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Faculty of Behavioural, Management and Social Sciences

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The handling of in- and outflow of information between different departments of small and medium-sized enterprises

Submitted by: Stijn Woudstra
S1594796

1st Supervisor: dr. A.G. Sigurdardottir
2nd Supervisor: dr. K. Sigurdsson

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Abstract

Sharing knowledge among different departments who work on the same project within a company is a component of effective management of organisational knowledge. Despite the cognition from companies that sharing knowledge is important and will lead to an improved and efficient working method, there are various reasons why there are limitations towards sharing knowledge and why organisations have problems being as efficient as possible towards knowledge management. This article focuses on finding out what those limitations are and how these limitations can be overthrown to make the best out of knowledge management possible. By using a single-case study and a qualitative research design within a small and medium-sized enterprise, the revealing of potential or present problems can be identified. By analysing 13 interviews for the case company, findings show that time, lack of infrastructure, individual expertise, organisational structure and monitoring of employees from the management are main components why sharing knowledge is lacking. Changing a sharing knowledge culture is difficult but needs to be approached by all managers to give a company competitive advantage. As existing literature does not offer sufficient information about the sharing knowledge process within SME's and their barriers. This research aims to provide an addition to fill this scientific gap in the research of sharing knowledge and knowledge management. A limitation of this research is the use of only one company and the limited availability of interviewees, which makes this research less reliable.

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1. Introduction

Knowledge sharing is the act of making knowledge available to others within the organisation (Ipe, 2003). It is effective for a company to create a knowledge-sharing culture to make it a part of the knowledge management within the company, because of effective communication between staff and employees it is clear that competitive advantage will be easier to maintain or even get better (Mei, Lee, & Al-Hawamdeh, 2004). A knowledge management program, which is isolated within only one department and where people do not share their ideas of information with the other employees and the company itself is not efficient or successful. Knowledge management is identified as, 'an emerging set of principles', processes, organisational structures, and technology applications that help people share and leverage their knowledge to meet their business objectives (Gurteen, 1999).

It is important to share knowledge because of the impact it has on the success of the organisation. Knowledge sharing can be used to gain a competitive advantage over other similar companies (Le & Lei, 2019). While sharing knowledge a company can improve employees' performance and also organisational performance. Employees will learn more from each other while transferring knowledge throughout a project or during courses, where information is exchanged. This information will have a positive outcome on the overall knowledge in the company and thereby also on the competitive advantage (Abdul-Jalal, Toulson, & Tweed, 2013).

For a company, two types of knowledge need to be shared that have an impact on the company itself. Explicit knowledge and tacit knowledge. Explicit knowledge is the knowledge you get from another company to fulfill the needs of a project and you can implement it on the project itself (X. Huang, Hsieh, & He, 2014). Tacit knowledge is intangible information and is learned over time, such as the culture of the company and the way a company expects you to handle situations such as meetings (E. A. Smith, 2001). A company needs to distinguish these knowledge types and learn how to share this type of knowledge in the most efficient way possible.

To create a knowledge management structure for these two types of knowledge, there needs to be a knowledge-sharing culture within the company to share knowledge as effectively as possible. A knowledge-sharing culture depends on every single employee in the company, it is necessary to see a business as a whole, to reuse, transfer, capture knowledge in every department to achieve the organisation its goals (Reid, 2003). For different departments

within a company that are not used to the way of sharing knowledge, it is hard to share knowledge, because of the different ways of thinking and ideas they have about business plans. The way how people share knowledge is essential and in what intonation or body language, they share information. To make the information important it is crucial to see the essence of the information for the company as a whole, with enthusiastic body language you inspire people more (Yang, 2004).

Transferring knowledge between departments, brings more complexity, because of the multifaced nature of the boundaries of the organisation, the culture of the company, and all processes involved. Therefore it is very useful to do further research into transfer knowledge. (Easterby-Smith, Lyles, & Tsang, 2008).

To effectively transfer this type of knowledge, a department needs to know, or in general; what the company or the other department needs. Discussing at first what a department needs during a transfer process is key to how effectively an organisation works, you need to find out what the differences are within expectations of what the other needs to adapt to each other to do the job well and also see what documents are required for the transfer of knowledge (Riege, 2005).

Organising the knowledge transfer process will require time to adapt within a company, due to this date the transfer process is not transparent and is not executed effectively in most companies (Malhotra, 2004), while this is the keystone for a good working business (Desouza & Evaristo, 2003). After all, there is much to be learned and understood about how knowledge is shared, created, and used within an organisation to get it as effective as possible, this will be discussed further within this research (Varun Grover, 2001).

As stated, some bottlenecks limit the transfer process, these bottlenecks are the reason why the company does not make use of the existing knowledge, it costs the company money and needs to be fixed. Based on what is seen in the bottlenecks (see 'individual and organisational level barriers'), problems can be seen as human behaviour, as most people need to have a manager that guides them. (Kuenzi, Mayer, & Greenbaum, 2019). Sometimes people's motivation is explicit and conscious, at other times behavior is energised and directed by nonconscious, implicit aims and attitudes, which mostly are directed by managing emotions by managers (Ryan, 2012). Another problem can be that there is no guideline for the transfer process founded by managers and that there are no rules or steps to provide a

functional transfer of knowledge. Both of these problems are connected towards behaviour of managers and show that there is a connection between sharing knowledge and leading development of managers towards employees.

As existing literature or papers do not offer sufficient information about the sharing knowledge process within SME's and their barriers. This research aims to provide an addition to fill this scientific gap in the research of sharing knowledge. This is important to find out how SME's can work efficiently through their lines of work and departments. If all these steps can be explained and be applicable for the company it will get a better position in its current competitive advantage over other companies (Argote & Ingram, 2000).

This research contributes to the theory of knowledge sharing and knowledge management by identifying the different departments within a company and how to find an effective way of communicating between different departments, which leads to a time-saving process. By sharing the knowledge it is not always shared with the right person or department that is why `managing` the knowledge is important to see if the information is eventually shared with the right person or department. In a way that the information transfer is effectively deployed and being implemented within the company such as that it fits within the company its culture. Which will then also give a headstart of changing while economies and businesses can change fast (Hatun & Pettigrew, 2004).

To accomplish this research goal, a close connection to a real-time case is crucial and will be conducted at Loohuis Installatietechniek at Almelo. A small and medium-sized enterprise (SME), which shares the lack of communicating skills and a proper and effective knowledge sharing culture. Such as problems of losing manuscripts during the transmission process between departments, or having no responsible person for the transfer process.

Looking at the sharing knowledge and the approached theories, the main research question is: *'How are small and medium-sized enterprises handling the flow of information between departments internally?'*

The sub-questions are:

To give a clear comparison between the case company and the theory:

- *How is knowledge sharing handled within the case company?*

What does a company lack to have a smooth knowledge sharing culture is important to know for the overall understanding of what a company needs to improve:

- *What is mainly the cause of preventing knowledge sharing?*

Using all the information from the interviews, there must be a way of how companies can use the information they get and transfer these in the best way possible through their departments.

- *What is the most effective way to share knowledge within small and medium-sized enterprises?*

2. Theoretical Framework

In this chapter, the key components of the research will be explained and what will be used to find the best sharing knowledge concept possible. This study focuses on the creation of efficient knowledge sharing between departments. Hence, in this chapter, the key concepts of knowledge sharing will be explained to solve the issues from the problem statement. To first see what can solve this issue it is important to explain what problems are causing this issue. Afterward, eliminate the problems to see what works best for a company to construct the best possible solution.

2.1 Why sharing knowledge within a company is important

Sharing knowledge within a company is very important. It is most essential to the survival of most businesses and competitiveness to strive for the best possible company. Within companies, a large part of the work is prepared and organised within teams and departments. Teams are interdependent groups who recognise themselves as a team with a certain degree of shared accountability (Ali, Wang, Khan, Pitafi, & Amin, 2019). The reasons why sharing knowledge is important according to Gurteen: (Gurteen, 1999): At first, Intangible products – the processes, ideas, and information do take a growing share of the global trade, they are taking a bigger impact from the traditional tangible goods of the manufacturing economy (Teece, 1998).

Secondly, increasing sustainable competitive advantage is continuously important, e.g. the application of sharing new knowledge (Arsawan et al., 2020). As the third point, increasing turnover of staff. It is important to keep knowledge within the company without letting people with that knowledge walk out again. Increasing the turnover also provides people to get an incentive to increase the level of knowledge sharing. (Svetlik, Stavrou-Costea, & Lin, 2007). Second last, the problem with a lot of organisations is that they do not

know what kind of information they have. Expertise learned in one part of the department of the company is most often not leveraged in another (Bhatti, Akram, Bhatti, Riaz, & Syed, 2021). At last, Gurteen says that accelerating change is of a huge impact. The change of economies and technology is booming, companies need to keep on track with information before it is outdated.

Sharing knowledge is also seen as an important view to social identification for workers with their team. They can express their feelings and thoughts about a project and acknowledge their own identity within a team, this results in a feeling of belongingness to the team in play (Ellemers, De Gilder, & Haslam, 2004). Being a part of the team gives a stronger identification of group goals and people are more willing to share knowledge (Van Der Vegt & Bunderson, 2005). A lot of studies have been carried out to discover what the influence is of social identification within a team and the commitment of people and their effect on work outcomes (Van Knippenberg, 2000). It is found to be related to motivation, job satisfaction, and lower conflicts on the work floor. People are likely to achieve more when they have a connection with the team they are working with (Podsakoff, MacKenzie, Paine, & Bachrach, 2000).

Workers who do not see knowledge sharing as a learning activity might indicate as a failure to successfully share knowledge throughout the organisation (S. Wang & Noe, 2010). This may result in work inefficiencies, more work errors, or a downgrade in work quality. Knowledge dissimilarities lead to a less efficient movement of knowledge throughout an organisation (Gagné, 2009).

2.2 Barriers to sharing knowledge

Knowledge sharing has gained attention in recent years, because the competitive advantage of companies seems to rely on the application of knowledge and of those parts where sharing knowledge can optimise business ideas and goals (Alavi & Leidner, 2001). On one hand, there are knowledge-sharing practices that have not accomplished their objectives to get a good grip on the company's assets to manage their skills and assets. This is mainly due to the large diversity of potential sharing barriers, which are mainly concentrated on organisational (De Long & Fahey, 2000), and national culture (Ford & Chan, 2003).

To measure the performance, goals, and strategies of sharing knowledge is difficult and it also differs between companies (Argote & Ingram, 2000). The differences can be due

to: Individual people when they have a lack of interpersonal skills, the structure of the company, the processes, and systems in the organisation, thinking of the hierarchical structure, and the technology needed to know whether there is a shortage of appropriate software tools (Sveiby, 1997).

Dixon (2000) emphasised that the use of sharing appropriate knowledge in the rightful way for the organisation is depending on the type of knowledge, the routine, and the frequency of the sharing process within the company and the one who receives the knowledge, in this case from the calculation department to the execution department. Moreover, she identified five different ways to share knowledge effectively, these ways are built upon Spender's (Spender, 1996) knowledge types.

Type of transfer	Explanation
Serial Transfer	Where tacit or explicit team knowledge is shared within the team to a different setting at a later time
Near Transfer	Replication of explicit team knowledge in other teams undertaking similar tasks
Far Transfer	The replication of tacit team knowledge in other teams doing similar tasks
Organisational know-how	Needed to complete a strategic task that occurs infrequently within the organisation
Expert Transfer	A team requires and seeks explicit expertise from others in the organisation to accomplish a task

Table 1 Knowledge Transfer Mechanisms (Dixon, 2000)

Barriers usually rely on three different sharing barriers aspects, the individual level, based on the employees and managers within the company. The organisational level is based on the infrastructure and the physical environment such as the hierarchy. The technological level, such as not being willing to use different sorts of applications which helps communication levels from the intranet. The technological level is not used in this research,

because of the lack of technological applications and the use of communication between them in the organisational level, there is an intranet, but this is in maintenance to sort out some bugs and is not used well since two years, this will be eliminated from the research from the case company. To see if the barriers rely on an organisational level or the individual level it is important to see what barriers create the problems within the organisation. On the individual level, it can be distributed over seventeen different barriers, while the organisational level can be distributed over fourteen levels (see Table 2).

Individual Level	Organisational Level
Lack of time in sharing knowledge, identifying colleagues who require information	Assimilation of sharing initiatives and knowledge management strategy into the firm's strategic approach is lacking
The suspicion that sharing knowledge may imperil or curtail the job security of people	Missing leadership skills and direction of managerial decisions, lack of knowing the benefits and values of knowledge sharing practices
Not knowing the value of the information you possess to share with others	No space or time to share, give feedback or generate knowledge
Dominance in sharing explicit over implicit knowledge, such as know-how and experience that requires hands-on learning, dialogue, observation, and interactive problem solutions	There is missing recognition for sharing the knowledge which demotivates people to share knowledge with colleagues
Using, formal power, position-based status, and strong hierarchy (pull rank)	Lack of corporate culture as it is does not administer enough support for knowledge sharing
Not learning from past mistakes, evaluation, feedback, communication, and tolerance that would boost individual and company level learning	Keeping knowledge of highly skilled personnel is not a high priority from the company
Differences in experience levels	Lack of right infrastructure to support sharing practices
No contact or lack of time between recipients and knowledge sources	Shortage of company resources that would give the right sharing possibilities

Weak written/verbal interpersonal and communication skills	In the case of external competitiveness within a business, units are high, for example when something is not invented here
Difference in age	The way of communicating within the firm is restricted into certain directions, mostly top-down
Difference in gender	The layout of working areas hamper effective sharing practices
Social skills or networks are lacking	Internally between departments or employees, there is competitiveness, and this can be high
Different levels of education	Hierarchical architecture slows down the sharing practices within the company
Taking responsibility for intellectual property, because being afraid of not getting the recognition or accreditation from colleagues and managers	The size of departments is not small enough to make it manageable to transfer or share knowledge between departments
Not trusting people because of the possibility they exploit knowledge or take the credit for themselves when they are not accountable	
Not trusting the reliability and credibility because not knowing if the source is right	
The distinction in the ethnic background or national culture. Part of this is values and beliefs	

Table 2: Based on the Individual and Organisational Barriers of (Riege, 2005)

What is used as an individual or organisational barrier within the company needs to be later identified by the company itself, there can be made organisational level decisions to clarify or adjust the company's structure to fit new ways of sharing knowledge effectively without these barriers. To look into this, it is an easy way of finding the problems within the organisation and not only use these methods for these two different departments, but also for the other departments who are closely connected and have problems with sharing knowledge.

2.3 Eliminating the barriers.

To reach its full potential, a company needs to pay attention to a large number of potential barriers to sharing knowledge. The list of barriers mentioned above is a more structured starting point to find out where the barriers lay within the company. Still, with all these barriers, there is little guidance for managers on how to overcome these barriers, if these exist within the company.

