

‘Knowledge sharing and collective decision-making in hubs’

*Has the amount of knowledge sharing a positive impact on the collective decision-making process
in hubs?*



Figure 1 Decision making model (Taheri, 2013).

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Radboud University Nijmegen

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Yara Kamps (s4060407)

Hoefslag 4

6525 PB NIJMEGEN

(0031) 6 53 53 61 11

yara.kamps@live.nl

First examiner

Prof. Dr. J.J. Jonker

Second examiner

Dr. Ir. G.W. Ziggers

Abstract

The Dutch government aims, with the help of its top sector policy, to be one of the five top economies in the world. By achieving the top sector policy, the Dutch government wants to stimulate research, development, innovation and sustainability. To stimulate this, new types of public-private collaborating are needed because the traditional types of public-private collaborating are superseded. Hubs are this new type of public-private collaborating which involves the government, knowledge institutions, entrepreneurs, organizations and residents of the Netherlands. The members of the hub share besides their individual goals a common goal.

Interviews and group sessions with members of three Dutch hubs, who are involved in the collective decision-making process of the hub, are used to gain insight in the behaviour of the collective decision makers of the hub. The three hubs investigated in this paper are Dirk de derde, Gloei and Krachtige kernen. The field research for this paper is mainly based on the conference evolving around circular economy 'Make Cense' on the seventh of June 2016 in Peel en Maas, the Netherlands. From the results stemming from the individual and group interviews it is found that several working groups are formed in the researched hubs. Within these working groups is knowledge when the members of a working group have different backgrounds and experiences which they are willing and able to share among the members of the working group, because they trust each other and share a common goal, which result in information symmetry in the working groups. The members of the working group collectively decide on the decisions revealing that theme for the benefit of the achievement of their common goal. These collective decisions are based on agreements. However, a collective decision in the hubs can only be made when knowledge is shared. This makes that the amount of knowledge sharing has an influence on collective decision-making in hubs in the Netherlands.

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1. Introduction

In this chapter, the reader is familiarized with the subject of the paper. The first paragraph explains the reason why this subject is relevant to research. The second paragraph explains the problem in this research and the third paragraph indicates white spots in contemporary literature and what the aim of the research is. The fourth paragraph covers the objective and research question, whereas the fifth paragraph presents the thesis outline.

1.1. Theoretical and practical relevance

Research, development and innovation are, as seen the the last couple of years, the foundation for the welfare of the Dutch economy. The economic crisis and the increasing number of residents in the world, which make use of (non)renewable resources and pollute the environment, increase the societal pressure for a sustainable economy (TNO, 2014). These issues do not only exist in the Netherlands but in many economies in Western countries. Collaboration between different types of public and private organizations and countries, in which knowledge creation and knowledge sharing are important aspects, helps in stimulating a sustainable economy for the benefit of the welfare of the Dutch economy. The Dutch government wants to be one of the top five knowledge economies in the world. Knowledge refreshes more often and needs to be used quicker than before. Therefore, the Netherlands needs to continuous improve their knowledge to achieve their goals (VSNU, 2016).

To reach its goal, the Dutch ministry of economic affairs, agriculture and innovation formulated in 2011 new guidelines for their enterprise policy (TNO, 2011). These guidelines concerned the nine top sectors in the Netherlands namely, energy, logistics, creative industry, high-tech, chemistry, horticulture, water, food and life sciences (TNO, 2011). These sectors have a high impact on the Dutch economy and the welfare of the Dutch residents. TNO (Toegepast Natuurwetenschappelijk Onderzoek) found that due to a lower number of public funds available, co-financing by enterprises of specified projects can be a powerful tool to shape the required collaboration between business and practice (TNO, 2011). To stimulate this public-private collaboration, representatives from the industry, knowledge institutions and the government formulated guidelines for the top sectors to strengthen its competitive power and its knowledge to invest and innovate on national and international level. The aim of the Dutch government is attached to the realisation of the European Union programme ‘Horizon2020’ (VSNU, 2016). The goal of the international Horizon2020 is: to strengthen the competitive power of organizations and to solve societal issues. National and international collaboration enlarge the synergy between the organizations and the collaborative partners can take advantage of its knowledge sharing and creation (VNO-NCW, 2016). Because there are predefined projects alongside several focus areas, the commitment of the members is focussed and concise, arguably endures to a higher success rate (TNO, 2011).

The sectors involved in the Dutch top sector policy are responsible for 70% of the emissions in the Dutch environment (TNO, 2011). This makes it necessary to involve these parties to solve the societal issues in creating a sustainable environment, because of their involvement in damaging the environment. By changing the behaviour of these sectors, it influences the amount of waste and emissions. This can stimulate other parties, because they want to remain compatible with the organizations in their (competitive) environment, to change as well. These changes are even top-down implemented by restrictions of the governments as bottom up by the policy of the organizations and the demand of the residents (Suurs, Bastein, & Seiffert, 2016). The bottom up and top down implementation leads to new ways of organizing and behaviour in the environment by the sectors. As a result, the change leads to new types of collaboration in the Netherlands. The traditional types of collaboration, for example networks are superseded. And do not cover all the aspects of the Dutch top sector policy. The new types of collaborating are about knowledge sharing to innovate and stimulate research, development and a sustainable environment and economy to remain competitive and solve societal issues. During a collaboration, several types of knowledge are required. Collective knowledge can be created when collective decisions are made. Knowledge about a decision and the environment in which the decision has to be made is important, otherwise a collective decision to reach the common goal is hard to make due to a lack of knowledge. These collective decisions concern the goals of the Dutch top sector policy. So, collective decision-making and knowledge sharing are related to each other. The sharing of knowledge and achieving information about a topic leads to a collective decision, which can help in reaching the goal.

1.2. *Problem statement*

The Dutch government wants to stimulate public-private collaborations to increase research, development, innovation and a sustainable economy and environment. Besides organizations, the government and knowledge institutions are also residents involved in these public-private collaborations. The demand of the residents is widespread and interrelated to the nine top sectors. The residents involved in the public-private collaborations have besides their common goal according to the top sector policy, also individual goals which are not necessarily related to the common goal. The residents aim to create, together with other parties, projects with several themes at the same time to reach the common goal. Decisions must be made to achieve the common goal, the decisions can be made when there is knowledge and information about the subject, which can be used and shared among the decision makers.

People make lots of decisions. Every day people make an average of 226.7 decisions about food only (Wansink & Sobal, 2007). These decisions are most of the time made quickly, however this only concerns decisions made by the individual. In a network or an organization, there are several individuals involved. Moreover, these individuals share their thoughts, information, knowledge and

ideas to achieve the goals of their network or organization. The individuals and the groups can only share knowledge when they are willing to share this knowledge, but also, more important, if they are able to share their knowledge. These individuals must be aware of the knowledge they possess. There exist tacit and explicit knowledge and both types of knowledge can be very useful for knowledge sharing, creation, and collective decision-making. Because these individuals behave according to the structure of their organization or network their individual decisions do not matter, the collective decisions count (Steins & Edwards, 1999). Collective decisions being made in networks and organizations do not concern individual goals but the goal of the network or organization. In which a form of collective decision-making takes place to achieve their common goals. The collective decision-making process is among other things guided by the types of individuals involved in the process, the available resources, the available information and knowledge and the common goal (Bohanec, 2003). When a decision during the collective decision-making process must be made, there is a discrepancy between the current and the desirable situation. In a public-private collaboration, which is demanded for by the Dutch government, this situation needs a decision in accordance with the guidelines of the collaborative partners (Robbins & Judge, 2015). “Difficult decisions can be defined as decisions spurred by situations characterized by high levels of uncertainty, risk and fear” (Murdach, 2009). The most important part of collective decision-making is having a complete array of information, information symmetry; the decision must be made out all the possible alternatives (Robbins & Judge, 2015). When there is information asymmetry, in this case is not all available information shared and possessed by the members, between actors this leads to the selection of a satisfying alternative instead of the most optimal decision (Robbins & Judge, 2015). When not all the necessary information is available during the collective decision-making process, this may cause a problem and may not lead to the achievement of the common goal.

1.3. *Research gap*

“A multitude of members brings a multitude of ideas on how to realize shared values and common goals, how to develop a form of organising and, for that matter, a strategy” (Kamm, Faber, & Jonker). Therefore, in the public-private collaboration the members need to interact with each other to understand each other’s values and goals. When these values and goals of the members are in line with each other this can stimulate knowledge sharing which can lead to collective decision-making (Hislop, 2009). “The knowledge to make a decision must concern details about the problem, the people involved and their objectives, the influences affecting the outcomes and the time horizons, scenarios and constraints” (Saaty, 1990). Without complete knowledge about all relevant details, the collective decision will not be the most optimal decision out all the alternatives. This can be attributed to the connotation that decision makers do not see the ‘real’ world, but rather view their perception of the world (Simon, 1959). This means that in the collective decision-making process, the decision maker needs to look rationally and without judgement or emotions at the decision (Saaty, 2008). This is

negotiated to determine the most optimal alternative. Collective decision-making is a difficult task, given there is a variety of individuals where each of them possesses a personal perception, information as well as ideas and thoughts about the common goal. In every group of individuals, the individuals have different filters which are unique and on which they are likely to behave (Simon, 1959). These individuals with their personal filters, experiences and goals are in hubs connected to each other because of their common goal. It is still unclear how these individuals with diverse backgrounds and different individual goals besides their common goal, are able to share knowledge, make collective decisions and reach their common goal. It is also not clear so far why traditional public-private collaborations are not able to achieve the goals of the Dutch top sector policy.

1.4. *The research question*

As already mentioned in previous paragraphs, the type of public-private collaboration stimulated by the government to reach the goals of the top sector policy is new because the traditional way is superseded. The way in which these goals need to be achieved are related to knowledge sharing and collective decision-making. Networks are the traditional structure, but networks do not have the ability to cover all the aspects that the government wants. The new type of public-private collaboration which is able to reach the goals of the government are hubs.

The research question:

Is the collective decision-making process positively impacted by knowledge sharing in hubs?

1.5. *Thesis outline*

The second chapter describes what types of collaborative organising exist. The differences and agreements between organizations, networks and hubs are explained. The third chapter explains what knowledge sharing is and what types of knowledge exist. In addition, the fourth chapter describes the collective decision-making process and what types of decisions exist. The fifth chapter describes the theoretical framework related to the literature review and propositions related to the research question in this paper. Moreover, the sixth chapter shows the methodology being used in this paper. The seventh chapter shows the implementation of the methodology. The eighth chapter shows the results of the methodology and the ninth chapter shows the conclusion and discussion.

2. Collaborative structure

The aim of this chapter is to understand collective organising. There are three organizational structures explained in this paragraph namely, organizations, networks and hubs. Also, is a comparison made between these three structures to see which of these three is most applicable to achieve the goals the top sector policy of the Netherlands.

2.1. Collective organising

As previously mentioned, during public-private collaboration, individuals with different backgrounds and interests are working together. They behave according to their personal beliefs, thoughts, knowledge, experience, information and environment. While working together a culture among the collaborators may arise. Organizational culture is “the collection of relatively uniform and enduring values, beliefs, customs, traditions and practices that are shared by the members of the organization” (Hislop, 2009). The culture of the organization decides the atmosphere in the organization, for example if the individuals in the organization are willing to share their knowledge for the benefits of the organization. The members of the organization who are collaborating are often called teams, these teams consist of two or more individuals who are assigned to specific roles and behave according to its common goal, mission and vision (Johnson, et al., 2007). By achieving the common goal, collective decision-making during the process need to take place. The members of the team who can be bounded to an organization and behave according to the rules, the environment and the culture of the organization (Hislop, 2009). Collective organising is collaborating in the organization and between organizations or parties with a minimum division of labour, shortened vertical communication lines, in which the power is shared in the organization and work is organized in teams around completed tasks (Hislop, 2009).

2.2. Organization

An organization is a “unit of accrual, governance structure to resolve agency problems through residual claims, and a repository of coordinating” (Kogut, 2000). The competitive advantage of the organization is based on the valuable, rare, inimitable and non-substitutable resources of the organization. It is important to know what the added value of an organization to a network is. In addition, what the (competitive) value of an organization is. The VRIO framework can show which value an organization creates (Barney, 1997). A valuable resource is created when it improves the efficiency and effectiveness of the organization and when an organization has the capability to exploit the value with the goal of generating profit and preventing losses (Miller & Shamsie, 1996). The resource itself is not necessarily valuable, but the way it is exploited by an organization is. A resource is rare if possession of the resource by an organization is unique. Valuable and rare resources give a competitive advantage to an organization. Resources are more difficult to imitate “if they are path dependent, if there is an ambiguous relationship between the resources that enhances competitive

advantage, if they are socially complex, if there are legal property rights or if the process of their imitation by other companies is lengthy” ((Dierickx & Cool, 1989), (Vergne & Durand, 2011), (Barney, 1995), (Reed & DeFillipi, 1990), (Wills-Johnson, 2008)). The resource must be of value not only for one organization, but also for many organizations. The competitive advantage of an organization is a result of the operation and interrelation of the strategic and non-strategic resources of the organization (Pan, 2007). When an organization has valuable, rare, inimitable and/ or non-substitutable resources, it will make an organization a threat for competitors. However, the organization can be very helpful and complementary in a network of organizations. Because organizations in all sectors want to reduce uncertainty and risk as much as possible, organizations need to reduce dependency on resources and transaction costs ((Pfeffer & Salancik, 1978), (Williamson, 1975)). Therefore, profit organizations are always looking at ways to diversify themselves among the group of organizations in their environment. Nowadays there is a high demand for sustainability and local initiatives. Organizations can acquire unique capabilities to react to this demand. In an organization, it is necessary to have a balance between exploration and exploitation in order to survive. Exploitation refers to the processes where existing knowledge is captured, transferred, and deployed in other similar situations. Exploration involves processes where knowledge is shared, synthesized and new knowledge is created (Bakker, Leenders, Gabbay, Kratzer, & Engelen, 2006). Organizations need to exploit their activities to ensure their current viability and organizations need to explore activities to ensure their future viability (Levinthal & March, 1993). If an organization chooses to invest more in exploration than in exploitation, there is an unbalance, and it may lead to an amount of undeveloped ideas. Because an organization may, for example, not have the money or the capacity to develop the undeveloped ideas and to explore new ideas. More certain ideas and outcomes are more preferred than less certain ideas and outcomes because this helps to manage risks. It is difficult to change currently used routines, because these routines consist of tacit, explicit and procedural knowledge (Nelson & Winter, 1982). Therefore, when an organization has an unbalance in exploration and exploitation, it will be difficult to change. The differences in routines and legacy between organizations will influence the barriers to entry and possibilities and constraints within the network. When organizations do not have any experience with exploration, it will be hard for these organizations to learn from other organizations. Not all of these organizations know how to learn from and with others for their own benefits ((Aldrich & Mueller, 1982), (Aldrich & Zimmer, 1986)). Therefore, organizations need to balance their exploration and exploitation. Organizations can do this on their own but can also learn from and with other organizations for mutual benefits. This can occur in a network of organizations. So in a network, different types of organizations are collaborating because they can achieve more together or other things together than they can do on their own.

2.3. *Network*

“A network can be defined as (1) several actors with (2) different goals and interests and (3) different resources, (4) who depend on each other for the realization of their goals. Networks can be both intra- and inter-organizational networks and can be found in both the private and the public sector” (Bruijn & Heuvelhof, 2008). A network consists of several independent organizations that interact, coordinate, and control their interaction to behave together as a larger entity. In this paragraph is looked at profit networks, because the aim of the Dutch top sector policy. Profit networks consist of organizations, suppliers, producers, components, machinery and services. Networks can help in outsourcing, improving access to information and complementarities, and can help in developing new markets for (new) products. Non-profit organizations may not have the right resources to overcome certain boundaries that only private organizations can overcome (Donahue & Zeckhauser, 2006). “Indirect government action can expand the resources, improve the efficiency, or boost the legitimacy of an undertaking” (Donahue & Zeckhauser, 2006). Collaboration and synergy between public and private organizations can be achieved if the partners can manage every part of the collective decision-making process, specified and unspecified (Osborne, 2000). Within a network, information exchange between organizations takes place for mutual benefits. However, in a network there is not necessarily a common goal, every organization can benefit from the other organizations (Steins & Edwards, 1999).

There are three types of network organizations (Business dictionary, 2016). “Internal where a large company has separate units acting as a profit centre, stable where a central company outsources some work to others, and dynamic where a network integrator outsources heavily to other companies” (Business dictionary, 2016). Most existing networks have long-term agreements. Organizations with long-term agreements have a lower amount of risk included in the relationship, because the partners depend on each other for a longer period. The relationship is not only based on a transaction but on complementing each other for a (un)certain timespan, so cooperation is more plausible than competition. In a network, it is not necessary that the group of organizations have the same structure and focus. The organizations in the network can complement each other and that can achieve more working together or something better than they would be able to alone. This is also one of the thoughts of the members of a hub. When collaborating, they can achieve more than when they are on their own. To avoid conflict within a collaboration, an equal dispersion of power is necessary (Keast, Mandell, Brown, & Woolcock). It is not just the dispersion of power that is important, but also the way plans are made. There are two ways to make plans. There is formal, deliberate planning when mission, vision, goals and future outcomes are set. Secondly informal, incremental planning, where action emerges over time (Mintzberg, Lampel, & Ahlstrand, 1998), (Huxham & Vangen, 2005), (Winer & Ray, 1994)). A problem may arise when partners of a network do not agree on everything, for this may lead to disagreement in other stages (Huxham & Vangen, 2005). There are three dimensions for networks (Human & Provan, 2000). The network as a form, the network as an entity and the network

as an interaction. Organizations want to innovate together and complement each other with their skills, experience resources and information, and together facing and overcoming the concurrency (Camarinha-Matos, Afsarmanesh, Galeano, & Molina, 2009). Organizations in a network can share costs and risks, because organizations in an alliance can establish a limited stake in an alliance while maintaining the flexibility to increase or decrease the commitment at a later moment in time (Kogut, 1991), (McGrath, 1997)).

