The job crafting efforts of product owners in an agile environment, a qualitative study.

Lisa Meerdink

S4780906

l.meerdink@student.ru.nl

13-06-2021

Supervisor

Monica van Winkel

2nd Reader

Caroline Essers

Table of content

Abstract

This study focuses on the challenge that product owners face in their daily jobs and how they use job crafting efforts to deal with those challenges. Five challenges are found: (1) working pressure, (2) lack of clarity, (3) communication, (4) organizational problems and (5) personal challenges. To deal with working pressure and communication challenges task, relational and cognitive crafting were used. Lack of clarity was dealt with via relational and cognitive crafting, organizational challenges were tackled via task and relational crafting and to deal with the personal challenges the product owners used task and cognitive crafting efforts. All challenges and crafting efforts were driven by the need for control, to stay connected to their role. Communication challenges are driven by the need for human connection too and to deal with personal challenges motivation also came from the need for a positive self-image.

1. Introduction

1.1 Topic introduction

Work-related changes are more likely to be accepted if employees implement the changes themselves (Harju, Kaltiainen, & Hakanen, 2021). As job crafting focuses on changes employees make their selves in their work tasks, activities, responsibilities and relationships, it has gained interest in the management literature (Harju et al., 2021). Both organizations and employees are responsible for the work-related well-being of employees (Tims, Bakker, & Derks, 2015). Organizations benefit from engaged employees as they report higher levels of performance, employees on the other hand are all different and need different job characteristics to fit their own characteristics to prevent negative outcomes (Tims et al., 2015).

The actions of individuals are important for innovation and improvement (De Jong & Den Hartog, 2008). Innovation is necessary to survive, employees need to be willing and able to innovate to create a continuous stream of innovation (De Jong & Den Hartog, 2008). Innovation efforts are heavily reliant on employees human capital and behaviour at work, these factors are key inputs in the value creation process (Chen & Huang, 2009). Agile working is one of many innovations of a work process, which finds its roots in the software development sector (Srivastava, Bhardwaj, & Saraswat, 2017). Agile working is about working more flexible across time and space, it also claims to be about working differently, working based on trust rather than in hierarchical relations, it is about working more independently and being able to respond to changes (Jeyasingham, 2016). Those characteristics lend themselves perfectly for job crafting.

Scrum, one of the methods within agile working, has gained a lot of traction because it can be used in many more sectors than just the software development industry (Gonçalves, 2018). There are three different roles within a scrum team, the product owner, the development team and the scrum master (Gonçalves, 2018). In this research the focus will be on the product owner, as he or she is responsible for the delivery of value in a project and is considered to be one of the most important jobs in the scrum team.

To balance the job demands and resources with personal abilities and needs, employees can craft their job (Zhang & Parker, 2019). Job crafting is referred to as the way in which employees take an active role in initiating changes to their jobs (Slemp & Vella-Brodrick, 2013). This proactive behaviour, in a way, aligns their idiosyncratic interests and values with their work practice (Slemp & Vella-Brodrick, 2013). This can lead to a better working experience for the employee and ultimately impact organizational performance (Berg, Dutton, & Wrzesniewski, 2008). Pro-active personality employees

are more likely to make changes in the boundaries of their work, other task-related factors like task interdependence, skill variety and feedback, also positively affect employees job crafting efforts (Kim, Im, Qu, & Namkoong, 2018).

1.2 Relevance

There is little research done which involves both job crafting and innovation, looking into the database of Ebscohost / Business source complete, there are 35 hits when searching for the term job crafting and innovation. When searching for job crafting and agile there are only two hits, job crafting and scrum gives zero hits.Therefore, this thesis can offer a new vision in the job crafting literature by linking it to the innovative way of working that is agile and scrum. As there is limited research in this area, this thesis will help to build knowledge in the, for now narrow, field of research. Job crafting is found to be related to innovative work behaviour (Afsar, Masood, & Umrani, 2019; Rizwan et al., 2016) but it has not been properly researched in an agile context.

It is widely accepted that innovation is a critical source of survival for an organization (Bessant, 2019; Ortiz-Villajos & Sotoca, 2018; Tushman & O'Reilly III, 1996) and agile working can be a valuable source of innovative working (Mergel, 2016). Individual employees are the cornerstone of organizational innovation (Lukes & Stephan, 2017) and should therefore be studied in the context of innovation. This means that there is not only a gap in the literature, but this research can also help firms better understand job crafting efforts of their employees in the context of an agile environment, which can contribute to the survival of these firms. There is also light shed on organizational support and constrain of the job crafting efforts in this thesis, therefore organizations can use this research to their advantage to facilitate job crafting were wanted and constrain job crafting where it is unwanted. Every organization has its challenges and employees try to deal with those challenges to the best of their abilities, job crafting can be one of the tools used to overcome the challenges.

There are few studies focussing on the human-specific challenges and issues in the agile transition process according to Javdani Gandomani and Ziaei Nafchi (2016). As job crafting is an activity initiated by the employee self, this research can offer new insights into the human-related challenges in the transition of agile working. In the scrum method, there are three roles, namely the product owner, the scrum master and the development team (Cervone, 2011), it is necessary for employees to make these new roles fit their needs and this can be done via job crafting. This thesis will focus on the challenges the product owners experience in their roles in an agile environment and how they use job crafting facets to deal with those challenges.

1.3 Research objective

In this research employees' job crafting behaviour in an agile working context is highlighted. The objective is to display the job crafting efforts of employees that have emerged to make the role of product owner fit better with their personal objectives for a job. Challenges that arise in their jobs are highlighted and how job crafting efforts are used to deal with those challenges are evaluated.

The research question corresponding to the topic is: *How do product owners craft their roles, related to their goals, in the dynamics of an agile working environment?*

1.4 Thesis outline

This thesis consists of a series of sections. First, the key concepts, or sensitising concepts, will be described. Job crafting, agile and scrum, innovative work behaviour and organizational support and constrains are elaborated. The method section will present the case and further elaborate on the way this research is conducted and how results are analysed. The results section will show an in-depth review of the information that is gathered through the interviews, observations and a document study. To end this thesis, a conclusion will be given, and the limitations, managerial implications and future research suggestions will be formulated.

2. Theoretical background

The following chapter will discuss the relevant perspectives on job crafting. Two theoretical streams in the job crafting literature are explained, the concept of agile and the scrum method is discussed and light is shed on how the organization can support or constraint job crafting efforts of their employees.

2.1 Job crafting

Individual employees needs are often outside the scope of consideration in management decisions (Bindl, Unsworth, Gibson, & Stride, 2019). This means that individuals might need to redesign their jobs on their own initiative (Wrzesniewski & Dutton, 2001). Job redesigning can be done by changing the task itself, the way they think about it, the skills needed or the relational boundaries in their job (Bindl et al., 2019). Job crafting is proactive employee behaviour in which employees initiate changes in job demands and job resources to make the job more meaningful, engaging and satisfying (Demerouti, 2014).

In the job crafting literature, there are two streams of thought, Wrzesniewski and Dutton (2001) and Tims and Bakker (2010) both will be elaborated now.

2.1.1 Wrzesniewski and Dutton (2001)

Wrzesniewski and Dutton (2001) refer to job crafting as the action employees take to shape, mould and redefine their jobs and state that there are three types of job crafting: (1) changing the job's task boundaries, (2) changing the relational boundaries of the job and (3) changing the cognitive tasks boundaries of the job. By changing one of these elements an employee can alter the design of the job and the social environment the job is in (Wrzesniewski & Dutton, 2001). Employees have different motivations to engage in job crafting, and these are arising from three individual needs (Wrzesniewski & Dutton, 2001). Firstly, employees want control over their job to avoid alienation from the work, secondly, employees are motivated to make a positive self-image in their work. Third, employees have the basic human need to connect to others (Baumeister & Leary, 1995; Braverman, 1974).

2.1.1.1 Changing the job's task boundaries.

This type of job crafting refers to altering the form or number of activities one engages in while doing the job. By changing the amount and focus of the job, employees create new, different jobs (Wrzesniewski & Dutton, 2001). Berg, Dutton, and Wrzesniewski (2013) describes three forms of task crafting, adding or dropping tasks, emphasising tasks and redesigning tasks. Adding or dropping tasks is related to changes in the formal job description. Emphasising tasks is the action of focussing on a task that is already performed and which is considered meaningful. Redesigning tasks is applied when

there is not enough time to add or emphasize tasks, employees can make tasks more meaningful by redesigning them (Berg et al., 2013).

2.1.1.2 Changing the relational boundaries of the job.

Relational boundary crafting has to do with means of exercising discretion over whom one interacts with while doing the job. The quality and the amount of interactions with colleagues is changed, involvement and the nature of the interactions will differ after the crafting afford (Wrzesniewski & Dutton, 2001). Relational crafting can be done in three ways, building relations, reframing relations and adapting relations (Berg et al., 2013). Building relations is related to connecting with people who make an employee feel worthy, proud or dignified. Reframing relations is changing the nature of the relation to become more meaningful. Lastly, adapting relations is about helping colleagues and support them to also get this help and support in return (Berg et al., 2013).

2.1.1.3 Changing the cognitive tasks boundaries of the job.

This entails changing the way how one sees the job, this also changes how employees approach the job (Wrzesniewski & Dutton, 2001). The example given by Wrzesniewski and Dutton (2001) is the change in view by nurses which leads to more patient advocacy and high-quality technical care. Engaging in cognitive crafting can be done via three crafting mechanisms, expanding perceptions, focusing perceptions and linking perceptions (Berg et al., 2013). Expanding perceptions is about the insights about the purpose of the job and impact of the job. Employees can also focus their perceptions on certain tasks or relations which they perceive as valuable and important. Linking perceptions is about connecting tasks they do not necessarily like to something they do like (Berg et al., 2013).

2.1.2 Tims and Bakker (2010)

Tims and Bakker (2010) view job crafting through a job demands-resource model, (Bakker & Demerouti, 2007; Demerouti, Bakker, Nachreiner, & Schaufeli, 2001) which assumes that every work environment has its own unique characteristics that can still be captured in one model. It suggests that there are two sets of working conditions, namely (1) Job demands and (2) Job resources, that effects employee's well being and effectiveness (Tims & Bakker, 2010). The sets of working conditions are translated into four job crafting dimensions for the employee (Tims & Bakker, 2010; Tims, Bakker, & Derks, 2012)

The four job crafting dimensions are (Tims et al., 2012; Tims et al., 2015); (1) increasing challenging job demands, (2) Decreasing hindering job demands, (3) Increasing structural job resources & (4) Increasing social job resources.

2.1.2.1Increasing challenging job demands.

The first dimension involves performing behaviours such as asking for more responsibilities and volunteering for special projects (Tims & Bakker, 2010).

2.1.2.2 Decreasing hindering job demands.

The second dimension entails performing behaviours that aim to minimize physical, cognitive and emotional demands, such as reducing workload and work-family conflict (Tims & Bakker, 2010).

2.1.2.3 Increasing structural job resources.

The third dimension includes performing behaviours that aim to increase the autonomy, skill variety, and other motivational characteristics of the job like development opportunities (Tims & Bakker, 2010; Tims et al., 2012).

2.1.2.4 Increasing social job resources.

The final dimension entails asking for feedback as well as advice and support from supervisors and colleagues. Social support and performance feedback are identified as key work characteristics, coaching is related to work engagement (Tims et al., 2012).

2.1.3 Defence of choice

The main difference between these views is that Tims et al. (2012) focusses mainly on the observable behaviour of the employees whereas Wrzesniewski and Dutton (2001) add a cognitive element to job crafting (Wingerden & Poell, 2017). In this research, the perspective of Wrzesniewski and Dutton (2001) will be used to research job crafting. This perspective is chosen because it covers both behaviour and cognition, which can be important in innovative work behaviour. Tims and Bakker (2010); Tims et al. (2012) add resources to the equation, this however, plays a facilitative role. Besides this reason, Wrzesniewski and Dutton (2001) approach is the basis of many qualitative pieces of research done in this field and is therefore in line with this research. This research considers cognitive crafting as an important facet of job crafting since it can be an important proactive strategy for employees to create fit with their work environment, even without behavioural change (Berg et al., 2013; Niessen, Weseler, & Kostova, 2016).

2.1.4 Framework

As mentioned before motivation from job crafting arises from individual needs.Together with the perceived opportunities presented within the organization to engage in job crafting, these motivations effect the extent and the form of job crafting activities (Wrzesniewski & Dutton, 2001). Organizational

change can lead to a misfit in job and employee, job crafting can help overcome this misfit (Walk & Handy, 2018).