To achieve continuous and effective growth for the company it is important to make knowledge-sharing practices an essential part of the day-to-day work. This will not immediately say that the problems will be solved if it is communicated within the firm, but it certainly helps. The strategies and successful goals of sharing must centre around a culture that embraces knowledge sharing. Culture is important for the organisation because it prevents or facilitates the implementation of innovation (Szczepańska-Woszczyzna, 2014). Whereas in this case, it is important for a smooth knowledge transfer within the organisation (Al-Alawi, Al-Marzooqi, & Mohammed, 2007). This depends on three main factors according to (Riege, 2005).

At first, the stimulation of individual employees as well as motivation and encouragement to capture, transfer and apply the existing knowledge, especially tacit knowledge for the employees gives an incentive from manager to employee to create a sharing knowledge culture which is valuable for the case company as well. Secondly, an open and flat structure of the organisation that is facilitating transparent knowledge flows. A continuous learning organisational flow with clear communication of company goals, a strategy of sharing knowledge practices that benefits the organisation. Leaders who give a clear direction and extensive feedback. And at last it is important to have a modern technology that provides an integrating mechanism and system which supports a suitable sharing platform to those who need internal and external information from different sources.

In short, for individuals or organisations knowledge sharing has no real value unless the one who receives the information receives, accepts, and also applies it to the job needed. It is hard for companies to find the right way of communicating and sharing knowledge, because there is no real structure to a knowledge management strategy that works best for every company. Every company differs from each other and it is hard to make a perfect fit for the company to make success (Håkansson & Ford, 2002). To make a good sharing knowledge network it is the key and art to build upon the already existing communication network within the company, when in a working sharing knowledge network, it is important to give the company the full potential it can receive. To do this it is first important to see where the

barriers are laying and to see the gap between a working and lacking knowledge sharing system.

2.4 Effectively sharing knowledge

To retrieve information from the different organisations, some key components were fit together to get a company that cherishes knowledge sharing (H. A. Smith & McKeen, 2003). When sharing knowledge, it is important to do this efficiently, for the best possible way to make a competitive advantage relative to other companies (Tallman, Jenkins, Henry, & Pinch, 2004).

At first, people see knowledge management as a time-consuming occupation, not seeing the benefits impacts the quality of decisions and performance (Connelly, Ford, Turel, Gallupe, & Zweig, 2014). The organisation needs to appeal to employees that it truly impacts the company if sharing knowledge is done in the right way so that people make time for it and it fits within the company his guidelines (Hansen, 1999).

Secondly, it is important to let people tell each other that it benefits the company to share knowledge so that other employees will take this as an example and will get encouraged to share knowledge (Lin & Lee, 2006). It will add value towards the habit of sharing knowledge for employees. It will give an increase in the perceived value of the individual his knowledge itself (Chen, Nunes, Ragsdell, & An, 2018). When having employees that understand the added value of knowledge sharing, it will become a habit to share knowledge more often (T. M. Jones, Harrison, & Felps, 2018).

Thirdly, Smith and Mckeen (2013) do say that using statistics to show to employees, helps motivate people to communicate and share more knowledge often, it also shows that management thinks it is important to share information because of the citing of this particular form of knowledge. With evidence that sharing knowledge will help the company in gaining a competitive advantage over other companies, employees are more likely to share knowledge with each other (Phong, Hui, & Son, 2018).

As fourth, it is good to get the right value proposition. Understanding and articulating the ways that knowledge-sharing is associated with the value is critical for the company to make an impact on the employees. It is a motivator for the whole organisation. If a company shares efforts that are focused on one particular part of the organisation, it is best to do this in a focused and pragmatic way to start stimulating knowledge-sharing. Giving all information about the way a company moves to will give employees a clear view and feeling of transparency (Aboelimged, 2018).

At last, it is important to focus as an organisation to take steps slowly, a firm needs to see when one step is implemented well within the company and employees see the possibilities and advantages of it. After that, a company can move on to the next step to see change and get a company that takes profit from sharing knowledge (Swart & Kinnie, 2003).

If the organisation gets a setback in implementing the knowledge-sharing tactic, it is important to react as a management team to see where it goes wrong and get the whole organisation back on track (H. A. Smith & McKeen, 2003). Sharing knowledge is critical for the company to get ahead of the competition, the literature reveals which mechanisms are best to use, which influence the effectiveness of knowledge sharing behaviour (N. B. Jones & Borgman, 2007).

Mostly used mechanisms for knowledge sharing are brainstorming, teamwork, storytelling, calling, training, informal chatting, web-meetings, email, meetings, and knowledge sharing boards (J. C. Huang & Newell, 2003). In a study with the comparison between different knowledge sharing mechanisms (Newell, Bresnen, Edelman, Scarbrough, & Swan, 2006), it is concluded that informal ways of knowledge sharing in project teams are a way more effective solution such as face-to-face contact than technology-based mechanisms, such as email.

2.5. Knowledge sharing in different complex firms.

Fieldwork on the socially situated way of sharing knowledge has led to a recognition that sharing knowledge is not only communicating but a complex process that goes beyond the mere transfer of knowledge (Boland Jr & Tenkasi, 1995). Companies that are well known for their knowledge intensity, gain a competitive advantage through their unique trading sets, where you need to think of human and social capital (Alvesson, 2001). Human capital within a company is called the explicit, and tacit knowledge that is brought in by their knowledge workers, while on the other half the social capital does refer to the embedded knowledge that lies within the organisational relationships (Dahiyat, Khasawneh, Bontis, & Al-Dahiyat, 2021). Sharing knowledge between clients, employees, and management becomes critical for a company to be knowledge-intensive (Alvesson, 2004).

2.5.1. Benefits of sharing knowledge

To look at the benefits of knowledge sharing within the business company it is important to look at the firm itself, to see what needs to be done. It is necessary to look at companies that are knowledge-intensive and see what drives them to share knowledge and what advantages it has (Starbuck, 1992). Looking at the employees and the definition of what

the processes of managing the human resource knowledge in organisations can be: 'The means by which value is added to raw knowledge (inputs) in order to create processed knowledge (outputs) i.e. adding value for their clients' (S. S. Soliman, 1999). Of course, there are different sorts of firms but in general, the basic principles for an organisation to manage knowledge, are, according to Soliman, to create, capture, organise, get access to knowledge, and as last to use the knowledge within the company to benefit the firm positively. By sharing these types of knowledge within the company, it will contemplate towards a bigger competitive advantage for the company (S. S. Soliman, 1999).

These five processes cover the human resources functions and are usually the main 'keys' used to obtain 'employees' knowledge (see figure 1). Implementing a knowledge structure within the company needs to be based around these principles. For a company, it is fundamental to ensure that the firm has a good strategy to implement the knowledge management strategy.

Guidelines for such a strategy are discussed in the follow-up (figure 1).

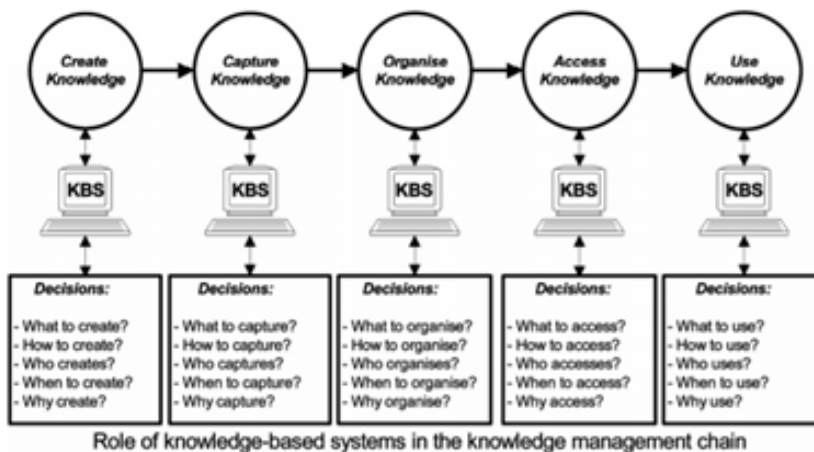


Figure 1. Role of knowledge-based systems in the knowledge management chain.

2.5.2. Aligning knowledge management with the business directions of the company.

To align knowledge management with the company's strategy it is important for the firm to see what is necessary and what knowledge needs to be transferred within the firm and to the client (Hansen, 1999). The best way to decide what is best for the company is to know what the market needs, what the profitable areas are, and where you need to put the focus on the sharing knowledge, and if the organisation uses one-off solutions for different approaches or uses the same solution repeatedly. For the repeated solution it is important to develop a good strategy to evolve this between departments of the organisation. When using one-off projects it is important to focus on tacit knowledge, it is good to hire people or use the knowledge between different departments.

Many of the benefits of knowledge management are imponderable and hard to appraise (Clark & Soliman, 1999). A company needs to conduct a full-scale business analysis to what suits their business the most for a knowledge management strategy (Sbarcea, 1998)

2.5.3. Choosing the right knowledge management program

When developing a knowledge management program it is important to consider three things to see what the market wants (Hansen, 1999). Looking at the market and see what it truly needs. What are the driving forces of the market? How can and will an enterprise fit into the market? Why this is important can be found out due to more insight knowledge of the case company. Knowledge strategies need to be aligned with tacit and explicit knowledge management and should always include strategies to improve knowledge sharing (Anand, Ward, & Tatikonda, 2010).

Three of the strategies to encourage knowledge-sharing are the scaring of employees, because giving them the idea that it is crucial for the company is key for success. Secondly, encouraging their ego by making it competitive and recognising the contribution from one another. At last but not the least strategy is to pay employees more for knowledge-sharing. This will give the employees an even bigger incentive to share knowledge.

2.5.4. Implement a know-how strategy

Based on different companies and studies (Brown & Coopers, 1999), to control and strengthen the know-how experience and the expertise of the employees within the firm, companies should implement the following seven-step strategy to be effective as possible. Become a knowledge-focused business, and focus only on what the business needs. In this order, it is important to secondly show important knowledge to the management and other employees. This knowledge should then be treated with awareness and the ideas of the customer should be taken off carefully. In this way, you also create awareness with the employees, because you make things important for the client which results in importance for the employees (Nätti & Ojasalo, 2008).

The concept of knowledge is mainly important because everyone is connected with the knowledge and it brings importance to the project from the client. Becoming a knowledge seeker and not only taking information, but also finding information as well as sharing information is of huge impact for a knowledge-sharing culture. The importance will only be seen by then, this is a core value for the company. As second last, measuring the results of the knowledge management program and showing what you can do with this information is of

importance for the continuation of knowledge sharing. Lastly, rewarding the employees for sharing their knowledge and intelligence (Bratianu & Orzea, 2010).

This list can also be used to ensure the company is covering all key elements of the knowledge management program. HRM has a big role in this, they are central for the success of this strategy to look out for the employees (Tan & Nasurdin, 2011).

2.5.5. Building a supportive environment for the knowledge management strategy

Knowledge has become an impalpable asset that promotes sustainable development and continuous growth, innovation, and competitive advantage in different organisations (Liu, Lu, & Wang, 2020). For Human Resource Management different supportive tasks need to be fulfilled to support knowledge management within the firm (F. Soliman & Spooner, 2000).

At first, it is important to have gatherings or social meetings from staff to get up to date with the knowledge management activities. This way you can get a weekly update of the main findings last week or the current week. The project will then be clear for every employee who is working on it. It is important to encourage co-workers to meet informally in everyone's office to share knowledge, there must be no barriers to meeting each other. This gives an incentive to share knowledge for everyone (Wolfe & Loraas, 2008). One of the most important ones is trust within the firm, employees need to trust each other or believe in the capabilities of others to improve the chance of knowledge sharing. Overcoming the differences between culture or educational level, the more everyone understands each other the more the company will trade knowledge and make it easier to collaborate (Serna, 2012).

Timing of knowledge sharing is key to success. As HRM it is possible to make a schedule for departments or employees when tasks are fulfilled and the exchange of knowledge needs to happen. Also, mistakes can be made by everyone the company needs to be open and honest when there are made mistakes that encourage people to share knowledge no matter the cost. At last, it is of much influence that senior management needs to be involved, it provides additional motivation for employees to share knowledge and it can lead to an increase in the success of the knowledge management program.

2.5.6. The use of technologies to improve knowledge management

Internet, mobile phones, email, and other technologies help to make it easier of communicating. It does not always have advantages. After all, it requires an active oversight by the supervisors that these kinds of communicating sources will not be misused, because people get easily distracted (Arkorful & Abaidoo, 2015). Arkorful says that when companies get a virtual system for communicating knowledge it is crucial to maintain five points.

At first, the authoring and the representation, the orientation of the content which is communicated, and that the knowledge is truly helpful. Secondly the role of moderation and facilitation. Does everyone truly understand how these systems work? At third, Support the strategies that people adapt to the technologies and make it easier for themselves. Fourth, it is important for the people to self-evaluate with HRM to track progress and if it truly connects with the company's strategy. At last, does the company adapt to the technology-changing roles, do the employees grow with the technology that everyone will keep up with.

A company needs to find out which is best for the firm itself. Face-to-face communication or technology-based communication needs to be identified and tested (Yates & Paquette, 2011).

2.5.7. Construct knowledge management control leadership.

The company will decide if a leadership role needs to be implemented, will there be one accountable person or will a whole team have the leadership on them. If a company chooses the leadership role for one person the person must have communication skills, a passionate leadership style with a vision that encourages employees, business sharpness, a strategic method of thinking and needs to handle setbacks (Sbarcea, 1998). While it is very useful to have one secure point to lead the knowledge management strategy, when knowledge management is part of the culture of the company, the strategy needs to be maintained by the HRM department. Another idea is to give a role of leadership towards the employees which is about social empowerment and the feeling of employees that they feel appreciated and in control (Spreitzer, 2008).

2.6 Sharing knowledge framework

Knowledge sharing is an important process while creating knowledge. It creates value and promotes innovation within a company, but also by creating the knowledge sharing culture there can be certain problems, they can be approached as an individual, organisational, or team-based level (Sánchez, Sánchez, Collado-Ruiz, & Cebrián-Tarrasón, 2013). By explaining this by a framework core process, we describe five different stages, which constitute an approximate model to standardise different processes to share and create knowledge within the firm (Voelpel, Dous, & Davenport, 2005).

At first, establishing a cycle for creating values for a corporation. To this date, the creation of knowledge and the sharing of knowledge have been seen as two different parts. The missing alignment of the sharing and creating stage follows an understanding of integrating these two stages. These stages are the most important parts to create value,

develop new knowledge, and establish the right way to share and create knowledge. These stages help to develop ideas, which can lead to higher productivity, and also makes it important to develop these stages into alignment.

Secondly, the identification of competencies that need to be changed or optimised at the team, organisational and individual level. Providing a collaborative working environment, where the knowledge is freely shared and created is the aim of this stage. At this stage, it is important to get an insight into what should be changed in the first place. Once identified it is important to boost these, by using different learning methods. Such as workshops. Starting at the individual level, working slowly towards the organisational level. Understanding as an individual about the organisational standards is acquired to upgrade towards your knowledge as well towards the organisational level (Chang, 2015). Having the individual knowledge on point, you can work as an organisation towards a higher point of similar understanding and a knowledge sharing culture (Bounfour, 2003).