In cross-sector collaboration, information, resources and capabilities are shared and/or linked in two or more sectors with the intention to achieve an outcome that could not be achieved by organizations in only one sector (Bryson, Crosby, & Stone, 2006). In cross-sector collaboration government, businesses, communities, non-profit organisations and the public are involved (Bryson, Crosby, & Stone, 2006). Cross-sector collaboration occurs, because most topics and problems in the world are ones that occur between several sectors. Moreover, by involving all the stakeholders and all the necessary sectors, the problem or topic can be more effectively tackled. In cross-collaboration there must be agreement between the organizations on the way, they are going to resolve the problem or topic and how much the organizations need each other. The structure of a collaboration is influenced by the context in which it is operating (Human & Provan, 1997), (Provan & Milward, 1995)). In public-private collaboration, stimulated by the government, are multiple parties involved and they interact because of their shared common goal. In networks, the parties do not necessarily share a common goal but collaborate based on their individual goal. The type of public-private collaboration, which has as a focus a common goal, is a hub (Hislop, 2009), (Kamm, Faber, & Jonker)).

2.4. *Hubs*

Hubs are a way of collective organizing in which multiple parties are collaborating. Hubs are local/regional clusters of activities where local citizens collaborate with entrepreneurs, governments, organizations, non-profit organizations and other parties in order to work together simultaneously on different themes (Jonker & Faber, 2015). Hubs are focused on several themes simultaneously with the intention to innovate and develop products and services within these themes together. “The hub connects various parts of an organization and relays goods and information between different departments or locations” (Jonker & Faber, 2015). For example, the hub Cleantech Center in Zutphen has a focus on clean energy. All the participants of the hub Cleantech Center aim to support certain aspects of getting cleaner energy (Cleantech Center, 2016). Moreover, the hub Noorden Duurzaam is a hub that invests in sustainable development with profit and non-profit organizations, professionals, students and residents (Noorden Duurzaam, 2016). The composition of the individuals involved in a hub can change depending on the theme, and therefore results in alternate internal dynamics (Jonker & Faber, 2015). The members in the hub must be willing and able to collaborate, share their knowledge, and use their resources for the benefits of the hub towards a common end goal. When there are themes

a hub addresses and wants to behave in, the hub can behave according to several roles like the facilitator, the initiator or the connector. The facilitator provides structure and process to interactions in order to support the group. The initiator takes an initiative in making something happen. The connector knows many individuals and is able to connect the obliged individuals for doing the job. The members of the hub make collective decisions as a condition to achieve the common goal. The hubs consist of the government, organizations, non-profit organizations and entrepreneurs to contribute in the process in order to acquire enough resources, the power and the full array of information to realize the ideas exploitation (Boer, Meijs, & Diepen, 2013). In the collective decision-making process the members of the hubs collectively agree on certain decisions.

In Figure 2 Collaboration in hubs (Kamm, 2015). Figure 2, it is shown how the concepts in hubs are connected. The concepts of hubs are interrelated and fluid. In hubs, there is a constant change in composition of the members of the hub. Hubs react to occurrences in the environment. Because these occurrences are not predefined, the composition of concepts in hubs is not always the same (Kamm, 2016).

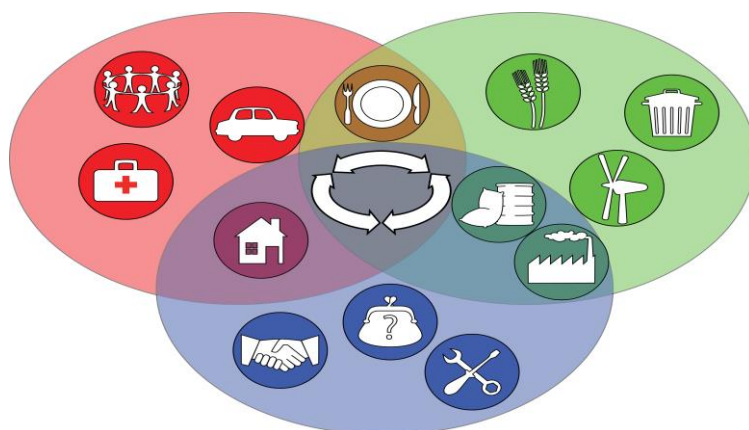


Figure 2 Collaboration in hubs (Kamm, 2015).

The five criteria to operationalise hubs are (Jonker & Faber, 2015):

- 1) Involvement of individual residents and/or citizen initiatives;
- 2) Multiple value creation (economic, social and ecologic);
- 3) Collaboration between organizations, (local) government, non-profit organizations and other members;
- 4) Gain value that would not be created while operating on their own;
- 5) Collective creation of value and sharing in the value created.

These five criteria are used in this paper, as guidelines to measure if the several forms of organizing that are participating in this paper are hubs.

To better understand what distinguishes hubs from networks is in Table 1 (p. 14) a summary made based on the information from Jonker and Faber (Jonker & Faber, 2015). Even though the summary is not yet complete due to the little amount of knowledge about hubs, it gives an overview of the so far

researched characteristics of hubs.

Characteristic	Explanation
<i>“Wicked problems”</i>	When a decision must be made, it is necessary to involve every aspect linked to the problem in the decision-making. It is hard to know if every aspect is involved when involved in the decision it will affect something else. Therefore, the process is always incomplete.
<i>“Initiated by (local) people”</i>	Most of the time, but not always, hubs are initiated by (local) people and sometimes they are initiated by government or organizations who share the same topics they want to solve.
<i>“Several members with different backgrounds”</i>	In a hub, everyone with every background and input is free to enter. Because decisions are made with so many topics in mind and related to so many other decisions and individuals, individuals with different backgrounds and focus will help the decision-making with their experience and perspective.
<i>“Local orientation”</i>	It is easier to collaborate when individuals know each other, because this makes easier to trust someone and to come to agreements together.
<i>“Value creation by using and sharing resources”</i>	The individuals involved in a hub have something to offer to the group like knowledge, experience, resources and money. However, these individuals not only invest but also share and eventually benefit from the bigger whole. “This is called multiple, collective, and shared value creation” (Jonker & Faber, 2015).
<i>“New type of organizing”</i>	A type of collaboration between individuals with different backgrounds and different ultimate goals, who collectively work on a project are not a widely-spread phenomenon.
<i>“The beginning of a potential community”</i>	A community is “a social group of any size whose members reside in a specific locality, share government and often have a common cultural and historical heritage” (dictionary, 2016). In a hub, individuals are working together and the individuals involved with one topic may be involved in the next topic. These individuals get familiar with each other and their habits. Working with more or less the same individuals on a topic will lead to a common culture between these individuals.

Table 1 Typology of hubs so far known (Jonker & Faber, 2015).

2.5. Comparison hubs, networks and organizations

Hubs are seen as a type of network but there are differences between them. The members of hubs manage to share knowledge and make a collective decision because they share a common goal besides their individual goals (Jonker & Faber, 2015). In addition, the members of hub do not follow a predefined structure during the achievement of their goals. The members of networks only share common goals besides their individual goals and knowledge sharing is not directly their intention. In networks are several actors with different goals and interests and different resources, who depend on each other for the realization of their goals. Several organizations are part of a network and are behaving according to a defined structure to achieve their common goal.

Characteristic	Hubs	Networks	Organizations
	Several actors with different backgrounds	Several actors with the same backgrounds	Several actors with more or less the same backgrounds
	Common goal besides individual goals and interests	Different goals and interests	Common goals and interests
	Depend on each other for the realization of the goal, they need each other	Depend on each other for the realization of the goal	Depend on each other for the realization of the goal
	Multiple value creation	Economic value creation	Economic value creation
	Local orientation	Local, national and international orientation	Local, national and international orientation
	Potential community	Collaborating to get the job done	Performance as a priority
	Without a defined structure, incremental	A defined structure, deliberate	A defined structure, deliberate

Table 2 Characteristics hubs and networks.

Hubs, networks and organizations have characteristics that overlap among each other but also characteristics that make the different types of organising unique. In this paper are knowledge sharing and collective decision-making the aspects that must converge with a type of collective organising. The type of organising that has these aspects involved is the type that fits with the top sector policy of the Dutch government. Organizations are part of a network and in hubs can several types of organizations involve. These three types can be interrelated with each other. Because of the differences between the characteristics of hubs, networks and organizations, the collective decision-making process and knowledge sharing is not the same for these types of organising. During the research in this paper is focused on hubs instead of networks or organizations. Hubs are typical forms of organising because they do not follow a defined structure, they behave emergent to achieve their common goal besides their individual goals. Because of the absence of a defined structure, the way they share knowledge and make collective decisions is unknown, but the outcome of these decisions resulting from the collective decision process is visible. Hubs arrange the creation and the sharing of knowledge within and between organisations. The members with different backgrounds are involved because of their shared expertise and passion. The members of the hub are committed to the hub; the membership distinguishes the members from other individuals. Therefore, hubs are the best type of public-private collaboration for the purpose of achieving the top sector policy of the Dutch government. In order to achieve the goals of the Dutch government, all the available information and knowledge about the topics needs to be shared with the members of the hub. Without knowledge sharing among the members, knowledge cannot be created or decision cannot be made for the benefit of the Dutch government.

2.6. *Collaborative structure and knowledge sharing*

Positive associations between the characteristics of a type of network and the outcome of its performance like innovation, productivity and creativity have been found ((Tsai, 2002), (Cummings, 2004), (Hansen, Nohria, & Tierney, 1999)). The amount of knowledge sharing is assumed to positively impact the performance of a network (Anderson, 2008). Different positions of a network in its environment link different individuals, opportunities and backgrounds and therefore represent different opportunities to engage in knowledge sharing ((Tsai, 2002), (Mors, 2010)). The members of a network who are the most prominent, important and active, have more privileged knowledge sharing opportunities and access to new knowledge (Wasserman & Faust, 1994). These members stimulate knowledge sharing in the network. Every member of a network is connected to other members in different ways. Moreover, every connection represents a channel through which knowledge may flow to and from that member (Anderson, 2008). So, the structure of the network has impact on the way knowledge is shared and the amount of knowledge sharing between the members of the network and outside the network (Reinholt, Pedersen, & Foss, 2011).

3. Knowledge sharing

Knowledge sharing is an important aspect during public-private collaboration. Knowledge and information are interrelated and they can be used to support research, development and innovation. In this chapter are the characteristics and aspects of knowledge, knowledge sharing and knowledge creation explained.

3.1. Types of knowledge

“Knowledge is the understanding or information about a subject which can be generated by experience or either known by one person or a group” (Cambridge Dictionary, 2016). There are four categories of knowledge “(1) knowledge on how to do things, know-how (procedures, processes, etc.); (2) knowledge on who are in the organization, for example whom to turn to with a certain question; (3) knowledge on the task (know-what) itself, task-content related for example facts, models, specifications, etc.; and (4) knowledge on why things are done (background knowledge)” (Bakker, Leenders, Gabbay, Kratzer, & Engelen, 2006). These categories of knowledge guide the behaviour of the person when one or more of the categories need to be used. By understanding the knowledge, the application of the available knowledge can be made easier (Gebreegziabher & Beshah, 2014).

There are two types of knowledge that individuals possess and can use, as shown in Figure 3. Explicit knowledge, which is objective and rational, and tacit, which is subjective, automatic and experimental knowledge. Tacit knowledge becomes explicit through externalization and explicit knowledge is shared

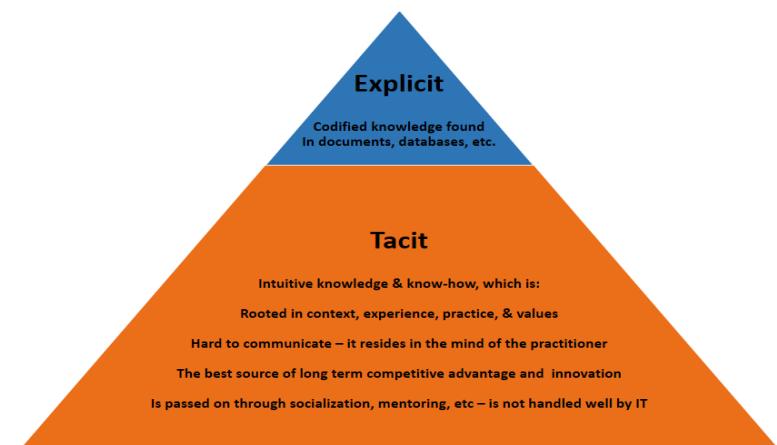


Figure 3 Tacit and explicit trust (Frost, 2013).

through socialization and externalization. Not all aspects of the knowledge in individuals' minds are likely to be made explicit, because some aspects are unconscious or seen as taken for granted. The less explicit the tacit knowledge is, the more difficult it is to assimilate the knowledge. Explicit knowledge does not require experience of the knowledge, tacit knowledge does require experience (Howells, 2002). Individuals use metaphors, analogies, demonstrations and stories to convey their tacit knowledge to others (Stewart, 1997). Tacit knowledge is often easier to remember and to talk about than explicit knowledge. Tacit knowledge can be divided in three groups, content, context and orientation knowledge, depending on the person and the situation one or more of these types may be used. Content knowledge is used to manage, in order to manage yourself, others or tasks. Context knowledge is used to look at the topic itself and to look at the task in which the topic is situated.

Moreover, orientation knowledge is about how workable an idea is and what the quality of an idea is (Wagner and Sternberg, 1987). Explicit knowledge can be reused to solve topics and projects and to reach the goal of the organization (Hansen, Nohria, & Tierney, 1999). Collective tacit knowledge is developed over time in interaction with the individuals in the group. Imitation of processes of products by others is harder to achieve when more tacit knowledge is diffused and shared. Their success does not only depend on their skills and explicit knowledge but on their intangible knowledge like experience, culture and a common vision (Leonard & Sensiper, 1998). If all individuals in an organization share their explicit and tacit knowledge, combining of all the available knowledge, creates new knowledge.

3.2. *Knowledge creation*

In four ways can knowledge be created (Hansen, Nohria, & Tierney, 1999). From tacit to tacit, learning by observing others. From explicit to explicit, using separate pieces of knowledge to combine them into a new piece of knowledge. From tacit to explicit, using individuals personal, not yet shared information, for the benefit of the organization or network and make it explicit. From explicit to tacit, interpret explicit knowledge for understanding and internalization by others ((Smith, 1997), (Hansen, Nohria, & Tierney, 1999)). This result in the creation of knowledge. By activating the usage of all types of knowledge, organizations provide socialization, externalization, combination and internalization. “Socialization refers to the exchange of tacit knowledge among members through the social interactions and shared experiences. Externalization refers to the translation of tacit knowledge into explicit knowledge through models, concepts, metaphors, analogies, stories etc... Combination refers to the generation of new explicit knowledge by combining and bundling together different bodies of explicit knowledge and internalization refers to the creation of new tacit knowledge from explicit knowledge. These conversion modes are highly interdependent and tangled” (Gebreegziabher & Beshah, 2014). The created knowledge cannot always directly be used. Not all the individuals who possess the knowledge are able or willing to use the created knowledge. Knowledge management can help these individuals by using the created knowledge (Hislop, 2009). During knowledge management, individuals are shown how to use, share, retain and create knowledge. Knowledge creation is done with the intention to share the knowledge in the organization among the members for the benefit of the organization and the members (Gebreegziabher & Beshah, 2014).

3.3. *Knowledge management*

Knowledge management is a process that is specified for acquiring, organizing and communicating tacit and explicit knowledge. Only that amount or type of information will be shared among the group, which is necessary for the completion of their task or goal. Individuals receive data and information from the environment and through interpretation, knowledge can be created. While using the most useful and relevant knowledge this can lead to a competitive advantage and increase the performance

of the organization, the network or the hub (Gebreegziabher & Beshah, 2014). Knowledge sharing is about sharing but also acquiring and providing information, knowledge and feedback about the project or goal to achieve among the group members (Cummings, 2004). With the use of knowledge sharing, individual knowledge is turned into organizational knowledge. Absorptive capacity is a requirement of individuals and organizations to share knowledge. Absorptive capacity is the ability to assimilate the transfer, the appropriate process to make the transfer happen and incentives for knowledge sharing and acquisition (Dyer & Nobeoka, 2000). The absorptive capacity of an organization is not the sum of the absorptive capacity of its individuals, but the acquisition and assimilation of information by an organization and to the organization's ability to exploit it. It does not only depend on the organization's connection with the external environment, but also depends on transfers of knowledge across and within teams of the organization (Cohen & Levinthal, 1990). When the organizational members have an extensive social network with their colleagues they perceive higher expectations for sharing knowledge than when these relations do not exist. In addition, a common goal improves the mutual understanding and the exchange of ideas (Chow & Chan, 2008). Because a common goal can only be achieved when there is cooperation and knowledge sharing. Without a common goal, the risk exists that one of the members only contributes for their own benefit (Chow & Chan, 2008). So, the common goal connects individuals and organizations and stimulates knowledge sharing. Knowledge is the foundation for the competitive advantage of the organization, but knowledge resides in human minds, which makes it not always easy to acquire (Bock, Zmud, Ki, & Lee, 2005). The members have the power in the organization to choose if they share their knowledge or not. This behaviour may encourage and facilitate knowledge sharing and learning for their own benefit and for the benefit of the organization (Bock, Zmud, Ki, & Lee, 2005). The organization can learn by the knowledge sharing, creating and exploiting of their members.

