialize. The implementation of the tasks can be, for example, such that the Product Owner is given only new features for all the time used, in which case it is challenging for the Product Owner to take care of the technical quality and the creation of customer value.

"I see that it's those are my stuff, I own those, and I have to take that forward. And that's clear. But I think it is a pretty natural pattern of thought. That's how it should be for everyone, though. I'm not quite sure... I've ever wondered before, that is when it comes to entrepreneurship, I might feel it is a little different than what it really is in a bigger company like this. It is more of a sphere of thought that needs to be entrepreneurial here maybe, but the activities might be a little different nonetheless." (H13)

“Everyone probably wants to act like that, and everyone wants to look like it works. But an entrepreneurial attitude means that you really own your product and are serious about getting that better and more profitable. We have thrown out maintenance from products to elsewhere. And then things related to the user experience are pretty in bad shape overall. And then we are required to do 120% of the work time new features, so try to be entrepreneurial there. That's not how it works. I don't believe in that. It may be that people are like fooling themselves with it, but in this model where we are now it doesn't work. We don't really have product ownership, we don't have product management. Then when we have them, then we can be entrepreneurial.” (H2)

Most of the Product Owners interviewed felt that they could implement their own skills in this role. Product Owners and other roles interviewed were motivated and committed to the work. 39% of the interviewees raised positive issues about the entrepreneurial mindset. 56% of the interviewees raised negative issues about the entrepreneurial mindset. Even when it was felt by interviewee that the case company had not given the Product Owner the opportunity to be entrepreneurial, an entrepreneurial mindset was perceived as a good goal within the company.

Aspects of an entrepreneurial mindset are described in Figure 14. The Product Owner's employer and the Product Owner strive to benefit from an entrepreneurial mindset. In this case, the Product Owner who implements an entrepreneurial mindset takes responsibility for the work, as if it were a company he or she owns. Although the Product Owner is an employee who enjoys a monthly salary from the company, the product still has a customer base.

“By the way, I haven't thought about that [the role of an entrepreneur]. In a way, yes, expectations are high from the business.” (H17)

"Even when doing a corporate app, this entrepreneurial perspective of course is still pretty much here, of course, it's our target group and customer." (H12)

A Product Owner can apply for a similar motivation, for example, from the analogy of a sports hobby. So, an entrepreneurial attitude can mean the same as the experience and skill of taking responsibility in a team sport or goal-oriented sport. It was felt that for an entrepreneurial attitude to be realized, the Product Owner must be able to modify his or her own operating environment. The athlete is always able to invest in her or his own development with independent decisions.

“But in a way, I find the analogy more from the team sports world, than from through entrepreneurship. And yet the goal in both is the same, that we are just super committed and striving to achieve the goals. In a way maybe that analogy of mine is coming from a different side now, but the goals that are being sought are the same.” (H18)

“But then there are still certain such house-level policies, in terms of practices or others, so that for example, I am look forward with great interest to how strict the policies will be for us to come back to the office [after pandemic]. [...] In this way comes that freedom and responsibility. When you have the freedom to choose where you work, then you will have a certain responsibility to do the work. Because then there’s kind of no one watching all the time. In my opinion, entrepreneurship is based on that. That you have that freedom, but then you also have that responsibility. And that responsibility must be borne.” (H8)

The Product Owner also wants to carry out his work in a way that promotes product development. For example, this manifested itself so that it was hoped that Product Owners would be able to influence the amount of remote work themselves. It would be difficult to see the environment as entrepreneurial if the employer company dictates how much the employee or team is allowed to do remote work.



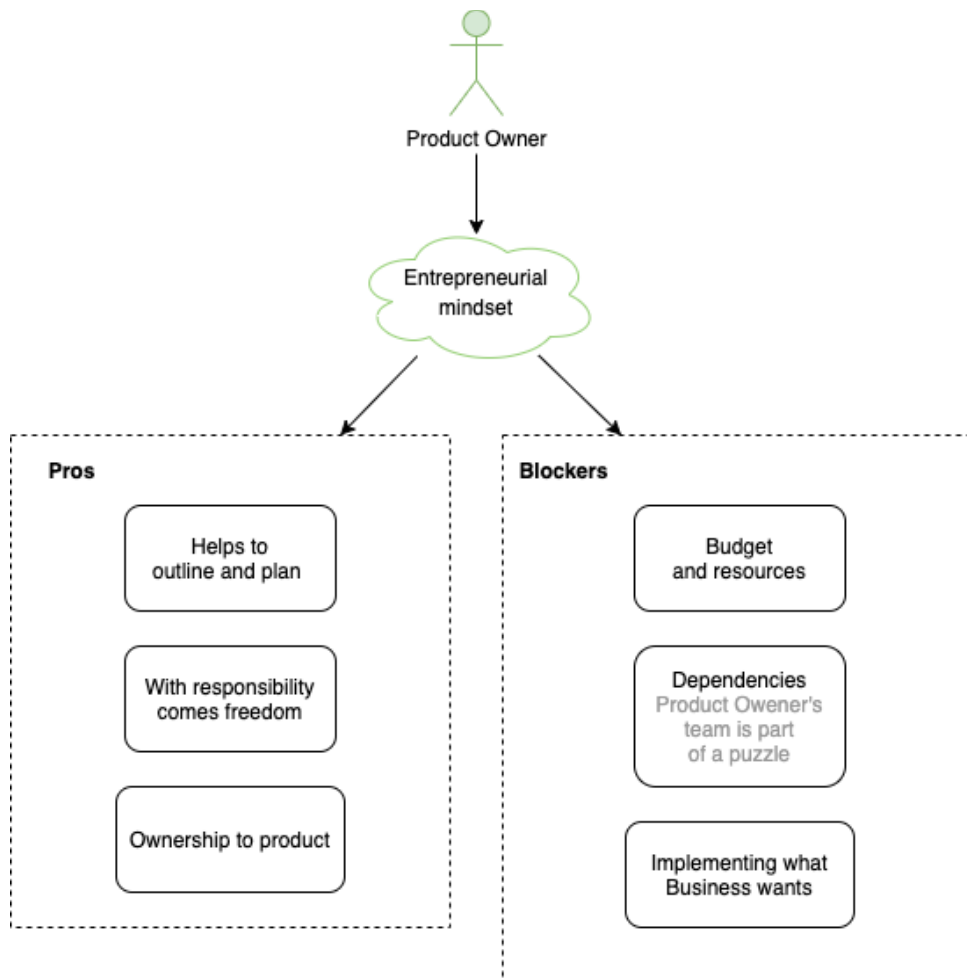


Figure 14. Pros and blockers of an entrepreneurial mindset.