2.6.1. Tacit knowledge.

Thirdly, Identifying the tacit knowledge that people share and bear with other members is the goal of this stage. Different people in different projects and stages within the company develop personal skills. They have been acquired by years of experience and that perhaps only each individual on their own will understand (Herbig, Büssing, & Ewert, 2001). The personal assessment is necessary to identify each negative and positive skill from each individual to boost and transfer the positive skills to the rest of the team. From the negative skills that need to be learned. Tacit knowledge does not depend on attention or the awareness of studying (Reber, 1989). At fourth, Analysing the tacit knowledge. The aim of this stage is the understanding of how the person was able to develop his or her skills. Aiming at clarifying the contribution of tacit knowledge towards the expertise of the employees and the managers in the domain of sharing knowledge (Herbig et al., 2001).

Tacit knowledge is acquired implicitly when working and is closely related to work experience and finishing working tasks (Patterson, Pierce, Bell, & Klein, 2010). Tacit knowledge also has a complex structure and contains often ignorant, sometimes even wrong theories that need to be identified or changed within the systems of the mind (Trafimow & Fishbein, 1994).

2.6.2. Knowledge creation.

At last, the translation of tacit knowledge towards a more practical view of understanding is called encoding, which also facilitates other knowledge management

processes (Sánchez et al., 2013). This part is a defined structure of how the information can be transferred to other members and employees of the firm. Creating space to allow people to get the advantage of this knowledge is also part of this stage and is important to transmit implicit knowledge. It is important to filter the knowledge that is important for the company so that there will not be information that is not adequate for the firm. To create this, it is necessary to have a deep knowledge of the company, its processes, and its employees.

After these stages, it is important to measure the productivity and the effect of the chosen tactics and protocols according to the framework. When validated, the knowledge will go through the knowledge management stage, in which the knowledge is organised. To achieve the goals it is also important to train with the employees to reach their maximum potential (Sánchez et al., 2013)

2.7 Trust and sharing knowledge in SME's

Trust is the confidence in the integrity or honesty of a person or thing (McKnight & Chervany, 2000). Trust is important in the sharing of knowledge and the idea that a person will benefit or use this knowledge in the best way possible for the company (Tyler, 2003).

Qualitative work relationships foster the trust of employees and their commitment towards the company, which therefore develops the willingness to share and create knowledge (Thompson & Heron, 2006). To develop an organisational culture that is based on trust between employees it is important to promote knowledge sharing (J. Wang, Gwebu, Shanker, & Troutt, 2009). High levels of trust have a positive effect on the flow of knowledge between individuals and from these individuals to the organisation's projects and their end product (De Long & Fahey, 2000). Employees who trust each other or who have faith in one another their capabilities share knowledge more easily with their peers or other co-workers (Ferres, Connell, & Travaglione, 2004). When having a lack of trust within an organisation it is important to try to restore this trust. This can be considered as a failure of corporate governance within the organisation (Child & Rodrigues, 2004).

To restore this trust there is a need for transparency for all employees and the option to be more committed to the course of the organisation. This will lead towards a better connection to the organisation and its ideas. There is also evidence of competitive advantage if the gaining of support from staff towards the own company increases (Child & McGrath, 2001). Secondly, managers need to stand up for their rules and need to control the behaviour of the employees. A feeling of control by managers towards employees leads to more

commitment towards the organisation because managers check the actions of their employees (Q. Huang, Davison, & Gu, 2011).

2.8 Guidance theory by managers

For a good guidance strategy, managers need to encourage and stimulate knowledge-sharing within the company (Lin & Lee, 2004). To truly live up to the expectations needed for a good strategy some points are important which are further explained (Michailova & Husted, 2003). Relationships must be based on trust, persons do not share everything when employees do not completely trust each other. This is why knowledge transmission is key to the organisation. Managers need to stimulate trust to create situations where trust is developed deep within the company and people do not reject knowledge from others or do not pass along information (Le & Lei, 2018).

It is also important to give feedback to employees, to see the essence of knowledge sharing, it is crucial to motivate people for sharing information within the organisation (Peariasamy & Mansor, 2008). There are three dimensions for managerial actions to motivate knowledge sharing. At first, managers are a good example by sharing their knowledge with everyone. Secondly, positivity and telling success stories can make employees aware of the relevance of knowledge-sharing that it is vital. At last, transparency and the communication of clear goals within the firm creates a high degree of transparency from bottom to top-level and constructs the expectations for a vital organisation with knowledge management (Dixon, 2000).

Giving clear instructions on what to share within different departments is important, the explanation and guidelines should be clear about what is necessary to share. Exploit the advantage of strong group affiliations within the organisation, assign different employees from various functions to work on joint projects. Make it clear that it is a criterium to share knowledge from different departments to each other to be most efficient. Managerial actions towards employees for not sharing knowledge should be very clear, lacking initiative or hiding mistakes should be punished, due to correction in public and exposure for other employees (Michailova & Husted, 2003). Furthermore, according to Michailova (2013), being aware as a manager, that forcing a company into sharing knowledge is a high risk. It can backfire if it is not applied in a consequent and patient manner.

A sharing knowledge environment should be built on a trust-based climate with transparency and consistency. Manager actions should be consistent, if not handled consistently, it would lead to confusion by other employees and invalidate the ambition to

activate mistakes in the creation process of a sharing system. The overall aim of the company should be to slowly initiate the process of knowledge-sharing (Nonaka & Takeuchi, 1995). As soon as the barriers of sharing knowledge are taken or broken down throughout the firm, it is possible to apply some more advanced instruments and efficient knowledge-sharing can be achieved (O'dell & Grayson, 1998).

2.9 Creating a knowledge-sharing culture

To create a knowledge-sharing culture, everyone within a company must agree (or if not), understand that sharing knowledge benefits the company (Appelbaum, Habashy, Malo, & Shafiq, 2012). Culture is important within a company, because it can change people their behaviour and it is very hard to change (Kotter, 2012). As it is seen in Figure 2, it is clear that culture influences the activities in all aspects of the company.

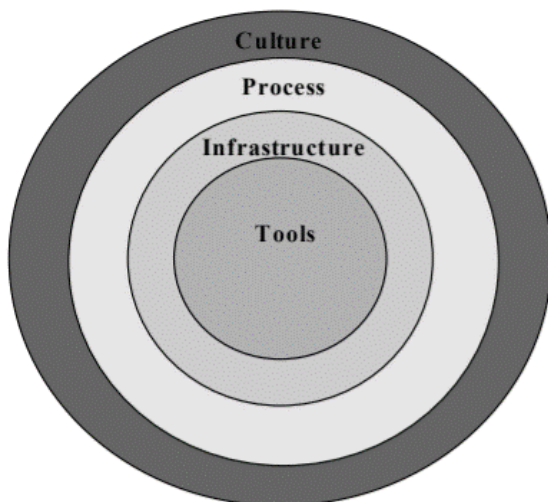


Figure 2. Culture influences activities in all aspects of the company or organisation. (Kotter, 2012)

All cultures within the company tend to vary along different dimensions, the sociable and solidarity side. At first, the sociable side has to do with the non-instrumental and emotional relations within an organisation. In short, the sociability side promotes the sharing of information and advances teamwork, it also creates an openness to new ideas. On the second hand, the solidarity part takes the degree to how many people share goals and tasks. Solidarity creates a form of trust within the team and the company, people respond in a swifter way as well that it generates a strategic focus. These two dimensions capture, most of what we know about the culture within the organisation (Goffee & Jones, 1996).

Everyone wants to let the work they do, be as fast and effective as possible. As seen later on (see figure 3), an organisation can be categorised into four different types. Each category has different strengths and weaknesses (Goffee & Jones, 1996)

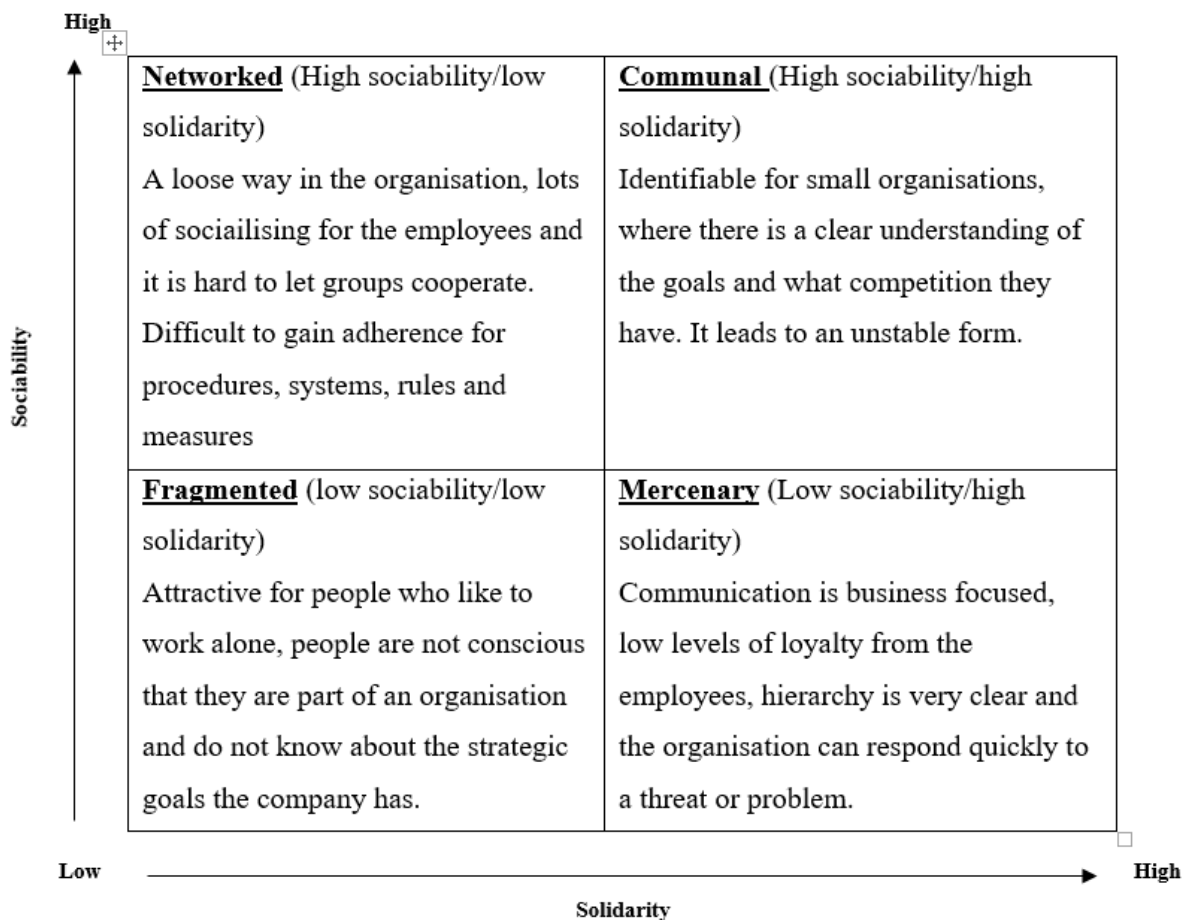


Figure 3. The four basic types of Organisation Culture

As explained in figure 3, the different categories have different aspects for different sorts of companies. With this research, the aim is to provide a better understanding within the sharing knowledge research fields and then in particular within the knowledge sharing between small and medium-sized enterprises with different departments for a project. This research is built upon the extended and existing data from previous internal observations (Wilmer, 2019), and the problem the organisation has with the transfer of knowledge between departments. This research aims to get a better understanding of how a small and medium-sized enterprise can transfer knowledge between departments in the most efficient way.

2.10 Case company

Loohuis is founded in 1953 by Bernard Loohuis as an electro-technical company in Almelo. In 1968 the gas bubble at Slochteren opened up new chances for the company. Central heating courses in installation technology were completed by the employees and new

employees were hired, at this point, this was greatly appreciated by the construction industry because of the lack of knowledge and people in this area of work. As the company grew everything was managed by Loohuis Installation group. The sons and son-in-law of Bernard Loohuis became directors of the operating companies after having received training and first worked in the company for some years. Then Bernard Loohuis retired. In 2007 there was made a division between the installation companies and the telecommunication and security. At this moment in 2020 Loohuis is a solid family business with 480 full-time employees and 10 different establishments in Twente. Loohuis offers her clients a professional and integrated approach for design, realization, maintenance, and management of all sorts, from technical installations in homes, residential buildings, utility buildings, retail, and industry within the Netherlands and even parts of Germany.

2.10.1 Processes Case Company

During the period of 2018-2019, all processes from Loohuis installatietechniek were mapped, so that all processes could be identified. The company did this to get a better view of what all processes were and in what order they were executed. There were 5 different flow charts for all processes, these were divided into quotation request, design making, preparation, execution process, and delivery to the customer (Wilmer, 2019).

These 5 flow charts (See Appendix A1-5), give a good understandable idea of how processes go within Loohuis. For all of these flow charts, the main objectives were put into boxes. All these boxes were approached separately, and the outcome of this approach for the boxes were put into schemes of what lacks in these objectives. The shortcomings of these objectives were based upon the interviews Rob Wilmer took with the different employees from different departments within the company. Based upon the knowledge of the employees there are made statements per box within every flowchart, what can be improved in the company or what is missing should be there. These statements are then furthermore divided into the retail department and the utility department of the company.

2.10.2 Case company problem definition

One of these problems is from the department Calculation towards Execution (See Appendix B). The knowledge transfer process between the calculation department and execution department (see 2nd-row Appendix B) is very limited. Even for the relatively simple case of transferring knowledge from one unit to another within the same firm, several factors may affect the effectiveness and the outcome of transfer (Szulanski, 1996). There must be a knowledge transmission process from the first department to the other, that information is

transferred in the best possible and most efficient way. But in practice, this is not going well in any way possible. There is not a transmission process at all within the company for these both departments. They transfer their knowledge and calculations for the project, just by putting the paperwork at the work desk from the other department without sharing any knowledge of why some calculations are made different than a similar project from earlier. Both departments told in earlier interviews (See Appendix C1-2), and based on what Rob Wilmer his portfolio showed, that there were some issues, which were bottlenecks in the transmission process.

Too few employees at the department, different ways of drawings, archiving, layouts, implementing changes. The execution department does not get enough information from the calculation department to work in the best way possible. Different people give different insights, not everything is the same for every calculation. Also, the transmission process is too limited, too little time, and rushed. The transmission from department to department is too limited (see Appendix D). (Wilmer, 2019)

There is not a real manager who leads the projects and controls them if the transmission process is not going the right way.

3. Methodology

3.1 Data Collection

By filling the need of the employee by using the perceptions and understanding of knowledge sharing experiences, it leads itself to a qualitative, interpretive approach, which is primarily found through interviews as data collection (Khan, 2014). The use of qualitative research design in this research is been used to reveal potential or present problems for sharing knowledge between departments within the case company (Porter & Bhattacharya, 2005). By using the qualitative research design, the idea is to get more in depth knowledge from the employees of the case company. Trying to trace a process that links causes and outcomes of sharing knowledge barriers and whether to find the link of theoretical concepts towards the context of the company. Also, the continuous flow of information in contrast to how employees look towards sharing knowledge is a natural day-to-day work ethic. This provides and makes it suitable for studying using a qualitative methodology (Miles, Huberman, & Saldaña, 2018).