3.4. *Organizational learning*

By continually learning, adapting, upgrading and sharing information and knowledge, this can create a competitive advantage and may lead to a sustainable competitive advantage. Learning can happen by learning of the individuals and by investigating in new individuals (Simon, 1991). The customers and individuals of the organization are the foundation for innovative ideas, but also the network within the organization behaves can stimulate innovation. The main task of an organization is to create, store and apply knowledge. Learning can be done by organizations by collaborating with other organizations and by observing and importing the practices of other organizations. Learning in organizations can occur by consuming (discovering knowledge), creating (by collaborating and learning), connecting (collaborate with individuals who share interests and goals) and contributing knowledge (to the network or organization). These types of learning show ways in which individuals and groups possibly interact to achieve their common and individual goals. These types are most effective when the individuals are open to each other and trust each other. When there is trust and openness among the

individuals in an organization, it benefits organizational learning and knowledge sharing.

“Connections between individuals can be formed or strengthened when individuals identify that they share a common learning goal” (Milligan, Littlejohn, & Margaryan, 2014). So, trust and openness are important requirements for knowledge sharing between individuals. The achievement of the common goal is only possible when the members trust each other.

3.5. *Trust*

Trust is the mutual confidence that no member or party of the collaboration will exploit another's vulnerabilities. Trust can be achieved when there are commonly shared norms between the members of the organization. This is the case when there is a common goal in an organization or network. Moreover, trust can exist when someone believes that another one has knowledge, information and expertise about the common goal or project and the exchange partners have the mutual confidence that the others do not have significant vulnerabilities. There is a form of trust when there are contracts made or when the reputation of the partner can be harmed when one of the partners cannot be trusted. Trust in partners can be a competitive advantage when the achievement of trust does not bring any extra costs in the collaboration but only benefits the partner. In this case the partners need to have different skills and abilities (Barney & Hansen, 1994). Trust can help to reach collective goals, but trust itself is not a final goal. When there are trust-relationships, individuals are more willing to provide useful knowledge. In addition, when trust exists, individuals are more willing to listen and absorb each other's knowledge, trust has a positive influence on knowledge sharing (Bakker, Leenders, Gabbay, Kratzer, & Engelen, 2006).

3.6. *Knowledge sharing and collective decision-making*

Knowledge sharing occurs between individuals and is often a team process in which trust and openness is encouraged. Team members encourage each other in their contribution of ideas and information (Srivastava, Bartol, & Locke, 2006). The behaviour of the members represents a joint capability of executing certain behaviours and is necessary to attain a desired level of performance on specific tasks, like achieving a common goal ((Bandura, 1997), (Gully, Incalcaterra, Joshi, & Beaubien, 2002)). When members of a team are engaged in collective decision-making for achieving its common goal, there are more opportunities for team members to share knowledge (Locke, Alavi, & Wagner, 1997). The higher the amount of knowledge sharing in a team, the more it benefits the collective decision-making process (Srivastava, Bartol, & Locke, 2006). Because the members of the teams are encouraged to solve problems together for mutual benefits, they are provided with opportunities to share their knowledge during the collective decision-making process (Arnold, Arad, Rhoades, & Drasgow, 2000).

4. Collective decision-making

Decisions must be made when there is discrepancy between the current and the optimal situation. Decision-making requires an amount of information and knowledge about the subject. For the achievement of the aim of the top sector policy of the Dutch government, several parties are involved and they stimulate public-private collaboration. During collaboration, collective decisions are made. In this chapter the types of decisions, the importance of rationality and information symmetry and the collective decision-making process are explained.

4.1. Types of decisions

A decision is “the act or process of deciding, the act of or need for making up one’s mind or a judgement” (Dictionary, 2016). When a decision must be made, there is discrepancy between the current and the optimal situation. There is a gap. This situation needs a decision made in accordance with the guidelines of the network or the organization (Robbins & Judge, 2015). Thus, decisions will cause a particular action to achieve an individual a group or several goals. Decisions are not made by accident but some elements of the collective decision-making process can be non-conscious. That is the reason why individuals with different backgrounds, personal perspectives and knowledge can combine their information in order to achieve the most optimal solution and avoid as much as possible the non-conscious moments during the collective decision-making process.

Each decision has specific characteristics, which fits in a category of decisions. By understanding and evaluation decisions, there are five categories. These categories can help the decision maker in the process. While coming to a moment when a decision must be made, the situation can provide some information. This information can be used while looking at the five categories of decisions and then the type that is most in line with the situation can be chosen. The chosen type of decision provides background information about how to deal with the situation. This can make decision-making easier for the decision maker. In a situation in which there are several alternatives, it is hard to find the most optimal one. Moreover, the difficulty in hubs is that each member may have a different perspective.

The five categories are:

- Riskless versus risky options. Then are two options available, one option is that the outcome is known for sure and the second option is that the outcome is not known for sure and is uncertain. These types of categories need different approaches.
- Information-gathering decisions. In this type of decision-making first all the available information must be identified. Then the quality and the usefulness of the information must be assessed and eventually can be decided if the information can be acquired.
- Trade-off decisions. In this type of decision-making, several conflicting objectives need to be accomplished at once. The importance of the objectives need to be weighed.

- One-time decisions versus repeated decisions. These decisions need to be separated in decisions for the long run and which need to be made repeatedly and decisions which only must be made once. It all depends on the decision context and their consequences.
- Sequential decisions. Series of decision are often linked. Therefore, once one decision is made, it will affect the next decision and so on ((Clemen & Gregory, 1995), (Yates, 2003)).

Sometimes decisions are complex or difficult to make, in those circumstances some kind of lead, like the category of the decision, is very welcome. Members of hubs are confronted with all types of decisions during the collective decision-making process. These different types of decisions are not necessarily being made simultaneously. It depends on the stage in the collective decision-making process which type of decision is used. Not always is the outcome of a decision known for sure. This leads to uncertainty and risk. Also, are in hubs information-gathering decisions to be made. There are also sequential decisions in hubs because the themes hubs are dealing with are often interconnected. When one decision is made, it may affect another decision. Rationality can help the decision makers to deal with several alternatives and types of decisions. Rationality can be used to make the collective decision-making process less complex.

4.2. *Rationality*

“Rationality is the possession of reason” (dictionary, 2016). Rationality has two components, the behavioural component; at this component, the best alternative from a set of mutually exclusive alternatives will be chosen. Which makes it possible to choose out of several options. The latent component shows preferences (Tversky & Kahneman, 1986). This makes it possible to make an order in the alternatives. When the collective decision makers possess rationality, they possess common sense, which is helpful to make decisions (Tversky & Kahneman, 1974).

There are six axioms of expected utility that define a rational decision maker. Expected utility is about decision makers who have preferences with regard to choices that have uncertain outcomes (Neumann & Morgenstern, 2007). When all the following axioms are satisfied, the decision maker can make a rational decision. Moreover, it is necessary to see every decision separately from other decisions.

- I) “The first axiom is complete ordering. The decision makers can compare any two alternatives.
- II) At the transitivity axiom. If the decision makers prefer A to B and B to C, then A is preferred to C by the decision makers.
- III) The continuity axiom describes that the decision makers are indifferent between the best and the worst outcome.
- IV) At the substitution axiom is $\underline{A}_i$ substitutable for A_i for the decision makers.
- V) The unequal probabilities axiom is an alternative preferred to another alternative by the decision makers.

VI) There is the reduction of compound lotteries axiom. Decision makers are indifferent between alternatives over the outcomes” (Neumann & Morgenstern, 2007).

So, complete ordering, transitivity, continuity, substitution, unequal probabilities and the reduction of compound lotteries are all satisfied when the decision makers are rational. This is the case in collective decision-making in an optimal situation. When there is an optimal situation in which the decision makers can behave rational, this can lead to a higher amount of quality of the collective decision-making process. Also, the difficulty of the decision is of influence in the collective decision-making process. To cope with difficult decisions, decision makers use heuristics. Heuristics are mental processes that allows decision makers to decide quickly and efficiently. The heuristics shorten the time to make a decision by simplifying the problem. Heuristics can lead to cognitive biases, systematic errors in thinking which effect the decisions individuals make (About psychology, 2016). There are three types of heuristics: the availability heuristic, the representativeness heuristic and anchoring and adjustment. “In case of the availability heuristic, decision makers assess the probability of events by how easily these events can be recalled. At the representativeness heuristic, decision makers must decide if an object or person belongs to a particular category and if an event originates from a process. For the anchoring and adjustment heuristic, individuals make estimates by starting from an initial value and adjusting from it to get their final estimate” (Tversky & Kahneman, 1974). The impact of anchoring and adjustment can be reduced by viewing problems from different perspectives and be open-minded. Also by doing this in isolation because, other individuals may influence the current ideas with their ideas (Hammond, Keeney, & Raiffa, 1998). When making decisions, overconfidence can occur. By considering the lowest and highest values, the effects of overconfidence can be reduced. In addition, prudency can occur, to avoid this, always make honest estimations and explain the estimations to everyone involved (Hammond, Keeney, & Raiffa, 1998). Heuristics can help the collective decision makers shorten the collective decision-making process. The collective decision makers must be aware that they are not deciding too quickly or do not look at the whole problem. Heuristics can be a helpful too to simplify the decision-making, but can also harm the collective decision-making when not every aspect of the problem is assessed. It is important that all the available information is considered and that all the members involved agree on the collective decision. This makes information symmetry while making a collective decision an important aspect.

4.3. *Information symmetry*

To make collective decisions and stimulate trust, information needs to be equally dispersed in teams. Therefore, there needs to be information symmetry among the members. This can be done in meetings and working groups. Meetings and the formation of working groups primarily facilitate information sharing among the members (Dyer & Nobeoka, 2000).

The members need to have information about every aspect of the collective decision-making context. The collective decision-making context involves among other things the obliged individuals, the budget, the time and the necessary resources. It is impossible to start the process without this information (Aarikka-Stenroos & Jaakkola, 2012). Information asymmetry among the collective decision makers may occur due to the lack of knowledge. However, there is often an unequal relationship between the collective decision makers. Collective decision makers often face different and conflicting opinions (Løwendahl, 2005). Not always is the information that individuals consist explicit, individuals consist also tacit knowledge which cannot be transferred easily. When there is mistrust or no consensus among the collective decision makers, the knowledge will not be easily transferred, then the tacit knowledge remains tacit (Yan & Pei, 2011). The collective decision maker will not be as open and receptive to new ideas, so the effectiveness of the collaboration will be reduced. The collective decision makers who show this kind of behaviour need to trust each other be open and share their information and knowledge to achieve their common goal. Information sharing among the collective decision makers need to be promoted during the collective decision-making process, until every collective decision maker acquires the same amount of information (Rhoads & Shogren, 2003). The information will be openly shared among the members when there are assurances provided to the members that their proprietary knowledge will be protected and when these members are encouraged to contribute valuable knowledge to the collective good (Dyer & Nobeoka, 2000). Nevertheless, the decision makers need to be open for new insights, information and thoughts, they must be conscious of bounded awareness.

When making decisions, bounded awareness is an important phenomenon. Bounded awareness takes place “when cognitive blinders prevent a person from seeing, seeking, using, or sharing highly relevant, easily accessible, and readily perceivable information during the decision-making process” (Bazerman & Chugh, 2006). Bounded awareness can happen in four ways. Individuals can fail to see key information necessary for making a sound decision. Furthermore, individuals can also fail to use information they have, but not realize that the information is relevant. Alternatively, individuals can choose not to use information because they want a particular outcome, which does not match with the information (yet), available. Lastly, it is possible that individuals fail to share information with others in the process (Bazerman & Chugh, 2006). To overcome these failures there is a need to increase awareness. This can be done by seeing information (know what you are looking for), seeking information (highlight important contexts), using information (assume that the information you need is available) and by sharing information (trigger sharing process) (Bazerman & Chugh, 2006). Disagreement between individuals and not understanding why something happens or needs to happen are some of the most common obstacles when making collective decisions (Mankins & Steele, 2006). It is important that the members of hubs are aware of the potential bounded awareness in order to prevent members failing to see information or failing to use the necessary information. When this

failure happens, consequently the optimal situation will not be reached. This may affect the quality of the collective decision-making process (Rogers & Blenko, 2006). However, the optimal situation can only be reached when the members are able to achieve consensus about the collective decision. The members need to agree on the decision and cannot have any arguments against the collective decision, otherwise the collective decision cannot be made based on consensus.

4.4. *Consensus collective decision-making*

The amount of information available is of concern while making collective decisions. If all possible information about the topic to be decided upon is available, there is less uncertainty and risk compared to when not all information is available. Not all-available information is directly necessary to make a decision, only the information that helps identify the alternatives is useful. The amount of risk and uncertainty influences the decision-making process and the final outcome (Tversky & Kahneman, 1974). When making collective decisions, there must be a consensus among the members. Consensus is agreement on a decision by all members. Consensus does not mean that every member is satisfied with the decision, but the decision must be acceptable enough (Gastil, 1993). Each member shares his or her available information and knowledge, but also their ideas and feeling with the other members. Each member also needs to listen to the other members. In case of consensus, there is no dictator in the group. Therefore, a minority viewpoint is important because the minority needs also to be listened to. An alternative can be weighted with the help from the members' opinion and an alternative can be chosen for implementation. "Making decisions in a team enhances the likelihood that these decisions will not only incorporate multiple perspectives but that new levels of understanding will develop. In reality though, the higher quality team decision is often made at the expense of speed, as team decision-making cycles are generally shown to be longer than those of individual decision makers" (Kline, 2005). Members in a team or a group supplement each other with their respective qualities, complementing the group and allocate others to learn. Together they can start a movement of change, depending on the themes they are interested in and the members involved. Nevertheless, they need to agree on consensus decision-making before some movement can be started.

Consensus collective decision-making has some advantages. With the use of consensus, there is more effective implementation of collective decisions. The members are in most cases more actively participating when their thoughts are considered. Also, is there a connection build among the members. Because the members need to be a unity before they can agree on consensus about collective decisions. Moreover, these members share their wisdom they can generate higher quality decisions (Bressen, 2012). Topics may arise during the collective decision-making process. These topics can be discussed in separate gatherings without having any pressure to make an immediate decision. When there are topics that are more complex and proposals, working groups are formed in order to take care of that topic. "This leads to an iterative back-and-forth between plenary and the

working group where ideas and drafts are brought forth, receive feedback, are revised and brought forth again” (Bressen, 2012). In the collective decision-making process, there may be some members who are blocking the consensus collective decision. These members are dealt with the use of cultural and procedural methods (Bressen, 2012). Consensus decision-making is closely related to information symmetry and rationality. In an optimal situation is consensus easier to reach when the collective decision makers have the same amount of information and are able to choose between the ranges of alternatives and show a preference during the collective decision-making process.

4.5. *Collective decision-making process*

The process of deciding something that is important for a group of individuals is collective decision-making (Hon-Tat, et al., 2011). Everything that individuals do, conscious and unconscious is the result of decision-making (Saaty, 2008). However, these decisions can only be made by understanding occurrences with the help of the available information (Saaty, 2008). The decision situation has three categories, the problem that must be solved like the structure or the availability of information, the decision-environment like time constraints and organizational culture and the decision maker who must solve the problem like its attitude (Wierenga, Bruggen, & Staelin, 1999). Nevertheless, the decision makers do not have a predetermined and explicit set of decision-making steps during the collective decision-making process (Mintzberg, Raisinghani, & Theoret, 1976). This makes collective decision-making and the collective decision-making process a difficult thing to do and it will easily end in making a bad decision (Finkelstein, Trogon, Cohen, & Dietz, 2009).

Information and data about concepts are the building blocks of knowledge and knowledge can be used to generate information. Information and knowledge are interrelated; the possession of knowledge shape the type of information to collect and the way the analysis of this information happens. This process has influence on the personal interpretation of the knowledge and may differ the results (Hislop, 2009). Because knowledge is made and interpreted in individuals’ minds the sharing of this knowledge is done through interaction and communication between individuals. When individuals are feeling valued, they are more likely to share more and sooner knowledge then when this is not the case. “The collective decision makers should acquire a thorough and correct understanding of the problem. In addition, they need to recognise the requirements that the decision must satisfy to be judged acceptable. Moreover, they should develop realistic and eligible decision alternatives and evaluate their possible positive and negative consequences. Also, should the collective decision makers choose the alternative with the best trade-off of advantages and disadvantages” (Kolbe & Boos, 2009). This collective decision-making process helps to make collective decision-making easier by providing the guidelines for the decision makers. The process consists of the following phases: - assessing the problem, - collecting and verifying information, - identifying alternatives, - anticipating consequences of decisions, - making the choice using sound and logical judgement based on available information, - informing others of decision and rationale and -evaluating decision (Bohanec, 2003).

Collective decisions seem to evolve gradually in interaction with the members of the collective decision-making process, available information and the environment. At every step information is acquired, alternatives identified and actions are taken (University of Massachusetts Dartmouth, 2016). There are several targets because of the several types of individuals involved. And information is an important factor, “information is negotiated knowledge” (Bruijn & Heuvelhof, 1999). The influence information has on a decision is important for the process of the hub. With the help of brainstorming can the collective decision-making process be started in order to let the decision makers acquire a complete understanding of the issue. While brainstorming, which is an unstructured process, the decision makers can suggest ideas of courses of action. And when there are no ideas left, and all potential alternatives are generated, the process of evaluating the ideas suggested begins and the common goal will be started to achieve. An environment need to be created in which all the decision makers feel free to speak freely (Barnett, 2016). While creating an environment in which the members of hubs share their information and knowledge with each other, the process of collective decision-making is easier to follow and achieve a wanted result. When not every aspect is shared among the members, the possibility exist that the most optimal situation cannot be reached.