Many interviewees saw problems in implementing an entrepreneurial mindset. Entrepreneurship can exist in many ways and performing entrepreneurship as an employee was not seen as a solution to defining the role of a Product Owner. It was felt that when the budget, resources and tasks or vision come from elsewhere, it is difficult to be entrepreneurial. It also emerged that as an employee Product Owner does so-called unnecessary or free work less or not at all, which is then to the advantage of the employer. As an entrepreneur, time is spent acquiring work assignments that do not necessarily result in assignment agreements. While as an employee, especially in a large company, there are almost always as much work as Product Owner has time to do.

"I've always thought I wouldn't want to be an entrepreneur, in a way, that safe job is a pretty important thing to me." (H17)

"And in this context, that work is done for the employer." (H4)

Product Owners feel that they are monthly employees in the Agile environment of a large-scale company. Making things and the environment more entrepreneurial would run the risk that employees would no longer feel so safe, and the focus would be on the potential negative aspects of entrepreneurship, such as job and salary insecurity.

“Entrepreneurship means that you are a 24/7 entrepreneur, and, in a way, the workday doesn’t end. Even though I personally feel that my workday doesn’t end when I end the day, but I’m still available after that if needed. But it’s kind of like I’m not responsible for being available 24/7, I don’t have to think about it all the time. And the stress levels are much lower, I don’t have to be responsible for everything.” (H18)

Product Owners felt they didn’t have to make sales like entrepreneurs. And the entrepreneur does more so-called futile work. An entrepreneur can do a lot of work on a project that he or she does not even get assigned to. In that case, that work produces nothing. The interviews explained how Product Owners do very little of this kind of useless work, where project preparation would not lead to implementation. However, entrepreneurship was felt to be largely about being able to build something new from scratch.

“As an entrepreneur, if and when you get to build a completely new service from scratch, I think that is more entrepreneurial” (H6)

When product development needs or repair needs, as well as new features come from elsewhere, e.g., business, it was felt that it was losing the opportunity for an entrepreneurial mindset. Because the entrepreneur owns the products and can decide those direction. If the Product Owner is merely an implementing party, the utilization rate of the expert role will be lower.

“But on the other hand, then, you can’t just be an entrepreneur [in this role] who makes decisions completely independently, but there are a lot of dependencies, which, in a way, then drops away the other side of the entrepreneurship, that is, the maneuver space. That we are part of the puzzle, though.” (H14)

“When it comes to just queuing up what comes from business as an input, that is not entrepreneurial. Or I don’t know, ditch excavation can also be entrepreneurial, you can start a business for that too.” (H2)

Budget management, i.e., the ability to influence the budget and resources, affects how entrepreneurial the Product Owner can experience his or her role in the work environment. It was felt that the budget and resources come largely given. Although an entrepreneur may not have even the same budget available than Product Owner in large-scale Agile company, at least entrepreneurs are freer to decide for their own uses of the budget.

“In this context, where we are operating, when we don’t have any credit for our operations or for that teams are able to operate independently, then our field of activity is pretty much limited. I feel like I work as an IT team coordinator and responsible, but not in an entrepreneurship. I feel that an entrepreneur should be creating that vision, and there should be possibilities to make an impact vertically, not just horizontally. It [the work of Product Owners] completely lacks the aspect of effect vertically. That’s why I don’t think there’s anything left of entrepreneurship in it, just crumbs.” (H9)

“For that operation to be entrepreneurial here [in my team], in a way, this little team would be my own boutique... We are not there. Yes, it would take quite a few things. One would be the budget. Also, I also really should have an influence on things like resourcing.” (H10)

The influence and freedom of the role of the Product Owner is largely crystallized in the trust found around them. To how the other roles, i.e., colleagues and those higher up the hierarchy, as well as the whole organization, see and trust the role. A Product Owner can spend a lot of time entrepreneurially driving their own product and new visions. When the Product Owner cannot influence vertically, then he or she cannot influence higher in the hierarchy. Company would benefit, when skilled and capable Product Owners get to show their skills and they should be given the opportunities.

## 5.6 Habits tested by Product Owners

Freedom can be expressed in the freedom to make choices and create new. Some choices and habits of Product Owners are very concrete. Many of interviewees had brought their own new habits to use in the team or teams. These habits in this chapter were created by individual Product Owners, and not used throughout the organization.

Interviews showed that room had been made for learning and as well as the self-direction of the teams. 70-20-10 is a way for an organization to support learning, quality assurance, new

insights, and job satisfaction. And for some teams, this practice had been implemented. One interviewee said that according to the 70-20-10 model, their team is not involved in sprint work at all on Fridays but does the non-sprint related work or studying.

When, for example, technical debt was written off by allocating up to a week of calendar time. Even in these teams, attention was paid on eliminating technical debt already in the development phase. But still, the time allotted for maintenance was deemed important, as it was part of quality assurance.

"Always, after the big releases, there is a maintenance week, i.e., cleaning and taking measures that help to improve the cover of test automation, focusing on bug fixes, putting the documentation in order." (H14)

Experiments were performed with events and processes in a new way so that those did not, for example, literally follow the recommendations of a particular software development method. In this way, by experimenting with, the role of Scrum Master orbiting within the team or weeklong sprints, the events were tailored to be more suitable for team and the learning curve, and with it the development work, became more efficient.