A single case study will be used for the research, in case studies, the adaptation of the research design to understand a real-life phenomenon under natural conditions that are relevant to the occurrence under investigation (Lobo, Moeyaert, Cunha, & Babik, 2017). The case company is identified with barriers as discussed in the theoretical relevance to fit within the research area of the study. Case research is well-suited to address the bigger picture for the theoretical gap and dilemmas, more often when the current literature is inadequate (Volmar & Eisenhardt, 2020)

To ensure trustworthiness, the data collection will be done within the firm, thirteen employees of the firm will be interviewed due to a semi-structured interview (see interview guide, Appendix E) from around half an hour within the span of mid-January until mid-February 2021. Using twelve employees from different departments (see Table 1), enables the development of insights within the company based on the comparison between employees (Ragin, 2014). There is chosen for a comparative method from Ragin due to the fact that it enables researchers to explore differences and similarities across all interviews that have been taken. Which also enables a better understanding of real life cases more and compare them to other literature.

Semi-structured interviews will be held, because they cause a verbal interchange where one person, most often the interviewer, tries to get information from another person by asking predetermined questions. Semi-structured interviews are a way to unfold the conversation into a conversation where there can be talked about issues that the employee thinks are important (Longhurst, 2003). Interviews will be held within different hierarchical levels, looking at the manager towards the employees who work at the lower levels of hierarchy. Knowledge is more distributed within the different hierarchical levels and will help in this way to give more insight in the answering of the research and how different people from departments look at the case. The interviews will be held with the persons responsible for the exchange of information from different departments to get the best possible results in return (see Table 3). By having different sources of information on different levels within the firm, the interviewer has different approaches to get a more extensive view of the results (Azevedo Amaral, 2020). Interviews are held in Dutch and will be translated into English.

The use of these people is established because of the ranks of the people in the company and the departments where they work for. The departments are connected and need

to transfer knowledge during a project which gives a good equal understanding of how people think of the communication process.

Function	Interviewees	Length
Teamleader Utility	Interviewee 1	30:07 minutes
Teamleader Retail	Interviewee 2	27:28 minutes
Calculator Electricity Utility	Interviewee 3	44:04 minutes
Calculator Mechanical Engineering Utility	Interviewee 4	23:32 minutes
Calculator Electricity Retail	Interviewee 5	19:47 minutes
Calculator Mechanical Engineering Retail	Interviewee 6	19:23 minutes
Project leader Utility	Interviewee 7	26:50 minutes
Project leader Retail Electricity	Interviewee 8	18:31 minutes
Project leader Retail Mechanical Engineering	Interviewee 9	19:38 minutes
Planner Utility Electricity	Interviewee 10	24:43 minutes
Planner Utility Mechanical Engineering	Interviewee 11	31:49 minutes
Process Optimiser 1	Interviewee 12	48:27 minutes
Process Optimiser 2	Interviewee 13	48:27 minutes

Table 3: Interviewees and functions Case Company

3.2 Data analysis

Data is collected by conducting in-depth interviews with combined questions about the barriers of knowledge sharing and sharing knowledge in different complex. Using multiple interviewees gives different insights for the research and a more reliable view of the situation within the case company.

To give a clear view of the interview it is separated into six parts;

1. General questions
2. Establishing cycle creating value
3. Identification of competencies
4. Identification tacit knowledge
5. Analyse tacit knowledge
6. Knowledge creation

The interview will be conducted as a retrospective interview that provides suggestions, facts about what happens within the company, and feedback. When looking at retrospectives it means taking a look back at what happens in the firm as a person and what the company can do to make it better as a whole and not just as a person (Reimer, 2004).

Data gathered by the interviews will be compared in the six different stages discussed above, the differences between the parts will be gathered between the different departments and hierarchical levels of the case company. This interview will be done face to face, due to better interaction with the interviewee and the connection between employees.

The data analysis does consist of the examination, categorizing, arranging, and combining the evidence given by the interviews (Ebneyamini & Sadeghi Moghadam, 2018). After all, data is collected and ordered, the qualitative data can be prepared for analysis, the weakly structured parts of the company, where the communication does not work fluently will be identified, just as the parts where communication goes well and does not need improvement or little improvement.

4. Findings

As stated in Appendix F, the findings table is divided into 6 parts, which are from the framework with core processes for sharing and creating knowledge (Voelpel et al., 2005). Questions, which are divided into the explanation of the core processes and the questions themselves. Furthermore, there is explained what the concepts and definitions of these questions are. There is defined literature with each core process. As second last, there is quoted the most important quotes from the interviewees, which explain the difference between the employees and their thoughts on the transfer knowledge process. Then in the last part of Appendix F, there is explained the difference between the literature/theory and the understanding of the employees. As sharing knowledge is important within a company All findings are based on the framework of Voelpel et al 2005. Divided into six parts, general questions, establish cycle creating value for the corporation, identification of competencies, identification of tacit knowledge, analyse tacit knowledge and knowledge creation.

4.1. General questions

The overall definition of sharing knowledge is understood by all the interviewees, which is good for the general understanding of the subject sharing and creating knowledge. Knowledge sharing is for all employees important and employees use this every day. As interviewee 13 explains; ‘The own knowledge you have received throughout your career, to

transfer this to your colleagues. And that is actually a continuous process of adjusting practice into knowledge related information to colleagues’

Timing of knowledge sharing is throughout the whole project as all interviewees declare, but most importantly is at the start of the installation to tell the in and outs of the project to all employees responsible for the project as told by interviewee 3, 4 and 9. Interviewee 3 says; ‘Yes, it is important to share knowledge, certain affairs needs to be pointed out at the beginning of the project. You can go left or right with the project, but if the person you need to cooperate with, is going right. You also want to go right, because otherwise the project will not go well. So at the beginning it is important to sit with the other person and ask what he thinks is the easiest, what would he do?’. Interviewee 4 sees it as; ‘That is very early, when you need to offer the installations and you will go in further consultation with the client and colleagues it needs to be aligned at the beginning. Interviewee 9 describes to when sharing knowledge is necessary; ‘At the first moment when the design is coming from the drawers and designers’.

To get all information, hopping on and off each other’s desk is a normal way of working and passing on pieces of calculations and drawings to different departments. Interviewee 11 describes this as; ‘Getting together at the beginning is important to share knowledge with the team this will have good influence at the end, because you already know the ins and outs of the project then.

Creating and sharing knowledge is due to own work processes, the information comes from different work groups as all interviewees agree except for one interviewee number 11 who thinks he does not create knowledge for others with one word; ‘No’. All other interviewees bundle their information and spread this with each other. But also Interviewee 12 sees sharing knowledge as a problem that needs to be solved, because the spreading of information is not going well. Interviewee 12 discusses this as; ‘From different workgroups we get information and we bundle this to get the most uniform and optimised solution. So yes, in that way we are creating information. But only the part of spreading this into the company has to be taken care of and solved’.

4.2. Establish cycle creating value

Created knowledge at the beginning of a project is passed on through all departments until the endproject, but this information is limited, employees need more gatherings to get complete information from third parties. People work with mapstructures where everyone can

work in, because it is on the network from the company, and people share and create knowledge for the project they work on. Communication with each other is key as all interviewees give this as an example. The mapstructure is not used well, and this is hard to use for employees, and this is also limited. Importance of sharing knowledge is limited to information which is needed for the company, no extra incentives from the employees as is told by interviewees 12 and 13. Interviewee 12 says; ‘Yourself is a piece of knowledge creation, just as the project teams’. As interviewee 13 says; ‘So maybe also looking further to see what are the alternatives for this. You need such knowledge to look further than just what they are asking. From what you get delivered from the client it is the strength to see a better way to get it more price efficient or better ways to get the most out of it. If a person is not up to date with the knowledge that is available you always walk on step back. The calculator is the brain of the company, and you want this persons on the right spot with a helicopter view over the whole project’.

The experience of the interviewees with the knowledge transfer guidelines is very limited, Interviewee 1, 2, 12 and 13 declare that they use the standard form of communication because they want a cohesive communication platform and like to see that everyone works in the same way. Interviewee 1 says; ‘Yes, by using the regular formats and lists, by also using the transfer form we use during the projects. That will make it easier during the transfer’. While interviewee 2 gives the same sort of answer; ‘I do not change the process, I am responsible for the work processes, if I do not take it seriously, how will my team take me serious if I do not follow the processes’. Interviewee 12 and 13 work together to make the processes within the company more uniform; ‘Well, we are currently busy with changing the processes. Are we making it easier for everyone? I think yes and no. I think the most is pointed to make it uniform, but this takes a lot of productivity from the employees’. Other employees are not familiar with these forms and use their own practical mind as interviewee 6 declares; ‘ I do not know what the process is from Loohuis according to transfer of knowledge’.

Appreciation from managers is lacking, and the importance of sharing knowledge is limited by the company according to interviewees 8, 9, 10 and 11. Furthermore, the interviewees declare that the appreciation is there, but that this is not always communicated. Interviewee 9 says this; ‘Not a lot, we get appreciation from mechanics, but from people higher in the hierarchy would be nice. If we hear nothing, we do a good job. Sometimes it would be good to get a pat on the shoulder. You will do some extra hard work if you get this

in my opinion'. While interviewee 8 gives a similar answer; 'You hope that this will get appreciated that you share knowledge, but this is not always here. But sometimes it is good to get this back. You always try your best to share the best with others'. While interviewee 10 and 11 see this as a normal thing within the company; 'It belongs to your job, I do not know if it needs to be appreciated' and 'Not particular, it is normal how we work. We get appreciated if the work is going well, but do not get appreciated to share or create knowledge'

As stated in the theory, appreciation is valuable to every employee and even managers. This will have a positive effect on the work ethic and declines neglective behaviour (White, 2014).

4.3. Identification of competencies

Individual knowledge is divided throughout the company, experienced personnel has enough knowledge, but this still needs to be divided throughout the younger personnel. Participants would like to see more knowledge within the company. The organisational structure is lacking, the overall view is missing, but a project is set up to get the structure more centralised. Most interviewees agree that individual knowledge level is good, but that new employees need more education to have the same level as the older and more experienced employees. According to interviewee 8; 'Individual knowledge is a broad understanding, certainly a part does have this knowledge. This has also to do with age and experience. There are enough people who have this experience. If you do not know that much it is mostly because of the young age you have and lack of experience. But overall the knowledge in the company is decent'. According to Mcdermott & O'dell (2001) and (Voelpel et al., 2005), the age gap between employees is a limitation for effective knowledge sharing.

Organisational structure is limited according to all interviewees, as interviewee 1 says; 'With the organisational structure we miss the helicopter view, but we did not know if other companies from (Case company) did the same, so we wanted to go to unanimous work processes and change the process that this is optimised'. There is also given that the company is implementing a new system which enhances a closer structure where everyone can work together; 'We are trying to make a format, and we are trying to fill this out. This will differ a lot from previous processes and it will make it easier than it is arranged right now' as interviewee 2 announces.

There is not a certain guideline for the transfer of knowledge between departments. Expectations from managers are lacking, employees do not feel the need to always perform in the eyes of an employer. As Soliman intends in his paper discussed above, it is important to

have a managerial view towards the projects and that employees need to be checked by managers to see if they do their job (S. S. Soliman, 1999). In comparison to Spreitzer who says that employees need to take manager jobs on them, which creates social empowerment (Spreitzer, 2008). Based on the interviewees, they lean towards one person who takes the lead and needs to be in charge. Interviewee 6 talks about the need of guidance; 'I want and need clear guidelines about how to transfer knowledge. I do it my way but do not hear any feedback if this is the right way'. While interviewee 7 is trying to find solutions for the guidelines of sharing knowledge; 'the structure in the company can be improved a lot better, we are growing in a steady way. We get more and more bigger projects. There has to be anticipated on. We need to have more engineers and drawers, so that you can put out more power from this side. Work planners who are lighter than the engineers, need to be better. This can be done by asking the engineers a lot which are better than them. The project leaders can then go outside and see where the things are going well and then they can go back inside to see where the improvement needs to be implemented'.

The transfer of knowledge is not clear, people talk face to face, but none or few meetings are planned. Hopping on and off each other desks is the normal way right now to transfer and share knowledge. As interviewee 13 says; 'I think you need to continuously adjust this as a team leader. Also as an employee you need to be continuously aware that you need to adapt to the company and add new knowledge to your repertoire, this will give an impulse in the transfer of knowledge' There is work to do according to interviewees 1, 4, and 12, but the company is working on this. Interviewee 1 talks about the whole knowledge sharing as; 'To make it more efficient, we need to get a base structure, that in a project map on the computer is a clear view that everyone uses it in the same way. Not as it is now where everyone is just working, but uses his own way of how to do this'. While interviewee 4 wants more understanding of meetings; 'What I am missing is that, Maybe a project is just too big to do this in one time, so that you might schedule a second session or meeting. But I think the execution department has too few information from us. Maybe even a third session is necessary. If the other departments have questions they need to bundle that and ask that during the second meeting'. Interviewee 12 misses the software use of manuals in the computer; 'They have a quality manual, but there are no process descriptions in. You still can get this knowledge by others, but it is not put in these manuals. It can be used to see how things need to be delivered to others'.

Limitation of sharing knowledge is mostly pressure, projects come and go in fast time as literally, all interviewees call this a problem, some statements, interviewee 1; 'We need

more time to do the preparations for the project'. Interviewee 5; 'Pressure is a limitation. I think we need more time for the transfer from calculation to execution' Interviewee 6 sees this the same; 'The projects are very fast planned, sometimes it is necessary to have more time'. Time to discuss the project is sometimes limited and meetings about the project are often not available. Due to the stream of available projects throughout the year, the company always keeps busy. Clear appointments during the week are missing. This limitation causes decision quality and performance according to (Connelly et al., 2014), which is stated above.

4.4. Identification of tacit knowledge

Different departments work well together, employees talk mostly face to face, and people pass by for questions for transfer of knowledge. An idea would be to be integrated within one room, so that communication can be done directly and people do not need to walk to every department or floor, says interviewee 13.

Employees ensure the right information to the right located place due to different communication methods, which are via e-mail (interviewee 5 and 10), face to face (interviewee 1, 2, 3, 4, 6, 7, 8, 9, 11). Interviewees 12 and 13 are trying to make this better and arrange a local workplace for every member of a certain project group.

Most interviewees address that they did not invent personal skills, all communication abilities are from experience and not workshops, some interviewees think it is good to do workshops for more socialisation within the company and to learn sharing knowledge skills. There is not much personal influence on the transfer of knowledge. As stated most employees use the tools the company offers, such as the map structure, but do not use personal communication skills. As Interviewee 4 clearly states that his experience leads the way; 'I work with the map structure, but I do not know anything for myself. Yes, maybe I pick up some work preparation to speed up the transfer process to other departments. That not all project information will be thrown over the fence. That is mostly experience to make it more efficient'. Just as interviewee 8; 'I do not think I really have special skills, but if I had to name something it would be experience, because I come from the work field'.

4.5. Analyse tacit knowledge

Developing skills for communication is based on previous job or experience, sometimes by the use of courses. Interviewee 1 says; 'I followed courses, workshops about leadership. Also, experience is good, and my personal character about what I think is important!' Which is in line with most other interviewees.