4.6. *Collective decision-making, knowledge sharing and collaborative structure*

Collective decision-making in a network relies upon the access to relevant knowledge and the ability of the members of the collective decision-making process to process it (Michailova & Husted, 2004). Knowledge sharing and learning within a network by its members, provide opportunities for mutual learning and the stimulation of knowledge sharing, knowledge creation and knowledge contribution to the network ((Kogut & Zander, 1992), (Tsai & Ghoshal, 1998), (Hippel, 1994), (Huber, 1991)). “Because of their differential external access and internal capacity, networks differ in their abilities to leverage and benefit from knowledge developed by other units” (Rulke & Galaskiewicz, 2000). Knowledge sharing among different teams and individuals occur in a shared social context in which different individuals and teams are linked to one another (Tsai, 2001). When more members of a team share knowledge within the team, this will facilitate collective decision-making (Rulke & Galaskiewicz, 2000). Shared knowledge improves group performance when knowledge is held by multiple members of the group and this will help during the collective decision-making. Because shared knowledge enables members of a team in a network to pool information more effectively and make better group decisions (Gruenfeld, Mannix, Williams, & Neale, 1996). This results in knowledge sharing which influences collective decision-making in public-private collaboration.

5. Theoretical framework

The stimulation for research, development, innovation and a sustainable economy by the Dutch government leads to a new way of public-private collaborating. The traditional ways of collaborating are superseded. So, new, modern ways are demanded for. The modern way need to consist several parties with different backgrounds, multiple value creation, knowledge sharing and collective decision-making to fulfil the demands of the environment, the government and residents.

5.1. Knowledge sharing and networks

Knowledge sharing contains besides the sharing of knowledge also contributing, collecting and learning knowledge (Hooff & Ridder, 2004). The organization, the network, the group and individuals can benefit from knowledge sharing (Chow & Chan, 2008). The social interaction and informal relationships in networks creates opportunities to share ideas, thoughts and knowledge (Luo & Bhattacharya, 2006). However, there needs trust among the members of the network to share knowledge (Moorman, Zaltman, & Deshpande, 1992). Sharing goals and trust can reduce conflict in a group and increase the willingness of sharing knowledge in a group. When there is no trust or even rivalry this leads to individuals guarding their knowledge (Ghobadi & D'Ambra, 2012). And this results in less knowledge sharing. Stimulating knowledge leads to benefits for both the individual and the network, so the individuals need to be motivated to share their knowledge (Husted & Michailova, 2002). This stimulation for knowledge sharing is influenced by environmental factors, like cultural characteristics, individual characteristics and organizational factors (Wang & Noe, 2010), (Cabrera & Cabrera, 2005)). In case of knowledge sharing between the members of a network, it stimulates mutual learning, which result in improvement of organizational performance.

In a network are different personalities, groups and organizations linked and influence the position of the network. The position of the network can cause different opportunities to share knowledge.

Because the environment, the organization and the composition of teams and collaborations changes more rapidly nowadays, there is less time and little opportunity to connect within a network and build strong ties ((Tsai, 2002), (Wang & Noe, 2010)). But these ties remain important for mutual benefits.

These ties are important for knowledge intensive organizations and networks because they can stay ahead of competition by having access to members with new and nonredundant knowledge. The members, which have many knowledge sharing opportunities with other members and networks, are centrally positioned in the network, and not isolated from other members or from the decision-making process. Therefore, the position of the network in the environment and the position of the member in the network influence the amount of knowledge sharing. The members that have intrinsic motivation to share knowledge because of their common goal are more willing to learn from and with other members. When a member possesses a diversity of knowledge, it is better able to absorb new knowledge because it enhances the chance that the new knowledge is related in some way to what is already known. The more diverse and extensive the knowledge is that the members possess, the

greater the likelihood that knowledge sharing occur. These members are also better in understanding how the knowledge that they possess, but also the knowledge that they do not possess is valuable in there and other contexts. These members can help the individuals that acquire knowledge to make sense of the knowledge (Reinholt, Pedersen, & Foss, 2011). This process can be seen in Figure 4.

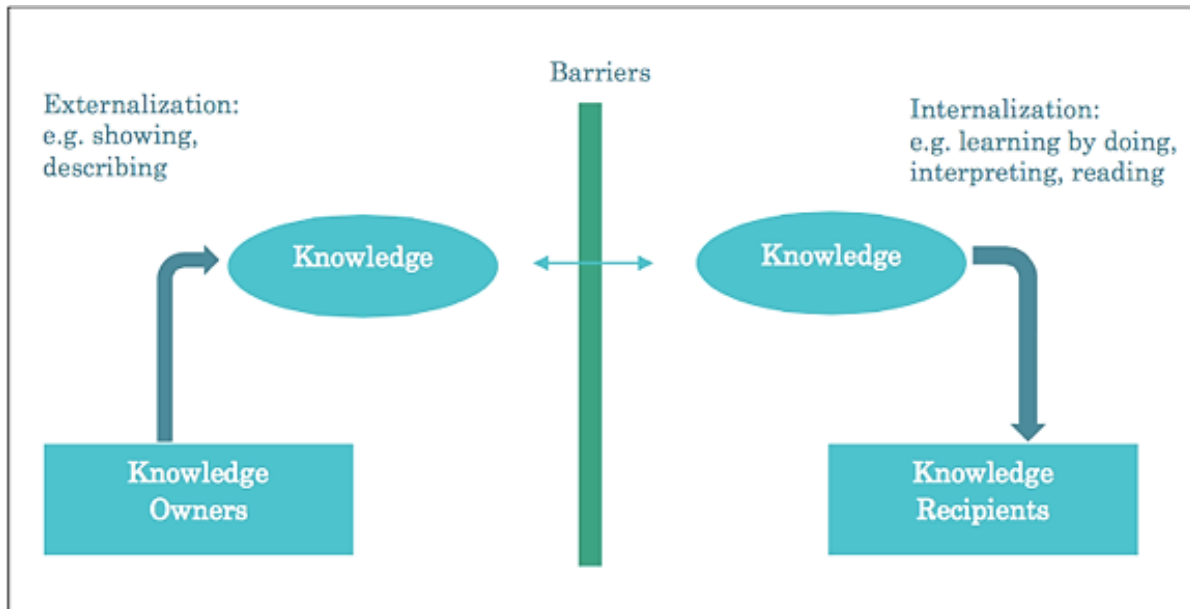


Figure 4 Knowledge sharing (Hendriks, 1999).

5.2. Collective decision-making and networks

Collective decision-making starts with the notice, as previously mentioned, that there is a discrepancy between the current and the optimal situation. In addition, the optimal situation is desired and decisions and knowledge must be made to reach that situation. During collaboration between individuals and organizations in networks, uncertainty can be reduced and knowledge can be shared to make the collective decision-making process of the network less complex (Kijkuit & Ende, 2007). During a collective decision-making process, decisions are not made by the individual but by a group of individuals who have different backgrounds, interests and information but are connected in a network (Knippenberg, Dreu, & Homan, 2004). These different backgrounds, interests and information create diversity. “Diversity may introduce differences in knowledge, expertise, and perspectives that may help work groups reach higher quality and more creative and innovative outcomes” (Knippenberg & Schippers, 2007). However, this diversity needs to be stimulated by the network, not only for the benefit of the individual but also the network. Conflicting interests in collective organising can influence the attitude of the individuals involved. To avoid this, it is important while collaborating that the individuals are likeminded with the same interests and goals, but do have different backgrounds and knowledge to rely on. In networks, the decision makers follow the collective decision-making process (Bohanec, 2003). The steps of the collective decision process guide the decision makers and follow the structure of the network. Because the structure of the

network and the process of decision-making is prescribed, all the steps are known in advance. This reduces uncertainty in the process which can lead to a preferred outcome, but it also reduces innovation and outside the box thinking (Bohanec, 2003).

5.3. *Knowledge sharing, collective decision-making and networks*

For mutual benefits are parties forced to cooperate. Organizations learn from each other and benefit from the new developed knowledge by the organizations and individuals while collaborating in a network. Through knowledge sharing are the members of a network able to contribute knowledge and stimulate innovation for the benefit of the competitive advantage of the organization. The collaborative structure provides possibilities to explore and exploit, which stimulates knowledge sharing. Also, when a collaborative structure stimulates trust during a collaboration, it encourages knowledge sharing (Wang & Noe, 2010). An environment in which new ideas are encouraged which is focused on learning from failure, stimulates knowledge sharing (Taylor & Wright, 2004). Knowledge sharing is stimulated by a less centralized organizational structure, informal meetings and open workspace (Wang & Noe, 2010). Equality among the members of a network and the acknowledgement of a members' expertise stimulates knowledge sharing (Thomas-Hunt, Ogden, & Neale, 2003). When the achievement goals of the organizations of a network require complex decision-making, the decision makers need to have access to each other's knowledge and must be willing, able and motivated to apply that knowledge during the decision-making process (Kogut & Zander, 1992). "Goal setting can be an important means of providing the necessary motivation to actively seek out and use available knowledge to achieve high levels of performance" (Quigley, Tesluk, Locke, & Bartol, 2007). The performance of a network is dictated by the collective decision-making process. In the collective decision-making process is the knowledge shared, used for the benefits of the network.

5.4. *The effect of knowledge sharing on the collective decision-making process in hubs*

Because of the shift toward a global business environment in Europe, with higher research and development costs, reduced product life cycles and a greater amount of resources and knowledge required for innovation, organizations and networks have been forced to rethink the scope of their organizational boundaries (Gulati, 1998, (Gulati, 1995)). This leads to new types of intraorganizational networks, because the current and traditional ways of collaborating are not able to deal with the current difficulties (Lawson, Petersen, Cousins, & Handfield, 2009). Especially in the Netherlands are new types of public-private collaboration searched for. As shown in chapter 1, Horizon2020 and the top sector policy of the Dutch government asked for new types of public-private collaboration to replace the traditional ones. The goal of the public-private collaboration is acquiring a top five position in the best economies of the world for the Netherlands. This position aims the Dutch government to achieve by research, development, innovation and sustainability (TNO, 2014). So, that

the Dutch economy remain competitive viable. The achievement of the goals is done with the help of knowledge sharing and collective decision-making. This can be done in working groups, which are allocated towards a specific theme. The members of the working group need to encourage themselves and the other members to acquire, share and create knowledge as much as possible (Lawson, Petersen, Cousins, & Handfield, 2009).

Hubs, in comparison to networks and organizations are the type of public-private collaboration that can achieve the goals of the Dutch top sector policy. Networks and organizations are mostly focused on economic value creation instead of multiple value creation, which is the focus of hubs. With multiple value creation, hubs are creating besides economic value also social and ecological value. The broad focus of hubs makes it possible to look at all the aspects of the top sector policy instead of being focused on only one aspect. The broad focus of hubs is stimulated by the common goal of the members of the hub. These members have an intrinsic motivation to share knowledge, but also to make collective decisions and achieve the goals of the hub besides their personal goals. For these members of a hub there is no need for an extrinsic motivation like an economic motivation in contrast to the motivation of a member of a network. Moreover, members of a hub do not behave according to an organizational structure or to reach specific targets like networks or organizations, they react on occurrences in the environment (Jonker & Faber, 2015). In many cases behaviour and guidance in hubs is based on intuition. The decision makers combine rationality with intuition to deal with the unstable and uncertain environment (Elbanna, 2006). Members of a hub can respond faster to occurrences in the environment because they do not have to ask permission, or must look if the project has any benefits for the network. Every topic that the members of the hub feel that is of value is valuable and can benefit the hub. All the topics that the Dutch government is trying to deal with, can be dealt with in hubs. Hubs are the only type of public-private collaboration who are able to manage multiple value creation and the achievement of a common goal with individuals from different backgrounds. These individuals have individual goals but they are connected because of their common goal.

As previously explained, the traditional view of public-private collaboration is mainly focused on networks and economic value creation. The traditional view does not fulfil the current demand any more. It lacks the aspect of quality of life which contains sustainability. The current demand for a new, modern view, which is, focused on several areas besides economic value creation, needs hubs instead of networks. Only hubs can fulfil this demand because of the way it functions and achieve its goals. In Table 3 (p. 32) can be found what the differences are between what traditional structures provide and what nowadays is necessary and what hubs provide.

Traditional view (network)	Modern view (hub)
Focused on working alone for achieving goals and during a collaboration not sharing all the available information, only the required	Knowledge sharing, acquisition and creation as prerequisite for collaborative innovation, research and development
Economy	Sustainability
Top-down implementation	Top-down and bottom-up implementation
Economic value creation	Multiple value creation
(Non) profit organizations & networks involved	Dutch residents involved in achievement of goal besides public and private organizations
Individual goal	Common goal
Following a predefined structure, externally determined	Without a structure, reacting on occurrences and possibilities, evolving and internally negotiated
Hierarchical structure	Non-hierarchical structure
Formalized and delegated membership	Voluntary membership
Using tested theories, knowledge and rationality	Using intuition and rationality

Table 3 Comparison traditional and modern view (Hislop, 2009).

5.5. Propositions

Networks are a superseded type of public-private collaboration for the current demands of the Dutch government. Therefore, hubs are the new way of public-private collaboration, which encourages reaching the demand of the Dutch government (Jonker & Faber, 2015). The change in the demanded type of public-private collaboration leads to a change in the way, especially the ones involved in the Dutch top sector, organizations, networks and residents behave and influence the way they behave, the quality of life, sustainability and the economy (TNO, 2014). Every party involved in the top sector policy need to be aware of the necessity of change. If one of these parties is not aware or does not want to change its way of doing things, the remaining parties will only have minor impact on the change. Moreover, to change these aspects, it needs joint efforts. By encouraging these joint efforts, it needs a structure for collaboration. In the collective decision-making process, to achieve the common goal, it is important that the members of the hub are early and extensive involved in the design and development process. This early and extensive involvement leads to improvements in the quality, cost, and development (Lawson, Petersen, Cousins, & Handfield, 2009). Successful development is dependent on the ability of the members of the working group to manage, maintain, and create knowledge (Cohen & Levinthal, 1990). These working groups, because of the involvement of members from different parties require more extensive coordination and intensive management than traditional networks for the development. Between members of working groups need trust and openness to be promoted (Bstieler, 2006). Trust between parties and members of a working group can be stimulated by socialization. Socialization is encouraged by communication, and personal and open

communication increases the richness of the communication (Daft & Lengel, 1986). Meetings, workshops and a shared common goal connect individuals across parties (Takeishi, 2001). These types of interaction “create a network of interdependent social exchanges and increasing the level of mutual trust and respect across the development teams” (Lawson, Petersen, Cousins, & Handfield, 2009).

In hubs are members involved with different backgrounds and different individual goals besides their common goal. Because of these characteristics, the members possess individual knowledge. The members can share their knowledge in the hub for mutual benefits. Their common goal can be achieved by the collective decision-making process. The collective decision-making process relies on the amount of shared knowledge in hubs. Every member contributes knowledge to the hub when there is trust and openness. The diverse range of knowledge results is a full array of available information to optimize the collective decision-making process. When there is more information available for the collective decision-making process, the most optimal alternative will be more likely be chosen.

Proposition 1: *The collective decision-making process in hubs is positively impacted by the amount of knowledge sharing.*

Trust and open communication leads to more frequent, informal and higher quality information exchanges within the working group and with the members of the working group. When a common language is provided and a shared understanding is created, it facilitates the transfer of both tacit and explicit knowledge between the members of a team (Davenport & Prusak, 1998). Sharing a common goal influences the amount of knowledge sharing among members of a hub. These members are more willing to share knowledge for the benefit of the hub but also for their individual benefit. Knowledge sharing can result in knowledge acquisition, creation and learning. This positively influences the collective decision-making process.

Proposition 2: *The amount of knowledge sharing is positively impacted by the common goal shared by the members of the collective decision-making process.*

With knowledge sharing different perspectives and insights can help the group in problem solving, research and development and innovation ((Takeishi, 2001), (Chung, Singh, & Lee., 2000)). The development in the working group is getting more effective when learning and knowledge from previous developments can be used into future developments (Marsh & Stock, 2006). This has the highest effectiveness when members of the group do not possess the same background and the same information, experiences and thoughts. Members of a team overvalue the group members and undervalue the non-group members. They value their own knowledge more than knowledge of others. They restrict the inflow of new ideas, thoughts, information and knowledge and reinforce commonly held ideas and information. Individuals who interact with individuals from different areas with

different backgrounds assimilate more innovative knowledge than when individuals only interact with individuals in the same group. These individuals develop then a common set of terminologies. When individuals know each other already before they enter a group, they are more likely to channel their time, energy, information and knowledge towards that group than other individuals outside the group are. So, if members in a team are more connected to each other they are not focused on acquiring information outside the group.

Proposition 3: *The amount of congruence in background of the members negatively affects the amount of knowledge sharing and the collective decision-making process.*

6. Methodology

The research objective is constructed with the information from literature combined with the research gap. The research gap is used as a foundation for the questionnaire and the questionnaire is used as the foundation for the interview questions and the group sessions. The combination of the questionnaire and interviews give a thorough insight in knowledge sharing and collective decision-making in hubs.

6.1. Research approach

This paper starts with the analysis of available literature to acquire information about knowledge sharing, collective decision-making and hubs. With the help of several websites, the visitation of the congress 'Make Cense' and the participation in a workshop about hubs the field is explored. The exploration of the field helped in gaining a familiarity with the topic. Familiarization with the topic is important in doing this research. It helps in getting an idea of how the members of hubs behave to make collective decisions.

Mixed methods research is used because this approach can draw upon the strengths and perspectives of quantitative and qualitative research. The similarities and differences between the aspects of collective decision-making in hubs can be highlighted with the help of mixed methods. Mixed methods research help in investigating phenomena that are difficult to measure with only qualitative or quantitative research (Curry, Nembhard, & Bradley, 2009). Quantitative research is not suited to investigate perceptions and behaviour but it is focused on numerical outcomes like estimates and frequencies. Qualitative research aims to understand complex social processes like the behaviour and the perception of the participants. With the use of both research methods, a more complete array of data can be acquired and both research methods can complement each other.