"Instead of having a purely Scrum Master type of person on the team running this backlog and these different events, sprints, and planning, so we made it a rotating role. Everyone on the team took turns for two weeks to be like this Scrum Master, who took care of all these sprint demos. Yes, still together with the Product Owner and others, and then these daily meetings. Through it, the awareness that what happened in our team increased a lot." (H11)

The rotating role, which was the role of Scrum Master in this example narrated by the interviewee, successfully shared responsibility and understanding of the development work and direction of the product for the team. Week-long sprints are a rarer experiment than a circulating role, and even contrary to common practice. In this way, however, the team was successfully driven in. The team estimated the workload better because the training in rating the workload and running the practices was more intense at the beginning, thanks to the week-long sprints.

“The way we set out to push sprinting in, for example, we tried to start with week-long sprints with very little content. To see if we get an output, or a planned output like this, that things are scored and split into small enough entities. Then plan our doing for a week and see what came out, and did we stay on schedule. We set out to try it out and then when it was seen as good, then we moved on to the normal two-week sprinting that we have very much in use here. [...] So of course, afterwards, when analysing that one-week sprint, people said that it makes no sense here because we spend so much time on these events, that it’s all away from actual working time. Because always those events take a certain amount of time. But instead of going straight on a two-week cycle and may not have been possible to plan things to do for two weeks, so it would happen easily that we would sprint for the first week and pull the next week in Kanban mode: and then the next thing from the list.” (H11)

The Product Owner must also prioritize their own work, so good routines are also needed for Product Owners. The community of Product Owners, and with-it networking, provides new ideas for routines and new product visions. In a busy schedule, Product Owners must find his or her own way in which, in addition to large lines, the Product Owner can also focus on smaller entities and routine work.

“I choose one thing I do for the day; this is my priority. It’s kind of like that now I’m deciding, that now I’m planning my next sprint, or refining our backlog, or today I’m creating our goals. In a way, it’s a really important course of action for me that in the morning, I decide that this is my area of focus today. And usually I try to think about it so that I want to get this thing done during this day. That’s a really useful way for me. Because by the way, I feel that in the role of the Product Owner, you have so many things on the table, that you won’t get anything done in the end, if you don’t create focus on working.” (H8)

“So that’s a culture of experimentation. It is always worthwhile for Product Owner, be it your own idea or the idea of some other, if there seems to be any potential in it, but without knowing for sure, you should give it a try! Then it will be seen in practice, whether it works or not.” (H4)

Many Product Owners felt free to organize the content of their work at least within their own team, e.g., scheduling of workdays, events, and work habits. From small experiments, experimental culture can spawn great experiments throughout the company.

In the interviews, it was hoped that retraining would be held at the tribal level about what Agile is. It was felt that in the tribes the roles of the Agile were not uniformly formed. The chapters were also perceived to be differently organized in the Business organization than on the Development & Technologies. Different practices received understanding, but those

were felt to reflect what the large-scale Agile aims for and how it is seen in different ways in the company, depending on the role in question or the organization from which the role is handled. A planning process based on Agile approach, e.g., Quarterly Business Review, could be a quick and dirty experiment in which, by experimenting with iterative steps, good approaches are found for the particular work community.

“This kind of budgeting, allocating money, frame discussions... We make those too complex. We are complicating things there. But I feel like everything, whether it is QBR, objective setting or something else, that we kind of trying first to build world ready, and then implement it. [...] But now in a way these processes are what we have created, for example the QBR process, we have first considered this n-amount of time in somewhere, how it has been brought in use. But it does not work that way. We should first think that we will make that kind of light, a bit like ugly, solution: “hey, this could work”. And then we start developing it. And then it interactively gets better all the time. So, it then also goes in the direction that it serves our entire organization. And it is not like we are trying to plant something for everyone.” (H8)

The employee can view different tribes in the case company’s internal employee profile system. But still, a few interviews revealed that creating networks by finding the right people through systems was felt difficult. Although an employee can find employee lists under different tribal names, it was difficult to deduce from the information provided by the system what the actual and specific responsibility of that employee, such as the Product Owner, is.

“Anyway, I do not think our tribe is very active about that. Maybe because it is such a big tribe. We have a lot of Teams in the tribe who do not know each other. It is such a big tribe. But I do not feel that our tribal leadership, the top leadership, is very active in finding a common model either.” (H9)

“From there, the intranet gives you a basis for what the different roles do. But what is the responsibility of each person and who do you need to contact, if you need to know, for example, how the payment has been made in the channel... It takes a little while to think about where to find this information. We don't have it... [...] And there are no clear organizational charts and divisions of responsibilities that are up to date. Those must be dug from the personal information system, but they may not be very easy to find either. Nor does it necessarily tell you what this team, Product Owner or Business Lead is really responsible for.” (H14)

Internal systems should include more specific, up-to-date information on what each person does for the job. This would allow people within the organization to find each other and network more easily. Because otherwise networking attempts will depend on the grapevine; colleagues ask and hear about contacts from each other. When employees have the opportunity to increase their knowledge about the different teams in the company, and find the representatives of the areas of responsibility, then Product Owners and others will be able to brainstorm new ideas and future directions of the products in the company of potentials who benefit from the idea. On the other hand, it was also felt that the organization is made up of people, co-workers. It was pointed out that if things are made to work between people regardless of the operating model, then cooperation is made to work. However, it should be borne in mind that the workplace is a large community where people work for pay. So organizational support is needed to push the work.

“We have an executive team, but I haven't heard from them how they feel about this [company's] Agile. It would be interesting to discuss together how they see these different roles. Because we don't have conversations with them every day or anything like that. So somehow it would be interesting... It is noticeable how everyone's roles are still a bit lost, especially on the business side. And there is no understanding from that development perspective. So, it would be interesting to hear how those people in the executive team experience this Agile.” (H7)

“So, in a way, at an even higher level, that content-based planning and roadmap work would be done jointly, those might be like that [development solutions] ... Then if the own responsibility area is thought about, how this budget, resourcing, and planning could be made efficient, and planning more continuous in that way... Not so that these things would always be agreed on for just a year, and then again for the next year. We could move away from such tribe-based planning to beyond the tribal boundaries-based planning: to a more product-oriented design and collaboration model.” (H14)

## 5.7 Data validation

A final discussion about the master’s thesis was held within the case company, where the main results of this master’s thesis were presented in a Teams video conference. The final discussion was held on January 2022. All interviewees were invited to the final discussion, as well as many other Product Owners and other roles, who were not interviewed. People from two different cities were invited to the final discussion. Participants in the final discussion were given the opportunity to express their views on the findings of this study.