Guidelines for effectively sharing knowledge are based on working with a transfer form that is not well integrated. A new pattern would be good and put the new guys with the more experienced guys. Interviewee 1 discusses this as; 'I think, and I target especially about the self-learning organisation. You have formats to share knowledge. But most importantly it is important to have meetings with the new personnel to share problems and to help them further within the organisation'.

Also, Interviewees 3, 6, 7, 8, 9 and 10 state that they do not know about a certain transfer document, all of them agree that there should be more cohesive communication between departments. Interviewee 3 states; 'a certain pattern to share knowledge is important. a repeating character is important, that everyone knows what is done'. While interviewee 6 and 7, 8, 9 and 10 do not know of certain guidelines they still think a guideline will be useful, interviewee 6; 'I think this is favourable for the rest of the company' and interviewee 7; 'But I think it is useful to have a certain guideline'. While interviewee 10 gives a suggestion; 'Map structure is lacking. This needs much and much better. Also it must be easier to find everything. You need to find it very easily and needs to be put together as a whole and efficient for everyone'.

As interviewee 5 gives an improvement on the transfer document; 'We work with the transfer form, but do not really work with this how it should be. To a certain point, it is good to have guidelines. I do not think to have point-to-point structural guidelines, you also need a natural flow to communicate with each other and do not pin down to one certain way. You need to create an accessible culture to share knowledge'.

4.6. Knowledge creation

Both individual and organisational knowledge sharing are lacking. An initiative from the individual is lacking. Organisationwise: planning is lacking, more appointments with the team would have a huge impact on the outcome of the projects and costs. As interviewee 3 says: 'I think this is more organisational. People from management need to plan courses to work safely. We need to work according to the standard of VCA, which means safe work. Also, they need to be more on top of the project, so we have the feeling that we get watched. This will give more a feeling that we need to do our job in the right way'. Interviewee 11 gives the lack of sharing knowledge to the individual level; 'If something is missing, it is more individual. If you do not have the right amount of knowledge in your process it is more a problem of an individual than organisational'.

How time is created to share knowledge is most often at the start of a project and planned afterward when there are further questions or projects come in the next stage. as told by interviewees 1, 2, 4, 5, 6, 7, 8, 9, 10, 11, 12 and 13. As is said by interviewee 10; ‘Yes, this is going in the process, you will plan a meeting, you will look through the drawing. Look at the different disciplines and see if they are aligned and if there are not any problems. The knowledge from every department needs to be combined at the beginning’. There is not always time as not all groups can be present due to high pressure. Passing by is largely the norm after the first meeting. Interviewee 3 does not plan specific teammeetings as is said, interviewee 3; ‘Not specifically, sometimes when we have time, we just walk to someone and ask how they are doing their particular job. Then you can get feedback from that person and see how this is. We do not set specific times to meet, because this will not stimulate our work flow at that time’.

Personal improvements in sharing knowledge are often described as more meetings and more initiative by themselves. As a manager, you need to make it important that the employee needs to show initiative and that you will observe this. Interviewee 2; ‘I am on the core team, which is an umbrella of different working groups. One for drawing, network structure, execution and work preparation, calculation utility, calculation housing construction. So I am busy with the improvements, and I share this with the people, what we discussed with the core team. Outside the workgroups, you still need to get information from all the departments. But if we need to work out with the network drive. So you are talking with everyone and find out what needs to be improved to make everything more efficient’. As is seen here, interviewee 2 needs to get the helicopter view to see more of every project and know when to step in when something is not going the right way. Other personal improvements based on sharing knowledge within the company interviewees are talking about, taking more time for the meetings and knowledge transfer at the start of the project. Interviewee 10 says; ‘The transfer process is sometimes to briefly, there needs to be put more time in this process. The client does not give not enough time for us’. Interviewee 9 agrees with interviewee 10; ‘Hmm, I think absolutely, by the start of a project. That there needs a clear transfer from calculation to execution. It needs to be very very clear. Not fast but clear’. Some interviewees do not see any personal improvements and do not think this is necessary, interviewee 5; ‘I do not know. Not at the moment’.

5. Discussion

During this study different theories about communication and knowledge transfer have been explained and obtained from the literature. While taking this literature into the interviews, a comparison is made between the practical view of the case company and the identified theories in the literature.

5.1 Comparison of the general questions and the literature which affects a general understanding of the knowledge transfer and sharing.

General understanding

A general understanding of the definition of knowledge sharing is present at all of the employees of the company, this already has a good impact on what is expected from the employee. General knowledge as ‘timing of knowledge’ and ‘creating and sharing knowledge yourself’

Timing of knowledge sharing

As stated in the interview, the interviewees think it is important to share knowledge. The overall understanding of the when and where is not clear. Interviewees think it is important to always share knowledge and do not have a certain point of the timing of when to share knowledge. As stated in the individual level barriers earlier (McDermott & O’dell, 2001), a lack of time in sharing knowledge and the educational level is playing a role within the case company. This leads to an overall misinterpretation of the timing of knowledge sharing. (Lawson, Petersen, Cousins, & Handfield, 2009)

Creation of sharing knowledge yourself

Creating of sharing knowledge is present at the company, employees do share the knowledge of projects they need to share. Interviewee 12 and interviewee 13 interpret that the extra incentive of sharing knowledge adding a new thinking pattern to a project is missing for the employees. People are doing what needs to be done, but will give nothing more or extra. This has to do with the creating of a knowledge-sharing culture. Everyone within a company must agree (or if not), understand that sharing knowledge benefits the company (Appelbaum et al., 2012). This also has to do with hierarchical levels, from up above (managers) the need of sharing knowledge needs to be rewarded will there be an upwards level of sharing knowledge.

5.2 Establishing cycle creating value

Process of knowledge creation

Knowledge creation is present due to own tasks for the job they have. Knowledge is created at the start of a project and the knowledge which is shared is scarce. Not all

information is present during the first phase, that is why other groups have a limited supply of knowledge, which is in line with (Hansen, 1999), where is stated that employees see knowledge management as a time-consuming occupation. Employees need more gatherings to get complete information from third parties and other parties who work on the project (Al-Busaidi, Ragsdell, & Dawson, 2017). There is a lacking form of stability for meetings and sharing knowledge, everyone is hopping on and off by co-workers to get the information necessary.

Changing process of creating knowledge

Most of the employees stick to their plan of sharing knowledge due to the use of a form that is implemented by the case company. This form is not up to date, based on the interview with interviewees 12 and 13 it is clear that there will be a form that will come with an updated side. Furthermore, the need for a change in the process is highly recommended by the interviewees. Interviewee 7 uses also modern technology to improve the sharing knowledge mechanism by using action lists, this also provides smooth knowledge transfer as stated in the literature of (Al-Alawi et al., 2007). Other interviewees keep using the standard use of forms and implemented ways of the case company.

Importance of creating and sharing knowledge

As stated in the interviews, the interviewees do not see the importance of adding valuable information in their sharing knowledge. Literature is especially demanding for the sharing knowledge that it is not only communicating but a complex process that goes beyond the mere transfer of knowledge (Boland Jr & Tenkasi, 1995). Sharing knowledge will become critical for a company as the case company to have a competitive advantage and be knowledge-intensive (Aslesen & Isaksen, 2007).

Appreciation

The appreciation of employees is limited as is seen in the interviews. Still, the connection to the company is present despite the lack of appreciation. There is given some appreciation after a big project, but most of the time employees do not hear anything back. This is not in line with the literature, it is also proven that if a company does not give enough credit or any assessments to check the progress of employees the knowledge management will remain on a low level (Swan, Newell, Scarbrough, & Hislop, 1999).

5.3 Identification of competencies

The individual knowledge

Based on the interviews, the idea of individual knowledge is divided within the departments, some say they are on the right track for individual knowledge. Others say that there is a distinction of individual knowledge and that they will only go to the person with the most knowledge. There is also been said that the knowledge within the company that is available in the company comes most from the older people, just as stated in the literature of (Joe, Yoong, & Patel, 2013), where they identify that if older more experienced employees leave the company, that also the company will lack more knowledge. This is all because of the outflow of knowledge. The employees who say that there is enough individual knowledge are mostly the younger people which are interviewed. This also is confirmed with the literature of (McDermott & O'dell, 2001) where they state that the individual level is also identified with the age gap. Younger people tend more towards enough individual knowledge, because the older people know more and otherwise the older people say that there is a lack of knowledge within the company.

The organisational structure

Overall there is missing a helicopter view from the managers, which is been told by more interviewees. It is important that from the top-level, clear goals need to be identified, this will give transparency for everyone and a feeling of monitoring the employees. This needs to be done by every manager to keep control high (Dixon, 2000). Also, there is been said that the managers who identify as project leaders also have other businesses to deal with, this has a bad influence on the overall view for a project and is a missing link for employees to feel checked upon. Managers' actions should be consistent, otherwise, it would lead to confusion (Nonaka & Takeuchi, 1995). Overall employees identify satisfied with the organisational structure, but there is certainly an improvement

Knowledge transfer arranged

Also seen in the questions above, there is no clear structure in the view of the transfer of knowledge, no clear appointment in the agenda of when and where to talk about the upcoming project. Or even the project which is worked upon at that certain moment. Knowledge transfer is mostly arranged due to hopping on and off the desk of a colleague which is not bad, but also leads to distractions which are in line with the literature stated above from (Riege, 2005), where hierarchical architecture slows down the sharing practices.

Limitations sharing knowledge company

Pressure as also stated in the literature of (Riege, 2005), is that there is no space or time to share, give feedback or generate knowledge. The time to come together and talk about

the project and get the eyes in the same direction is not present during some days. Interviewees see this as a problem but do not always think this is the company's fault, even though the internal infrastructure is not complete to handle the pressure of different projects at the same time.

Sharing knowledge at beginning/middle/end?

The availability of sharing knowledge is available at every stage from beginning to end. Clear appointments are missing, which gives a dysfunctional view of what the client wants. And even what the other employees need to operate at their best during the project.

5.4 Identification tacit knowledge

Collaboration between departments

Departments work well together, when there are problems or questions, you can pass by one another, this is also in line with the literature as stated by (Newell et al., 2006). They say that it is concluded that informal ways of knowledge sharing in project teams are a way more effective solution than technology-based mechanisms, mostly known as Skype, email, or even calling. According to the interviewees, there is a lack of missing workgroups and some even suggest working together with all people of different departments in one working space to work as effectively as possible.

Placing of information

The way the interviewees surpass information to one another is by passing by mostly, as discussed in the earlier stages of the findings. Putting it on the documents map of the company is used as well for the passing on to other departments. This is also in line with the use of placement of information from mechanisms see (J. C. Huang & Newell, 2003)

Personal communication skills

Concluded from the interviews is that it is clear that some people do communicate better than it was during the start of their career at the case company. This is mostly due to experience, but also through courses. Though the case company is not profound in the training courses of knowledge management, the plan needs to be to add their intranet's capacity to improve the knowledge sharing (Stoddart, 2001). This is also stated by 3 other interviewees to improve their knowledge sharing or overall communication skills. Also, interviewees did say that they do not learn any communication skills to improve their overall knowledge-sharing experience.

Personal change of transfer knowledge

There is not much personal influence on the transfer of knowledge, people rely on the knowledge of the management or are counteractive on their knowledge engagements. Most of all managers do act by organising meetings about the project, and personal meetings about personal improvements. This is a small start of an improvement on the sharing knowledge culture. In the end, an overall understanding of the benefits of knowledge sharing for the company needs to be seen by the employees in general (Appelbaum et al., 2012).

5.5 Analyse tacit knowledge

Communication skills

Communication skills are deprived by previous work or long-based knowledge. Sometimes courses are used to improve communication skills. As stated in previous work it is important to stimulate knowledge sharing by the management team of the company. Consequently, managers should establish the ideal contextual conditions to propel and optimise the organisation's use of knowledge management practices and initiatives through the design of tools such as human resource management practices (Donate & de Pablo, 2015).

Guidelines sharing knowledge

Guidelines are not integrated for the use of sharing knowledge. The case company works with a form to communicate their knowledge transfer progresses. This form is not used by all employees and is mostly neglected by employees to use. Most interviewees think it is good to use a guideline for the company, they think this will help in a better competitive advantage, innovation, and consolidation (Snyman, 2007). This comes in line with the literature of keeping a guideline for the company. It is important to have practical guidelines for successfully measuring knowledge management maturity. If there will be a questionable improvement or even no improvement at all for the knowledge management ideas, they will say the high cost in terms of commitment and time will not value the knowledge management and all and the sharing knowledge idea will bleed out slowly (Kazimi, Dasgupta, & Natarajan, 2004).

5.6 Knowledge Creation

Managers as carriers of knowledge sharing culture

As this question is only asked the last 2 interviewees (12&13), they think it is of the essence to be on top of the knowledge-sharing culture. Managers need to make it important that the employee needs to show initiative. This is good for the overall better understanding of the whole project (De Ridder, 2004)

Creating time for sharing knowledge

Time is most often created at the start of the project. There is not always time as not all groups can be present due to high time pressure and a lot of projects at the same time. Mostly the sharing knowledge is by passing by each other. Most of the interviewees think it is good to have weekly planned meetings. In line with what (Hudcová, 2014) says about planned meetings, because they are more valuable than unplanned meetings. Also, the size of the groups have an impact on knowledge transfer, because smaller groups will absorb the knowledge better than big groups. This is because of the noise with more people.

General knowledge company

The overall judgment is that general knowledge of the whole company is important to all. Not everyone does see how the company will accomplish this to foresee general knowledge to all employees. An idea of four people is to head out a newspaper every month to see where the company is working on, and to know more about other departments.

Personally improve sharing knowledge

As a general last question is to see how the employees look towards, what they want to improve by themselves. Some say there is no need to change the sharing knowledge culture. Others say that it is important to create time to discuss the project and keep a one-week update instead of hopping on and off at the desk of other colleagues to discuss the project, this takes much more time.

6. Contribution

One of the practical contributions to this research is the number of times interviewees of the interviews think meetings are very important for the efficiency of knowledge sharing. This implies that for effective knowledge sharing, meetings should be organised at the beginning of a project and deadlines should be made for the next meeting, to keep everyone interested in the project, the importance of knowledge sharing and meetings. The case study also reveals that managers do not see the importance (yet) of knowledge sharing and have different tasks where they are involved in. To make knowledge sharing important, management should be on top of knowledge sharing.

Another practical contribution is about the individual knowledge of people, sometimes individual knowledge is limited. To gain and increase individual knowledge, the contribution of the research is to invest in these people and let them integrate with the company as fast as possible.

The theoretical contribution, contributes to our understanding of the sharing knowledge network in SME's and how they interact with each other. Based on the individual barriers, it is mainly found that problems lie within the lack of time in sharing knowledge, a difference of experience level, lack of contact at the beginning of a project, and different levels of education. When looking at the organisational barriers, it is found that sharing initiatives are lacking from up the managers level, missing leadership towards knowledge sharing, there is missing recognition for sharing knowledge which demotivates people and lack of right infrastructure.