Figure one presents a framework form Wrzesniewski and Dutton (2001) for describing job crafting, this report will build upon their framework.
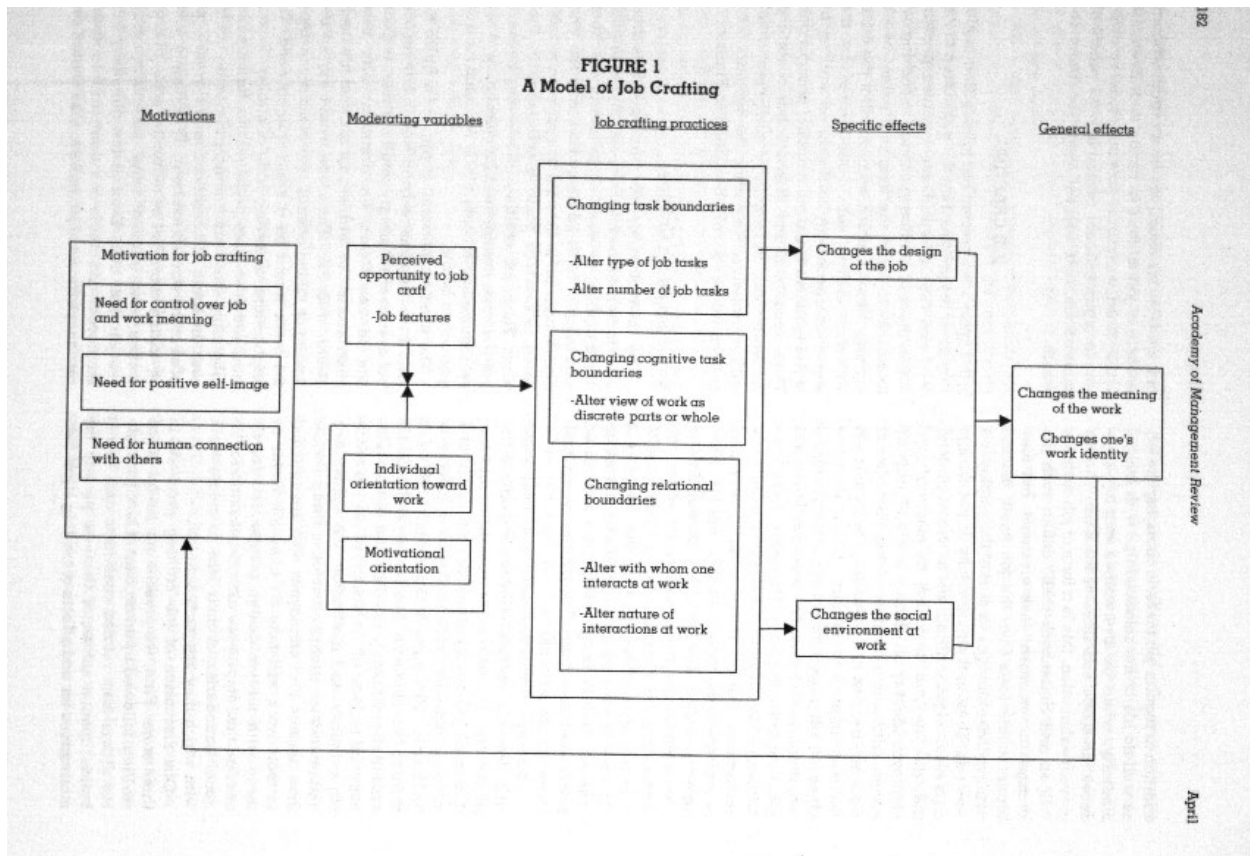
Figure 1(Wrzesniewski & Dutton, 2001)

The model starts with describing the three motivations for job crafting. The motivations that Wrzesniewski and Dutton (2001) consider in their model are (1) the need for control over the job to avoid alienation from work, it has become clear that employees want some sort of control over their job as this is a basic human need (Braverman, 1974). By shaping their jobs, employees can take control over their job and fulfil this need, and this is even possible in low autonomy jobs. (2) Creating a positive self-image is another motivational factor. When the employee's job makes it difficult to have a positive construction of the self , employees are motivated to change this situation which comes from the drive to create a positive image of the self in the work field (Dutton, Dukerich, & Harquail, 1994). The last motivation mentioned is (3) the need for human connections with others. The article of Wrzesniewski and Dutton (2001) quote Baumeister and Leary (1995) accurately 'Human beings are motivated to forge connections with others in a way to introduce meaning into their lives'.

Wrzesniewski and Dutton (2001) add the notion that employees build relationships with others at work to reframe the meaning of their work and their work identity.

These three motivational factors mentioned above have an effect on the job crafting practices, this effect is however moderated by several other factors, which will be elaborated on now. The motivations for job crafting are more likely to turn into action if employees perceive the opportunity which exists to craft their jobs (Wrzesniewski & Dutton, 2001). The perception of opportunities is based on two moderation factors (1) the level and form of task interdependence and (2) the level of discretion or freedom to job craft allowed by the monitoring systems (Wrzesniewski & Dutton, 2001). Task interdependence is the extent to which elements of the work are interrelated, this would mean that a change in one elements effects the state of another element (Wrzesniewski & Dutton, 2001), this can restrict task alterations. The discretion or freedom is related to the monitoring of higher management of the employees and controlling their time and tasks, when there is little monitoring employees perceive more opportunities to craft their jobs (Wrzesniewski & Dutton, 2001). Another moderating factor is the orientation of the employee toward their work, these orientations are seeing your work as your job and thus focus on the financial reward, your carrier and thus focussing on advancement or as your calling and thus focus on the enjoyment of fulfilling, socially useful work (Bellah, Madsen, Sullivan, Swidler, & Tipton, 2007).

The left part of the model is now clarified, this leads to the middle part of the model which are the job crafting practices. They will be discussed shortly as a brought evaluation can be found in the theoretical background. The first form of job crafting is changing the task boundaries, this can be achieved by changing the number, scope or type of job tasks (Wrzesniewski & Dutton, 2001). The second form is changing relational boundaries, this involves the change in the quality and/or amount of interaction (Wrzesniewski & Dutton, 2001). The third and last form of job crafting refers to the changes in cognitive task boundaries which involve employees' altering how they parse the job (Wrzesniewski & Dutton, 2001).

The right part of the model is visualizing the effects of job crafting practices. The job crafting practices change the meaning of the work by changing either job tasks or relationships which allows employees to reframe the purpose and experience of the work (Tausky, 1995; Wrzesniewski & Dutton, 2001). If the feeling of purpose is altered it is likely that there is a change in the meaning of the work, job crafting can also shape the work identity of an employee (Wrzesniewski & Dutton, 2001). This reshaping of the work identity can help to create a positive and desirable identity that will fulfill the need for positive self-assessment. These changes in identity and meaning of work can effect the motivations for job crafting and the cycle can start again.

This model will act as the base of this research and will therefore be the guide in the interviews that are held with the employees. By following this framework, the aims and the actions of the job crafters can be questioned and analysed based on a pre-defined structure that has a wide acceptance in the literature.

2.2 Agile work and role transition

Agile working makes people more motivated and satisfied with their jobs (Tripp, Riemenschneider, & Thatcher, 2016). Agile methods are a reaction to traditional software development actions like the waterfall method, being agile means deliver quickly, change quickly and change often (Cohen, Lindvall, & Costa, 2004). Central characteristics of agile techniques are the iterative development and the focus on interaction, communication and reduction of resource-intensive intermediate artefacts (Cohen et al., 2004). There are several agile methods, scrum being one of them. TenneT, the company participating in the research adopted the scrum method.

The agile manifesto names twelf principles that should be applied when working agile (Beck et al., 2001). These principles are:

> (1) Our highest priority is to satisfy the customer through early and continuous delivery of valuable software. (2) Welcome changing requirements, even late in development. Agile processes harness change for the customer's competitive advantage. (3) Deliver working software frequently, from a couple of weeks to a couple of months, with a preference for the shorter timescale. (4) Business people and developers must work together daily throughout the project. (5) Build projects around motivated individuals. Give them the environment and support they need and trust them to get the job done. (6) The most efficient and effective method of conveying information to and within a development team is face-to-face conversation. (7) Working software is the primary measure of progress. (8) Agile processes promote sustainable development. The sponsors, developers, and users should be able to maintain a constant pace indefinitely. (9) Continuous attention to technical excellence and good design enhances agility. (10) Simplicity, the art of maximizing the amount of work not doneis essential. (11) The best architectures, requirements, and designs emerge from self-organizing teams. (12) At regular intervals, the team reflects on how to become more effective, then tunes and adjusts its behaviour accordingly (Beck et al., 2001, Chapter 1, par 1-12)

These core principles, as mentioned above, are derived for software development, the principles are slightly modified to fit agile project management. Agile project management emphasizes two

important concepts. The first is that risk minimization done via short iterations of clearly defined deliverables. The second is that direct communication with partners in the development process is emphasized in contrast to creating copious project documentation. These concepts are emphasized because they help the project team to adapt quickly to unpredictable situations and rapidly changing requirements (Cervone, 2011).

2.2.1 Scrum

Scrum projects have several iterative sprints consisting of (1) pre-sprint planning, (2) sprint and (3) post-sprint meeting (Cohen et al., 2004). Cervone (2011) states that a major reason for using this iterative process is controlling the chaos that results from conflicting interests and needs with a project team. It also helps to enable improvement in communication, maximizes cooperation and protects the team from disruptions and impediments.

The key principles of scrum that are listed in the book of Cohen et al. (2004) are; (1) Small working teams that maximize communication, minimize overhead and maximize sharing of tacit, informal knowledge. (2) Adaptability to technical or marketplace changes to ensure the best possible product is produced. (3) Frequent builds, or construction of executables, that can be inspected, adjusted, tested, documented and built on. (4) Partitioning of work and team assignments to lean, low coupling partitions, or packets. (5) Constant testing and documentation of a product as it is built. (6) Ability to declare a product done whenever required.

2.2.1.1 Scrum Roles

The scrum model is built upon three different roles; (1) The scrum master, (2) the scrum team and (3) the product owner (Bass, Beecham, Razzak, Canna, & Noll, 2018; Cervone, 2011; Noll, Razzak, Bass, & Beecham, 2017). The scrum master, in traditional terms this is the project manager, is responsible for enacting the scrum values and practices and removing impediments. The scrum teams is usually a cross-functional, self-organizing team of five to ten people who work on the project full time, they are responsible for the development of the software (Noll et al., 2017). The product owner is the functional unit manager, the person who manages the organizational unit, with knowledge of what needs to be built to enable the project and in which order the progress should be made (Cervone, 2011), you can therefore say that the product owner represents the needs of the external stakeholders (Noll et al., 2017).

The role of the product owner will be researched in this master thesis. The product owner is responsible for the communication between the customer, usually B2B, and the development teams and therefore is crucial in bringing new products to life and managing the product lifecycle (Bass et

al., 2018). This makes it one of the most important and difficult roles in scrum (Sverrisdottir, Ingason, & Jonasson, 2014). The product owner is responsible for maintaining and prioritising the product backlog for the product being developed (Sverrisdottir et al., 2014). This means that the product owner works closely with the team but has no authority over the team as they are self-organizing, he or she gives guidance and makes difficult decisions when needed (Sverrisdottir et al., 2014).

2.2.1.2 Scrum activities

There are five key activities in the scrum process: (1) the kick-off, (2) the sprint planning meeting, (3) the sprint, (4) the daily scrum meeting, and (5) the sprint review meeting (Cervone, 2011). The kick-off meeting is similar to the sprint planning meeting, the major difference being that the group define the high-level backlog for the project and the major project goals. The sprint planning meeting is held with the scrum team, scrum master and the product owner at the beginning of the sprint. The meeting consists of two parts. First, the product backlog is defined, this is a list of project requirements. After that the sprint goals are determined, these are the formal outcomes of that particular sprint. Secondly, the sprint backlog is created. The sprint is a month-long iteration cycle in which the functionality of the product is developed, there is no outside influence interfering with the scrum team. The daily scrum meeting is held every day between the scrum master and the scrum team, this meeting lasts about 15 minutes and should clarify the following questions: (1) What did you do since the last scrum? (2) What are you doing until the next scrum? (3) What is stopping you from getting on with your work? The sprint review meeting is held at the end of each sprint, it aims at showing the created functionality to the product owner, this meeting should be informal and not be a distraction for the team members (Cervone, 2011).
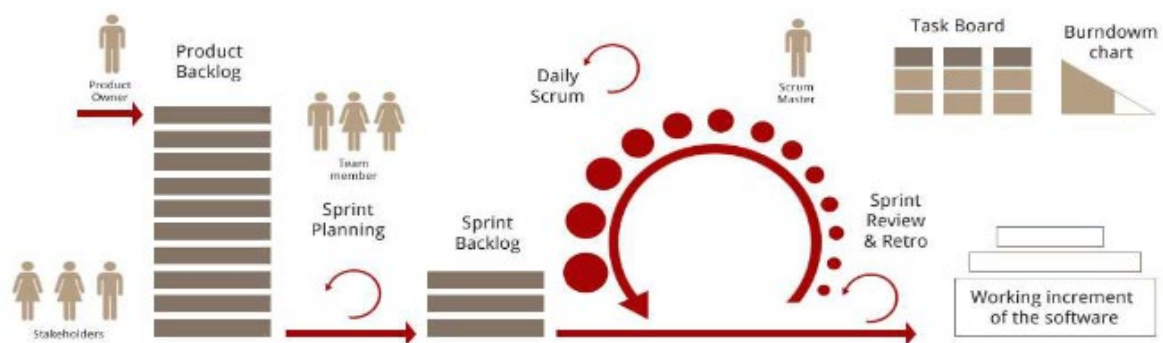

Figure 2 The scrum process (Sverrisdottir, Ingason, &Jonasson, 2014)

2.2.1.3 Scrum Artifacts

The scrum artefacts include (1) the product backlog, (2) the sprint backlog, and (3) burn down charts (Cervone, 2011). The product backlog is managed and owned by the product owner and consists of project requirements expressed as a prioritized list of backlog items. The project backlog is a

deliverable of the kick-off and the sprint planning meetings, this product backlog can't be changed during the sprint. By reviewing the product backlog an estimation of the activities done during a sprint can be estimated. The sprint backlog contains the subset of product backlog items that are defined as part of the work for a particular sprint, this backlog is created by the scrum team and is updated every day. Scrum uses burn down charts to focus on work done with the goal to provide information in an easy to comprehend manner. Cervone (2011) mentions the three most commonly used burn down charts: the sprint burn down chart, documenting the progress of the sprint, the release burn down chart, documenting the progress of the release, and the product burn down chart, documenting the overall project progress.