If only qualitative or quantitative researched will be used in this paper, it will be not thorough enough to capture every part of the knowledge sharing and the collective decision-making process in hubs.

Hubs are evolving in practice and knowledge sharing and decision-making occurs in practice; this guides the focus of this research on practice. Also, the literature is about hubs, knowledge sharing and collective decision-making in practice. Even the literature about research methods happens in practice so this shows that mixed methods is the best research method to use in this research. In Table 4 (p. 36) (D'Cruz & Jones, 2008) the characteristics and the differences of qualitative and quantitative research are shown. Qualitative research is a subjective research method and quantitative research is an objective research method.

<i>Aspects of research</i>	Quantitative research	Qualitative research
<i>Role of research</i>	Preparatory	Means to exploration of actors' interpretation
<i>Relationship between researcher and subject</i>	Distant	Close
<i>Researcher's stance in relation to subject</i>	Outsider	Insider
<i>Relationship between theory/concepts and research</i>	Confirmation	Emergent
<i>Research strategy</i>	Structured	Unstructured
<i>Scope of findings</i>	Generalizable	Unique
<i>Image of social reality</i>	Static and external to actor	Processual and socially constructed by actor
<i>Nature of data</i>	Hard, reliable	Rich, deep

Table 4 Differences qualitative and quantitative research (D'Cruz & Jones, 2008).

The quantitative research in this paper is done with the use of questionnaires; the questionnaire is the same for every participant. The reason why the questionnaire is the same for every participant is that the filled in questionnaires can be compared among the participants. The comparison can show the amount of correspondence between the hubs. When several participants of the hubs choose the same answers in the questionnaire, it is a possibility that it is a characteristic of hubs and that all the hubs have these characteristics. It can also provide a familiarization in when and how knowledge is shared and how the collective decision-making process go in hubs. When there are characteristics that overlap, these can be objectively compared (Inview Veldwerk BV, 2016). The questionnaire is used to acquire familiarization about the concepts, because it is according to Table 2 a preparation for the qualitative research (D'Cruz & Jones, 2008). In the questionnaire is the researcher distant from the subject and behaves like an outsider (Graauw, 2016), (Inview Veldwerk BV, 2016), (D'Cruz & Jones, 2008). Therefore, the participants can only show their view and opinion and this cannot be directly measured and tested by an outsider.

Qualitative research is used to investigate new problems and opportunities. The in-depth individual interviews are used to explore and understand the underlying reasons, experiences, perceptions and motivations from the members involved in the hub. The researcher is close to the members and behaves like an insider. The results of the interviews are unique and give a rich insight in the behaviour of the members of the hubs. The in-depth individual interviews are most of the time unstructured with open-ended questions. These interviews are unstructured with open-ended questions because it gives the interviewee the room to talk about subjects that the interviewer never thought of.

The members involved may have different reasons to enter a hub and to participate in the hub. That reason may guide their behaviour, amount of knowledge sharing and the collective decision-making process in the hub. By understanding the members, it may lead to the answer why hubs work and behave in the way they do (Curry, Nembhard, & Bradley, 2009).

The focus groups of the group sessions are guided discussions that are arranged after the individual in-depth interviews have taken place. The focus groups consist of members who share a common characteristic, namely being a collective decision maker in a hub. These group sessions aim to generate unique insights into understanding the shared experiences and to uncover factors that influence the behaviour and opinions of the members (Curry, Nembhard, & Bradley, 2009). The group sessions take an hour. The group is observed during the reconstruction. In addition, the collective decision makers of a hub provide a poster in that hour. On that poster is the collective decision-making process of one topic of their hub reconstructed and showed when and how knowledge is shared.

6.2. *Research ethics*

In this paper the privacy and dignity of the participants is protected. The participants were free to involve or exclude themselves from the research. The participants were free to decide if they wanted to fill in the questionnaires anonymously or not. They were free to decide if they were interested in helping in further research by agreeing to an interview. Additionally, the participants decided if they wanted to be informed with the results of the research. The results are treated confidentially; the information acquired is not used for other purposes than for research of the Radboud University Nijmegen (D'Cruz & Jones, 2008). Before the interviews are taken, the interviewee is asked if recording the interview is a problem. The interviewee is notified that the interview will be elaborated and within 24 hours sent to the interviewee for possible corrections. After the possible corrections, the interview will only be used in this research and not spread to third parties without permission of the interviewee. The results of the group sessions are dispersed among the members. Moreover, the results of the research are shared with the involved participants.

The credibility of this study is determined by the extent to which the findings cohere what is already known from literature and practice (Curry, Nembhard, & Bradley, 2009). The transferability of this paper is determined by the extent to which the findings can be generalized and applicate to other settings with the help of the summaries of the interviews and the results of the questionnaire from this paper (Curry, Nembhard, & Bradley, 2009).

In this paper, there are several limitations, like the newness and fluidness of the concept hubs, which makes it hard to acquire a clear overview of how many hubs, exist in the Netherlands. Also, is the time pressure of concern in this paper, which can also make it hard to find all the hubs in the Netherlands. Besides finding the hubs, they need to be questioned about the research question. With that in mind, can this paper being used for further research as an orientation on the field.

7. Implementation and the analysis of the methodology

This chapter describes the way data is acquired for the questionnaire, the in-depth interviews and the group sessions.

7.1. Procedure data collection

The questions for the questionnaire are made in collaboration with drs. M.A.A. Kamm and based on the literature review. The results from the questionnaire guides the questions for the individual in-depth interviews and the idea for the group sessions.

In this paper are the concepts used in a certain way to understand the members of the hubs. As mentioned are knowledge sharing and collective decision-making related. The concepts that describe knowledge sharing and collective decision-making are related as well. If there is one aspect missing in a hub the possibility exist that knowledge sharing and/or collective decision-making is absent in the hub. In this paper are the concepts knowledge sharing and collective decision-making measured by the aspects learned from the literature review.

In addition, these aspects are used in the following manner:

Knowledge sharing

Knowledge creation: the continuous transfer, combination, use and conversion of the different types of available knowledge.

Knowledge management: the process of creating, sharing, using and managing the available knowledge and information.

Organizational learning: the process of creating, sharing, using, retaining and transferring the available knowledge within an organization.

Trust: the believe in reliability, truth or ability of.

Collective decision-making

Rationality: the way the members of the hub can choose an alternative from a range of alternatives and are able to show a preference.

Information symmetry: the extent to which all the decision makers have the access to the information and knowledge available. Moreover, if the available information and knowledge is freely dispersed. This is closely related to knowledge sharing. With the use of knowledge sharing information asymmetry can be changed to information symmetry.

Consensus decision-making: the way collective decisions are made with acquiescence of every decision maker. This does not mean that every decision maker agrees on the collective decision, but accepts the collective decision and does not have any arguments against the collective decision.

Collective decision-making process: individuals collectively decide from the range of alternatives available, following the steps from Bohanec (Bohanec, 2003).

Before each participant can start with the questionnaire, the definition of a hub is explained. The definition is given; because every participant of the questionnaire must have the same amount of information in this investigation, otherwise it would not be possible to compare the answers among the participants. It is important for the investigation that the questionnaires can be compared because this research aims to tighten the research gap about knowledge sharing and collective decision-making in hubs. The participants of the questionnaire are members of hubs. Not always are members of hubs aware that they behave in a hub in advance but throughout the questionnaire they find out they do. The members were reached in several ways during June and July 2016. The questionnaire was spread among the participants of the 'Make Cense' conference at the seventh of June 2016, the questionnaire was mentioned on several websites and in newsletters and the questionnaire was sent by mail to members of identified hubs in the Netherlands.

The hubs for the in-depth interviews and the group sessions are selected because they assumed to be hubs according to the five criteria that operationalize hubs mentioned in chapter one. Throughout this paper is investigated if the forms of organizing involved in this research are in accordance with the concept of hubs according to the five criteria. Three hubs are selected in this paper. All of the three hubs are initiated from a different perspective. One hub is initiated by residents; one hub is initiated by the educational sector and one hub is initiated by the governmental sector. Even though the initiation differs, they have the same goal. They want to realise concrete projects or start a movement of change. Also, are in the hubs involved in this paper public-private collaborations. That is the reason these hubs are of interest for this research. Due to the time constraints, it was not possible to research more hubs.

In the three hubs are three participants per hub selected for the individual in-depth interviews and the group sessions. The participants for these individual in-depth interviews are selected because they are connected to the hub for several years (most of them from the beginning), are involved in the board of the hub and are involved in the collective decision-making processes. Individual in-depth interviews show the motivation of the interviewee for entering the hub and the personal view on the behaviour the amount of knowledge sharing and the collective decision-making process of the hub. After the individual in-depth interviews, group sessions are held in every hub. These group sessions are held with the same members as in the individual in-depth interviews. The group sessions are the last part of the methodology in this paper. The information of the group sessions in combination with the previous results from the individual interviews and the questionnaire aim to answer the research question. In these group sessions, every hub is asked to collectively reconstruct its knowledge sharing and the collective decision-making process of one topic on a poster. They highlight the most important moments in the process to achieve a goal of the hub. They were free to choose which theme, but they must all agree on the process how they accomplished the goal, and they must be able to do in in one hour.

The first hub is: Dirk de derde. Dirk de derde is a hub initiated by five residents from Culemborg, Haaften, Maurik, Kerk-Avezaath and Varik in 2013. The goal of Dirk de derde is to realise projects that could not have been realised while working alone. The members of Dirk de derde do not want to remove the current way of working together, they aim to show how individuals can work together differently and they aim to show an alternative. Dirk de derde is collaborating with other residents, government, organizations, social service and knowledge centres. They have divided their non-profit organization in six themes, agriculture, energy, education, healthcare, mobility and income. Moreover, they intend to start to make a movement concerning the daily life.

The second hub is: Krachtige Kernen. Krachtige kernen is initiated from the educational sector. Krachtige Kernen is one of the nine Centres of Expertise at the Hogeschool van Arnhem en Nijmegen. They aim to collaborate between their lecturer, government, residents, and organizations. Their focus is welfare, education and health care. The goal of Krachtige kernen is to provide an answer on the expected shortage of workforce in several sectors, to strengthen the demand between practice, research and education and to innovate by using practice-oriented research.

The third hub is: Gloei. Gloei is initiated from the governmental sector. Gloei consists of members from organizations, social organizations, entrepreneurs, government and residents. They collaborate in different compositions depending on the topic. Gloei inspires and supports their members in the process from the start of an idea to a concrete plan. They have in mind to fill in the gap between what belongs under the influence of the government and what under the influence of the residents. They intend to help individuals in working together and making connections, which helps to achieve better or quicker results than when these individuals are working on themselves.

7.2. *Procedure data analysis*

The goal of the data analysis in this paper is “to provide sufficient detail so that another researcher could analyse the same data in the same way and come to essentially similar conclusions” (Curry, Nembhard, & Bradley, 2009). The answers that the respondents of the questionnaire gave on these questions can be analysed in the programme Qualtrics (Qualtrics, 2016). The programme Qualtrics generates pie- and bar charts from the results of the questionnaire. The most chosen answers provide the biggest pie and bar in the chart. The biggest bars and pies provide the familiarization.

The questions in the individual interviews are the same for every interviewee. Because the questions are the same for every interviewee, the answers from the interviews can be compared. The answers can be compared among the interviewees per hub and between the hubs. This comparison shows the differences and agreements between the hubs. The comparison is made with the use of the concepts and the five criteria that operationalize hubs.

The last part of the research in this paper are the group sessions. There are group sessions held with the same decision makers as in the individual interviews. In these group sessions are the three hubs separated. The decision makers in the group sessions are asked to collectively reconstruct the collective decision-making process for one theme of the hub. The reconstruction is made on a poster in one hour and on this poster, the most important moments of the collective decision-making process in the hub are visualised. The result of the reconstruction is a timeline per hub. After all the group session, have taken place three timelines are made. These timelines can be compared. To compare these timelines special care is taken to note which moments resulted in the biggest change or movement. In addition, it is attempted to see if those moments can also be found in the other timelines. When the three hubs have the same flow in the collective decision-making process and knowledge sharing and they have the same moments that result in a movement and general assumptions about the collective decision-making process in hubs can be made.

8. The results

In this chapter, the results of the questionnaire, the individual in-depth interviews and the group sessions are shown. The questionnaire is dispersed at an international congress at Castle 'De Berckt' in Baarlo, the Netherlands. The individual in-depth interviews are held with the decision makers of the hubs Krachtige kernen, Dirk and Gloei. Moreover, the group sessions are held with these decision makers. The results acquired from the three hubs are compared with the theory and with each other.

8.1. The questionnaire

The questionnaire was distributed at the 'Make Cense' congress on the seventh of June, 2016 in Baarlo, the Netherlands. The organization of the 'Make Cense' congress pledged upfront that there would be around 250 participants at the congress. In reality, there were 106 participants. Not all the participants were Dutch or were involved in a hub. These participants were excluded from the questionnaire. Eventually 38 of the participants of the congress filled in the paper questionnaire during the congress. After the congress, the questionnaire was sent by email to identified hubs in the Netherlands and published in several newsletters and on several websites. All results were acquired in four weeks. 18 respondents filled in the digital questionnaire at a later moment. Even though the response on the questionnaire is too low to give a reliable view on the field it does give a very useful input for the qualitative research that consist of individual interviews and group sessions in the selected hubs with their decision makers.

8.1.1. The results

In Table 5 are the characteristics of the participants of the questionnaire showed and the characteristics of the hubs involved in the questionnaire showed. These characteristics provide general information about the participants and their hubs, to get familiarized with the situation.

About the participants of the questionnaire	About the hubs in the questionnaire
55% male participants	44% of the hubs is regional oriented
47% 35-50 years' old	35% of the hubs is a non-profit foundation
91% of the participants contribute knowledge to the hub	69% of the hubs makes plans that lead to concrete projects
44% of the participants are participating in the hub voluntary	89% of the hubs have specified plans that are executed

Table 5 The characteristics of the participants and hubs of the questionnaire.

8.1.2. *Learned from the questionnaire*

In Table 6 are the results from the questionnaire showed. Moreover, this table shows what is learned from the questionnaire about knowledge sharing and collective decision-making in hubs. The full array of questions and results of the questionnaire can be found in appendix 10.1.4.

Learned from question 6 is that the hubs are dealing with several themes at the same time. However, even though the themes have a certain amount of coherence, the amount of the coherence among these themes is not investigated. The high number of themes that hubs can deal with is also visible in the stated mission and vision of the hubs. This amount indicates a broad orientation of the hubs involved in the questionnaire. However, it can also indicate an unfocused orientation of the hubs. According to the results from question 7 is learned that the participants in this paper were mainly residents of the Netherlands and individuals from small- and medium enterprises. The government and the municipality are not highly represented. If the participants were equally spread across the different parties, this may have resulted in different outcomes. Moreover, according to the results from question 21 and 22 of the questionnaire the participants said that they are participating in the hub for a professional reason and see the hub as a mean to achieve their goal. These results can be seen as the motivation of the participants to enter the hub and why these specific individuals are involved. Even though the participants say that they mainly contribute knowledge and time to the hub, according to the previous results a personal economic advantage can be the reason to participate. From question 8 is learned that the hubs are according to 50% of the participants' regional oriented. The participants who said this were focused in 75% of the results on Limburg. It is a limitation in this paper that the participants are mainly from Limburg. This can lead to results that are not applicable for the whole country and only that region. Further research in other regions can verify this answer. As said are according to 59% of the participants' decisions made on consensus, but according to 31% of the participants are decisions made based on majority. However, when this amount is considered, it is doubtful if the participants of these hubs are members of hubs. When collective decisions are made based on majority in a type of organizing, the type of organizing is not a hub because in hubs the members make collective decisions based on consensus.

Learned from the questionnaire

<i>Members</i>	The members of a hub are residents, independent contractors, individuals from the local municipality and individuals of small and medium enterprises.
<i>Themes</i>	The themes that a hub deals with are according to the participants are about viability, energy,

	education, waste and the regional economy. The hubs deal with 4 themes at the same time.
<i>Role</i>	The role of a hub is mainly a facilitator, initiator or connector.
<i>Type of decision-making</i>	76% of the hubs have central decision-making
<i>Goals</i>	91% of the hubs have collective goals stated. In addition, 60% of the hubs have a collectively stated plan to achieve their goals.
<i>Consensus</i>	59% of the members of the hubs make decisions based on consensus.
<i>Collective decisions</i>	87% of the members of the hubs make collective decisions in physical meetings in which knowledge is shared.

Table 6 Results questionnaire.

8.1.3. Questionnaire conclusion

The results from the questionnaire show that collective decisions are made in hubs based on consensus. The results from the questionnaire show that the hubs behave mainly as a facilitator, initiator or connector. In addition, the hubs have collective goals stated and plans made to achieve these goals. These goals and plans concern the themes viability, energy, education, waste and the regional economy in most hubs. Therefore, hubs are a form of collective organizing in which they have collective goals and the hubs help to realise these goals. The hub is not an executor but a facilitator. The results lead to the insight that information symmetry, consensus decision-making and a common goal are important topics in hubs. The topics that the hubs are interested in stimulate knowledge sharing and benefits the collective decision-making process in hubs. The individual in-depth interviews and the group sessions will verify the results from the questionnaire.

8.2. The individual in-depth interviews

The individual in-depth interviews were held after the questionnaire and tests the literature research. In appendix 10.1.5 can the exact questions from the interviews and the elaborations of the individual interviews be found. The most interesting insights in the three hubs acquired from the individual in-depth interviews are highlighted in Table 7.