Seeing these points, it can be said these are the main issues of SMEs, even if the research is limited within one company. Although lots of research has been done on sharing knowledge within companies, very little to none has been done between departments of SMEs and their projects. This research addresses the problems of sharing knowledge between departments and where organisations can look to improve the effectiveness of sharing.

Recommendations

Recommended for the company is to make knowledge sharing appealing from top-down to employees, often the organisation does not see the benefits knowledge sharing has. The importance of knowledge sharing for managers will give employees the feeling the management thinks knowledge sharing is important and this will often have a positive effect on the knowledge sharing culture within the company.

Management needs to tell employees about the success stories of sharing knowledge and how this positively affects the work efficiency of different departments or project groups. People will replicate this, because it works encouraging. Employees and managers who see the value of knowledge sharing will speak about it with co-workers and this encourages more employees to follow.

Measure the sharing knowledge culture. Managers need to check upon other employees to let everyone know what the company believes is important. This also helps to check where knowledge-sharing quality can improve. Checking upon employees makes sharing knowledge an important asset to everyone and will eventually help to work more efficiently and faster in the future.

The project leader or manager should plan meetings and take time to share knowledge. Taking time is most important and saves time later on in the project. The employees strive

towards meetings and are willing to take more time for these, because they feel it is necessary for a fluent follow-up towards an end product.

Implementing the knowledge-sharing culture and meetings will take a lot of effort for everyone. Big meetings need to be planned from director to manager, and from manager towards the employees that the company wants to implement a knowledge-sharing culture. The points they want to address need to be talked about and from that point on, these recommendations need to be followed up by everyone and checked upon by managers.

Limitations

Limitations for the research have been identified and three limitations had an impact on the research and its validity. At first the use of only one company to see what the limitations are. It might be possible that other companies have a different knowledge-sharing culture and have other limitations or even have a different knowledge-sharing approach. Secondly, the use of thirteen interviewees is limited because departments are small and not everyone was available. It would have been better to do more interviews to make it more reliable. Thirdly, the use of only men in the interviews is limited, because in other companies it might be possible that there are more women in the working area, and you will get a different view on how they work there.

7. Conclusion: Knowledge sharing process from calculation to execution

Looking at the findings of the interviews, departments are not particularly designed for the transfer of knowledge. As is stated in the interviews, the different departments have different working places which do not help improve the transfer of knowledge. They are not designed for communication with the whole project team. It is important to give a new overview towards sharing knowledge and a new guideline needs to be made to get all faces from the employees in the same direction.

The sharing knowledge problem lies within different areas, looking at the individual side, the difference in experience level is high. Not all employees have the right knowledge level and this needs to be upgraded. This can be done by using experienced people, to educate the less experienced people. Also, the difference in education level is a problem.

Furthermore, the organisational level is lacking more. The sharing initiatives from up hierarchically are minimal and there is no support from the top-level to share and transfer knowledge. Even the direction of leadership skills are not equal to what employees expect.

Employees would like to have a central talking point for leadership who is there for them and a leader who does not have other tasks. There is a lack of time to share, give feedback or generate knowledge of the project to the departments, this leads to a lack of knowledge for the whole project. Lack of time for communicating and planning meetings, there is high pressure for employees. This leads to a lack of communication skills and a lack of time if you look at how many employees are passing by each other to check up on each other, due to lack of information.

The most effective way to share knowledge is depending on the time managers want to spend towards making a knowledge-sharing culture. If managers want to have a knowledge management culture, this will take time to adapt and employees need to be checked up upon. This will give a good incentive for employees to work out the sharing knowledge problem and will inhabit this in their daily working routine. Meetings are extremely important as is seen in the findings of the interviews and are largely encouraged by the employees. Working together in one place with the different departments makes it easier to communicate and align the project they are working on.

While giving insights into the scientific gap, this research provides more insight into communicating processes within SME's and their barriers. This will lead to a better overall view of the current state and how to make knowledge management within these organisations more efficient.

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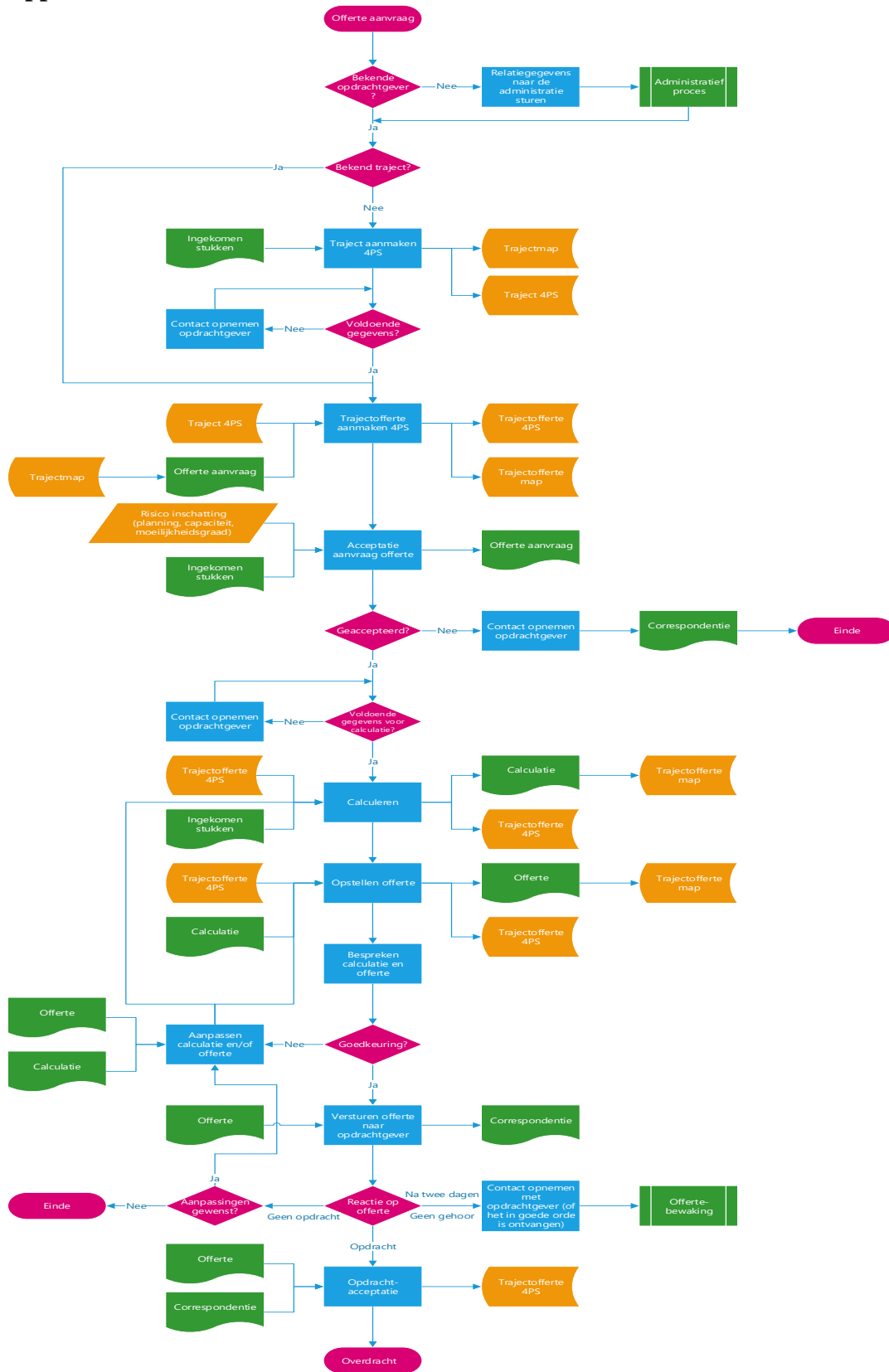
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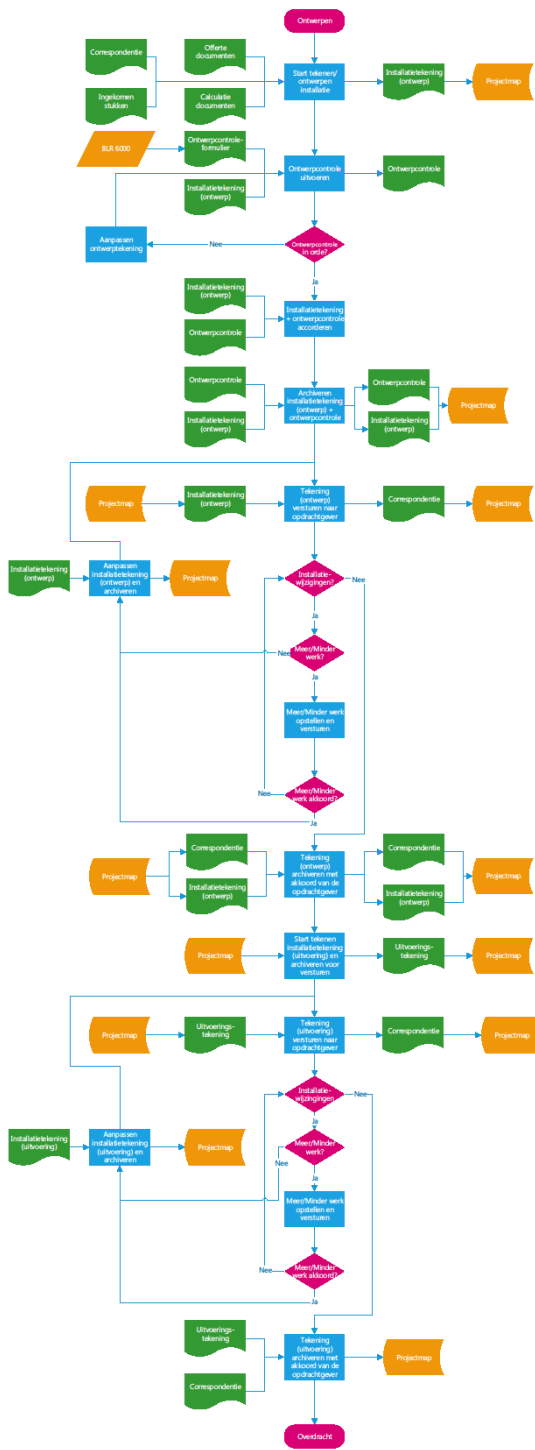
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Appendix