2.2.2 Role transformation

The transformation to start working agile is not an easy process (Gandomani, Zulzalil, Ghani, Sultan, & Nafchi, 2013), there are a lot of human-related challenges and barriers (Javdani Gandomani & Ziaei Nafchi, 2016). People are used to and adapted to the traditional methods, leaving these methods and adapting to new roles and responsibilities to be difficult and challenging (Gandomani, Zulzalil, Ghani, Sultan, & Parizi, 2015). Peoples behaviours, attitudes, and mindsets need to change and this can evoke resistance (Cockburn & Highsmith, 2001). Due to the key role of the employees in agile methods, the challenges that arise make can make the transition frustrating and time-consuming (Javdani Gandomani & Ziaei Nafchi, 2016).

Job crafting helps to reduce the misfit between the new job/role (Walk & Handy, 2018) that this change has initiated. By crafting their new job employees can turn their new jobs more meaningful. Javdani Gandomani and Ziaei Nafchi (2016) name five challenges in the transition from the traditional way of working to agile working, (1) lack of knowledge about agile, (2) cultural issues related to the organisational culture, (3) wrong mindset typically seen in managers, (4) lack of collaboration and (5) resistance to change. By crafting the new job, employees can establish higher levels of fit and overcome the challenges. This is very important in agile working as the principle of motivated individuals and people working together daily imply.

If the transition to a new role is highly challenging it can have counterproductive outcomes such as job dissatisfaction, anxiety and frustration (Dubé, 2014). To overcome these challenges, it is important to understand how these transitions are experienced, this is especially true for skilled professionals where demands for flexibility and agility is high (Dubé, 2014).

2.4 Supporting or constraining job crafting

Job crafting is a phenomenon executed by employees, sometimes even without the knowledge of their supervisor (Wrzesniewski & Dutton, 2001). This can make it hard for organizations to facilitate this kind of behaviour. Job crafting improves the fit between a person and the job and shows positive relations with work engagement, job satisfaction, meaningfulness and job performance (Demerouti, 2014; Rudolph, Katz, Lavigne, & Zacher, 2017). These are highly valued characteristics as they have potential to lead to higher levels of performance (Tims et al., 2015), which is beneficial for the organization. Looking from the perspective of the employee, who has or wanted to, engage in job crafting efforts, what can an organization do to support job crafting and what might the organization have done to constrain the efforts to craft their job. There is little research done on organizational support or constrain for job crafting efforts.

2.4.1 Supporting factors

Perceived organizational support facilitates the work environment, consisting of knowledge sharing, procedural justice, motivation and promotion, each of which fosters employee creativity (Kim et al., 2018). Kanten (2014), however, found that perceived organizational support has no significant effect on job crafting. This research can shed light on the contradictory results. Management support and relationships with supervisors are viewed as important in stimulation innovative behaviour (Parker, Williams, & Turner, 2006). Organizations can support innovative work behaviour and creative skills by fostering proper leadership, transformational leadership is considered to be a proper leadership style (Afsar et al., 2019).

Job crafting is related to the concept of proactive behaviour, which is referring to people actively seeking information and opportunities in order to improve things (Crant, 2000). Crant (2000) build a conceptual model in which contextual factors like organizational culture, norms and management support influence proactive behaviour. Proactive behaviour gains from both positive and negative effects (Sonnentag & Starzyk, 2015), if people experience positive effects they are more likely to take risks, think brought and develop more positive expectancies. If people are experiencing negative effects they perceive the situation as problematic and will engage in information seeking and causal analytical reasoning (Sonnentag & Starzyk, 2015). Employees need to experience both, so they see opportunities to better the current situation.

2.4.2 Constraining factors

High job demands can be straining, if employees don't get enough time to recover from demanding tasks (Bakker & Demerouti, 2007). If there is a constant high working pressure with very challenging demands that employees are not competent enough to deal with, this can lead to strain of the

employee.A high workload is found to be contributing to employees fatigue, illness and other issues which lead to lower levels of performance and in the end might lead to burnouts (Fan & Smith, 2017).Time pressure can also be viewed as one of the contributors to high levels of workload, as strict deadlines are imposed by external players force employees to complete their work within a strict time schedule which can force them to work outside of their hours and adapt their schedules to meet the deadline (Ford & Jin, 2015).

A constraining factor can be narrowly defined job tasks, as this makes employees see fewer opportunities to craft their jobs (Wrzesniewski & Dutton, 2001). The employee does not see room to craft their jobs as there are very strict boundaries that should not be broken. If employees experience high levels of freedom and autonomy they see opportunities to select alternative ways to complete their tasks, which gives a feeling of ownership and confidence in orchestrating the outcomes (Kim et al., 2018). Job crafting is benefitting from freedom as it focuses on alternative ways to do tasks, if there is little freedom within the organization it can be constraining for employees to craft their jobs.

4. Methodology

The data is collected in a European transmission system operator called TenneT with approximately 5.700 employees. TenneT is focused on integrating the North-West European energy market and advancing the energy transition. TenneT started working agile approximately five years ago and as expected this came with a lot of changes. The IT department, where the research is conducted, is not fully transitioned into agile working yet.

To conduct this research a qualitative approach is used. A set of semi-structured interviews are held with eight product owners, two scrum masters and one business analyst. The focus is on the role implementation of the product owners, the other roles can give an outside perspective on the product owner role which might differ from how product owners perceive themselves. The researcher also observed during three scrum events, the daily scrum meeting, the product owner alignment and the program increment preparation and analysed two documents, the formal function description of the product owner 1.0 and the notes for the new product owner 2.0.

Miles and Huberman (1984) state that qualitative research gives well-grounded, rich descriptions and explanations, it preserves causalities outcomes are undeniable. A hybrid approach of inductive and deductive methods are used, both are common strategies in qualitative research (Tucker, Powell, & Dale Meyer, 1995) and often need a qualitative research method to be executed (Woiceshyn & Daellenbach, 2018). Inductive methods involve moving from the particular to the general, as when making empirical observations about some phenomenon of interest and forming concepts and theories based on them (Locke, 2007) and is, therefore, data-driven (Fereday & Muir-Cochrane, 2006). Deductive methods seek to match an established theory to the data (Hyde, 2000) and are therefore theory-driven. For the job crafting part of this research extensive theory is build (Tims & Bakker, 2010; Tims et al., 2012; Tims et al., 2015; Wrzesniewski, McCauley, Rozin, & Schwartz, 1997) and deductive measures can be used. There is however little to no research done on the challenges related to job crafting in an agile environment, inductive measures are used for that analysis. Using this hybrid method allows for the social phenomenon to be integral to the process of deductive analysis whilst allowing the themes to emerge from the data using inductive methods (Fereday & Muir-Cochrane, 2006).

Interviews. As job crafting can be done in many different ways, interviews are preferred over surveys. In the interview, employees can explain their behaviour in more detail and the narrative can come

forward, this can't be achieved via surveys. Interviews can give an in-depth insight into the experience of individuals (Bleijenbergh, 2015). In this research, the experiences are related to the narrative. As the participants tell the story of their process the motivations, the corresponding challenges and opportunities will come to the surface.A narrative view on experiences highlight that people are individuals and they should be understood as such, but they should also be understood in their social context and experiences grow out of other experiences and lead to further experiences (Clandinin, 2006; Clandinin & Connelly, 2000).

Observations. As observations are at the basis of research they can be used to test theories or prior knowledge (Forinash, 2012), the researcher also participated in 3 scrum events to confirm the data collected during the interview. The researcher was invited to a daily scrum meeting of one of the product owners after an interview. During this event, the researcher was introduced by the product owner to the team but stayed in the background during the event. For the product owner alignment and the program increment preparation meeting, the researcher was invited by the scrum master and stayed in the background during those meetings. As the researcher now sees the product owners in their natural settings nuances and contingencies of the human behaviour can become clear (Forinash, 2012).

Document analysis. The formal documents were analysed to give insights into the formal description of the tasks that are associated with the role of a product owner. Notes about the 'upgraded' role of product owner 2.0 are also analysed to see what the product owners are transitioning to.

4.1 Case description

Context. In consultation with TenneT, we came to the conclusion that the focus of this research would be on the product owners, one of the roles in a scrum team. TenneT is currently in transition from a product owner 1.0 to a product owner 2.0. With this change in the role of product owner, they try to lift the role of product owner to a higher level, which includes stakeholder management, coordination and communication. Within the transition to agile working, functional application managers had gotten an additional role as product owner, after a while it became apparent that this was too much and TenneT suffered many employees with burnouts. With the product owner 2.0, they focus more on the skills of stakeholder management, coordination and communication and not so much on knowing everything about the technical process.

Time frame. To narrow down the timeframe in which the role of product owner is crafted, the researcher again in consultation with TenneT, decided to look at one sprint including the product

delivered, which is two weeks. In the context of that one sprint, the participants are asked about their job crafting efforts and motivations, which efforts they think fit with product owner 1.0 and which with product owner 2.0 and if they feel supported by TenneT to make their job more meaningful using job crafting activities. During the interviews, it became apparent that cognitive crafting does not appear in the time frame of one sprint, for this reason, the researcher altered the interview guide slightly to look at cognitive crafting in a longer timeframe. For a detailed guide of the interview see Appendix 3.

Participants. Besides the interviews with the product owners, three interviews are held with other employees of TenneT who work closely with the product owners. Those people are asked what their perception of the product owner is and if there is a difference in how the product owner sees their role. By interviewing both the view of the product owners and their colleagues' biases are minimized as an inside and an outside perspective is given. Eight product owners are interviewed with several different backgrounds, some had experience in the product owner role in different companies, participants had a background in development work, testing and functional application management and management. Some participants only worked for TenneT for half a year, others already worked for TenneT for over fifteen years. Most participants are product owner for one team, one participant is product owner for two teams. All product owners operate in a different module within TenneT. The researcher also interviewed one business analyst and two scrum masters/release train engineers.

4.2 Data collection

Before starting the interviews, a more general conversation is held with a team leader. In this conversation, the general information about TenneT is discussed. We also discussed the role of product owner and how TenneT implements this role to fit their needs. In this conversation, it became apparent that they are transitioning to a product owner 2.0. The guide for this conversation can be found in Appendix 1.

The interviews are semi-structured, questions have been made before the interview but follow up questions are asked to further engage conversation and get more elaborate answers. The interviews for the employees are divided into three categories namely (1) task crafting, (2) cognitive crafting and (3) relational crafting. The interview guideline for the interviews of the employees are based on the guideline used in the research of Slemp and Vella-Brodrick (2013) and Berg, Wrzesniewski, and Dutton (2010) and can be found in Appendix 3.This interview guideline is also based on the operationalisation of job crafting, which can be found in Appendix 2. This guideline is used to steer

the conversation in the right direction. The aim of the interview is to have a conversation rather than a classic interview. By engaging in this conversation, the narrative can speak.

The observations are held during the scrum events where the researcher did not participate but only observed. Extensive notes were made that reflected the way the product owner behaved in certain situations. These were later translated to a report about the observations and are held against the background of the interviews. The documents are received via the team lead with who the initial conversation was held. The documents are used as a framework to hold against the interviews to confirm the tasks the product owners were conducting. The documents are translated in the researcher's perspective based on the documents, the full documents can be found in the Appendix.

4.3 Data analysis

The grounded theory approach by Corbin and Strauss (2008) is used to analyse the data, as this is in line with the inductive method used. The grounded theory is used because it is true to reality and it includes the discovery of conditions that apply to certain phenomena (Corbin & Strauss, 2008).There are three types of coding in the grounded theory. (1) Open coding: unrestricted coding of data, which is done by closely looking at the interview to find concepts that seem to fit the data. (2) Axial coding; is the process of relating categories to their subcategories, it aims at putting fractured data back together in a new way after the open coding process by making connections between categories. (3) Selective coding; aims to code systematically and concertedly for the core category (Bulawa, 2014; Urquhart, Lehmann, & Myers, 2009). To code all interviews Atlas.ti is used.