Dirk de derde: from the individual in-depth interviews with the members of the collective decision-making process from Dirk de derde is learned that the concepts that measure knowledge sharing and the collective decision-making process are present. The members show that they are in Dirk interested in several related themes at the same time. These themes are of interest because of the intrinsic

motivation that the members possess to achieve the agreed common goal. The collective decision making process in Dirk is based on consensus decision-making. Decisions can be made in Dirk because of the information symmetry between the members in the working group assigned to a specific theme. Also, possess the members of Dirk rationality, they are able to show preferences. In these working groups are different types of knowledge shared, created, used, retained and transferred. Knowledge sharing in these working groups is stimulated because of the amount of trust between the members. Constantly is checked if every member fits in the working group and if their intrinsic motivation and shared common goal are still present.

Krachtige kernen: from the individual in-depth interviews with the members of the collective decision-making process from Krachtige kernen is learned that the concepts that measure knowledge sharing and the collective decision-making process are absent. The members of the hub are bounded to the possibilities and limitations of the Hogeschool van Arnhem en Nijmegen. The amount and the types of knowledge sharing, creation, usage, conversion, managing, retaining and transferring is guided by the programme manager of the Hogeschool van Arnhem en Nijmegen. Moreover, the collective decision-making process is also guided by the programme manager. The programme manager chooses to share only the information that is necessary for the project with the members of the hub. Rationality and trust are not important aspects in the hub because every part, every aspect is decided by the programme manager. This results in information asymmetry and dictator decision making. Which makes collective decision making a difficult task.

Gloei: from the individual in-depth interviews with the members of the collective decision-making process from Gloei is learned that the concepts that measure knowledge sharing and the collective decision-making process are present. The members of Gloei share a common vision and ambition and they believe and understand that they need each other for the realisation of their goals. Several connected themes are related to the goals of Gloei. With the use of the online communication system NING are the members of Gloei connected. In NING and in the working groups the members are able to share different types of knowledge, but also create, transfer, use, manage, retain and transfer knowledge because there is trust among the members. The members of the hub are making rational decisions; they are able to show preferences and decide based on the information available. In the collective decision making process are decisions made based on consensus. The decisions are made without competition; there must be cocreation and reciprocity.

Learned from the individual in-depth interviews about the criteria that operationalize hub

Krachtige Kernen

Dirk de derde

Gloei

Non-profit foundation

Cooperation

<i>Collaboration between organizations, (local) government, non-profit organizations and other members</i>	Professors, students, residents, welfare organizations, health facilities and housing corporations	Residents, government, research institutes, investors and social organizations	Residents, welfare organizations, (local) government and entrepreneurs
<i>Multiple value creation (economic, social and ecologic)</i>	Living, welfare and (health) care	Food, health care, energy, transportation, connecting and income	Everything that a member is interested in and that have enough support, like energy, welfare, health care, food, income and sustainability
<i>Role</i>	Facilitator	Facilitator	Facilitator
<i>Type of decision-making</i>	Dictator	Central consensus decision-making	Central consensus decision-making
<i>Gain some kind of value that would not be created while operating on their own/ Goals</i>	To strengthen the ability of the residents to decrease the impact of the upcoming cost reductions on their daily life's.	Realisation of projects. If obliged time and money available. Combination of intrinsic motivation and economic motivation. Balance between realism and idealism.	Movement of change. Mutuality is important in collaborating. Process focused.
<i>Collective creation of value and sharing in the value created</i>	A community of learning per theme	In cooperation's per theme. Common vision.	In working groups per theme. Common vision in which the personal values and ambitions are leading

<i>Type of knowledge</i>	Know-how and know what	Know-how, who are, background information and know-what	Know-how, who are, background information and know-what
<i>Knowledge creation</i>	Socialization	Socialization, externalization, combination and internalization	Socialization, externalization, combination and internalization
<i>Involvement of individual residents (initiatives)</i>	Presence of a guiding board	Balance between self- and collective interests	Connecting individuals from inside and outside the hub
	Projects are prescribed with the use of targeted results, capacity and expertise	Combination of short-term and long-term projects	Facilitating initiatives

Table 7 Comparison individual interviews.

Table 7 shows the amount until what the three hubs are hubs according to the operationalization of hubs from Jonker and Faber (Jonker & Faber, 2015). In this table, can be found that the hubs Dirk de derde and Gloei are hubs that are in line with the criteria that operationalize hubs. And the aspects that show knowledge sharing and collective decision-making. Krachtige kernen on the other hand is not a hub that in line is with the criteria that operationalize hubs. With the acquired knowledge from the questionnaire, the individual interviews and the group sessions can be concluded that the information from the hubs Dirk de derde and Gloei is useful for this paper about collective decision-making in hubs. The information acquired from Krachtige kernen is not useful in this paper because Krachtige kernen does not fulfil the obliged criteria.

8.2.1. The conclusion of the three individual interviews per hub

Every decision is a new decision so there is no prescribed way these decisions must be made in the hub. But the collective decision-making process has some guidelines, which the hubs are using. The collective decision-making process is influenced by among other things the time available, available resources and regulations involved. These influences can hinder the collective decision-making process. Also, is the amount of knowledge and information available and shared an important aspect

of the collective decision-making process. The interviewees agree that when the members of the hub have an intrinsic motivation and a goal in line with the common goal and vision, collective decision-making is possible. So, the collective decision-making process can be started when the collective decision makers are like-minded and share a common goal. This stimulates trust and knowledge sharing. The themes that the members of the hubs deal with are achieved with in separate working groups. In these working groups are the members the decision makers and these members share their knowledge and information in these working groups, for their own benefit and the benefit of the hub. The members share knowledge, are seeking for knowledge to achieve their common goal with the use of collective decision-making based on the collectively shared, sought, and created knowledge. So according to the individual in-depth interviews of the decision makers of the hubs knowledge sharing and the collective decision-making process present Gloei and Dirk de derde. This is not the case at Krachtige kernen.

8.3. *The group sessions*

In this paragraph, the group sessions with the three decision makers per hub are explained. Moreover, the reasons why they have chosen the certain themes are explained. Every hub is asked to make a timeline of their collective decision-making process within one hour. The collective decision makers were observed during the reconstruction and their output on a poster is compared among the hubs. The timelines must show what was necessary to happen before a step could be made in the process and when and how knowledge is shared.

8.3.1. *Dirk de derde*

The first hub, involved in the group session to reconstruct their collective decision-making process and knowledge sharing, is: Dirk de derde. The three decision makers Mr. De Kock, Mr. Van Lutterveld and Mr. Wink were previously individually interviewed. After the individual interviews, they were asked to reconstruct the timeline of the formation of the energy cooperation. Within one hour, the three decision makers made their most important moments visible. **Fout! Verwijzingsbron niet gevonden.** shows the timeline of Dirk de derde and their collective decision-making process according to the steps from Bohanec in chapter four (Bohanec, 2003). The most remarkable moment was august 2011, at the Maatschappelijk Verantwoord Ondernemen entrepreneur café met Mr. De Kock, Mr. Van Lutterveld and Mr. Wink. This moment can be marked as the beginning of the movement. Then in November 2011 the Betuws energie coöperatie was formed. After that formation, several meetings with (potential) stakeholders took place. In January 2013, Mr. Kerkhoven joins the group. Mr. Kerkhoven introduced multiple value creation and the circular economy. These topics guided the formation of Dirk de derde and the themes in the hub. In September 2013 Dirk de derde was formed. They agreed on making decisions following the consent principle. With the use of the consent

principle, decisions are made when no decision maker has arguments against the decision based on the available, shared and created information in the hub.

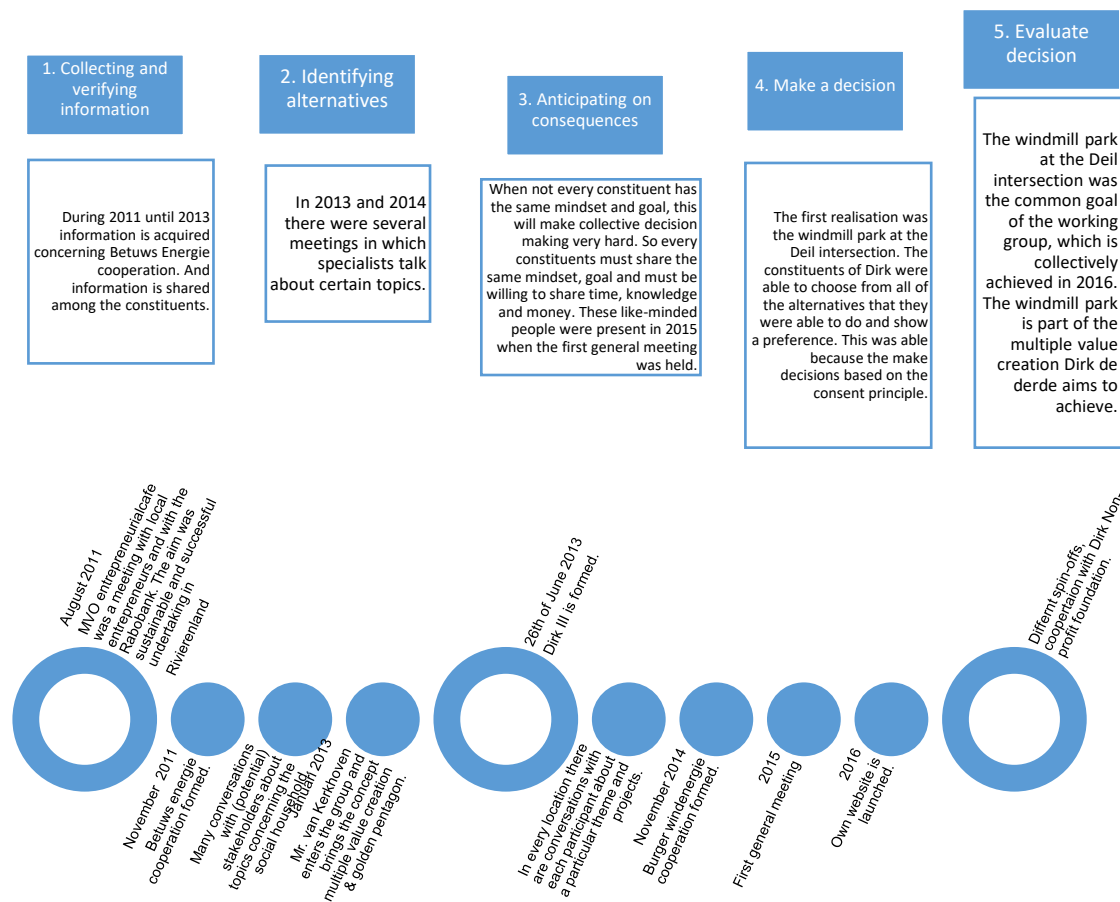


Figure 5 Timeline of Dirk de derde.

From September 2013 until November 2014, several meetings were held in different areas. In every meeting, there were speakers who talked about certain topics the goal of which was to inspire the individuals present from Dirk de derde and to share information and knowledge which the individuals present could use for the own benefit and for the benefit of the hub. Every meeting had its own theme, but all the themes Dirk de derde is concerned with are interrelated. The themes of Dirk de derde concern an aspect of the daily household; this is because residents initiated Dirk de derde. In Geldermalsen, the Burger windenergie cooperation was formed on November 14th, 2014. This was done in collaboration with Dirk de derde, residents, government and real estate developers. On November 4th 2015, the first general meeting of the members of the Burger windenergie cooperation was organized. The goal of the collaboration was the realisation of windmill parks at the Deil intersection. This realisation was only possible when the hub acquired all the information possible about the project. After the legal formation of the Burger windenergie cooperation, in March 2015 Mr. Kerkhoven left Dirk de derde. Mr. Kerkhoven had a different vision from Mr. De Kock, Mr. Van Lutterveld and Mr. Wink at Dirk de derde. This made it impossible to use the consent principle within Dirk de derde with the current decision makers. Moreover, the departure of Mr. Kerkhoven, had

overlap with the legal formation of a cooperation per theme. Dirk de derde had representatives in every cooperation. However, the goal of Dirk de derde to initiate a movement was realised. Dirk de derde is now as a non-profit organization that now does what to do next, because the goals are realised for the cooperation.

The collective decision-making process is guided by the rationality of the collective decision makers of Dirk de derde. The collective decision makers of Dirk de derde make rational decisions. They can choose the best alternative from a set of mutually exclusive alternatives. The amount of ideas that the collective decision makers had were huge. Moreover, they were all in accordance with their common goal. However, they decided, even though several ideas were important, that they started with the realisation of the Burger windenergie cooperation. After the successful realisation of that cooperation, the collective decision makers divided their selves among several working groups in which several themes at the same time were taken care off and in which knowledge is created and shared. Within the working groups of Dirk de derde the collective decision makers they share the information available among the members and they keep on searching for more information, knowledge and experience. This made it possible to reach consensus decision-making in the hub. There is no dictator in the collective decision-making process in hubs, they make collective decisions based on consensus. Nevertheless, the decisions that the working groups make, must be in line with the common goal of the hub and in accordance with the vision and the mission of the hub.

8.3.2. Krachtige kernen

The second hub is: Krachtige Kernen. Krachtige Kernen is one of the nine Hogeschool van Arnhem en Nijmegen Centers of Expertise. Krachtige kernen came into existence due to a demand for a better connection between business and practice. They aim to collaborate between their lecturer, government, residents, and organizations. Their focus is welfare, education and health care. The goal of Krachtige kernen is to provide an answer on the expected shortage of workforce in several sectors, to strengthen the demand between practice, research and education and to innovate by using practice-oriented research.

The collective decision-making process reconstruction of Krachtige kernen is about Lingewaard. In Figure 6, their timeline is shown and the followed steps of the collective decision-making process. The collective decision makers in this project from Krachtige kernen are Mrs. Cornelissen, Mrs. Melis and Mrs. Abbring. Lingewaard is a municipality in the Netherlands and consist of the former municipalities Bemmelen, Gendt and Huissen. In 2015 in Lingewaard, a group of residents wanted to form a group to support the social coherence. In the municipality Lingewaard there is a problem with an ageing population as well as a decreasing population. The group in Lingewaard wanted to help the individuals who were affected with these problems. They wanted to help these individuals with doing things on their own or with the help from individuals in the neighbourhood instead of having to appeal

to the government or family members who do not live nearby. A welfare organization, Stichting Welzijn Lingewaard, a residents' initiative ZELF, a residence cooperation and the municipality helped the inhabitants to implement this idea. In addition, to help the municipality solve the problems it is facing. The individuals from ZELF had some ideas to boost the social cohesion. However, they needed more information and knowledge about the topic. They involved the students of the Hogeschool van Arnhem en Nijmegen in their plans and introduced them in the network. Before the summer of 2015, the idea for collaboration in a hub arose. This was the second of several meetings in which information and knowledge is shared and created, every member was involved in the meetings and later, involved in the hub because of their own perspective and goals. The meetings to form a hub made visible what kind of interests each member had and why. Moreover, when the hub was formed it was named Krachtige regionale leerkring. The members of Krachtige regionale leerkring agreed on several objectives. The aim of Krachtige regionale leerkring was not only to learn from and with students but also from and with professionals. Everybody is welcome to learn within the hub.

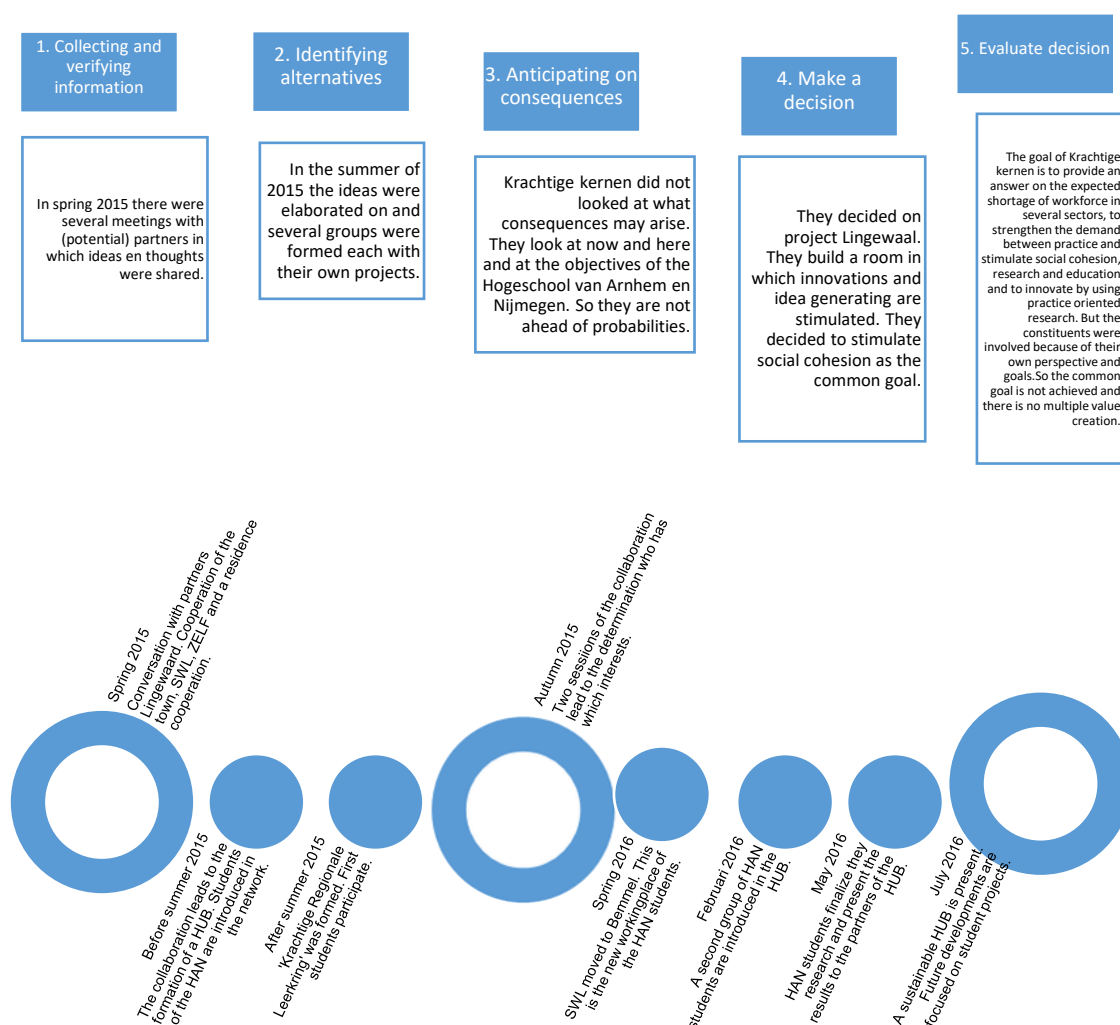


Figure 6 Timeline of Krachtige kernen.