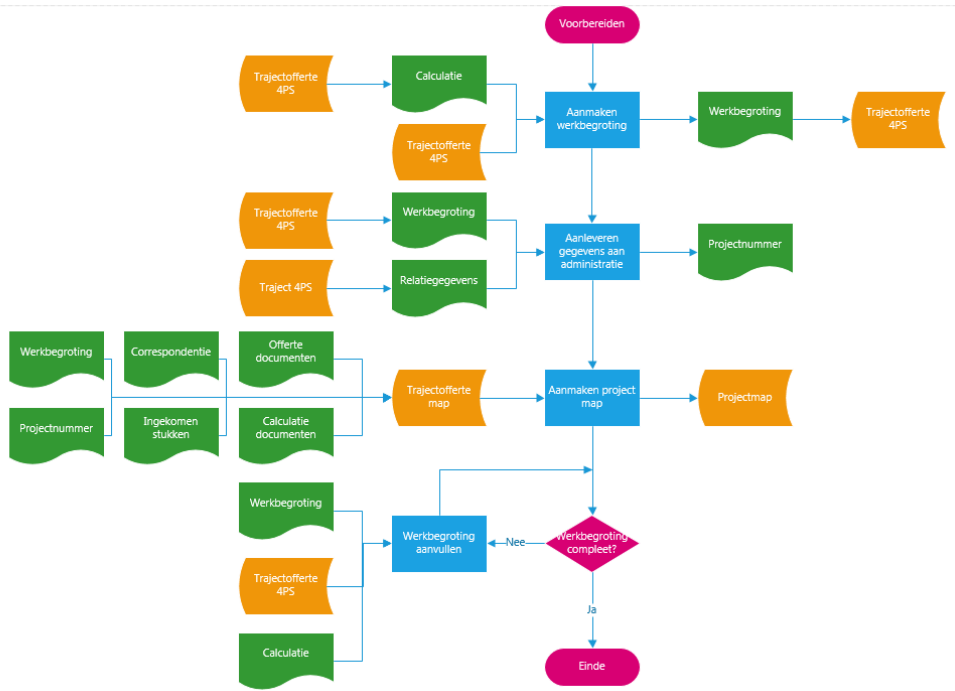
Appendix A



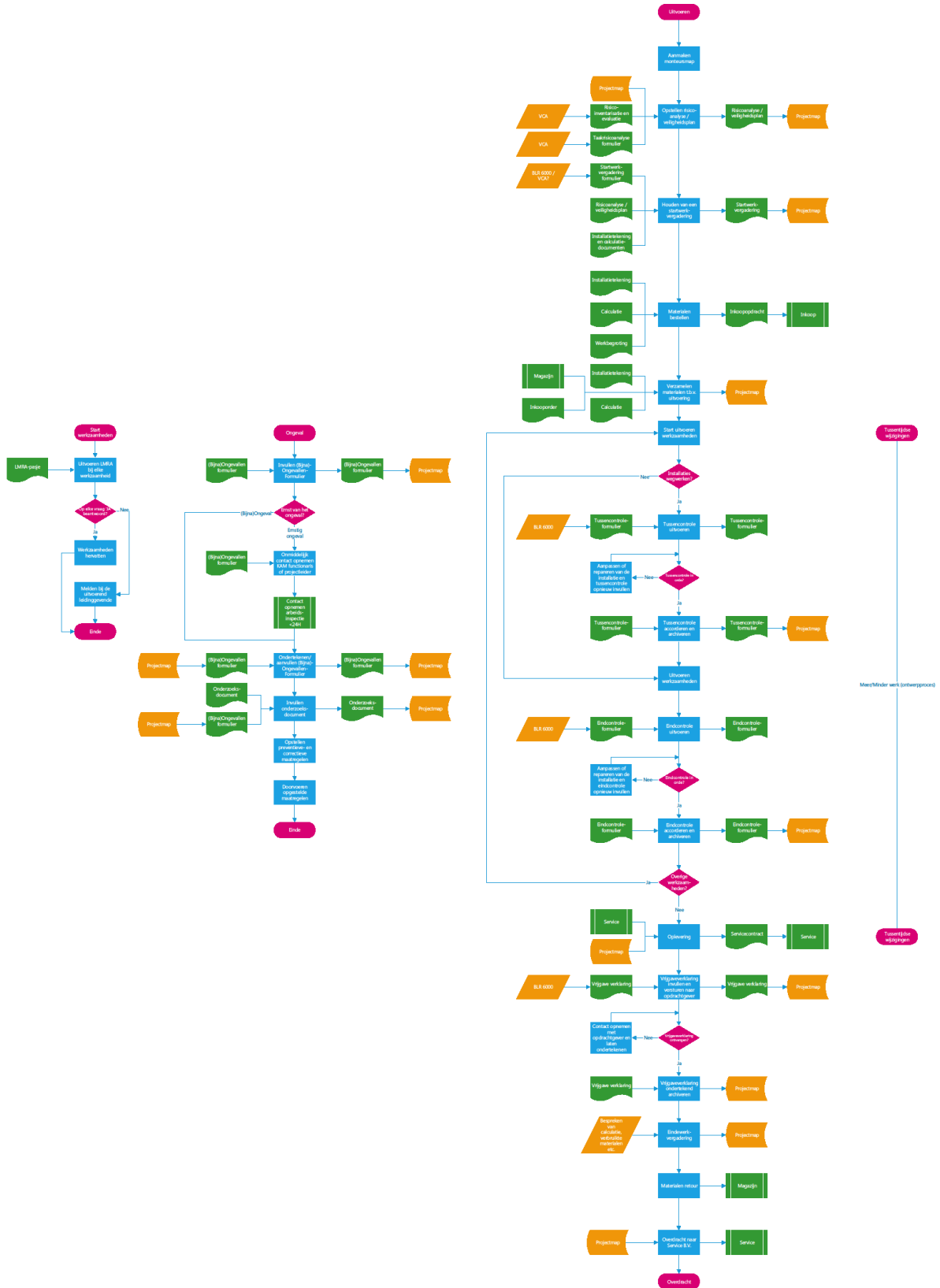
A.1 Quotation Request



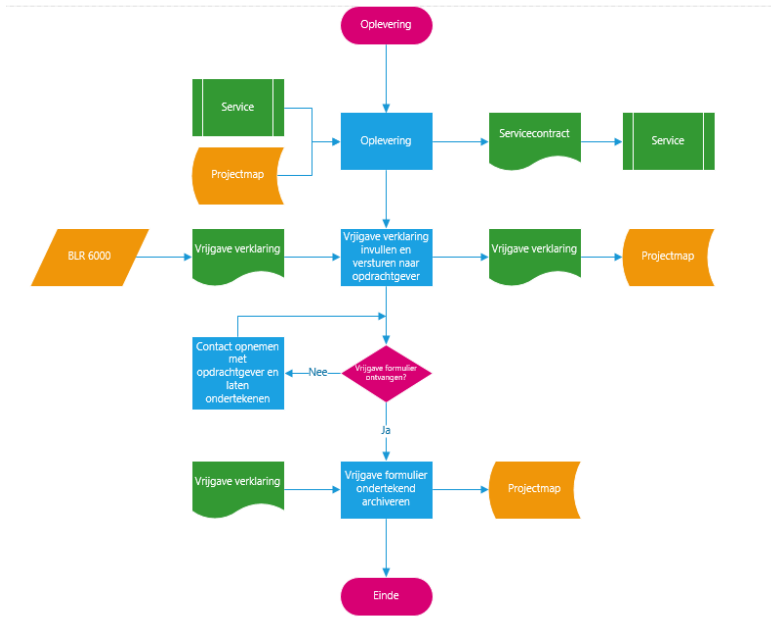
A.2 Design



A.3 Preparation



A.4 Execution



A.5 Delivery to customer

Appendix B



Appendix C1

Geïnterviewde: Remco Lennips

Functie: Calculator Utiliteit Elektra

Datum: 2-12-2019

Hoe ga je precies te werk? Wat is het proces?

Eerst krijgen wij een aanvraag vanuit het bedrijf die binnenkomt bij de teamleider. De teamleider stuurt deze door naar ons. De calculator maakt dan een traject aan en hier wordt gelijk een trajectofferte van gemaakt. Deze wordt gemaakt aan de hand van de opgestuurde stukken van de opdrachtgever. Alle stukken die Loohuis krijgt van de opdrachtgever wordt door de desbetreffende calculator in de mappen gezet op Loohuis server, ik maak gebruik van mijn eigen indeling en de afdeling utiliteit waar ik werk doet dat eigenlijk ook. Het duurt nog wel even voordat de gehele mappenstructuur optimaal is voor gebruik,.

Nu heb ik een beetje een idee hoe je te werk gaat. Maar hoe gaat de overdracht naar uitvoering?

Op dit moment is er niet een goede overdracht, wij krijgen de stukken die we uitwerken. Deze geven we aan de uitvoering, maar de tekeningen en specificaties worden niet uitgelegd. Pas later in het proces wanneer de uitvoering er mee bezig is krijgen we vaak vragen en dit kost extra tijd. We hebben wel eens dat we een calculatie anders maken dan dat de uitvoering het het liefst zou zien. Zo spenderen we soms meer geld aan een bepaalde schakelkast in plaats van de bekabeling zoals de uitvoering het liever wel zou willen zien.

Heb je zelf ideeën over hoe dit beter zou kunnen?

Hier heb ik al vaak over nagedacht en heb wel een idee over hoe ik dit zou uitwerken. Er zijn eigenlijk twee manieren die zouden kunnen helpen. Als we klaar zijn met de calculatie dat de projectleider van de uitvoering langskomt en de stukken doorneemt en na een week of eerder dit dan heeft besproken met het team war ze tegen aanlopen. Zo kunnen problemen voordat de uitvoering ermee begint alvast getackeld worden en kunnen wij deze problemen ook aanpassen. Een ander idee is om tijdens het calculeren al samen te gaan zitten, zodat je vanaf het begin al aanpassingen kan maken zoals de uitvoering het graag wilt zien. Zo lees je het gezamenlijk door en kun je dit ook samen bespreken wat je uiteindelijk precies wilt. Dit moet dan wel weer binnen het budget vallen.

Hoe denk je dat deze ideeën uitgevoerd kunnen worden?

Door middel van controle is alles mogelijk, ik vind het belangrijk dat er een aangewezen persoon is die alles controleert en de goedkeuring uitvoert van een project. Dit zorgt binnen beide partijen (calculatie en uitvoering) ook tot meer rust en het gevoel dat het overdrachtsproces serieus genomen wordt. Er zijn verschillende mensen die aangewezen kunnen worden als 'verantwoordelijke' dus je kan het werk dan verder ook verdelen en hoeft het niet veel tijd te kosten. Wel moet de verantwoordelijke het project goed doorlezen en fouten eruit halen. Het moet serieus genomen worden, op die manier voorkom je dat andere mensen het niet serieus oppakken, maar ook dat het project op de juiste manier verloopt. Een projectleider aanwijzen kan pas wanneer het duidelijk is wanneer het project uitgevoerd kan worden.

Welke problemen loop je nog meer tegen aan?

Niet elke calculator denkt hetzelfde, wat dus een probleem veroorzaakt in hoe de uitvoering het precies wilt en er dus altijd een slechte afstemming is. Dit is in beide partijen zo.

Ook hebben we nu een overdrachtsformulier wat vrij waardeloos is, dit formulier is onnodig als we het toch met beide partijen gaan bespreken en het face-to-face gaan uitleggen.

Appendix C2

Geïnterviewde: Leo Prinsen

Functie: Teamleider Uitvoering

Datum: 9-12-2019

Hoe ga je precies te werk? Wat is het proces?

Op basis van de calculatie maken wij een inschatting wat we nodig hebben qua apparatuur en laten onderaannemers weten wat we van hun verwachten, ja dit wordt helaas uitbesteed, omdat we hier de mensen niet voor hebben. Wij maken de tekening voor de daadwerkelijke bouw.

Nu heb ik een beetje een idee hoe je te werk gaat. Maar hoe gaat de overdracht naar uitvoering?

Het gaat op dit moment niet zoals het hoort, op dit moment is het een verslag doorgeven en succes met de uitvoering en het maken van de tekening. Het vastleggen van de situatie gaat verkeerd en men slaat soms dingen over bij de calculatie die van essentie zijn bij ons, of ze weten niet precies hoe en wat we nodig hebben. Zodat ze andere dingen incalculeren die wij graag willen uitbesteden, of dit in bijvoorbeeld de armatuur willen stoppen in plaats van in de bekabeling.

Heb je zelf ideeën over hoe dit beter zou kunnen?

Wij hebben op dit moment best wat mensen tekort om alle werkzaamheden uit te voeren. We lopen op onze uiteindes soms. De teams moeten staan, geolied zijn en iedereen moet van elkaar weten wat ze doen. We hebben op dit moment gewoon te weinig werkvoorbereiders voor het aantal werk wat we hebben. Het zou mooi zijn als we wat mensen erbij kunnen krijgen, maar dat is op dit moment gewoon niet mogelijk. Dus dan moet je kijken hoe je efficiënter gaat werken met de mensen die je hebt en hebben op dit moment het aardig voor elkaar. Ook is het een idee om minder projecten aan te nemen, dit doen we al. Keuzes worden gebaseerd op snel 3 ton pakken, of een groter project waarbij je meer faalkosten kan pakken, omdat de marges groter zijn.

Hoe denk je dat deze ideeën uitgevoerd kunnen worden?

Op dit moment vanuit het management is het niet mogelijk om iemand bij te regelen. We hebben een zieke bij ons op de afdeling door oververwerktheid. We zullen geduld moeten

hebben en kijken hoe Loohuis het gaat aanpakken. Zo kunnen we uiteindelijk ook meer tijd vrijmaken om met de afdeling calculatie te gaan zitten om dit efficiënter in te delen en de communicatie te doen verbeteren, zodat het overdrachtsproces goed verloopt en we niet tegen blokkades oplopen tijdens het bouwproces en de tekening.

Welke problemen loop je nog meer tegen aan?

Op dit moment zijn er wel meer problemen, maar die zijn niet relevant voor het onderzoek.

Appendix D

Overdrachtsformulier Calculatie - Projectteam



PROJECTNUMMER: _____ CALCULATOR _____

PROJECTNAAM : _____ DATUM OVERDRACHT _____

OPDRACHTGEVER : _____ AKKOORD VESTIGINGSLEIDER _____

Omschrijving	Check	NVT	Opmerkingen																
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Overzicht contractstukken																			
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Appendix E

(In general)

- What is knowledge transfer in your eyes?
- In your job, when do you need to share knowledge with other employees?

(Establishing Cycle creating value for corporation)

- During the creation of knowledge (calculation) how does this get shared to (execution)
- Can you describe the process of knowledge creation within your department?
- Do you change the process of creating knowledge to make it easier to transfer knowledge?
- Does it make you feel more connected to the company when you get appreciated by sharing and creating knowledge?

(Identification of competencies)

- During the sharing of knowledge. How would you describe the individual knowledge and organisational structure within the firm? Is there any lacking and does this need improvement?
- How is the transfer of knowledge arranged at the moment?
 1. Can this be done better than that it is now? If yes how?
 2. Why is it done like this?
- Does the sharing knowledge gets limited by the company? Do you think you need more time?
 1. How is sharing knowledge arranged to get the best possible result? (Beginning of the project) (Middle) (End)
 2. And is this already done?
 3. What is a positive thing about the transfer of knowledge between departments?
 4. What is negative?
- How is sharing knowledge arranged? Beginning/middle/end of project?

(Identification Tacit knowledge)

- How do different departments work with each other to communicate in the best way possible?
- How do **you** ensure, that all the necessary information gets located in the right department?
- Did you develop personal skills which other people in the department or organisation do not have?

- What do you do to make the transfer of knowledge effective within the company?

(Analyse tacit knowledge)

- How did you develop this skill or skills? Experience? Workshops?
- Does the company have guidelines on how to share knowledge effectively?

(Knowledge Creation)

- Is sharing knowledge an organisational problem, or more individual?
- How is time created to share knowledge with other departments for the project?
- Is it good, to know more about other departments to have a better general knowledge about the company, which helps you with your own job?
- How would you personally improve the sharing knowledge as it is now? Do you have any improvements?

Appendix F

<i>Question</i>	<i>Sub subjects</i>	<i>Concepts and definition</i>	<i>Definitions from literature</i>	<i>Quotes Interviewees</i>	<i>Identified characteristics from literature used</i>
<i>Part 1</i>	<i>General Questions</i>				
<i>Q1</i>	Definition knowledge transfer	Knowledge transfer	An event through which one organization or person learns from the experience of another (Easterby-Smith et al., 2008)	<p>2. Knowledge that you have, or knowledge you have from someone else sharing with someone else.</p> <p>7. The transfer of knowledge you have and another does not have. To transfer this as completely as possible, to know what is going on and transfer this. The substantive transfer of knowledge.</p> <p>13. The own knowledge you have received throughout your career, to transfer this to your colleagues.</p>	Understanding of all interviewees is matched and understanding of the main definition was given by all.
<i>Q2</i>	When do you need to share knowledge?	Timing of knowledge transfer	The timing of the knowledge management effort is important for its success (F. Soliman & Spooner, 2000)	<p>5. Every moment I think. Except if you do something for yourself, but otherwise you always share knowledge with employees and third parties information.</p> <p>8. That is quite a lot I guess, knowledge you share to clients, mechanics, people from the execution. Knowledge that is based on advice from customers.</p> <p>10. If something is not clear from the project.</p> <p>11. It is important, to when I encounter problems. Then is the right moment to ask.</p> <p>13. This goes in the whole process, we have a work list. This goes from the quotation process, calculation, assignment, work preparation, implementation and aftercare of the project. So continue you have the process that you have to keep people sharp. So in the delivery of quality, it also has to do with your level of knowledge. You have to be self-teaching. If you are only doing your job and do not any other things, you are more a solitary cell, this is not good for the company. So if you are busy with something, you always have to think in three steps: what are you doing? What are the consequences? And what happens if I do it? And everyone needs to take this into account when they share knowledge so that everyone has to be continuously involved in the processes of sharing the right knowledge.</p>	Importance of sharing knowledge is present. Though, the timing is for some people off and there is not a cohesive thought on when and where people need to share knowledge.
<i>Q3</i>	Create and share knowledge yourself?	Creating and sharing of	Create value for the company and establish an	2. Of course, face to face, by paper. And I share knowledge with client, own departments, other	Creating knowledge is as the company wants it. Most interviewees do not think outside

	knowledge yourself	adequate procedure for sharing and creating knowledge (Sánchez et al., 2013)	departments, advisors, teamleaders, projectleaders, management. Everywhere is knowledge, and knowledge need to be shared. 3. Not particularly, I just do my job and share with the people who need it. 10. Yes, but in the way the company wants it. 11. No.	of the box and keep it just as what they have been told to do. Thinking outside the box or coming with new ideas is not part of this
Part 2	<i>Establish cycle creating value for corporation</i>	the ability of organizations to develop new knowledge which help them outperform their competition (Barlow, 2000)		
Q1	Describe process knowledge creation department	Process knowledge creation	4. That is very short, face to face with people. But we create knowledge by making the calculation and using the information from the client to form our idea of how the client wants it. We create knowledge by discussing with each other how we can make this cost-efficient, but that it still fits in the idea of how the customer wants it. 9. By talking with each other and talking about the design to pull out every detail possible. Everyone has some knowledge, and with each other you know more, it is easier to pull the necessary information. 10. We work with project maps on the computer discs, all the information is on these discs. if the pieces from the calculation are already there, and these are put in the project maps. And we can work with this. The map structure is not good as it is right now. If everyone would do the same and would work in the same format every time. It would be a lot better, but right now everyone just uses it in his own way and they do not work in the correct way.	Knowledge creation is present due to own tasks for the job they have. Knowledge is created at the start of a project and the knowledge which is shared is scarce. Not all information is present during the first phase, that is why other groups have a limit supply of knowledge. Employees need more gatherings to get complete information from third parties and other parties who work on the project.
Q2	Do you change the process of creating knowledge to make it easier to transfer knowledge?	Change process of creating knowledge	1. Yes, by using the regular formats and lists, by also using the transfer form we use during the projects. That will make it easier during the transfer. Yes, we need to work on the forms and use of this, in the past this is not used in the right way. 2. I do not change the process, I am responsible for the work processes, if I do not take it seriously, how will my team take me serious if I do not follow the processes. 7. I do not have guidelines from the company. But what I told you	Mostly there is used a form for the transfer of knowledge. Not many change is brought to the company in terms of knowledge creation.