Firstly the data is analysed using the deductive analysis method. The deductive part of this research is done via open coding, the transcripts are read and fragments are labelled according to topics concerning the sensitising concepts, job crafting, moderators and motivation that are conceptualized on forehand based on the theory of Wrzesniewski and Dutton (2001). Most of the sensitising concepts were pertinent to the data. The moderating factor *orientation toward work,* did not fit the data 100%. The participants didn't refer to their work as job, carrier or calling, they did however experienced a high degree of responsibility. In the introductory conversation a concern was mentioned by the lead, this concern had to do with the growing ego of the product owners. The interviews, however did not displayed the specific orientation of job carrier or calling.

Secondly the data is analysed using the inductive analysis method. In the first phase of the inductive part, opencoding is used. Transcripts are read and fragments are labelled according to topics concerning the challenges, high working pressure, burnouts, product owner 2.0, waterfall, value delivered, ideal product owner role and agile working. In the second phase of axial coding, the

fragments that are found are put together in their corresponding category. In the last stage of selective coding, the fragments that were found are further analysed for their different dimensions and are placed into categories. The categories related to the different dimension of challenges, ideal role and TenneT specific codes.The inductive coding is based on an initial read of the interviews and consists of an iterative process to build a complete codebook (Fereday & Muir-Cochrane, 2006). The deductive part of this research is done via open coding, the transcripts are read and fragments are labelled according to topics concerning the sensitising concepts, job crafting, moderators and motivation that are conceptualized on forehand based on the theory of Wrzesniewski and Dutton (2001). The completed codebook can be found in Appendix 6.

4.4 Research ethics and limitations

Ethics is an important topic in doing research. As you work with people it is important to consider ethical issues and if and how your research can be harmful (Holt, 2012). Symon and Cassell (2012) describe ethical research as: "a research process that has encompassed ethical practices: procedural (institutional rules, e.g., informed consent), situational (contextually specific ethical actions), relational (personal actions in the field) and exiting (the manner in which research is completed)".

All participants were told that it is highly appreciated that they want to participate in this research, but they could decide to no longer participate at all times. Before the interview, all interviewees were sent information about the interview in order for them to prepare for the interview and know what the interview is about. All interviewees were asked for permission to record the interview and were informed that the information gathered from the interview would only be used for this research and will not be shared with outsiders. After transcribing the interview, the transcript was sent back to the interviewee to check if their words and thoughts were accurately presented. The anonymity of the participants is secured to the best of the ability of the researcher. The participants are also offered the research at completion.

5. Results

In this section the results of the document study, the interviews and observations will be discussed. Firstly, the documents about the formal job description of a product owner are analysed, secondly, the observations made during the events will be discussed and lastly, the outcome of the results are analysed.

5.1 Formal description Product Owner function

Two documents are analysed, the formal function description of the product owner 1.0 and the notes for the new product owner 2.0.

The formal description states that the role of product owner is a role within the role of functional application manager. A product owner is responsible for making, adjusting and maintaining the product backlog. The product owner should also coordinate with other product owners and the agile team and assesses and prioritizes incidents. For a more detailed description see Appendix 4. The product owners of TenneT pointed out that they would like a more demarcated job description as their current role was too demanding and was leading to burnouts (S. Glismann, personal communications, 2021-04-29) .

TenneT is now creating a product owner 2.0 to better fit the needs of the product owners, for a detailed description of the product owner 2.0 see Appendix 5. The role of product owner 2.0 is more supporting and facilitating and the product owner is no longer the person who also knows the most about the technical process behind the development, there are expert for that specific knowledge.

5.2 Observations

The researcher was present at three scrum events, a daily scrum meeting, the Program Increment preparation meeting and the Product Owner alignment. During these meetings, extensive notes were made, mainly focussing on the product owner's behaviour and the issues that were raised. The researcher was present during those events to get herself familiar with the way of working and the atmosphere in the organization, the observations also helped to support and validate the information given in the interviews. Due to the technical nature of the meetings the researcher was not able to fully comprehend the content of the meetings, this should however not affect the results of this thesis as it focuses on the role of the product owner and not on the technical content they work with on a daily basis. All meetings were held via WebEx, due to corona measures, which might influence the results, as interaction is different in an online environment in contrast to a real-life meeting.

5.2.1 Daily Scrum Meeting

The daily scrum meeting is a short meeting of about 20 minutes with a scrum team that was held via WebEx. The ambience of the meeting was casual, and jokes were made, the team seemed to be getting along well. The product owner had a minor role in this meeting as the team discussed what they were going to do that day. The product owner asked some questions that were answered but stayed in the background for most of the meeting.

5.2.2 Program increment preparation meeting

In this Program increment preparation meeting all product owners, the business owners and the facilitators of this meeting talked about the current quarter goals, which will give guidance for the upcoming program increment planning for next quarter, this meeting was focused on tasks. The atmosphere during this meeting was informal and jokes were made, the meeting lasted an hour and was held via WebEx, there were about 35 people present in the meeting.

The product owner was a central point in this meeting and many questions were raised about the prioritizing of the epics. A discussion came up about prioritizing and how this was done, the release train engineers explained how they prioritized the list and the product owners discussed how to tackle the epics.

5.2.3 Product owner Alignment

In the product owner alignment, the product owners talked about their, and their team's performance. There was a drop in releases under the level that they forecasted, the facilitators of this meeting raised the question of why this drop had appeared. This meeting was more focused on growth and what can be done better in the next quarter. The meeting was attended by approximately 23 people and was hosted on WebEx.

The atmosphere was informal but more tense than the program increment preparation meeting. The main two issues that were raised about the drop in releases is that the platform is too unstable for testing which takes a lot of time to fix and the dependency between teams that is hard to manage. The product owners were not as quick to answer and were not as proactive as in earlier meetings. In this meeting they also decided who would present their outcomes during the program increment planning, there was no one really enthusiastic to do this. In the end, two people volunteered to do the presentation about what they accomplished and where the points of improvement lay. The product owners seemed willing to learn from this quarter to do better next quarter.

5.3 Interview outcomes

During the interview and the coding of the interviews, five categories of challenges were found. Those five challenges are described in the following paragraph followed by the job crafting facets the product owners used to deal with the challenges and the motivation to do so. These challenges will be elaborated on in a case method, describing the situation including quotes. Figure three gives a schematic overview of the findings.

	Job Crafting efforts			Motivation		
	Task Crafting	Relational Crafting	Cognitive Crafting	Need for control	Need for positive self-image	Need for human connection
Challenge 1; Working pressure	Dropping tasks Emphasising tasks	Reframing relations	Focussing perception	x		
Challenge 2; Lack of clarity		Building relations	Expanding perception	x		
Challenge 3; Communication	Adding tasks Dropping tasks	Reframing relations Building relations	Focussing perception	x		x
Challenge 4; Organizational problems	Adding tasks	Building relations		x		
Challenge 5; Personal challenges	Adding tasks Dropping tasks Redesigning tasks		Expanding perception	x	x	

Figure 3 Summarization of results

The code book consists of four groups, (A) Job crafting, (B) Motivations, (C) Moderators and (D) TenneT specific codes, the codes are partly based on theory and partly found in the data. (A) Job crafting has three dimensions, task crafting, relational crafting and cognitive crafting, all are derived from theory. Task crafting has four indicators, adding tasks, dropping tasks, emphasizing tasks and redesigning tasks. Relational crafting consists of the indicators building, reframing and adapting relations. Cognitive crafting also has three indicators namely, expanding, focussing and linking perceptions. (B) The motivations consist of three codes derived from theory, need for control, need for positive self-image and need for human connection, and two open codes, ideal role and value. The motivations are the underlying reasons why the product owners started to craft their roles.(C) The moderator codes have two groups, the perceived opportunity to craft and the challenges. The perceived opportunity gives the supporting and constraining factors and the challenges presented are the provocations the product owners have to deal with in their role. The perceived opportunity indicators are all based on theory and are the level of task interdependence, the form of task interdependence and the level of discretion or freedom. The codes related to the challenges are based on the findings in the interviews. The indicators are burnout, pressure and challenges. Challenges are categorized into five sub dimensions, working pressure, lack of clarity, communication, organizational problems and

personal challenges. Working pressure consists of the sub indicators limited time, extra tasks, working pressure and demand, double role and limited people. Lack of clarity based on the sub indicators of complex processes, lack of clarity about what should be done, lack of clarity about the tasks related to the product owner role and lack of vision. The indicators for communication are interference with the job of the product owner, chaos within the team, communication and coordination with other teams and the communication between business and IT. The indicators for organizational problems are unstable platform, little organizational support and budgeting problems. The last sub dimension of personal challenges consist of the sub indicators saying no and high sense of responsibility. Group D are the TenneT specific codes and are therefor based on the interviews, the dimensions are product owner 2.0, agile working, waterfall and tasks to be done. In Appendix 6 a schematic overview of the code book is given, the codes that are in regular fond are the codes derived from theory and the codes in Italic are the codes derived from the interviews.

5.3.1 Challenge 1: Working Pressure

The high demand was the most mentioned challenge during the interviews. The main challenges that were found in this category are; limited time, extra tasks, work pressure and demand, double role of product owner and other role and limited people. TenneT is aware of this high demand and is now transitioning into product owner 2.0, which should release product owners of some of their technical duties. To help the product owners TenneT offers a training to learn the skills of a product owner 2.0, stakeholder management and communication are focus points.

All participants agreed on the fact that being a product owner is a demanding job. The business analyst even said that the demand put on the product owners is too much. As a consequence of this high demand, multiple employees suffer from burnouts, one of the participants suffered a burnout. In the introductory conversations this challenge also came up, this means that TenneT is aware of the problem.

> *Participant: last year I have had a burnout myself, in my experience it was very demanding. There were several reasons for my burnout; I got little support from the business side of the company, I was a product owner and a functional application manager. I had no process specialist and yes that's it. There were too many balls I had to keep in the air. (…) Because you have a lot of technical knowledge the team is going to ask you how something works quite frequently and this is not what a product owner should do, a product owner should focus on the functional part.*

Product owner is a full-time job and in the long run, it is not possible to take on another role besides being a product owner. As the transition continues the product owners are dropping tasks and start to focus on their role as product owner. The product owners agreed that performing tasks related to the functional application manager do not go together with the role and responsibilities of the product owner. With the training for product owner 2.0 all product owners are offered to develop their skillset,

this can help people to make their competences fit the needs for the product owner role. As this training is an addition to the regular tasks it can put extra strain on the product owners at first but should ease the strain in the long run.

> *Participant: we are growing towards a more functional and strategic level, and we have to let go of the technical knowledge otherwise people will topple over within a week. (…) We are outgrowing the old situation and are not keeping all balls in the air. So, we are letting go of the technical knowledge and the functional application manager role and become full and only product owners.*

This quote displays the task crafting of dropping tasks as the job of functional application manager is dropped. By getting rid of highly demanding tasks the participant makes his job better fit his needs, the tasks that are draining are disposed. The participant is also emphasising his role as product owner by fully focussing on one task which makes him a better product owner as all available time can fully be dedicated to being a product owner, the role of product owner is experienced as more meaningful and is therefore emphasized. The motivation to craft the job is the need for control, this product owner has had a burnout in the past and wants to protect himself from a future burnout caused by high job demands. By protecting himself and focussing on the role of product owner, which is experienced as meaningful, he can dedicate all his attention towards one job and say connected to that job.

There is also a lot of pressure on the development teams to produce, this indirectly influences the way the product owner implements its role as he is the link between the 'outsiders' and the team. The product owners have to become more of a motivator towards the team and are therefore changing the social relationship with the team, the relation with the team is reframed. By reframing the relation to becoming more of a motivational factor, the product owner role is gaining meaning. The product is no longer only a translator for the 'outsiders' to the developers, the product owner also becomes a person who motivates and stimulates the team.

> *Participant: At this moment the pressure is so high that the motivation within the team is very low. Our team is changing, and somebody is leaving. (…) it is challenging how to get the team to stay motivated. The demand is high and where possible I want to give them rest, because you do not benefit from a team that is falling apart. The scrum master is also responsible for the team and yes, it is an interplay between the product owner and the scrum master.*

TenneT is aware of this high demand and the training for product owner 2.0 has started, the perception the product owners have of their role is also shifting. They now focus their perception more on the higher-order skills of stakeholder management and communication. The perception of the product owners is focused on the those skills as these skills are considered to be more meaningful in the role of product owner. After evaluating the product owner role TenneT came to the conclusion that stakeholder management and communication skills would lift the product owner role to a higher level.

> *Participant: I was a little bit sceptical in the beginning because it started out a bit slow. As I said before, I was at the basis of that script, so I know how it works and I also had an idea about how I could solve it, so somewhere I had to be very harsh with myself and say fine, you have other work, go and work on it in the background,*

something will probably happen, it doesn't seem to be going well at the moment, but then they'll just have to take a tumble and we'll see. So, I let go and that was a very good thing, actually. That actually resulted in many more people in the team knowing and being enthusiastic.

5.3.2 Challenge 2: Lack of clarity

The second group of challenges that is identified is the lack of clarity. The most mentioned challenges in this category are the complex processes, lack of clarity about what should be done, tasks related to the role of product owner are unclear and the lack of vision.