A total of 28 employees participated on this final discussion, which was recorded. A large number of invitations were sent. By e-mail, 70 employees from the case company were invited to final discussion’s Teams session. Among these invited were those who was interviewed, as well many other Product Owners from the case company, and also roles similar to Product Owners, and management level people. This invite was also forwarded to case company’s Product Management Guild, which has 183 members in case company’s internal Teams channel. Addition to Product Owners, people had been invited to final discussion from all the roles of the interviewees. The guild also had a variety of additional roles involved, e.g., System Product Owners, Lead Developers, Solution Analysts, Process Developers, Agile Coaches, etc. An estimated 40 names overlapped with the original e-mail invitation and guild. So, in practice, over 200 invitations were sent to the final discussion, in which this master’s thesis data was validated. The holiday season dropped the number of participants. So, a total of 28 participated in the final discussion. The amount was appropriate because of the lively discussion that took place. Participants shared their thoughts and questions on the master’s thesis. In the final discussion, the results of the work were presented with Power Point slides and figures from the final work. Eight of the 28 participants presented their opinions.



Some of the participants thanked that they recognized the areas for development highlighted in the work. Questions also arose in discussion, such as if the tribes of the interviewees are very different from each other, then whether the results of the work are bundled together into a too generic outcome. This is opened in the thesis in the section of organizational boundaries, which describes that although there were a wide variety of backgrounds and experiences within the same company, commonalities were found. This was also evident in the final discussion that although there were good experiences on this subject, the problems raised in the study were identified.

“Resourcing that you brought up, that’s the key. Even if the Product Owner recognizes certain potentials and opportunities, in practice it all depends, now, on Business Lead, whether it is possible for you to raise even somehow that need for budgeting. And even if it’s a good Business Lead, there can still be limitations just according to the [organization’s] structure.” (V8)

“I was left wondering that I have not longed for me to sit on those boards. Then I was left wondering why, so in a way because I’ve been heard, and I have got to speak and be influential at the point where something goes to the board for discussion. [...] That where it is that point, where I perceive that this is now something that is OK for the Product Owner to decide. As a Product Owner, I decide things, and it makes sense in a way that the upper management is not overloaded.” (V5)

The power and freedom of the Product Owner were commented in such a way that some felt they were well heard enough. The discussion also gave rise to the question of who has the business responsibility and mandate. In the final discussion, the challenges and organizational structure of Agile Implementation were perceived as an identifiable feature.

“It was very delightful to see that the experiences I have myself were reflected in this presentation. I think you have at least got into this presentation very well, how this world looks like from my point of view. [...] That is, there has been a slight debate in our tribe about who makes those decisions. One view there is that business tells us what to do, and the job of Development & Technologies is to do as we are told or do what the business says.” (V2)

"But what I lack in that tribe, I have no decision-making power in any forum." (V3)

"I feel like we are still pretty strong in there, what was being said, that features are being ordered." (V4)

The comments in the final discussion confirmed the pain points that emerged from the interviews and whose years Product Owners felt that it was sometimes difficult to implement Agile culture. Features for products are ordered, rather than discussed and decided together.

The theme, which was raised in this research to create new ways to take ideas forward was considered important in the final discussion. This is because it was felt that the current resourcing and budgeting model does not quite support Product Owners being able to try new ideas: it was felt that resources are devoted to what is planned from the business side.

## 6. Discussion

According to Ross et al. (2006), there are four stages in a company's architecture that a company goes through in pursuit of a better way of operating in the organization. These steps are still a current example when a company like the case company in this master's thesis is seeking to increase its own maturity with such a large-scale Agile and Product Owner roles.

The Spotify model has been criticized for being challenging, because collaboration is challenging when there is no common language in a large organization. The phenomenon in the Spotify model, that people implementing the model and Agile practices doesn't even have a basic understanding of those practices, has also been the subject of criticism. (Lee, 2020) It came to the fore in this master's thesis research that Product Owners wanted more routes on how to take their own vision forward; without too many interpreters between and using a vocabulary of specific competence area. Blockers for these routes were e.g., too strict hierarchy and the need for different forums. It was also criticized that development teams are given tasks as in a customer-supplier chain. These controlling habits were considered old-fashioned, when the role of Product Owners was not perceived as a whole, including business and technical competence at the same time. So, additional training in Agile culture was seen necessary. Disadvantages of the Spotify model appeared similar in this research: an Agile approach is challenging to implement when the understanding of it is not profound throughout the organization.

Remta (2020) says that the Product Owner participates in the marketing strategy. The Product Owner must find a market for their product and map out the market situation. But it is somewhat contradictory how much a Product Owner is involved in marketing their own product. If involved, it could speak of an entrepreneurial attitude. But the literature does not support such an idea, and marketing is presumably always left to marketing professionals.

Grudziński and Sulich (2019) noted that in management, freedom is not considered entirely possible due to the complexity of the concept of freedom and due to human nature. They also listed that negative aspects of freedom in management are e.g., misunderstandings about organizational activities that can lead to slowdowns in achieving goals or loss of money. In

increasing freedom, the optimal use of resources is also a concern so that resources, and with that, money, are not wasted. This master's thesis brings new insight into how freedom is handled in an Agile organization and what new opportunities it could bring to products and companies. This research brings also new information about what kind of activities Product Owners need from the organization. It is felt that the potential of roles within the organization could be better understood. In addition, resourcing problems were experienced when goal and budgeting were not fully perceived as serving processes. The size and complexity of the planning processes, the challenges of influencing budgeting, and the challenges to present opinions directly were made visible.