In January 2016, the welfare organization Stichting Welzijn Lingewaard bought a new building. In that building Krachtige regionale leerkring got a room. In that room, it is possible to work for students but also the other members of the hub. The goal of that room is to make it a nursery of ideas and innovations. The students involved are participating in Krachtige regionale leerkring for six months. In most cases, the students are doing a minor or writing their thesis with the help of the assignments within the hub.

ZELF left the hub Krachtige regionale leerkring in February 2016. The individuals from ZELF wanted that the students involved in the hub did assignments for ZELF instead of collaborating in the hub. That was the reason they had to leave the hub.

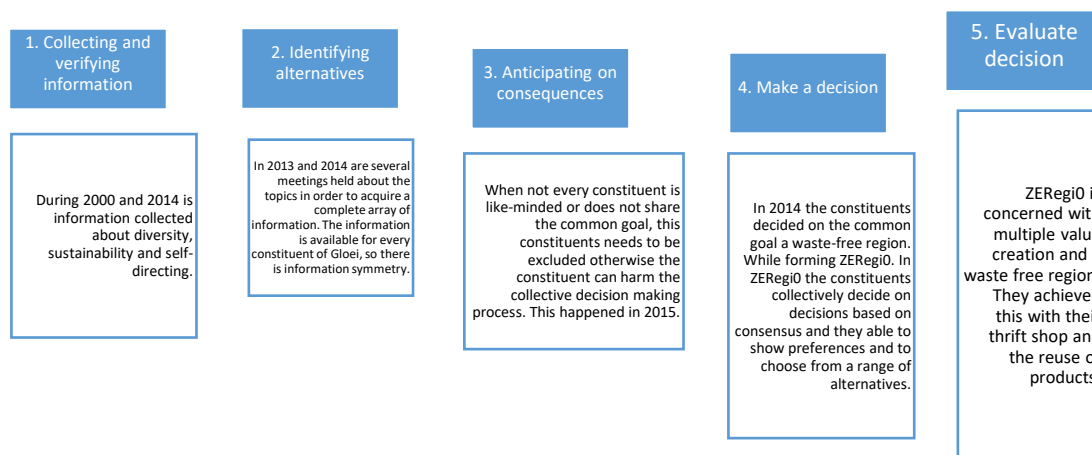
In the beginning, Krachtige kernen did not have a concrete plan on how to do things, when to do things and with whom. Nevertheless, they learned by experience. The hub was not inconsiderate but in retrospect, they should have done things differently. For example, the issue with ZELF. Krachtige kernen felt that if they had made even better and concrete agreements, this could have been prevented. Unfortunately, there are fewer student projects after the summer of 2016. This could have been prevented by better anticipating. This experience remains a part of the evolution of the hub. The connection between education and practice remains of importance. Until this moment in time, the hub achieved several things. They created a physical location, a network of members and they made some recommendations.

The collective decision-making process is guided by the rationality of the collective decision makers of Krachtige Kernen. The collective decision makers of Krachtige Kernen are behaving rational. Because they made the decision to involve in the Lingewaard topic. There were several topics in the area that Krachtige Kernen could choose from, but they preferred Lingewaard. In Krachtige Kernen there is no equal dispersion of information, there is information asymmetry. The board makes decisions about the process and the projects and the programme manager guides the project. The programme manager searches for the obliged individuals for the projects. The board and the programme manager only shares the information that is necessary to share instead of collaborating on the same level with the same resources. Moreover, there is no consensus decision-making within Krachtige Kernen. The board and the programme manager decides based on the acquired information. Even if members have arguments against the decision, the programme manager does not have to take that into account. So, there is more attention to the goal of the board and the programme manager and the board than to the common goal. There is room for knowledge sharing and creation within Krachtige kernen, but the created and acquired knowledge is not evenly dispersed. This makes the collective decision-making process difficult to accomplish.

8.3.3. Gloei

The third hub is: Gloei. Gloei is initiated from the government due to the transformation of the municipality Peel & Maas and the question what is of concern of the government and what of concern of the residents. Gloei consists of members from organizations, social organizations, entrepreneurs, government and residents. They collaborate in different compositions depending on the topic. Gloei inspires and supports individuals in their process from the start of an idea to a concrete plan. They aim to help individuals in working together and making connections which helps to achieve better or faster results than when these individuals working on their selves. Gloei is just as Dirk de derde a non-profit foundation and their organizational form is also intercalated. They also have the space to make some new plans. The timeline, the collective decision-making process and the knowledge sharing of Gloei can be found in Figure 7 (p. 54).

The first notions to form Gloei were formed in 2009. From 2000 on the municipality noticed a gap between which topics belongs to the municipality and which topics belongs to the citizens. In 2009 the three-main values diversity, sustainability and self-directing were stated by the municipality. And the municipality Peel and Maas decided that within two years a sustainability platform was to be formed. Mr. Boonekamp said it was impossible to implement some things the government wanted without the help of local initiatives. So, a meeting was arranged with several individuals who had a connection with sustainability. With the help of these kind of meetings Gloei was formed in 2013. In 2014 Mr. Koenen joined Gloei. Mr. Koenen was an example of the local resident who joined Gloei. Mr. Koenen was known for his very sustainable home. At the same time of the advent of Mr. Koenen, several partners entered Gloei. The Rabobank and Koenen en Co. accountancy. Both partners provide money and knowledge for Gloei but in return they wanted structure and a business plan. Until that moment Gloei was a movement that provided a facilitating function in the region. A structure was implemented, with the help of the Rabobank and Koenen en Co.



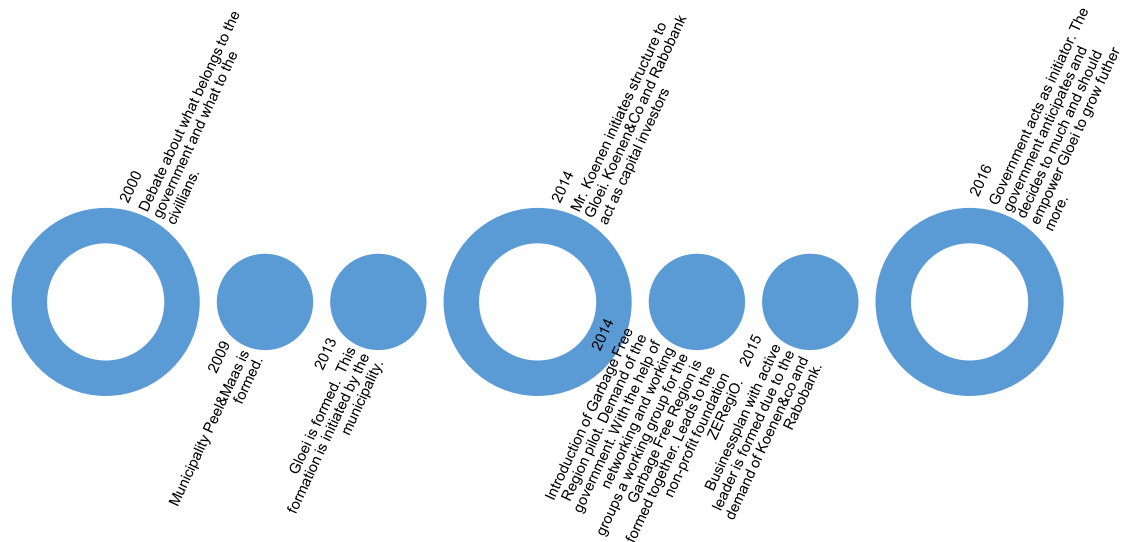


Figure 7 Timeline of Gloei.

In 2014 Rijksdienst Voor Ondernemend Nederland approached Gloei, they wanted to try to accomplish a waste free municipality. Gloei proposed this question to its members and they set up a meeting. In this meeting a working group was formed out of the members of Gloei, but also the government and the waste processing organizations. They called the working group ZERegIO. ZERegIO constituted of several sessions to provide knowledge about the topic and to set the guidelines for the project. They want to reuse products like clothing, textile and power tools. With the help of recycling, the materials and products are not wasted anymore. They divide five applications, direct reuse, reparation, feudal tenure, redesign and recycling. Besides sustainability, ZERegIO wants to contribute the local employment and the local society. One of the members of ZERegIO opened a thrift shop due to the inspiration acquired from the meetings. Gloei is now at a point where they do not know which direction to go. Therefore, the more Gloei facilitates the less the influence and the support of the government and the municipality is necessary. Gloei is initiated from the government and the government supports Gloei with subsidies. The decision makers of Gloei want Gloei to have the function of a facilitator and to start a movement, now and in the future. They do not necessarily want financial input from other parties. They want individuals to contribute to Gloei because of their intrinsic motivation and because they do not want to follow the guidelines of the sponsors. They hope to get in contact with universities to collaborate and organise an event and attract students into the hub. The hub Gloei behaves as a facilitator for the members of the community. The collective decision makers from Gloei behave rational during the collective decision-making process. The members of Gloei are interested in several topics but they could choose to go further in the ZERegIO concept. They preferred the thrift shop and the reuse of products above other sustainable projects. The members of the communities of Gloei communicate via NING. They use NING to share all the information they have and to discuss about projects. Therefore, there is within Gloei information symmetry. In addition, they make collective decisions based on consensus to achieve their common goal. Their knowledge

sharing and creation results in achieving their common goal with the use of the collective decision-making process.

8.3.4. The conclusion of the group sessions

The three timelines are constructed with the use of the information gained from the group sessions of each hub. As can be seen in these timelines the collective decision-making process is very fluid in all three hubs. The beginning of the process is an important moment. This can be seen in the bigger point in the timeline, in the middle of the process there is another important moment, and at the end of the process is another important moment. It seems that after reaching an important point in the decision-making process the members start from the beginning when taking on the next point. This results in a flexuous movement, which is visible in the decision-making timeline for all the three hubs. The three hubs start their decision-making process with some individuals who see a discrepancy between the actual and the desired situation. In most cases, this desired situation is concerned with the daily life of residents and topics like energy, water, viability and education. Then the initiators from the hub arrange several meetings in which individuals build on relationships with each other to stimulate the trust between these individuals. In these meetings, can individuals with the same interests participate, share, create and transfer knowledge and join the initiators. This leads to the formation of working groups, which are focused on a specific theme. These themes are related to the mission, vision and goal of the hub. Moreover, this moment of the process can be seen as the formalisation of the hub. The hub has collectively understood goals, because the members of the hub collectively decided on the goals. From that, moment on the hub is working on the different themes at the same time in the specific working groups. These working groups decide in accordance with the goals, what the mission and the vision of the hub is, there is no higher decision-making unit in the hub who makes the decisions for every working group. The decisions in the working groups are made based on consensus. Before a decision is made several meetings are held about the topic and as much information as possible is acquired. When individuals with a certain profession or knowledge are necessary for making, and implementing the decision, these individuals are approached and asked to participate. When the invited individuals are willing to participate and the required resources and information are available, the decision can be made and implemented. After implementation, there is an evaluation to see if what the hub was intended to achieve was achieved.

Dirk de derde and Gloei have in common that they started a movement a few years ago and they accomplished several tasks, like the start of ZERegIO and a park of windmills. However, they are now at a moment in time where their task as a facilitator is ending. The projects Dirk de derde and Gloei initiated are now attached to a non-profit foundation. Their organizational form is now concrete. This gave the hubs space to start new movements and make some steps. Therefore, they are both looking at

what this next step is and where they can help as a facilitator utilising their experience and resources, or what other role can they fulfil. Krachtige kernen is not in that phase now. They are still looking at what their role is and what they can impart. There is a difference between the hubs with the phase they are in right now. They all had one person or group who entered the hub and made a change. In Dirk de derde there was Mr. Kerkhoven who made the themes clearer and set some guidelines. In Krachtige kernen Mrs. Van Biele saw some local topics about social cohesion and sustainability so she started Krachtige kernen. And in Gloei, Mr. Boonekamp wanted to think and act outside the boundaries with the local initiatives. Therefore, the hubs have a lot in common and encounter more or less the same issues. Moreover, this is the way the participants of the hubs envision the process of collective decision-making.

8.4. *Chapter conclusion*

In both the questionnaire and the interviews, it was found that the hubs had chosen the themes because of a demand in their personal environment. The members of the hubs make decisions based on agreement. Therefore, there is no dictator in the hub, all the members collaborate and decide together. It is not necessary that everyone agrees on the decision to be made, but no one can have arguments against the decision to be made. The members of the hub are individuals from public and private organizations, government, entrepreneurs, residents, and non-profit organizations. Most of the members relate to the hub because of their profession. Moreover, one of the biggest limitations in all the hubs is that they need money to finance their projects. It is not always difficult to find investors, but these investors need something in return. In most cases, the investors want to set some guidelines, and the hubs are known for their thinking outside the box and outside the boundaries. Therefore, this can get in the way. The hubs want to finance their own projects, but that is not always possible. They are struggling with this issue. The members of the hubs believe that being part of the hub and behaving and thinking in line with the hub is a way of life. This behaviour is guided by their intrinsic motivation and cannot be learned or imposed. The decision-making processes in the hubs are very flexuous. The decisions are made in the hubs in the specific working groups. These working groups assemble the necessary individuals for making and implementing the decision. Within these working groups is knowledge shared, created, acquired and used for the benefit of the hub. When there is information asymmetry, it affects the collective decision-making process in a negative way. The decision-making process reacts to circumstances, demand and events in the environment. Therefore, it is not possible to predict the initial phase of decision-making nor how the process will evolve. There are central meetings where every (potential) members is welcome to participate. Nevertheless, these meetings do not guide the behaviour of the working groups. The working groups make decentral collective decisions with the members assigned to a theme. The members are assigned to a working group because of an interest for that theme.

9. Discussion

The information from the literature and the theoretical review are the foundation for the questionnaire held at the conference 'Make Cense', the in-depth individual interviews and the group sessions with three hubs. In the questionnaire, the interviews and the group sessions are the amount of knowledge sharing related to the collective decision-making process tested for the new type of public-private collaboration, namely hubs.

9.1. Conclusion

The Dutch top sector policy set guidelines for the future for the nine top sectors in the Netherlands to achieve a top five position as knowledge economy in the world. The Dutch top sector policy is attached to the European policy 'Horizon2020'. The European policy is about the achievement of a more sustainable economy, a decreasing amount of waste by organizations and residents and to stimulate research and development by organizations. The organizations of the nine top sectors need to collaborate to achieve the guidelines of the top sector policy. These public-private collaborations require a new way of collective organising, because the traditional ways are superseded, to meet the guidelines. The modern way of public-private collaborating which can meet the guidelines of the Dutch top sector policy are hubs. Hubs are able to create besides economic value also ecologic and social value. Also, are the members of the hubs able to share a common goal besides their individual goal. In hubs are besides organizations, also residents, the government, entrepreneurs and non-profit foundations involved and they collaborate simultaneously on different themes. The biggest difference between hubs and networks is that hubs work on several themes at the same time in order to achieve their common goal besides their individual goal and there is multiple value creation, whereas networks tend to focus on a single theme and economic value creation, without sharing a common goal besides their individual goals. This makes hubs the way of collective organising which is able to meet the guidelines of the top sector policy. Within the hubs is trust and an open environment stimulated by the formation of working groups in which knowledge is shared and leads to collective decision-making. The collective decision-making is encouraged by the knowledge shared by the members of the working groups. The members of the working groups have different backgrounds, experiences and interests and this benefits the knowledge sharing and the collective decision-making process.

The three propositions from chapter five are all accepted during the research in this paper. This means that sharing a common goal by the members of the hub has a positive influence on the amount of knowledge shared. When the members of the hub have more diverse backgrounds, this has also a positive effect on the amount of knowledge sharing. The research question is positively answered as well. Which results in the outcome that the amount of knowledge sharing has a positive influence on the collective decision-making process in hubs.

Proposition 1: *The collective decision-making process in hubs is positively impacted by the amount of knowledge sharing.*

A collective decision-making process needs knowledge about the decision to make, the environment in which the decisions need to be made and the available alternatives. During collective decision-making, all the members of the collective decision-making process need to possess the available knowledge to be able to make a collective decision. Knowledge sharing occurs when members of a hub are willing and able to share the knowledge they possess with other members for their common benefit. When the members of the hub are interconnected in specific working groups and when there are communication channels by which the members can share knowledge, the members are encouraged to share their knowledge with the other members of the hub and the working group. Not only the presence of communication channels and working groups stimulates the amount of knowledge sharing, also the amount of trust and openness between the members of the hub. When members trust each other they are more willing to share their knowledge, especially in hubs when the members share a common goal besides their individual goals. So, knowledge sharing occurs for the benefit of the achievement of the common goal. To reach the common goal, it requires a collective decision-making process. Collective decisions can be easier made when there is more knowledge available that helps the achievement of the common goal. Knowledge sharing and a higher amount of available knowledge makes collective decision-making easier.