> *Participant: That is with TenneT, typicallyTenneT. It is already very busy and then you are also going to change the way agile is described. People have worked so long on agile and scrum, people have written so many books and than you going to adjust it and make it your own, it is a shame. (…) All that pressure and unclarity only lead to chaos within the teams.*

To deal with the unclarity that exists within TenneT the product owners try to extend their perception by cognitive crafting. All product owners came across as well educated and most of them have a good vision of what they want to do. Because TenneT is a very dynamic company that has to constantly adapt to the changing environment, employees are 'forced' to continuously craft their jobs to keep up with the demands. By expanding the perception the meaning and purpose of their role is placed in the centre of their thinking, filling the backlog and being an intermediary for the stakeholders the development team, but also new purposes emerge, carrying out a vision and building a roadmap. These new purposes of the role can bring more meaning to the role as more responsibility is experienced.

> *Researcher: What is your ideal product owner role?*
> *Participant: Well, my ideal role as product owner is that I have a very clear image of who my stakeholders are and what their roadmap is, so I can make a roadmap that fits theirs. In that way I can create a calm environment in which my team can work peacefully. (…)*
> *Researcher: Why do you think that this doesn't exist?*
> *Participant: That has two sources, I think. The business is not joining us in the agile transition, they work to much on a project base. The other area that I see that needs to change is architecture. I and my many other teams benefit from a clear architectural vision and perhaps that also helps the business, but I see that it is still lagging behind a bit. All sorts of things are set in motion but not very many concrete things are done. So, I do miss a bit of vision.*
> *Researcher: Do you have an idea what that vision should be? What would you like?*
> *Participant: Well, not a vision per se, but to fill in the roles. I would actually expect there to be a product manager, one or more who take over from the product owners. If we do that, we are not going to be a good voice to the parties we are in business with.*

This quote also displays the need for control. The product owners want there to be a clear vision of where they need to go in the upcoming years, they need to know where to work towards. The lack of vision might result in the product owners alienating from their role as there is no long term goal to

work towards. By creating a vision for all product owners, the individual product owners can build their own roadmap to offer guidance for their team.

To deal with the complex process's product owners tend to build stronger relationships and sometimes even new relations, this is done via relational crafting. These relations can help the product owner to gain more knowledge about the processes but can also help with performing better in the role of product owner. These processes have a wide variety, for example the budgeting side of the company or the technical side, how an application is build. By building these new relationships and gaining knowledge the product owners can get a feeling of worthiness and dignity as they increase their skills and value for the company.

> *Participant: Well, you certainly need a year to get to know the processes, but they expect me to deliver within half a year. But I don't have to do it alone. (...) This project was already started before I came to work here and there was a temporary product owner on the team. So, in the beginning I mainly focused on completing stories, I did that with the business analyst.*

To deal with unclarities task crafting was not applied by any of the product owners. This might be the case because processes are so complex, and vision is missing that product owners don't know how and which tasks to do or do not do. They might not want to add or let go of responsibilities because they do not know where they are heading or what they should be doing in the future.

5.3.3 Challenge 3: Communication

The third category of challenges is communication, the challenges that are grouped into this category are the interference with the job of the product owner by outside roles, chaos within the team, communication and coordination with other teams and the communication between the business side of the company and the IT side of the company. With the training that TenneT is now offering to their product owners communication should be improving as this is one of the skills that is desired from product owners 2.0.

Communication is a known and accepted challenge within TenneT and in the role of product owner. With product owner 2.0 TenneT is offering product owners the chance to learn skills associated with communication to provide tools in order to deal with this challenge. One product owner raised the concern about doing the things that matter most and not only the ideas of the product owners who have the loudest voice.

> *Participant: So that we are doing sensible things and not the things that are not, or just doing what is said by the people who are screaming the loudest.*

To deal with the interference of others product owners focus their perception on the importance of their role. They will defend their team and let others know that they are the leader and that the other product owner knows where the team is heading and why they are heading that way. By focussing the perception of their role they grow closer to the team and move away from the bigger picture. In the case of TenneT this is not favourable as they are trying to lift the role of product owner to a higher level which also includes seeing the bigger picture. They focus their perceptions on the team and where the team is heading because the product owner thinks that this is the most important part of their role, they perceive that part of their role as most valuable. This, however, might not be the most valuable for the company overall.

> *Participant: What I see, for example, is that we have many leads and managers, and everybody wants to interfere in my job, but also service managers. I then get the question why are you doing this or that? My reaction is, and I don't care who you are in that case, why, why do you want to know that? You can only have one captain on the ship, and I am the one who is steering, I know damn well where why we do things and I have my contacts with the business owner where I explain myself to and no one else has anything to do with what we are doing and why.*

Alignment is hard within TenneT as there are many players that all want to be involved. To manage this alignment product owners, on some occasions, have to change the tasks they are doing. The job crafting facet they use is dropping and adding tasks. Because stakeholders constantly want different things product owners need to be flexible in their role and the tasks they are doing. The tasks that are normally done might not be relevant in this sprint and can be dropped while other tasks have gained importance and need to be emphasized now.

> *Participant: With your methodology and your processes, and what we sometimes see is that the business works from projects, and they just have a certain timeline, and they claim all kinds of resources in advance, and they expect results at moments and the implementation is then put in the hands of IT, which then works agile again, so there is still room for improvement.*
> *Researcher: So, this is a real challenge, this communication between business and IT?*
> *Participant: Yes*
> *Researcher: And how do you deal with that as a product owner?*
> *Participant: (…) So what I can do is feed the product owners who do talk to the business with information, and they can take that into account, but for me it is less of an issue, but when I look at the big picture, at the other product owners, I see that they have some kind of blockage that makes their work more difficult. And eventually my work too, or things start shifting, or things suddenly have to be moved forward and then I have to move flexibly. So, if there were to be an alignment, I would have a better idea of what should be done first and what the priority should be.*

As this quote also nicely shows, this product owner also crafted their relations to fit the needs of the role. The product owner is reframing his relations with the other product owners to feed them with information to help them better implement their tasks. In this example the relation changed into a giver and receiver of information role instead of just aligning. In that way, he is also building new relations with product owners and the IT sector in which he connects the two by giving out information. He is

becoming an agent between the different parties, which also involve new product owners and their teams.

The motivations for the crafting found in the interviews are the need for control and the need for human connection. Control is a reoccurring motivating factor, as product owners are independent, strong-minded persons they tend to want to control the situation as can be read in the first quote of this paragraph, they feel the need to be closely involved with the team and changes made in their roles in order to stay connected to TenneT and their role as product owner. The need for human connection comes from the difficulty to align with others in the organization, there are many parties involved in the process and they all need to be on the same page. The Covid-19 situation has reduced the connections made during the day as almost all employees of TenneT are working from home, this makes communication even harder.

> *Participant: Yes, that management is also new for me. So, it's a great challenge. Yes, it's a lot, a lot of talking, stakeholder management, a lot of coordinating with people.*

5.3.4 Challenge 4: Organizational problems

Within the category of organizational problems, there was one challenge that was mentioned by almost all product owners and that was the stability of the testing platform. Other challenges categorized in this challenge are little support from the organization and budgeting.

The instability of the testing platform is a big issue for the product owners as their products can't go live if they are not properly tested. This not only came back in the interview but also in the product owner alignment meeting. As this platform isn't working the product owner has to add tasks to his role in order to solve the issues with the testing platform, sometimes other teams are needed for that as well. By reaching out to those other teams the product owner is building new relations with those teams and is crafting the relations. The new relationships that are build with those teams can give a feeling of worthiness because the product owner is actively seeking a solution for the problems that the testing platform is giving.

> *Participant: Towards the end of a delivery that becomes increasingly difficult because you still want to have a lot done and also want to have findings resolved. (…) We would like to test, but the test environment is not yet completely stable. are you then going to pay attention to making that test environment stable or solving findings that come from an unstable test environment, well, all those kinds of choices have to be made. That was a challenge.*

This is a challenge that is beyond one product owners' control and leaves the product owners with little control over their releases. Fixing the platform is not a one team job and will affect many teams,

during the meetings the product owner mentioned that in the next quarter this would be a challenge that has to be solved.

TenneT wasn't supporting the product owners enough in their highly demanding job, they are now offering training to become more skilled, higher-level product owners but they keep demanding and demanding more of the product owners and their teams which leads to product owners and teams not reaching their goals. The incidents keep piling up which leads to the product owner adding more tasks to their already full schedule. As these incidents have to be fixed the product owners have to take on the extra tasks to not let them interfere with other projects the team is working on.

> Participant: If the product owner receives something in his sprint as an incident, then you have to look at what you should prioritise. But that does not happen at TenneT: things are always being added, but the work you already have is still there. That means the pressure is getting too high and you won't make it. Instead of saying what can be removed from the sprint so that it fits again, but that doesn't happen. And then they say yes, we didn't make it because of incidents. But then you have to steer more and more, and you notice now that it is not going so well.

The training is offering the product owners a new skillset to help them better perform their role as product owner. There is however also the problem of being short staffed, which leads to people having double roles and not being able to perform the product owner role 100%. TenneT could offer more support by making sure every team has all the members it needs to fulfil their day to day job.

No evidence was found that the organizational challenges lead to cognitive crafting. This might be because these challenges are coming from beyond their control and are accounted from an external factor. As cognitive crafting comes from within the person the organizational challenges do not change the way they think about their role as product owners. Cognitive crafting is about how the product owners interpret their job and related tasks can influence how meaningful they experience their work, organizational challenges might not alter the way they view their job and tasks in relation to meaningfulness as these challenges are not due to their actions.

5.3.5 Challenge 5: Personal challenges

In the fifth and last category of challenges, the personal challenges are described, saying no to certain tasks and the high sense of responsibility. There were product owners who mentioned that experiencing the role of product owner as a high demanding role and taking on too many tasks is in the nature of the person, but the researcher decided to make this a separate challenges as high demand was named by all participants.

With the high sense of responsibility, the product owners tend to expand their perceptions by cognitive crafting, the role of the product owner is crafted in a way that pulls responsibility towards them. They feel responsible for many other things besides their tasks written in the task description, this makes

them add additional tasks to their already demanding job. By extending this perception they expend the insights about the purpose of the product owner role, the expansion is manly focused on the sense of responsibility. This feeling of responsibility can come from the need to have a positive self-imageas every person wants to feel good about himself. The quote below portraits the product owner relates the responsibilities to growing and facilitating others which in the end leads to a positive self-image as the organization benefits from those actions.

> *Participant: I personally see myself really as the CEO of our little company(the team).So,it consists of fourteen people that's pretty big for a devops team, (...) you also really pick up all the different work as well, which is sometimes difficult for a developer/tester of, and you need to know so many things. But I see myself as the CEO who ensures that there is trust in the team, focus, cooperation and yes, as someone who also looks ahead to ensure that our company can continue to work. So that means I am constantly looking for new jobs that I think will tie in well with the work we are already doing, or will provide a lot of value for TenneT, or, yes, new, familiar questions and new things to take up, so that the team remains interested in the work. Because if all we do is run production, then of course a developer also wants to see and learn new things, and I see that as my job too, to ensure that everyone is at their best and remains enthusiastic.*

As the product owners feel a high sense of responsibility the second challenge in this category is related to saying no to certain tasks. If a product owner has difficulty saying not their tasks list can grow out of proportion and can lead to many tasks not being completed. There were multiple product owners who said they had difficulty with this task, there, however, were also product owners who said that this was not an issue for them. This challenge might be more human nature related than role-related but nevertheless worth mentioning.

> *Participant: Let me just say that I get super good support from my current manager, he is very clear and sometimes I find that difficult because I have the feeling that all of a sudden he puts something on my plate that I think okay why.But that is also more his way of trying to bring things to the point and that is more up to me to react (...) And it's more up to me to respond to that and say: unfortunately, dear manager, you can say that now but I'm just not going to do it, or it doesn't suit me, or I want to do it for you, or that means that I won't do this and this for you any more, or that I'll do that later or something.*
> *Researcher: Yes, that is difficult, to say no to.*
> *Participant: I am not very good at saying no. That's one of the things I need to focus on, now that I know I have to be confident about that.*

This quote shows the dropping of tasks and redesigning of tasks using task crafting, because there is limited time the product owner chooses to drop tasks. He is redesigning the tasks due to lack of time, by redesigning the tasks they become more meaningful for the product owner and he can establish better fit with his role. Now that the product owner knows that saying no is a challenge, he now knows that he has to say no sometimes or redesign his tasks so that the demand is not rising above a certain level. The motivation to craft the job in this way comes from the need for control, to not let the demand get too high to handle. As too many tasks lessens the attention given to all tasks, it is important to decline new tasks when you are already involved in many tasks, as to many tasks risk

alienation from the work. The scrum master also noticed that saying no is one of the challenges related to the product owner role.

> Participant: Exactly, and yes, unfortunately, you must have heard that some product owner is sitting at home in a burnout, so how hard can you be to protect yourself? (...) In the end that is not good for TenneT, because TenneT doesn't get better from our people falling out, also the environment must help, it should never be the case that people experience too much work pressure, in that case we are doing something wrong as an organization. It's also about how do I learn to guard that boundary and how can I learn to say no.