			<p>before is that I have action lists. We have a good way to have a good overview of the project.</p> <p>12. Well, we are currently busy with changing the processes. Are we making it easier for everyone? I think yes and no. I think the most is pointed to make it uniform, but this takes a lot of productivity from the employees</p>	
Q3	How important is it for you to create and share knowledge?	Importance of creating and sharing knowledge	<p>3. It is very important, but how important? I want to share the right knowledge so that the right information will be used further on in the project.</p> <p>11. I think it is not particular important for me, the necessary forms need to be delivered to the right person, so the project gets handled the way it should be.</p>	Importance of bringing the right information to the person who needs it is there. Feeling of giving something extra is lacking.
Q4	More connected to the company when getting appreciated by sharing/creating knowledge?	Appreciation	<p>2. You will not get a pat on the shoulder, but I think it is very necessary to share all the knowledge that is available.</p> <p>4. If the project is properly completed, financially and commercially. You get this back from the supervisors. And if you do not hear anything, that is also good. Not hearing a thing is good.</p> <p>13. People who are enthusiastic and know how to share knowledge in a proper and effective way. It will give you energy, because you know it is going the right way. And the best is, that your employees will profit from this and will see the added value. The most important is that you need to realise people that they get insight in where we want to go as a company. If you know what the company wants in the future, you will also adapt to this circumstances.</p>	Appreciation is lacking. Importance of sharing knowledge is limited by the company
Part 3	Identification of competences		<p>Identification of critical knowledge and the ability to utilise it is a challenge for any project organisation. Successful project management is based, on the one hand on accumulated knowledge, and, on the other hand, on individual and collective competences.</p>	

		(Kasvi, Vartiainen, & Hailikari, 2003)		
Q1	Individual knowledge enough?	Individual knowledge	<p>1. Individual knowledge is present here, people who work here need certificates to be even allowed to do this job. The individual knowledge is based on the job, we need to get this up to date every time and we pay attention to this.</p> <p>4. I think we are at the moment on the right track for the individual knowledge, in the past we lacked knowledge. The techniques are going very fast and you need to get up to date with this.</p> <p>11. No, for certain questions, I go to certain people, so I make a distinction.</p> <p>13. There is a strong need to improve the knowledge level of the organisation, especially in these types of flat organisations. A lot of people are grown within the company from mechanic towards the execution part. Is this really quality for the company and is there knowledge level high enough? We are always looking for people who can adapt fast to the organisation and market.</p>	Idea of individual knowledge is divided. Some people think the knowledge is enough while others think there need more understanding within the departments.
Q2	Organisational structure good enough?	Organisational structure	<p>1. With the organisational structure we miss the helicopter view, but we did not know if other companies from Loohuis did the same, so we wanted to go to unanimous work processes and change the process that this is optimised.</p> <p>2. We do not have a particular work process, we are busy with that now, and you are part of that as well. We are trying to make a format, and we are trying to fill this out. This will differ a lot from previous processes and it will make it easier than it is arranged right now.</p> <p>8. About the organisational structure, they are working on that now, but it has to reflect more from above to downwards. They are working on an organisational chart. That is what you are missing right now, a certain expectation from above.</p> <p>12. Purely on Almelo pointed, we have retail, utility, and that is the only thing that is present here. René is branch manager and team leader utility. It is better to do this separate. Some project teams have the need to really have one leader</p>	As stated, the overall view is missing, a project is set up to get structure more centralised. Expectations from up in the hierarchy is lacking. Employees do not feel the need to always perform in the eyes of a employer.

			who they can talk to and meet whenever they want without getting to know that he has other business at the moment.	
Q3	How is the transfer knowledge arranged at the moment?	Knowledge transfer arranged	<p>2. The retail we have our own calculations, our own quotations and the same persons will take this to execution. So the transfer process is already based in the same department, and is seen as one process.</p> <p>5. Normally we usually talk on the Friday, we share knowledge about what we are doing at the moment. This is how we keep each other on track to see if someone does not forget anything and we can keep each other sharp.</p> <p>13. I think you need to continuously adjust this as a team leader. Also as an employee you need to be continuously aware that you need to adapt to the company and add new knowledge to your repertoire.</p>	There is no clear structure in the view of transfer of knowledge, no clear appointment in the agenda to talk about the projects you are working on.
Q4	Does sharing knowledge sharing gets limited by the company?	Limitations sharing knowledge company	<p>1. We need more time to do the preparations for the project, sometimes we just take too easily a project without saying that the time limit is too few, because we can do this in not the same amount of time.</p> <p>3. I think there needs to be more steps in between, we are two to three weeks busy with a project and only half a day we get the time to transmit the project to the other department. It is important to make this more into steps, in the beginning maybe one hour or two and after one week again.</p> <p>5. Pressure is a limitation.</p> <p>8. Yes time, but the company cannot do much about this. It is mostly at what time you get the information.</p>	Pressure is a big limitation, projects come and go in a fast time. Time to come together and talk about this and get all the eyes on the same level is not present.
Q5	Sharing of knowledge? Beginning/middle/end?	Sharing knowledge during project.	<p>6. In the beginning there is a transfer from calculation to execution. With a transfer form, but we do not use this. In the middle we plan meetings to share knowledge with the mechanics from the execution. And we get feedback to see if the after calculation is done right.</p> <p>11. We get in the beginning a transmission from the calculation how everything is and what is important to take care of. If I miss something I will walk upstairs and ask how something is thought of. I think it is late if I need to come back to go through the assignment again with them, at the moment when a design is finished you are already too late to discuss points, because the execution of the project is at the start.</p>	Sharing knowledge is available in all structures from beginning to end. Clear appointments are missing for a clear understanding what the client and the next department wants.

Part 4	Identification tacit knowledge		Often the answer to solving complex social problems already exists in the community as some type of tacit knowledge, but it is hidden from plain view. (Slettli & Singhal, 2017)		
Q1	How do different departments work with each other?	Collaboration between departments		<p>1.Face- to face is working good at the moment, maybe in the future retail and utility will be put together to make it easier to communicate.</p> <p>4.Mostly we pass by each other, sometimes we email if someone is really busy.</p> <p>8. It is already a bit better, usually we worked on different islands. We had groups of retail and utility. We try to make more projects when groups need to cooperate together.</p> <p>13. I think they should seek each other out a bit more, and further they need internally the consultation which they are providing right now.</p>	<p>Departments work well together, when there are problems or questions, you can pass by.</p> <p>Missing is the real working in groups. Every department is divided. An idea would be to put together the groups.</p>
Q2	How do you ensure that all necessary information gets to the right department?	Placing of information		<p>3. I am going to other departments face to face, also by my calculation folder, with all the necessary information for the project. Everything is built in the same way always.</p> <p>9. Go to the other department, if you send this by mail, it will take a longer time. If you pass by it will take less time.</p>	Ensuring that information is delivered well is done by passing by and getting the right forms in the map structure.
Q3	Did you develop personal skills?	Personal communication skills		<p>1. In what I do, is that I take people with me, I arrange meetings where I put as many people together. So, we can discuss people when things will get changed or need to be changed. I will let people think with us, and this will give the people a feeling that they are important. This will motivate people to also use input.</p> <p>2. No</p> <p>7. I think so, I am busy with a course which also has a part communication. Also from me some things are going wrong based on communication. Sometimes I am too fast, but as a project leader I am the mouthpiece of the client for the work preparation. I am trying also to sell to the client to (for example) use a type of fabric or steel to make more profit</p>	Communication skills did originate by some people to communicate better than it was in the beginning. Also differentiation is present in the company. Not all employees did learn personal communication skills

			11. I think I am very good at putting things on paper. It is very clear what people need to do when they will investigate my papers.	
Q4	What do you do to make transfer of knowledge effective?	Personal change of transfer knowledge	<p>2. I do one time planning consultation a week, and a monthly project leader consultation. And I sit with my team on one department. It is very easy to interchange knowledge. I rather sit one time a week one hour to see how everyone is working and how it is going. It is easy for me to work with other people</p> <p>8. I am a supporter of courses, and this is what I also contribute to team leaders or management. And normally I visit suppliers and trade shows to get more knowledge to make the transfer of knowledge effective. I would like to do this with courses, but due to a lack of time this is not possible.</p> <p>10. Not really, everyone wants to work as efficient as possible. But, not specific.</p>	<p>Not much of personal influence on the transfer of knowledge.</p> <p>Some people did some small things to improve themselves within their communication skills</p> <p>Overall not enough stimulation from the company to grow as an employee</p>
Part 5	Analyse tacit knowledge		Tacit knowledge is not easily codified or articulated because it is embedded in an individual's brain or experience, such as know-how or skill. (Nonaka, Byosiere, Borucki, & Konno, 1994)	
Q1	How do you develop this skill or skills?	Communication skills	<p>2. I developed this myself, based on the needs of the department and what is needed. How busy is everyone?</p> <p>7. Courses, experience of course.</p> <p>11. Based on my previous job I learned how to put things better on paper. We sat with a contractor, an architect, installer we make a plan to do renovation project. The client identified what he needed and on base of that we made a plan. That had a lot of effect on my development on putting things on paper. All based on experience.</p> <p>13. Yes I have a big workers past, so I also have a lot of experience. I have a lot of personal coaches during projects. How to approach people, how is your communication, and how do see people you. A little self-reflection And how does someone else look at you. How are you with your approachability. You will get a lot</p>	<p>Based on previous work or long based knowledge. Sometimes courses.</p>

			of knowledge because of this. Most of all this is experience.	
Q2	Does the company have guidelines to share knowledge?	Guidelines sharing knowledge	<p>1. I think, and I target especially about the self-learning organisation. You have formats to share knowledge. But most importantly it is important to have meeting with the new guys to share problems and to help them further within the organisation</p> <p>3. Not that I know of, but a certain pattern to share knowledge is important.</p> <p>5. We work with the transfer form, but do not really work with this how it should be. To a certain point it is good to have guidelines. I do not think to have point to point structural guidelines, you also need a natural flow to communicate with each other and do not pin down to one certain way. You need to create an accessible culture to share knowledge with each other.</p>	<p>Working with a transfer form which is not well integrated within the company</p> <p>A pattern for sharing knowledge would be good. Taking the new guys in hands with the more experienced guys.</p>
Part 6	Knowledge creation		<p>Knowledge creation involves more than the creation of a new idea; it requires discourse (talk, writing, and other actions) to determine the limits of knowledge in the community, set goals, investigate problems, promote the impact of new ideas, and evaluate whether the state of knowledge in the community is advancing. (van Aalst, 2009)</p>	
Q1	Is sharing knowledge an individual or organisational problem?	-	<p>3. I think this is more organisational. People from management need to plan courses to work safely. Also they need to be more on top of the project, so we have the feeling that we get watched. This will give more a feeling that we need to do our job in the right way.</p> <p>10. Both, everyone thinks he is doing it good or trying his best. But I think everyone can do this better, even if they are not very sure about things. Business-like it is important to be on top of the people and guide them through the best way possible.</p>	<p>Both is lacking</p> <p>Individual: Initiative is lacking</p> <p>Organisational: Planning is lacking, more appointments with the team would have a huge impact on the outcome of the project and the costs</p>

			12. I think so as well, organisational you are missing structure. Individual I would say the productivity what is missing with some persons. So see if they show initiative in the project.	
Q2	Is it good to have a knowledge creation culture? Let managers be the key to make sharing knowledge important	Managers as carrier of knowledge sharing culture	12. Yes, but I would really love to see it from the employees and not only from the managers. That the employees come with ideas instead of otherwise. We want to see people that bring new ideas. 13. Look as a manager you put out the lines for the employees, but you have to take care of that employees need to share knowledge. You have to stimulate this and show that this is valuable.	As manager you need to make it important that the employee needs to show initiative.
Q3	How is time created to share knowledge?	Creating time for sharing knowledge	1. mainly in the preliminary stage, it is important to communicate. Otherwise you will walk past each other and make mistakes in the building phase. 6. Planning for meetings, I pass by employees, and I mail people to share knowledge. While sitting with other employees it is good to record things during a meeting. That is how we have a summary of what we all need to do. 8. No we plan meetings at this moment with a new project. Two different departments we have a meeting every Monday at this moment.	Time is most often created at the start. There is not always time as not all groups can be present due to high pressure. Also just passing by and asking for questions is part of the job.
Q4	Good to know more about departments for general knowledge?	General knowledge company	4. Yes, that can be an improvement. It is good to know, for example how a planner works in a way, that you know how he or she works and that you can adapt to this and work more effectively. I would organise this by, maybe once or twice a year an event to keep the knowledge about other departments up to date, or to see if the regulations are changed. 7. Yes this is important. It is good to know what is going on in different departments. The company is growing and then it is nice to know what is going on in other departments or maybe even problems. And also that you get information about other departments that you can use for your own benefit. 12. Yes, actually how we do it, we know how it is going right now. I think if you are a calculator, that it is very important that you know	Importance of this is understood for anyone, but a clear layout about how to make this available and catchy is not clear.

			<p>what is going to happen with your pieces. This way you can respond to the situation. So this way, yes, it is good to know a lot about the company. So you can fit better in your current position.</p>	
Q5	<p>How would you personally improve sharing knowledge in the organisation?</p>	<p>Personally improve sharing knowledge</p>	<p>4. The form is faltering, this needs to be improved. Also the meetings do not need to be one time, but we need more time and also more meetings to work out this fluently. Otherwise we come back to much too each other</p> <p>9. Hmm, I think absolutely, by the start of a project. That there needs a clear transfer from calculation to execution. It needs to be very very clear. Not fast but clear. Also regular moments to meet.</p> <p>13. If you look at the educational level, you cannot ask for a night course to follow. But together with Saxion and the university we are trying to stimulate people from practice to put them in a higher level. We are already busy with how to make an email. A little course about how to assemble an email. And every employee who wants this did this course. They learn about how they communicate, how do you do this in an email? Are you very clear? And so are we also busy with 'learning communities' actually this is with two companies: Loohuis en Engberink where we both have two cases for all the twelve companies. Engberink is busy with the digitalising of the building side and digital implementation of dimensions. This is highly topical at the moment in the installation industry, because everyone is sitting with the same problem. How to get a good evaluation of a project and that this is well manageable and how to get the best solution for later on in a new project. Now we can see where the improvements need to be. We have around 8-10 percent failure costs. But if we can halve this in the future then we are well on track. This also saves a lot of frustration with the client and between themselves.</p>	<p>Meetings need to be more often for updates and questions.</p> <p>Also starting with yourself to make the most out of yourself.</p>