Central to the development of modern capitalism has been the idea of freedom (Dierksmeier and Pirson, 2010). The freedom of the roles of the Agile environment and organization has hardly been studied. There are few articles about freedom in management. The Product Owner is more of an orchestrator, but studies of Product Owner Freedom are lacking. This master's thesis, which has been conducted in the financial sector, explores freedom of Product Owners in a new way, how to holistically implement product management or, if they wish, to expand the scope of the role for the purpose of promoting the product themselves. The role of the Product Owner is more than good intentions, which the Product Owner is expected to meet by making the product successful, and this research provides additional insight into what Product Owners perceive as slowdowns or barriers to product management.

Like the role of a customer, the role of the Product Owner is embedded and continuous, in which case the Product Owner is substantially involved in many decisions (Drury et al., 2012). Although entrepreneurship is perceived in this master's thesis research to reflect the ideal perspective of the role of the Product Owner, Product Owners perceive entrepreneurship to be different from the work of the Product Owner. The underlying human's predisposition of entrepreneurship to try or pursue persistently entrepreneurship are determined by different models (Burke et al., 2008). It is challenging to place new mechanisms in an Agile environment through attitudes, for example, an entrepreneurial mindset. Giving freedom improves organizational agility, as well freedom is empowering employees to act independently and in a self-coordinated way, as entrepreneurs do (Nobles and Staley, 2009). The results of this master's thesis indicate that the existing literature

explains well role and requirements of the Product Owner. But this thesis also finds that new ways and driving forces to describe the role is needed so that the entire organization understands the role of the Product Owner.

## 6.1 Key findings

Summarizing the results of the first research question and its sub-questions, this study found factors that limit or allow more freedom in the work of the Product Owner. The power of the Product Owner lies in determining the direction of the product through backlog prioritization. But as shown in this research, the Product Owner also gets priorities according to objectives from many sources. This research shows that it is sometimes difficult for a Product Owner to influence goals and resources, thus losing freedom. Freedom to exercise the role of Product Owner is also influenced by how other roles perceive the role of Product Owner and how they interact with the Product Owner. Surprisingly, the organizational structure was highlighted in the interview data. The organization was seen to cause dynamic problems at times that made the work of the Product Owner more difficult. On the other hand, these structures were discovered to make it more difficult to expand the product and advance new ideas. Product Owners felt that the possibility of expressing a dissenting opinion was not self-evident. Changes were wanted in the work environment's boundaries so that the structures would better serve the Agile approach and product development work. The role of the Product Owner was limited by the fact that the content and potential of the role were not fully understood. A change was wanted so that the role of the Product Owner would not be seen as a mere implementer. But as a responsible for the growth story of the product or products.

The second research question examined how the entrepreneurial mindset is reflected in the work of the Product Owner. It was found that Product Owners perceived an entrepreneurial mindset to describe their work and they perceived that mindset as helping to outline their role. But still, Product Owners felt that their work was not comparable to entrepreneurship.

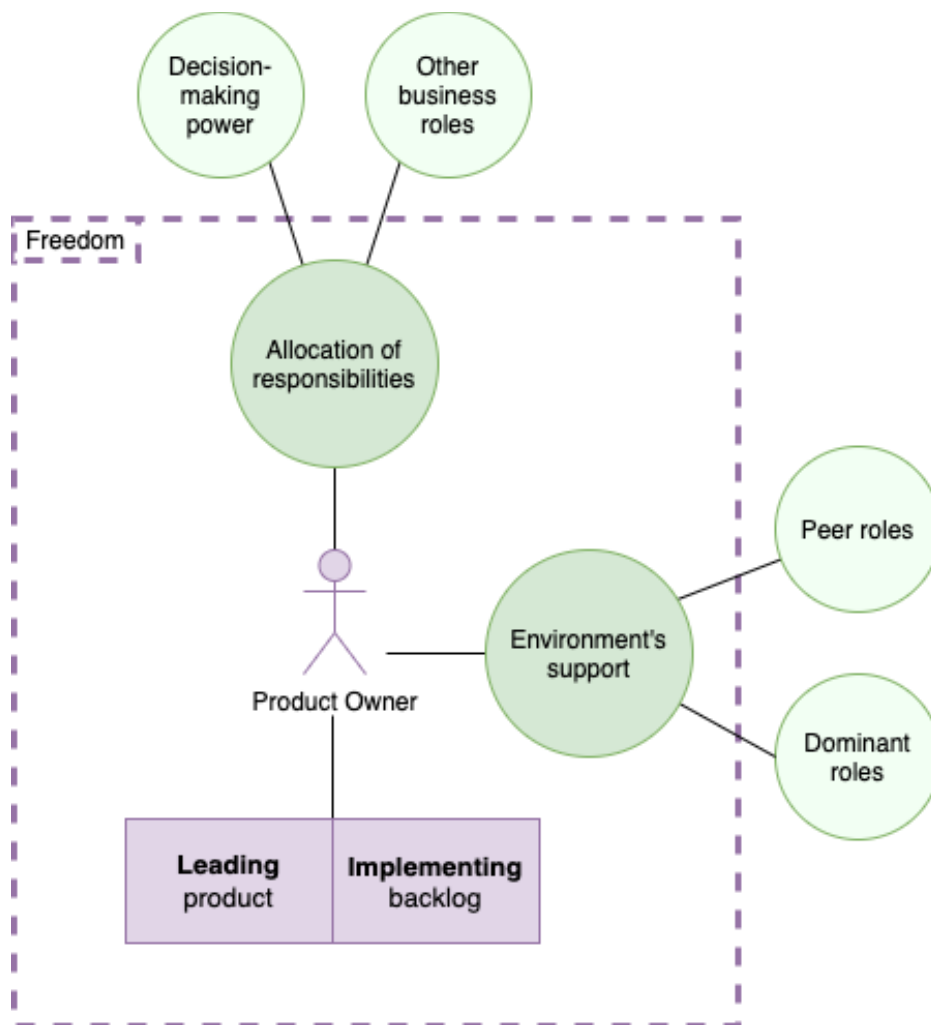


Figure 15. Product Owner and freedom.