There is no evidence found in the interviews that the product owners use relational crafting to overcome challenges related to personal challenges. This might be because these challenges are focused on the product owner self and do not involve other people. One product owner mentioned that he was struggling with the high demand of his job and had a hard time saying no, he later talked about this with his manager and the manager had not noticed that the product owner was struggling. This suggest that he is a private person who does not like to bother other people with his problems, this might also be the case for other product owners.

5.3.6 Moderators

One of the moderating factors named by Wrzesniewski and Dutton (2001) is the level of discretion or freedom. Within TenneT there is a lot of freedom to find a way to fulfil your role in a way that fits your needs, all participants said that TenneT gives a lot of freedom to fulfil their role. By allowing this freedom TenneT offers employees the freedom to craft their job to better fit the needs of the individual employee and therefore make their jobs more meaningful. One of the participants gives the following statement;

> Researcher: Is there freedom to make adjustments in your role?
> Participant: Yes, I decided everything.
> Researcher: And there is no one of the top management that says, 'this is enough'?
> Participant: No

By giving this much freedom to the employees to craft their jobs the organization is facilitating job crafting, which can lead to more motivated employees and ultimately to higher performances. All participants mentioned that they appreciated this freedom that TenneT is giving.

The two other moderating factors are the level of task interdependence and the form of task interdependence, both are high within the IT department of TenneT. Although this is a moderating factor it is also one of the challenges within TenneT. The teams are independent of each other but actions of one team can have an effect on the module that another teams is working on. Teams should align their work so all teams know what is currently under construction and can take this into account in their planning. In the product owner alignment meeting this was also a topic of discussion as one of the product owners asked about were to find the epics all teams were working on. Because the

interdependence between teams is so high product owners experience difficulties in obtaining their sprint goals and need to adjust accordingly.

> *Participant: We noticed that the MRD was lagging behind and that it should be updated. This is what we wanted to do during this sprint but during the first or second day we heard that another team working on the MRD was implementing changes in the module and we would be hindering each other. So already during the first two days of the sprint we said that we would not be reaching the target of this sprint.*

There is another moderation factor mentioned in the framework of Wrzesniewski and Dutton (2001), namely, the orientation towards work. This orientation is divided into three kinds of orientation, job, carrier and calling. This concept is, however, not pertinent to the data. The researcher found no evidence that could conclude if the product owners viewed their role as a job, carrier or calling. No specific questions were asked about this orientation and no evidence can be read between the lines. One product owner mentioned the following.

> *Participant: I think I just better at keeping my work and private life a bit more separate. if I close my laptop, my laptop is really closed, and then immediately everything from work is gone. So then the world can end. But I think for me, you're a product owner, you just have a number of hours in the week, you have 40 hours in the week. What you do for the team, you also have to do for yourself, you just have to be working on your highest priorities and when that time is up, it's up, yes and I really don't work in my spare time then I have something else to do.*

This quote would suggest that there is a job orientation toward work, this is, however, only mentioned by one product owner which is not enough to come to a well-founded conclusion.

6. Conclusion

In the conclusion, a summary of the findings will be given and an answer to the research question is provided. The conclusion is divided into three parts, the supporting factors, the constraining factors and the job crafting efforts in relation to the challenges.

6.1 Challenges and Job crafting

Figure 3 presents the findings in a schematic manner. After coding the interviews five categories of challenges were identified. Looking at these challenges, job crafting efforts are linked to the way the product owners dealt with these challenges and their motivations to do so were identified. This also answers the research question; *How do product owners craft their roles, related to their goals, in the dynamics of an agile working environment?*

High working pressure is the main challenge that exists within TenneT. The product owners dealt with these challenges via all three job crafting facets, task, relational and cognitive crafting. With task crafting they started to drop tasks, for example, the extra roles that they took on them because no one else could employ those roles. Besides dropping tasks, they began to emphasise the tasks they were doing, for example focussing on their own tasks and stop interfering with the team. The relations of the product owners are reframed under this high demand as the relation with the team changed, the product owners are shifting more in the motivator role to keep their team excited. The perception of the role also shifted a bit, the product owners focussed more on the higher-order skills of the product owner 2.0 to be better equipped to deal with the high demand, these skills are the communication and stakeholder management. This was al motivated by the need for control as the product owners want to have a say in what is done by the team and not just follow orders, this would make sure that they stay involved in their role and not become alienated with the role of product owner.

The second challenge identified is the lack of clarity, within TenneT the processes are complex, and the lack of vision makes it vague what is expected of employees. To deal with this challenge the product owners used relational and cognitive crafting. There is no evidence found that task crafting is employed to deal with this challenge. Relationships are built to gain access to the knowledge of other people. Another facet used to deal with this challenge is expanding the perception as the product owners need to keep up with the constantly changing demand, they need to constantly craft the way they see their job. The motivation for the crafting efforts lays in the need for control, the product owners want to be valuable, but this can be hard if it is unclear what is expected of you.

The third challenge that came forward during the coding phase is communication. There is a lot of interdependence between teams and communication is not always going as wanted. To deal with this challenge product owners used all three job crafting efforts and are motivated by their need for control and human connection. As their teams can be hurt by the actions of other teams the product owners like to be in control, the need for human connection is derived from the interdependence and the sense of belonging. As stakeholders constantly want different things the product owner needs to be flexible and drop or add different tasks to their role in order to fulfil the needs of the stakeholders. To get and supply others with information the product owners need to build new relations to get access to their knowledge and to reframe old relations to change the relation to be able to share more knowledge. As the interdependence is high the product owners started to focus their perception on their team and the needs of their team, the perception became more narrowly focused on the team instead of the whole process.

The fourth challenge category that is derived from the interview is organizational problems, to deal with these challenges the product owners used task and relational crafting. Both were motivated by the need for control, as the product owners have little to no control over deficiencies of TenneT. By engaging in training and fixing incidents that occurred during the sprint product owners add tasks to their already full schedule and as the interdependence between teams is often high, they need to build new relations in order to fix the incidents that occur. There is no evidence found that points at cognitive crafting, this might be the case because the organizational problems are external to the role of the product owner.

The fifth and final challenge that the product owners spoke about is the personal challenges. Due to the feeling of responsibility and the challenge to say no product owners engage in task and cognitive crafting. This is done because they feel the need for control and the need for a positive self-image. This need for a positive self-image can come from the facilitating role the product owner has to the team, the need for control is based on guarding their selves and not let the pressure get too high. Tasks are added because product owners feel responsible for obtaining a goal but drop and redesign their tasks to guard their selves to remain under doable pressure. By expanding the perception of their role more responsibility is pulled towards the product owner, and it can make the job unnecessarily heavy. There is no evidence found that relational crafting is used to deal with the personal challenges, this might be because the challenges are product owner centred and don't involve other roles.

6.2 Supporting factors

TenneT is supporting their employees to craft their jobs by allowing employees the freedom to fill in their jobs to meet their needs and make their job more meaningful. There are hardly any restrictions coming from the top management to limit the product owners to craft their jobs. Due to this freedom,the product owners can make their role fit better with their personal needs and even the needs of the organization which can ultimately lead to higher performances. TenneT embraces ideas from the product owners to make changes in the role of the product owner.

The second supporting factor that came forward during the interviews is the training that is offered in relation to product owner 2.0. Product owner 2.0 is supposed to elevate the product owner role to a higher level focussing on skills like communication and stakeholder management. This training is initiated because there were many product owners who either were in a burnout or are on the verge of one. This is due to the fact that there are product owners who have a double role of product owner and functional application manager or are product owners who used to be functional application managers and still use their functional application knowledge on a daily basis. With the training to product owner 2.0, the product owners learn to use the higher-order skills of communication and stakeholder management and leave the technical part to their teams.

6.3 Constraining factors

The constraining factors to craft the role of product owner within TenneT are due to working pressure, the demand within TenneT is very high which can strain the product owners. As demand is so high there is little room to craft the job to fit personal needs.

There is a shortage of people within TenneT, some product owners had to fulfil other roles whilst fulfilling the role of product owner due to the lack of employees that could fulfil that other role, for example, the role of scrum master. As product owner is a full job on itself already also taking on another role means that the product owner can not give 100% of his/her attention to the tasks related to the product owner role. During the interviews, it also became apparent that due to the lack of functional application managers products that were built did not go live because for approval the functional application manager was needed. This led to a decrease in motivation within the teams as their products are left on the shelves for long periods of time. The testing platform is unstable which also causes trouble with going live with products.

Time pressure is a constraining factor too, it puts the product owners under high demand as they are responsible for the planning and deal with the stakeholders and manage their expectations. As one of the product owners said.

Participant: I feel the pain, because I talk to stakeholders.

TenneT is also bound to European laws and deadlines which lack flexibility. The product owners have to comply with those laws and deadlines to avoid consequences and fines. Due to these restrictions,the product owners can feel forced to stay in their current role and not make adjustments as this might interfere with the deadlines.

7. Discussion

In the discussion the interpretation of the results will be displayed, contribution to the knowledge, the practical implications, limitations and suggestions are made for future research directions.

7.1 Interpretation of results

The product owners within TenneT's IT department are constantly crafting their jobs to make them fit their needs and to deal with challenges that arise in their daily jobs. The motivation for crafting the job mostly comes from the need for control. Product owners are smart and committed people who want to be in charge of their actions. Like many organizations, TenneT is a dynamic organization with many interlinkages within and outside the organization which forces the product owners to be flexible to deal with demands. Because there is a high need for flexibility the jobs are crafted every day, product owners are constantly dealing with challenges and incidents and make their role suitable to deal with those situations via job crafting.

The product owners engaged in all job crafting efforts, task crafting, relational crafting and cognitive crafting. They did however not adapt their relations or link perceptions. The lack of adaption in the relationships might be due to the fact that the network of a product owner is very extensive, to begin with, and the roles relations are already defined, which does not leave room to adapt the relation there is with other roles. Linking perceptions is about linking a task to something they like, the lack of linking perception can come from the short period of time that the product owners are involved in their role, as TenneT recently started the agile transition and is adapting the role of product owner to a 2.0 version there might not have been enough time to link the perceptions they might have.

Job crafting is an effective tool for the product owners to make their role fit their needs, TenneT offers room for employees to craft their role and isn't giving restricting job descriptions to make their employees feel fine to make changes in their jobs, but which can also lead to challenges like lack of vision. The product owners came across as content with their role as product owner, but they see opportunities to improve and with job crafting efforts and the help of the organization they can move towards the ideal product owner role.

7.2 Contribution to the knowledge

As there is little to no research done on job crafting in an agile environment this study contributes to the job crafting literature base and the agile working literature base. This research gives a unique inside in a case where the agile transition is in full motion and the role of the product owner is in a transition towards a higher-level function. By analysing the interviews, the perspective of the product owners is given towards the challenges in their daily jobs and how they deal with them in the context of job crafting.

This research gives the perspective of the employees and can therefor offer valuable insights for the organization. Challenges are uncovered and how employees deal with those challenges is brought to light, organizations can use this information for future situations. Agile work is new and upcoming way of working and transitioning towards a new way of working always comes with challenges, in this Thesis an overview of the challenges experienced by the product owners of TenneT is given and the way they deal with those challenges is described. This can help other organizations that want to walk the same path TenneT is walking.

7.3 Practical implications and recommendations

TenneT is offering great freedom to its product owners to craft their jobs they could however support their product owners more by offering more resources. There is a lack of human resources which causes the product owners to add extra tasks or even whole roles to their workload which is too obtainable in the long run. By lack of resources is mend that not every team has every role necessary. By making sure that every team has every role that is necessary to function in it (scrum master, process specialist), the pressure can be lifted from the product owners' shoulders. Another big issue was the instability of the testing environment, this is leading to little incidents that constantly need the attention of the product owner. Demand is high and by offering the right resources it could elevate the pressure of the product owners.

There are many strong-minded product owners who all have their own vision on the role of product owner, the vision and where TenneT should be heading. TenneT is careful that the situation doesn't escalate and the one who makes the most noise will also make the most decisions. Continue with the product owner 2.0 training but look at the needs of the individual product owner to build skills and let them see the bigger picture, there is a need for a vision statement. A recommendation to TenneT would be to listen to the ideas of the product owners and don't dismiss them, they are the ones who are working in their role every day and can offer interesting insights.

Continue offering the freedom that is offered now. This makes the employees feel trusted and appreciated and it can stimulate them to work harder and be more motivated. The product owners that the researcher spoke came across as trustworthy and smart people with common sense, by giving them the freedom to keep adapting their roles, they find better fit within their role and the organization.

7.4 Limitations

As this research is done in only one organization with only eleven participants the results given are not generalizable, to make the results generalizable a much wider range of participants should be interviewed in different organizations. As this thesis had to be completed within half a year this was beyond the possibilities of the researcher.

The interviews are held and coded by one researcher and no peer review was held. If a peer would have read over the interview other aspects might have come up, due to lack of time this part was skipped. This makes the results more prone to biases due to the point of view of one person instead of the combined view of multiple researchers. This can endanger the reliability of the results.

The central role of this research is the product owner role, findings might not apply to other roles and should therefor not be generalized to other roles within scrum and agile working. Three interviews were held with other roles, they were questioned about their view on the product owner role. By also allowing an outsiders perspective on the product owner role the researcher tried to minimize they bias that product owners have about themselves. Three is however a limited number and if more participants were interviewed results might have been different.

7.5 Future research

As this research highlights, a new connection between job crafting and agile working environment is studied. This research focuses on the job crafting efforts of the product owners but there are many other roles that research can be focused on, the scrum master, a developer or functional application manager are some examples. To give an complete view of how a scrum team craft their jobs to make it more meaningful, all roles within a scrum team should be researched.

Research can be done in different organizations; small or very large hierarchical organizations might give different insights as restrictions might differ from TenneT's restrictions. In smaller organization there might even be more freedom to craft than TenneT is offering and in more hierarchical organizations employees face a challenge because there is less freedom to craft the job. Also different sectors might give different results, this research is done in the IT sector but in advocacy different insights might come up.

A follow-up study within TenneT on the implementation and results of product owner 2.0 can give even more insights into the crafting process of the role of a product owner. The implementation of product owner 2.0 is just starting, the first training was given in the week the researcher started the studies. By studying the process of going from product owner 1.0 to product owner 2.0 full insights can be given over a longer period of time.

References

Afsar, B., Masood, M., & Umrani, W. A. (2019). The role of job crafting and knowledge sharing on the effect of transformational leadership on innovative work behavior. *Personnel Review, 48*(5), 1186-1208. doi:10.1108/pr-04-2018-0133

Bakker, A. B., & Demerouti, E. (2007). The job demands-resources model: State of the art. *Journal of managerial psychology.*

Bass, J. M., Beecham, S., Razzak, M. A., Canna, C. N., & Noll, J. (2018, 2018). *An empirical study of the product owner role in scrum.*

Baumeister, R. F., & Leary, M. R. (1995). The need to belong: desire for interpersonal attachments as a fundamental human motivation. *Psychological bulletin, 117*(3), 497.

Beck, K., Beedle, M., Van Bennekum, A., Cockburn, A., Cunningham, W., Fowler, M., . . . Jeffries, R. (2001). The agile manifesto. In: Feb.

Bellah, R. N., Madsen, R., Sullivan, W. M., Swidler, A., & Tipton, S. M. (2007). *Habits of the heart, with a new preface: individualism and commitment in American life*: Univ of California Press.

Berg, J. M., Dutton, J. E., & Wrzesniewski, A. (2008). What is job crafting and why does it matter. *Retrieved form the website of Positive Organizational Scholarship on April, 15*, 2011.

Berg, J. M., Dutton, J. E., & Wrzesniewski, A. (2013). Job crafting and meaningful work.

Berg, J. M., Wrzesniewski, A., & Dutton, J. E. (2010). Perceiving and responding to challenges in job crafting at different ranks: When proactivity requires adaptivity. *Journal of Organizational Behavior, 31*(2-3), 158-186. doi:10.1002/job.645

Bessant, J. (2019). The long term survival through innovation. *Journal of Business Chemistry, 16*(1), 2-10.

Bindl, U. K., Unsworth, K. L., Gibson, C. B., & Stride, C. B. (2019). Job crafting revisited: Implications of an extended framework for active changes at work. *Journal of Applied Psychology, 104*(5), 605.

Bleijenbergh, I. (2015). Kwalitatief onderzoek in organisaties (2e druk). *Den Haag: Boom Lemma Uitgevers.*

Braverman, H. (1974). Labor and Monopoly capital: The Degradation of work in the twentieth century. *New York: Monthly Review Press.*

Bulawa, P. (2014). Adapting Grounded Theory in Qualitative Research: Reflections from Personal Experience. *International Research in Education, 2*(1), 145. doi:10.5296/ire.v2i1.4921

Cervone, H. F. H. F. (2011). Understanding agile project management methods using Scrum. *OCLC Systems and Services: International digital library perspectives, 27*(1), 18.

Chen, C.-J., & Huang, J.-W. (2009). Strategic human resource practices and innovation performance—The mediating role of knowledge management capacity. *Journal of business research, 62*(1), 104-114.

Clandinin, D. J. (2006). Narrative Inquiry: A Methodology for Studying Lived Experience. *Research Studies in Music Education, 27*(1), 44-54. doi:10.1177/1321103x060270010301

Clandinin, D. J., & Connelly, F. M. (2000). Narrative inquiry. In: San Francisco: Jossey-Bass.

Cockburn, A., & Highsmith, J. (2001). Agile software development, the people factor. *Computer, 34*(11), 131-133. doi:10.1109/2.963450

Cohen, D., Lindvall, M., & Costa, P. (2004). An introduction to agile methods. *Adv. Comput., 62*(03), 1-66.

Corbin, J., & Strauss, A. (2008). Techniques and procedures for developing grounded theory. *Basics of Qualitative Research, 3rd ed.; Sage: Thousand Oaks, CA, USA*.

Crant, J. M. (2000). Proactive Behavior in Organizations. *Journal of Management, 26*(3), 435-462. doi:10.1177/014920630002600304

De Jong, J., & Den Hartog, D. N. (2008). Innovative work behavior: Measurement and validation. *EIM Business and Policy Research, 8*(1), 1-27.

Demerouti, E. (2014). Design Your Own Job Through Job Crafting. *European Psychologist, 19*(4), 237-247. doi:10.1027/1016-9040/a000188

Demerouti, E., Bakker, A. B., Nachreiner, F., & Schaufeli, W. B. (2001). The job demands-resources model of burnout. *Journal of Applied Psychology, 86*(3), 499.

Dubé, L. (2014). Exploring How IT Professionals Experience Role Transitions at the End of Successful Projects. *Journal of Management Information Systems, 31*(1), 17-46. doi:10.2753/MIS0742-1222310102

Dutton, J. E., Dukerich, J. M., & Harquail, C. V. (1994). Organizational images and member identification. *Administrative science quarterly*, 239-263.

Fan, J., & Smith, A. P. (2017). The Impact of Workload and Fatigue on Performance. In (pp. 90-105): Springer International Publishing.

Fereday, J., & Muir-Cochrane, E. (2006). Demonstrating Rigor Using Thematic Analysis: A Hybrid Approach of Inductive and Deductive Coding and Theme Development. *International Journal of Qualitative Methods, 5*(1), 80-92. doi:10.1177/160940690600500107

Ford, M. T., & Jin, J. (2015). Incongruence between workload and occupational norms for time pressure predicts depressive symptoms. *European Journal of Work and Organizational Psychology, 24*(1), 88-100. doi:10.1080/1359432x.2013.858701

Forinash, M. (2012). Qualitative research methods, data collection and analysis: Interviews, observations, and content analysis. *Dance/movement therapists in action: A working guide to research options*, 141-166.

Gandomani, T. J., Zulzalil, H., Ghani, A. A. A., Sultan, A. B. M., & Nafchi, M. Z. (2013). Obstacles in moving to agile software development methods; at a glance. *Journal of Computer Science, 9*(5), 620.

Gandomani, T. J., Zulzalil, H., Ghani, A. A. A., Sultan, A. B. M., & Parizi, R. M. (2015). The impact of inadequate and dysfunctional training on Agile transformation process: a Grounded Theory study. *Information and Software Technology, 57*, 295-309.

Gonçalves, L. (2018). Scrum. *Controlling & Management Review, 62*(4), 40-42. doi:10.1007/s12176-018-0020-3

Harju, L. K., Kaltiainen, J., & Hakanen, J. J. (2021). The double-edged sword of job crafting: The effects of job crafting on changes in job demands and employee well-being. *Human Resource Management*. doi:10.1002/hrm.22054

Holt, R. (2012). Ethical research practice. *Qualitative organizational research: Core methods and current challenges*, 90-108.

Hyde, K. F. (2000). Recognising deductive processes in qualitative research. *Qualitative Market Research: An International Journal, 3*(2), 82-90. doi:10.1108/13522750010322089

Javdani Gandomani, T., & Ziaei Nafchi, M. (2016). Agile transition and adoption human-related challenges and issues: A Grounded Theory approach. *Computers in Human Behavior, 62*, 257-266. doi:10.1016/j.chb.2016.04.009

Jeyasingham, D. (2016). Open spaces, supple bodies? Considering the impact of agile working on social work office practices. *Child & Family Social Work, 21*(2), 209-217. doi:10.1111/cfs.12130

Kanten, P. (2014). The antecedents of job crafting: Perceived organizational support, job characteristics and self-efficacy. *European Journal of Business and Social Sciences, 3*(5), 113-128.

Kim, H., Im, J., Qu, H., & Namkoong, J. (2018). Antecedent and consequences of job crafting: an organizational level approach. *International Journal of Contemporary Hospitality Management, 30*(3), 1863-1881. doi:10.1108/ijchm-01-2017-0040

Locke, E. A. (2007). The case for inductive theory building. *Journal of Management, 33*(6), 867-890.

Lukes, M., & Stephan, U. (2017). Measuring employee innovation. *International Journal of Entrepreneurial Behavior & Research, 23*(1), 136-158. doi:10.1108/ijebr-11-2015-0262

Mergel, I. (2016). Agile innovation management in government: A research agenda. *Government Information Quarterly, 33*(3), 516-523. doi:10.1016/j.giq.2016.07.004

Miles, M. B., & Huberman, A. M. (1984). Drawing valid meaning from qualitative data: Toward a shared craft. *Educational researcher, 13*(5), 20-30.

Niessen, C., Weseler, D., & Kostova, P. (2016). When and why do individuals craft their jobs? The role of individual motivation and work characteristics for job crafting. *Human relations, 69*(6), 1287-1313.

Noll, J., Razzak, M. A., Bass, J. M., & Beecham, S. (2017). A Study of the Scrum Master's Role. In (pp. 307-323): Springer International Publishing.

Ortiz-Villajos, J. M., & Sotoca, S. (2018). Innovation and business survival: A long-term approach. *Research Policy, 47*(8), 1418-1436. doi:10.1016/j.respol.2018.04.019

Parker, S. K., Williams, H. M., & Turner, N. (2006). Modeling the antecedents of proactive behavior at work. *Journal of Applied Psychology, 91*(3), 636.

Rizwan, M., Humayon, A. A., Shahid, A. U., Tufail, H. S., Danish, R. Q., & Muneeb, H. M. (2016). The effect of job crafting on job creativity through job engagement: a case of banking sector of vehari, Pakistan. *European Online Journal of Natural and Social Sciences, 5*(4), pp. 1005-1011.

Rudolph, C. W., Katz, I. M., Lavigne, K. N., & Zacher, H. (2017). Job crafting: A meta-analysis of relationships with individual differences, job characteristics, and work outcomes. *Journal of vocational behavior, 102*, 112-138. doi:https://doi.org/10.1016/j.jvb.2017.05.008

Slemp, G. R., & Vella-Brodrick, D. A. (2013). The Job Crafting Questionnaire: A new scale to measure the extent to which employees engage in job crafting. *International Journal of Wellbeing, 3*(2).

Sonnentag, S., & Starzyk, A. (2015). Perceived prosocial impact, perceived situational constraints, and proactive work behavior: Looking at two distinct affective pathways. *Journal of Organizational Behavior, 36*(6), 806-824. doi:10.1002/job.2005

Srivastava, A., Bhardwaj, S., & Saraswat, S. (2017, 2017). *SCRUM model for agile methodology*.

Sverrisdottir, H. S., Ingason, H. T., & Jonasson, H. I. (2014). The Role of the Product Owner in Scrum-comparison between Theory and Practices. *Procedia - Social and Behavioral Sciences, 119*, 257-267. doi:10.1016/j.sbspro.2014.03.030

Symon, G., & Cassell, C. (2012). Assessing Qualitative Research 12. *Qualitative organizational research: Core methods and current challenges, 204*.

Tausky, C. (1995). The meanings of work. *Research in the Sociology of Work, 5*(1), 15-27.

Tims, M., & Bakker, A. B. (2010). Job crafting: Towards a new model of individual job redesign. *SA Journal of Industrial Psychology, 36*(2). doi:10.4102/sajip.v36i2.841

Tims, M., Bakker, A. B., & Derks, D. (2012). Development and validation of the job crafting scale. *Journal of vocational behavior, 80*(1), 173-186.

Tims, M., Bakker, A. B., & Derks, D. (2015). Job crafting and job performance: A longitudinal study. *European Journal of Work and Organizational Psychology, 24*(6), 914-928. doi:10.1080/1359432x.2014.969245

Tripp, J. F., Riemenschneider, C., & Thatcher, J. B. (2016). Job Satisfaction in Agile Development Teams: Agile Development as Work Redesign. *Journal of the Association for Information Systems, 17*(4), 267-307. Retrieved from http://search.ebscohost.com/login.aspx?direct=true&db=bth&AN=115721483&site=ehost-live

Tucker, M. L., Powell, K. S., & Dale Meyer, G. (1995). Qualitative research in business communication: A review and analysis. *The Journal of Business Communication (1973), 32*(4), 383-399.

Tushman, M. L., & O'Reilly III, C. A. (1996). Ambidextrous organizations: Managing evolutionary and revolutionary change. *California management review, 38*(4), 8-29.