Figure 15 shows key findings. The freedom of the Product Owner is based on the leading and implementation of a product. Hierarchical structures intertwine so that this role acts as a melting pot of roles, when she or he as a Product Owner leads and implements at the same time. It depends on what kind and how much of power the Product Owner has been given, how she or he manages the product and implements the features. Environment's support acts as a facilitator of product's progress.

## 6.2 Development suggestions

The study highlighted two types of themes from the interviews that could promote the freedom of the Product Owner, and with it the quality of the work and new innovations. These themes were organizational dynamics and internal boundaries. Internal borders were

perceived to cause some dynamics problems when roles and organizations had not internalized how to work together in an Agile way. Fading organizational boundaries reduces duplication of work and helps Product Owners keep the whole product on course.

Agile has iteration rounds where goals are achieved by re-examining the issue and learning from the work already done. Interviews revealed that there is a desire, that top management would clarify their views on the roles. As Agile experimental way sets example, the shaping of the organization could be achieved by reopening discussions about what is the significance and way of working of roles are and how the organization functions. Many roles are important, such as the role of Product Owner, but their full potential is not seen in every part of the organization and therefore it is unused.

Development suggestions for case company are presented in Table 9. The backgrounds to these development proposals are explained open in the results, which answers the research questions.

Table 9: Development suggestions for case company.

Target	Theme	Insight	Development suggestion
Case company	Limits set by the organization	Dynamics problems limit the Product Owner's freedom to perform that work and creates a sandbox.	The existence and purpose of internal organizational boundaries should be refined, and these organizations brought closer or combined together.
		More flexible boundaries: internal organizations, segments, and tribal boundaries.	Avoid duplication of work and contribute to product success, when work on a product is not determined by organizational boundaries or the team's strong expertise of specific technology.
	Adopting the Agile way	Ways of working of all roles should involve an Agile approach. Smaller experiments instead of large processes.	Further training in Business and Development & Technologies practices in Agile. More human interaction instead of hierarchy or processes. increasing understanding that this is not always the case.
		More transparency to management level vision.	Public in-house discussions about how top management sees the role of Product Owner. Sharpening goals is needed: Product Owner wants to be able to prioritize work according to prioritized objectives (e.g., annual objectives).

The maturity of a company is determined by how far it reaches in the steps of building the architecture of the company. Attempts have been made to avoid business silos by building a large-scale Agile model in which the tribes operate. In case company, technology is standardized, so that the development and systems in this big company can be managed and integrated. Maturity is considered to be at a very high level in an organization when business and IT work close together. The modularity of the business remained a question of whether it is desired to be realized with this case company's Agile model and what is its degree of realization. There were still border fences in the Agile organization that posed challenges to this kind of adaptation.



The research suggestions for academic research are presented in Table 10. The role and requirements of the Product Owner have been defined in many studies, but its degrees of maturity would be interesting to see defined. Not because maturity would be defined to help create a salary scale! But that organizations would better understand the potential of the role and that Product Owners would be supported in creating their place in the organization and as forward exporters of products.

Table 10: Research suggestions for academic research.

<b>Target</b>	<b>Theme</b>	<b>Insight</b>	<b>Research suggestion</b>
Academic research	Maturity of Product Owner	The potential for extending the role of the Product Owner is seen in various ways, e.g., competence and executing the visions.	Desired levels of Product Owner's maturity could be defined.
		The size of the role of the Product Owner and how it is implemented in practice in the implementation of visions.	It could be investigated whether the Product Owner has a place primarily in his or her own team or how extensive visions the Product Owner is allowed and wanted to implement in product's environment.

Ideas and suggestions as solutions for case company were raised during the interviews. Interview comments containing development suggestions have been collected in this section. A smaller scale of processes would engage their implementers, e.g., Product Owners, other roles, and stakeholders, better. When the creators of the plans are involved in the creation of the process, the participants are more committed to the process and have a deeper understanding of the process steps. When a process does not come fully complete, large, and honed, its users better internalize the process, objectives, and content of the process. New processes can first be tested on a small scale with a small number of people. But change is much easier, when an organization is ready to help push common processes into action.

Smaller processes for budget planning, annual plan processing and quarterly planning (QBR) could be tested according to the Agile spirit. Thus, the objectives do not become obsolete or lag behind during the implementation period.

There was a need for support in defining roles from the executive team level. And in addition, the boundaries were felt to be so tight that product design, that goes beyond the tribal borders and rigid annual planning complicates the work of the Product Owner. Product Owners are a resource for a company that should be utilized to their full potential. This study sought to reveal how Product Owners experience the freedom to fulfill their role. The Product Owners were multi-skilled and expert professionals, so their message should be listened to.

### 6.3 Limitations

Although the 18 interviewees were a large number to be interviewed by one interviewer, then more interviewers could have brought different shades to the interviews. This case study was conducted within one company. But there was a lot of tribes and teams, so there was a plenty of choice for interviews: the case company had really a large pool of Product Owners. It would have been interesting to involve an even larger number of Product Owners from the same case company. Because the role of the Product Owner is so diverse and it each Product Owner seemed to have something to give for the interviews, then more perspectives could have come from the additional interviews.

#### 6.3.1 Internal validity

There were a lot of interviews for research of this size that was conducted at this master's thesis, so the internal validity is high along with it. In addition, Product Owners from several different tribes and two cities were included. In this study, the majority of Product Owners were from two different tribes, so the results do not just reflect the habits of a particular part of the organization, but provide a reliable perspective. Organizationally, there were few people above the Product Owners in the interviews. For the sake of comparison, it would be interesting to interview more other roles than Product Owners, which would also provide more information on the implementation of the Product Owner role.

There may be a potential information bias in the research, as the manifestations or restrictions of freedom described by the Product Owners are partly self-raised. Although most of the interviewees raised the same themes in these interviews.

### 6.3.2 External validity

The case company has a wide variety of different business areas, so this too made the research base of Product Owners attractive. On the other hand, the contrast could have been increased by involving and interviewing Product Owners of other major players in the financial sector. Although, already in this case company there was a huge amount of material to the research of Product Owners.

## 6.4 Further Research

Future research could specify more detailed interview questions and thus guide the discussion more precisely on what the possible indicators and milestones in the freedom of the Product Owner are.

Kelly (2019) has stated that Product Owner should do a lot more than just backlog maintenance, else the role brings too little value. Future research could seek to investigate where a company is left out unless the role of the Product Owner is not understood and exploited to its full potential. In this case, experiences could be gathered about the kind of ideas, visions and know-how that may not have been used from the Product Owners. On the other hand, it may be easier to find data for research that looks at what and how large visions Product Owners have experimented and how they have deviated from the sandbox of their own given role.

Product Owner does not have business without customers (Kittlaus and Fricker, 2017). It could be defined more precisely who are the internal customers in a large company and in particular, the roles that the Product Owner has as customers. Saddington (2012) described that Product Owner should not be sitting in a ivory tower, instead, cooperation should be at

the center of the role. Efforts have been made to make the organization above the Product Owner light and flat, but as presented in this master's thesis, there is still room for refinement. It could be experimented and examined, what would happen if the Product Owner would be as decisive and influential as entrepreneurs, in which case the Product Owner would make more final decisions.

Agile development teams are largely autonomous. Autonomous teams are given a lot of responsibility and power for example to planning, scheduling and decision making that have business implications. (Moe et al., 2019). It is desirable that such factors would be the basis for the freedom exercised by the Product Owners. Prioritization and choice of direction are influenced by the freedom. A single agile team cannot be fully autonomous in a large-scale environment but needs organizational control and alignment around it (Moe et al., 2019). This is due to dependencies. Research is needed on how Product Owner's autonomy could be supported.

Skills needed for entrepreneurship are supported in the school system from an early age for example through various group works, workshops and courses experimenting with innovation. An agile culture itself promotes entrepreneurial skills: identifying new opportunities, appreciating opportunities and creative thinking, persuasive communication, negotiation, information acquisition, and problem solving (Tolfo et al., 2018). Entrepreneurial mindset of Product Owner has not been so much researched, so further research into it could find new perspectives on working in this role.

## 7. Conclusions

The article contributes to the literature on Product Owners by moving beyond the specifications of role and requirements by defining factors that affect the freedom of Product Owner to lead a product. The study achieved its objectives by mapping out how the role of the Product Owner is limited and what is desired in freedom in this role. On a larger scale, the role of the Product Owner should be seen in the organization as an enabler. The ways in which an organization operates and the roles surrounding the Product Owner have a major influence on the extent to which the Product Owner can exercise freedoms, help its product expand, and build new around the product.

This research was inspired at the beginning by a question, that is the role of the Product Owner a fairytale. A lot is required from this role! The content of the Product Owner's work is difficult to understand even from the inside when organization strives to act according to Agile principles. Projects shape the role's emphases based on what kind of Product Owner each product needs. This role is perceived as important and influential, so that it almost seems like a fairytale; because the role of the Product Owner is considered as orchestrator, but the role doesn't have free hands.

In this case company, Product Owners perform their role with high quality and have truly internalized the requirements and potential of the role. So, with the help of these interviewees, it was a good opportunity to study more deeply about how to reap the benefits of the full potential of the Product Owner's role. The full potential is achieved by giving Product Owners the freedom to play their part. In this way, obstacles that make it difficult to fulfill the role are removed from the organization. In this case, the Product Owner is seen as a success factor for the product, and the Product Owner controls the development direction of the entire product, and the product is not illogically broken down due to organizational boundaries. Product Owners are given channels to actually influence decisions and budgeting. These channels should not be hijacked from Product Owners. The understanding of the role of the Product Owner should be increased throughout the organization.

Product Owners felt great freedom at least within their own team. Prioritization was determined by many planning processes that the Product Owners wanted changes to. It was desired that the annual targets remain valid throughout the year and would not appear outdated when making quarterly targets. Product Owners also wanted the role of Product Owner to be seen also as a business role, and for other business roles to understand the content of the role of Product Owner, which consists not only of creating a business and customer value but also of technical aspects. With other roles, and especially with organizational boundaries, there were barriers for freedom due to dynamic problems. Dynamic problems were perceived to be caused by organizational boundaries. Also, these problems were perceived from the division of responsibilities, in terms of planning and decision-making power. It was experienced, that were not enough forums for Product Owners to work fully independently, for example, to gather for planning or to take ideas forward. There was a boundary between the business and the more technical organization, and the existence of this boundary was not fully understood, and it seemed artificial.

The entrepreneurial mindset was perceived to describe the role, but entrepreneurship was perceived in practice to be different from the work of the Product Owner. Entrepreneurship was perceived to describe the mindset of Product Owner and thus the target state, but still in such a way that the everyday work of the Product Owner does not correspond to the everyday work of the entrepreneur. Entrepreneurs were perceived to have more uncertainties, such as customer acquisition and working hours. The Product Owner was perceived to have less power than the entrepreneur running his or her own business.

This study offers a new basis for exploring the entrepreneurial attitude of the Product Owner. Future research could dig even further into understanding the potential of the Product Owner role, in how freedom can be concretized in this role. While an even more in-depth examination of freedom could help the emergence of new and greater innovations in Agile environment, this research studied the organization and the operating environment of the Product Owner and mapped the aspects of the role's freedom.

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## Appendix 1: Questions for initial interviews

- History of Product Owners?
- What is Product Ownership in this company?
- Why should Tribe 1 and 2 be chosen for this study?
- How do the tasks, role and requirements of the Development & Technologies and Business organizations differ?
- Why a certain role in a certain area (e.g., Business, Development & Technologies, Product Owner, Business Developer or Hat Product Owner)
- What titles and roles can there be in this company?
- Is there a technical Product Owner?
- Is the Hat Product Owner responsible for product management?
  - What is a Hat Product Owner?
- The role and requirements of a Business Developer?
- How are Product Owners in tribes divided into different areas?
- What are the Product Owner's greatest responsibilities and what is most important in the Product Owner's work?
- How does the Product Owner grow or train for her or his role?
- Where and how does the new Product Owner study their role?
  - What is the target audience of this company's role documentation?
- When the Product Owner succeeds in her or his role?
- What possibly impairs the Product Owner's chances of succeeding in their work at this company?
- What are the potential bugs in this company's Agile culture in the role of Product Owners?
- What is an entrepreneurial mindset and how is it realized in Product Owners in practice?
- How does product management work at the group level? For example, segments, tribes, Product Owners... What would be the benefit to the Product Owner if there was more consistent information about the products across the segments?
- If the Product Owner deviates from its own role, how it happens, what kind of exceptions have occurred?