Urquhart, C., Lehmann, H., & Myers, M. D. (2009). Putting the 'theory' back into grounded theory: guidelines for grounded theory studies in information systems. *Information Systems Journal, 20*(4), 357-381. doi:10.1111/j.1365-2575.2009.00328.x

Walk, M., & Handy, F. (2018). Job Crafting as Reaction to Organizational Change. *The Journal of Applied Behavioral Science, 54*(3), 349-370. doi:10.1177/0021886318777227

Wingerden, J. v., & Poell, R. F. (2017). Employees' perceived opportunities to craft and in-role performance: The mediating role of job crafting and work engagement. *Frontiers in psychology, 8*, 1876.

Woiceshyn, J., & Daellenbach, U. (2018). Evaluating inductive vs deductive research in management studies. *Qualitative Research in Organizations and Management: An International Journal, 13*(2), 183-195. doi:10.1108/QROM-06-2017-1538

Wrzesniewski, A., & Dutton, J. E. (2001). Crafting a job: Revisioning employees as active crafters of their work. *Academy of management review, 26*(2), 179-201.

Wrzesniewski, A., McCauley, C., Rozin, P., & Schwartz, B. (1997). Jobs, careers, and callings: People's relations to their work. *Journal of research in personality, 31*(1), 21-33.

Zhang, F., & Parker, S. K. (2019). Reorienting job crafting research: A hierarchical structure of job crafting concepts and integrative review. *Journal of Organizational Behavior, 40*(2), 126-146. doi:10.1002/job.2332

Appendix 1 Introductory conversation guideline

Could you tell me about TenneT's job, what does TenneT do as a company? And about your position within TenneT?

- Atmosphere within the organization, very rigid or lots of freedom?

What was the transition to agile work like?

How is/ will agile work be implemented within TenneT?

- Scrum, how do you guys work?
- Advantages and disadvantages?
- Challenges that have arisen?

Could you talk about the duties and the role of the product owners?

- Are there challenges involved?
- Advantages / disadvantages over the old function?
- Is there freedom to adapt the role?

What do you see as the main problem? One that I could research within my scope? In particular about the context of agile working and role transition?

Practical questions

- Are you forwarding my letter to the product owners?
- How does the process continue with getting in touch with the product owners and how should I schedule appointments?
- The scrum events, what is convenient to agree on. I would like to participate in 2 or 3 to get a feel of the atmosphere.
- Should I make an introductory letter about myself?

Appendix 2 Operationalisation Job crafting

Concept	Dimension	Indicator
Job crafting	Task crafting	Adding tasks
		Dropping tasks
		Emphasizing tasks
		Redesigning tasks
	Relational crafting	Building relations
		Reframing relations
		Adapting relations
	Cognitive crafting	Expanding perceptions
		Focusing perceptions
		Linking perceptions

Concept	Dimension
Motivation	Need for control
	Need for positive self image
	Need for human connection

Concept	Dimension	Indicator
Moderator	Perceived opportunity to craft	Level of task interdependence
		Form of task interdependence
		Level of discretion or freedom
	Orientation towards work	Job
		Carrier
		Calling

Appendix 3 Interview Guides

A) Interview guideline Product Owner

Do you give permission for the interview to be recorded?

Background info about the research

I want to gain insight into how product owners fulfil their role in the context of agile working and how they find answers to new challenges in the organisation in that role.

Job crafting consists of 3 parts: (1) a concrete change in the tasks, for example by adding or dropping tasks (2) changing the social relationships at work and (3) cognitively redefining and reappraising the work, this means that employees redefine their thoughts about the work so that the work is experienced as more meaningful.

General questions (short introduction)

1. Can you tell me about your role as product owner?

> What does your role entail? What tasks do you perform? What working relationships are there?

2. Can you tell me about the transition from waterfall to Agile?

> How did you experience this? Challenges? Change of your role.

To delineate my research, I have chosen to look at the fulfilment of the role of product owner within a sprint including a delivery. The idea is to choose a sprint that forms an example for you of your 'work' to 'reinvent' the product owner role each time. The following questions will therefore also relate to that period, a sprint and delivery, whether or not linked to each other.

3. Could you tell me about this sprint?

What was the goal? What was your task? Were there any challenges and did these affect the fulfilment of your role?

4. What adjustments in tasks did you make during the sprint (more/less tasks; different view or interpretation of tasks), tasks that might have been part of your 'task description'? Task crafting

> Why did you adjust these tasks or not? Are there any challenges involved? Can you sketch this situation for me?

Is there a relation between the tasks of product owner 1.0 and product owner 2.0?

5. Can you tell me what your views are on the role of product owner: the significance for yourself, the added value in relation to the organisation's tasks (in that sprint/completion)? Cognitive crafting

> Has your view changed or been confirmed during the sprint? If so, where did this change come from? And did these changes make you a 'better' product owner in your eyes? Did you encounter any challenges in doing so? Can you outline this situation for me?
>
> Is there a relation between the tasks of product owner 1.0 and product owner 2.0?

6. Did you change your (functional) working relationships during the sprint or did you maintain them? For example, in the sense of advising, assisting, auditing, coordinating, progress monitoring, prescribing and providing service. Did you make new contacts or not or different contacts with people you normally do this with? Can you sketch this situation for me? Relational crafting

> Why have you modified or kept these working relationships? Have you experienced any challenges with this?
>
> Does the creation of working relationships relate to the tasks of product owner 1.0 and product owner 2.0?

Concluding questions

7. What freedom do you experience in terms of adapting your role as product owner to make it more meaningful for you and valuable for the organisation?

8. Now we've talked about your role and the practice of and space for all kinds of adjustments. Is there an overall relationship between the tasks of product owner 1.0 and product owner 2.0?

9. What would be your ideal product owner role? And why does this role not exist?

10. Do you have any questions?

Thank you very much for your participation. After I have transcribed the interview, I can send it back to you for any feedback on parts that may not have come across correctly, are you interested in that?

B) Interview Guide non-product owners.

Do you give permission for the interview to be recorded?

Background information

I want to gain insight into how product owners fulfil their role in the context of agile working. I am interested in talking to you because there are differences and similarities between how someone sees their own role and how others see it. So, I would like to talk about your perspective on the role of product owner.

Job crafting consists of 3 parts: (1) a concrete change in the tasks, for example by adding or dropping tasks (2) changing the social relationships at work and (3) cognitively revaluing the work, this means that employees redefine or revalue the thoughts about the work so that they experience their work as more meaningful and valuable.

General questions

1. What is your role? Can you tell me briefly what your tasks are?
2. What is your relationship with the product owners?

Specific questions: related to a sprint and the delivery possibly linked to another sprint. The idea is to choose a sprint that is an example for you and to analyse the role of the product owner on the basis of that sprint. The following questions will therefore also relate to that period, a sprint and delivery, possibly linked to each other.

3. Could you tell us about this sprint?

What was the goal? What was your task? Were there any challenges and did these affect the fulfilment of the role of product owner and your own role in relation to the product owner?

4. How do you see the role and tasks of product owner from the experiences in your own role in this sprint/completion? Task crafting

> Did you notice that product owners made adjustments to their tasks during the sprint in question (more/less tasks; different view or interpretation of tasks), tasks that perhaps did not belong to their 'task description'?
>
> How do you see this task performance by the product owner from your needs in your role and the value for the organisation?
>
> Are there any challenges in task crafting for yourself in relation to the product owner? Can you outline this situation for me?
>
> Is there a relationship between the tasks of the product owner 1.0 and the product owner 2.0?

5. What does the role of product owner mean in terms of your role fulfilment? Cognitive crafting

> How do you see the performance of this task from your point of view?Is it significant for you?
>
> And the value for the organisation? Are there any challenges in this for yourself? Can you sketch this situation for me?
>
> Have the adjustments made by the product owners made them 'better' product owners?
>
> Is there a relation between the cognitive role of the product owner 1.0 and the product owner 2.0?

6. How do you see the network of working relationships of the product owners? Relational crafting

> Has the product owner modified his working relationships during the sprint? This can be both functional (e.g., in the sense of advising, assisting, auditing, coordinating, monitoring progress, prescribing and providing service) and in the quantity of relationships. Are there any challenges in this? Can you outline this situation for me?
>
> Is there a relationship with the working relationships of product owner 1.0 and product owner 2.0?

Concluding questions

7. Do you feel that it is possible to adapt roles to make them more meaningful within TenneT? (For the product owners)

8. What do you think is the ideal job description for a product owner?

> Why does this ideal job description not yet exist?

9. Do you have any questions?

Thank you very much for your participation. After I have transcribed the interview, I can send it back to you for any feedback on parts that may not have come across correctly, are you interested in that?

Appendix 4 Function of product owner

Product Owner

- Is verantwoordelijk voor het opbouwen, bewerken en onderhouden van de backlog van het product.
- Zorgt voor afstemming met andere PO's / Agile teams met betrekking tot afhankelijkheden waarbij de samenhang over de keten wordt bewaakt;
- Beoordeelt en prioriteert incidenten in samenwerking met Functioneel Applicatie Beheer, processpecialisten en/of proces eigenaar

De functie van Functioneel Applicatiebeheerder (Product Owner) komt voor op schaal 7 en schaal 8. Zie hoofdstuk 1.1. voor de niveau onderscheidende kenmerken per schaal.

Zachte competenties

Schaal 7	Schaal 8
Te selecteren uit het competentieboek	Te selecteren uit het competentieboek

Product Owner	- Is accountable voor de product backlog. - Prioriteert de product backlog (user stories en features) om snel waarde te kunnen leveren aan de organisatie. - Ondersteunt bij het opstellen van epics, features en user stories. - Rapporteert/presenteert over en bewaakt de voortgang van de productontwikkeling - Uit het functieboek: Zorgt voor afstemming met andere PO's / Agile teams met betrekking tot afhankelijkheden waarbij de samenhang over de keten wordt bewaakt.	Selection from PO 2.0 document and from Functiebook

April 12 2021

TenneT

- In case the group of people in and DevOps team should delivery something, accountability is placed on the Product Owner or the Scrum Master, just because only one person maybe accountable.

Appendix 5 product owner 2.0

Functie-eisen Product Owner

Hieronder staan een aantal functie-eisen die gesteld zouden moeten worden aan een PO 2.0.

- Draagt bij aan de doelstellingen van TenneT en adviseert de opdrachtgevers, stakeholders
- Kan werken vanuit een agile mindset
- Is vaardig in stakeholdermanagement.
- Kan strategie vertalen naar visie en doelstellingen (roadmap)
- Ondersteunt bij het opstellen van epics, features en user stories
- Prioriteert de product backlog (US en Features) om snel waarde te kunnen leveren aan de organisatie
- Is accountable voor de product backlog.
- Kan de stakeholders adviseren op impact/waarde van de backlogitems
- Rapporteert/presenteert over en bewaakt de voortgang van de productontwikkeling
- Is verantwoordelijk voor het overzicht van de afhankelijkheden voor processen en data flows inzichtelijk en acteert hierop
- Communiceert en overlegt (proactief) met Stakeholders en klanten i.v.m. afhankelijkheden in de keten
- Draagt zorg voor documentatie van de systemen en het opleiden van gebruikers (beheer en gebruik)

Soft skills Product Owner

Hieronder staan een aantal soft skills die gesteld zouden moeten worden aan een PO 2.0.

- Kan communiceren op verschillende niveaus, verbindingen leggen maar desnoods ook delegeren
- Weet het team te motiveren en werkt aan vertrouwen
- Geeft het team ruimte om zelf technische keuzes te kunnen maken
- Vertegenwoordigt verschillende belangen en weet daarbij prioriteiten te stellen
- Weet overzicht te houden op de gehele keten en daarbij behorende planning
- Is gedreven, flexibel en heeft overtuigingskracht
- Weet op verschillende niveaus te acteren
- Neemt verantwoordelijkheid binnen het gestelde mandaat, m.b.t. deadlines, functionaliteit, werkzaamheden en gemaakte keuzes
- Denkt in kansenenoplossingen

Appendix 6 Code book

* Normal fond are concepts derived from theory & *Italic* fonds are concepts derived form data

Concept	Dimension	Indicator
Group A. Job crafting	Task crafting	Adding tasks
		Dropping tasks
		Emphasizing tasks
		Redesigning tasks
	Relational crafting	Building relations
		Reframing relations
		Adapting relations
	Cognitive crafting	Expanding perceptions
		Focusing perceptions
		Linking perceptions

Concept	Dimension
Group B. Motivation	Need for control
	Need for positive self image
	Need for human connection
	Ideal Role
	Value

Concept	Dimension	Indicator	Sub Dimension	Sub Indicator
Group C. Moderator	Perceived opportunity to craft	Level of task interdependence		
		Form of task interdependence		
		Level of discretion or freedom		
	Challenges	*Burnout*		
		Pressure		
		Challenges	*Working pressure*	*Limited time*

				Extra tasks
				Work pressure and demand
				Double role
				Limited People
			Lack of Clarity	Complex processes
				Unlcear what should be done
				Unclear what tasks belong to product owner
				Lack of vision
			Communication	Interference with job
				Chaos within team
				Communication/ coordination with other teams
				Communication Business and IT
			Organizational problems	Unstable platform
				Little organizational support
				Budgeting
			Personal challenges	Saying no
				High sense of responsibility

Group D. Concept	Dimension
TenneT	*Product owner 2.0*
	Agile working
	Waterfall
	Tasks