- How are Product Owners rewarded?
- How has corona (Covid-19) changed the work of the Product Owner?
- What was copied into the Agile culture of this company from other companies?
- What would you wish from this research?

## Appendix 2: Questions for Product Owner interviews

For Product Owners, Business Lead and Business Developer (adapted to the role):

1. How long have you been in the current role of Product Owner?
2. In what roles have you acted in Agile?
3. What is your educational background? Business or technical...
4. Have you received Product Owner training from outside your current employer?
5. In what ways do you feel you are a member of the development team?
6. What events, practices, or personal habits support your work?
  - a. Which of these slow you down?
7. How do you get people on your team and across team boundaries to follow you and build together?
  - i. For example, a team, a tribe, or a whole company.
8. Do you mainly do business, technical aspects or customer value creation in your work?
  - i. Practical examples?
9. To whom can the Product Owner say no?
10. Who are the Product Owner's expert helpers, sharing the role of the Product Owner?
11. Do you feel you are implementing product management?
  - i. What is your responsibility in the role of Product Owner?
12. Do you feel like an entrepreneur?
13. Do you see entrepreneurship as a suitable goal for the Product Owner in this company?
14. How have you made your role as a Product Owner look like your own?
  - i. Helper question: Have you brought your own to development methods or processes? How have you adapted your operating environment?
15. What is freedom like in the role of Product Owner: how are you as an experimental Product Owner
16. What improvements would make your Product Owner's job easier on daily basis or in the organization of this company

## Appendix 3: Coding and theming of interviews

Top-level heading in coding node	Picked mentions (aka references) from interviews	Sub-heading
Organization	160	<ul style="list-style-type: none"> <li>• Business</li> <li>• Technology</li> <li>• “Development and Technology” line</li> <li>• “Business” line</li> <li>• Line Manager</li> <li>• Supervisor of PO</li> <li>• Communication</li> <li>• Large-scale agile <ul style="list-style-type: none"> <li>○ Role of business in Agile</li> </ul> </li> <li>• Problems <ul style="list-style-type: none"> <li>○ Prioritization problems</li> <li>○ Role definitions</li> <li>○ Silos</li> <li>○ Solutions</li> </ul> </li> </ul>
Objectives	120	<ul style="list-style-type: none"> <li>• Strategy</li> <li>• Vision</li> <li>• Regulation</li> <li>• Cycles <ul style="list-style-type: none"> <li>○ Ultimate</li> <li>○ Roadmap</li> <li>○ Year</li> <li>○ Quarter</li> <li>○ Month</li> <li>○ Week</li> <li>○ Sprint</li> <li>○ Other cycle</li> </ul> </li> </ul>
Prioritizer	116	<ul style="list-style-type: none"> <li>• Quarterly Business Review (QBR)</li> <li>• Check and Align</li> <li>• Tribe</li> <li>• Budget distribution</li> <li>• Technical</li> <li>• Business</li> <li>• Business Developer</li> <li>• Line Manager</li> <li>• Project Owner</li> <li>• Business Lead</li> </ul>
Responsibility	106	<ul style="list-style-type: none"> <li>• Technical responsibility</li> <li>• Business responsibility</li> <li>• Customer value</li> <li>• Dependencies</li> <li>• Innovation</li> <li>• Mental support</li> <li>• Negative observations</li> <li>• Saying no <ul style="list-style-type: none"> <li>○ Conversation</li> <li>○ Saying no to everybody <ul style="list-style-type: none"> <li>▪ No with a laugh</li> </ul> </li> </ul> </li> </ul>
Background of PO	57	<ul style="list-style-type: none"> <li>• Business PO</li> </ul>

		<ul style="list-style-type: none"> <li>• Tech PO</li> <li>• Previous Agile experience</li> <li>• Courses</li> </ul>
Entrepreneurship	59	<ul style="list-style-type: none"> <li>• Pros of entrepreneurship</li> <li>• Cons of entrepreneurship</li> <li>• Mindset</li> <li>• Rewarding</li> </ul>
Role	55	<ul style="list-style-type: none"> <li>• Documentation</li> <li>• Description of PO role</li> <li>• Success factors of PO role</li> <li>• Supervision role for PO</li> <li>• Hat role</li> <li>• Chapter lead</li> <li>• Business Developer role</li> <li>• Business Lead role</li> <li>• Solution Analyst role</li> </ul>
PO's help	54	<ul style="list-style-type: none"> <li>• PO Sync</li> <li>• Scrum Master</li> <li>• Analyst</li> <li>• Solution Analyst</li> <li>• Business Developer</li> <li>• Business Lead</li> <li>• Other</li> </ul>
Product management	15	No sub-headings
Competence of PO	37	<ul style="list-style-type: none"> <li>• Business competence</li> <li>• Technical competence</li> <li>• Customer value competence</li> </ul>
Power	41	<ul style="list-style-type: none"> <li>• Freedom</li> <li>• Experimentation</li> <li>• Power on team</li> <li>• Sandbox <ul style="list-style-type: none"> <li>○ Decision-making</li> <li>○ Power for technology</li> </ul> </li> </ul>
Orchestration	35	<ul style="list-style-type: none"> <li>• 70-20-10 model</li> <li>• Followers of PO</li> <li>• Team member</li> </ul>
Habits	31	<ul style="list-style-type: none"> <li>• Events</li> <li>• Creating new</li> <li>• Maintenance</li> </ul>
Tools	19	No sub-headings.
Budget	8	No sub-headings.
Wishes for master's thesis	9	No sub-headings.
History	5	No sub-headings.
Total	927	