Proposition 2: *The amount of knowledge sharing is positively impacted by the common goal shared by the members of the collective decision-making process.*

The members of the hub are connected because of their common goal besides their individual goals. Because these members are willing to achieve their common goal for collective and individual benefits, they behave in favour of the achievement of the common goal. This leads to knowledge sharing, because with the sharing of knowledge between members of the hub who have different backgrounds, new ideas and thoughts can come up. And these new ideas and thought complement each other and this will benefit the collective decision-making process. Especially when the members of the hub have an intrinsic motivation which is in line with the common goal to be involved in the hub, this makes it easier to be dedicated and involved in a hub. The intrinsic motivation and common goal stimulates knowledge sharing which benefits the collective decision-making process in hubs.

Proposition 3: *The amount of congruence in background of the members negatively affects the amount of knowledge sharing and the collective decision-making process.*

When all the members of the hub share the same background, thoughts, ideas and knowledge, they do not need each other for the achievement of the common goal. Because the members see, say and think more or less the same things. When the members of the hub are alike, they will not stimulate each other with new ideas, insights and new and different opportunities and possibilities. But when the

members of the hub have different backgrounds, their diverse interests and ideas complement each other and stimulate the achievement of the common goal during the collective decision-making process. This also stimulates knowledge sharing because the members can learn from and with each other, which provides new methods and ideas as well for the benefit of their common goal.

The results from the questionnaire, individual in-depth interviews and the group sessions with members of hubs leads to answering the research question: *Is the collective decision-making process positively impacted by knowledge sharing in hubs?* The answer is that the collective decision-making process is positively impacted by knowledge sharing. The collective decision-making process in hubs, is positively impacted by the formation of working groups by the hubs, by the available communication channels, and when there is more trust and openness between the members of the hubs which stimulates knowledge sharing and results in the achievement of the common goal. The members of a hub are collaborating because they share a common goal. This common goal can only be achieved when there is enough knowledge from different perspectives about the goal. The members of the hub inspire and stimulate each other because they have diverse backgrounds the members of the hub can learn with and from each other for mutual benefits. And when knowledge is shared in hubs, the members of the hub possess the same amount of knowledge to make collective decisions. When knowledge is not shared with all the members of the hub, it may happen that the common goal cannot be achieved by their collective decision-making process. So, knowledge sharing and a common goal are two important requisites for the collective decision-making process.

The research question has been answered with the help of the questionnaire, and the interviews with the three hubs; Dirk de derde, Krachtige kernen and Gloei. The members cannot follow their own agenda and believes when certain boundaries or guidelines are set. It can cause troubles when investors are present in the hub, who often try to determine the themes and associated decisions, leading to a discrepancy between the members, as the members are generally willing to deal with themes that emerge via local or regional demands. This is best visible in Krachtige kernen and Gloei. Most of the themes are brought in because there is no apparent solution or help for social cohesion, energy, food and transportation. Because the themes are so close to the hearts of the members a decision-making process is hard to specify because it is not set in stone and it evolves gradually especially in Dirk. Moreover, in most cases (Gloei and Dirk) a lot of deliberation is not even needed. These members make choices in favour of the common goal. So, the members found it hard to describe how they decide, because they mainly react on circumstances. The reason why the hubs, their spinoffs, the working groups and the non-profit foundations are working on several themes at the same time is that these themes are mostly interconnected. These themes are interconnected because they concern the daily life of the members. The high degree of specialisation of the members makes it possible for hubs to work on several themes at the same time. Because these themes are interconnected

and close to the members' hearts multiple value creation becomes a possibility. The decision-making in hubs is a gradual and emergent process and there is no guideline that governs how to decide. The members react on external events while having their common goal in mind. Everything that they do, everything that occurs is all for the benefit of the common goal besides their individual goals. The knowledge sharing in the hubs Gloei and Dirk occurs because they understand the importance of collectively and the achievement of their common goal. The members of Gloei and Dirk are aware that they cannot achieve the things they want to achieve on their own, they need each other because of their different backgrounds and perspectives. This shows the importance of public-private collaboration, because the organizations involved in this collaboration learn from and with each other and share a common goal. And the common goal cannot be achieved while working alone, so they need each other for current and future benefits.

9.2. *Methodological limitations*

While doing this research, there were several complications. There was not much contemporary literature about the concept hubs. So, there is made use of traditional literature about collective decision-making in networks and knowledge sharing in networks. The concept is not widely used and not everyone is familiar with the subject. This made it difficult to obtain a clear picture of the hubs currently in existence in the Netherlands. With this research the concept of hubs is elaborately explained with the participants of the research project, this was done to ensure everyone worked from the same information. Hubs do not have stated guidelines, often there is a great deal of improvisation. The members of hubs could not always explain how they managed projects or how the hubs came into existence. Because the collective decision-making process is very fluid, it is hard to describe and to make generalized comments about hubs. Finding participants was the hardest part for this research. The questionnaire was spread in different ways, in person as well as in digital newsletters, and by announcing it at a conference. Due to the summer break, it was not possible to go to more conferences and approach individuals in person to fill in the questionnaires. Organizations who behaved according to the definition of hubs were approached. Respondents were approached in person, by mail, by telephone and several newsletters. Not everyone wanted to participate, mostly because they were not aware of the fact that their organization behaved as a hub. The result is that only individuals who were aware that they were part of a hub participated in the research. It is therefore possible that the results of the inquiries would have been different if more of these individuals participated. The hubs that were interviewed are all hubs which are initiated from a different perspective. Dirk de derde was initiated by residents, Krachtige kernen is initiated from the educational sector, and Gloei is initiated by the government. Krachtige kernen appeared after doing this research not a hub according to the five criteria that operationalize hubs. The information acquired in this paper from Krachtige kernen cannot be used to make general statements about collective decision-making and knowledge sharing in hubs. The most remarkable aspect of Krachtige kernen is that they have a programme manager who sets the

guidelines for Krachtige kernen and make the decisions. So, in Krachtige kernen is no collective decision-making and the knowledge is not equally shared. The foundational differences between the hubs may have changed the way the hubs behave. It is also possible that if all the hubs that participated had been founded by residents there would have been more overlap. But in this case, it is at least possible to make more general statements about hubs. The fact that only one hub from each different kind of hubs participated with the research means that the basis for making solid statements about each different kind is not very great. If time constraints had not been such a huge problem, more time and effort could have been devoted to approach and convince more individuals and hubs to participate, this would have led to a greater data pool and as such would have greatly helped the research. Two hubs that are hubs according to the five criteria that operationalize hubs are not a solid ground to make statements about. More hubs that are hubs according to the five criteria would be more useful in order to make statements.

Another problem for this research was that some individuals did not keep their word. Some members agreed to collaborate on questionnaires and research but in many cases, did not actually happen. This cost a lot of valuable time. In future research projects, I will not depend that much on external sources. And I will start earlier with different ways to collect data. In this research, I was too late with starting my backup plans. And this shortened the time available even more.

9.3. *Practical implications*

The results from this research can be helpful in practice for several reasons. With the help of this research is shown that it is possible to set up semi-structured research into a group of individuals who belong to a hub. Though it will take time to acquire more results from further research. Moreover, individuals and organizations in practice can learn that they cannot make every decision on their own. They need other organizations and individuals with different backgrounds to learn from and with each other. Several organizations are dealing with the same kind of issues, while collaborating they collectively deal with these issues and solve them. Moreover, knowledge sharing requires trust and openness, this needs to be stimulated by organizations because it will be beneficial for the organization to possess as much knowledge as available in individuals' minds. Because knowledge is useful for the (competitive) advantage of the organization, now and in the future. Moreover, several themes can be elaborated on at the same time during a collaboration when organizations and individuals share a common goal. The goal will be achieved when the members involved have an intrinsic motivation instead of an extrinsic motivation. When there is an intrinsic motivation to achieve certain goals, the members involved are more involved into the process and this lead more often to more successful implementations and goals. And because many decisions and knowledge are interconnected, several goals can be achieved at the same time. By collaborating and thinking outside the stated boundaries solutions can be found to solve some of society's problems. The importance of collaboration, sharing knowledge and making decisions depending on the circumstances without

paying much heed to boundaries become very clear in this paper. In practice this does lead to the knowledge that when collective decisions must be made a common goal and shared interests of the members of the collective decision-making are very valuable. And that these characteristics combined with intrinsic motivation will lead to the accomplishment knowledge sharing and collective decision-making.

9.4. *Suggestions for further research*

A suggestion for further research is to figure out why the traditional forms of organizing are not capable of achieving the same things as hubs. Also, is it interesting to figure out if there are more aspects, not mentioned in this paper, influence the amount of knowledge sharing. Further research can also investigate to what point a hub is necessary, and when the spinoffs and the non-profit foundations resulting from the hub can participate in the community without the hub as a backup. Moreover, the results from the questionnaire show that some answers to a question were chosen roughly just as much. Further research can investigate if this happens as well or that one answer will be chosen more often. Moreover, further research can investigate if the concept of hubs is just a hype. It can be possible that the initiation of hubs is just a reaction to the governmental top sector policy and that the concept hubs disappear in a few years when the residents are used to the cost reductions. Furthermore, can be figured out in further research if hubs also exist in the same way in other countries. And if these hubs in other countries behave in the same way as in the Netherlands.

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10. Appendix

10.1. *Elaboration of the interviews*

In this paragraph the complete individual interviews of all the hubs are worked out. The interviews are held in Dutch. The elaboration of the interviews is done with the exact words of the interviewee.

10.1.1. *Krachtige Kernen*

“Omdat de hub Krachtige kernen is opgericht vanuit de overheid en de Hogeschool van Arnhem en Nijmegen is deze hub gebonden aan de mogelijkheden en de beperkingen van de hogeschool. Om deze reden zijn de betrokkenen bij de hub niet vanuit een persoonlijke overtuiging de hub begonnen maar vanwege hun achtergrond betrokken geraakt. Dit heeft ertoe geleid dat er in dit interview enkel gezamenlijke antwoorden zijn gegeven omdat ze gebonden zijn aan de richtlijnen van de Hogeschool van Arnhem en Nijmegen.”

- *Hoe, door wie, waarom en wanneer is Krachtige kernen ontstaan?*

"De Hogeschool van Arnhem en Nijmegen bestaat uit een tak onderwijs en een tak onderzoek. Rond 2012 is er in Nederland bedacht dat er bij hogescholen ook onderzoek verricht moet worden en niet alleen praktijkopdrachten uitgevoerd moeten worden. Universiteiten zijn toch meer bezig met wetenschappelijk onderzoek, ze zijn meer theoretisch. Bij de hogescholen is er praktijkgericht onderzoek dat ook als doel heeft de vraag te beantwoorden hoe kun je de praktijk verbeteren. In die tijd zijn er lectoren gekomen, de hoogleraren van het hoger beroeps onderwijs. De Hogeschool van Arnhem en Nijmegen kwam met een negen kenniscentra die vallen onder de centers of expertise. Deze centers of expertise dragen bij aan het uitoefenen van de negen speerpunten van de Hogeschool van Arnhem en Nijmegen. Krachtige kernen is een van die kenniscentra, ofwel center of expertise. Die speerpunten vertegenwoordigen de grote thema's waar de Hogeschool van Arnhem en Nijmegen mee bezig wilt zijn. In het center of expertise werken verschillende lectoren, onderzoekers met de gestelde thema's. Lectoren hebben door het uitoefenen van hun expertise binnen een bepaald vakgebied een thema waar zij aan bijdragen. Krachtige kernen bestaat vanuit de Hogeschool van Arnhem en Nijmegen uit een doorsnede van lectoren die bijdragen aan verschillende thema's. En het doel van krachtige kernen, maar ook de andere centers of expertise, is om antwoord te bieden op het verwachte tekort (zowel kwalitatief als kwantitatief) aan arbeidskrachten in diverse sectoren, het versterken van de vraagsturing tussen onderwijs, onderzoek en bedrijven/instellingen en de innovatie via het praktijkgerichte onderzoek (valorisatie)."

"Om deze reden is Mevrouw van Biene in 2013 Krachtige kernen gaan opzetten. Krachtige kernen paste bij het lectoraat van Mevrouw van Biene, namelijk lokale dienstverlening vanuit klantperspectief en kenniskring. Mevrouw van Biene werkte vanuit klantperspectief, wat kunnen mensen zelf doen om te bereiken wat ze willen en hoe het dorp leefbaar blijft. Het bestuur van de Hogeschool van Arnhem

en Nijmegen heeft, toen de overheid meer onderzoek verplicht stelde, die speerpunten bedacht. Lectoren van de Hogeschool van Arnhem en Nijmegen konden hier ideeën voor aandragen en zo is Krachtige kernen ontstaan. In het begin was Mevrouw van Biene degene die Krachtige kernen aanstuurde en aan het hoofd stond. Maar doordat er meerdere lectoren betrokken waren maar de verhouding niet evenredig verdeeld was is er na twee jaar gekozen om met een onafhankelijk programmamanager en coördinator als verbinder te werken."

- Hoe lang bent u al betrokken bij Krachtige kernen?

"Mevrouw Abbring is sinds 2014 betrokken bij Krachtige kernen. De rol van mevrouw Abbring is programmamanagement, business development, ontwikkelen Krachtige Regionale Leerkringen (innovatieve werkplaatsen/sociale innovatie hub), externe contacten, verbinden van het werkveld aan praktijkonderzoek en het vertalen van de praktijkvraag naar een onderwijsopdracht.

Mevrouw Cornelissen is sinds 2015 betrokken bij Krachtige Kernen. De rol van mevrouw Cornelissen is coördinatie, business development, het ontwikkelen Krachtige Regionale Leerkringen, interne contacten, en het verbinden van onderwijs aan werkveldopdrachten.

En Mevrouw Melis is sinds 2015 betrokken bij Krachtige kernen. De rol van mevrouw Melis is het begeleiden van studenten in de Krachtige Regionale Leerkring, kwartiermaker in de Krachtige Regionale Leerkring, en het vertalen van de praktijkvraag naar onderwijsopdrachten. Mevrouw Melis werkt zelf 3,5 jaar bij de Hogeschool van Arnhem en Nijmegen. Ze vindt het concept Krachtige kernen interessant. En in de hub Lingewaard doet zij de studentbegeleiding en het onderhouden van de connecties met de partners daar."

- Hebben alle partijen waar Krachtige kernen mee samenwerkt een even groot aandeel binnen de hub? Waarom wel of waarom niet? En welke partijen zijn dit?

"Doordat er meerdere projecten zijn waar Krachtige kernen bij betrokken is, is de vraag naar welke partijen betrokken zijn en in welke mate afhankelijk van het project. Er wordt per project gekeken wat er nodig is om de doelstelling van het project te behalen. Het is dus afhankelijk van de vraagstelling/problematiek in welke mate en welke partijen er worden betrokken. Het aandeel van de partijen is dus fluïde."

"Intern zijn de lectoraten, docenten en studenten betrokken.

Extern zijn er burgerinitiatieven, welzijnsorganisaties, zorginstellingen, woningbouwcoöperaties, gemeentes, dorpsraden en dergelijke betrokken."

- Bestaat er een gemeenschappelijke gedachte en doel binnen Krachtige kernen? In welke mate hangen de verschillende partijen dit ook aan?

"De gedachte vanuit Krachtige kernen is de behoefte en de eigen kracht van de burger. Van daaruit ontwerpt Krachtige kernen in co-creatie nieuwe concepten op het gebied van wonen, welzijn en zorg.

Krachtige kernen houdt zich erg bezig met het feit dat kleine dorpen en gemeenten te maken hebben met krimp, bevolkingsdaling, vergrijzing en minder kinderen. Mensen willen wel in hun dorp blijven wonen, dit vraagt wat van het netwerk en de woning die de mensen hebben bijvoorbeeld, er wordt zo een groter beroep gedaan op de omgeving voor hulp. De ontwikkelingen zijn gaande met name in de achterhoek, Friesland, Groningen, Zeeland en Limburg. De voorzieningen in die dorpen zoals de bakker en de supermarkt, worden steeds moeilijker om in stand te houden, evenals de brievenbus, de pinautomaat en de scholen en ga zo maar door. Dus dit verdwijnt steeds meer. Met Krachtige kernen zijn we dan bezig met, kijk we zijn met een bepaald aantal mensen in dat dorp en die kunnen zelf er ook voor zorgen dat dat zorgt leefbaar blijft. Als ze een supermarkt willen, kunnen ze er zelf voor zorgen dat de supermarkt in stand gehouden worden. Wat je doet is die mensen hun eigen samenleving in stand laten houden. Als een participatie samenleving, niet afhankelijk willen zijn van de gemeente of subsidies."

"De Hogeschool van Arnhem en Nijmegen doet alles dat gericht is op de buitenwereld, met betrekking op studenten opleiden en leren praktijkgericht onderzoek te doen. Ook doet de Hogeschool van Arnhem en Nijmegen onderzoek om de buitenwereld te kunnen helpen en verbeteren. Er zijn drie blokken, het bedrijfsleven, het onderwijs en de overheid, maar er moet een sterkere verbinding tussen de drie blokken komen. Hoe krijgen we docenten en studenten in die opdrachten. En zo zijn ze bij de hub gekomen. Krachtige kernen heeft het nog niet ervaren dat sommige partijen er anders in staan waar het gaat om de gemeenschappelijke gedachte en doel. Wel dienen de belangen onderling soms wel afgestemd te worden en is men soms zoekend wat betreft invulling eigen rol."

- Wat is het ontstaan geweest van de thema's wonen, welzijn en zorg gekozen om te behandelen binnen Krachtige kernen?

"Mevrouw Abbring en mevrouw Cornelissen, maar ook andere lectoren betrokken bij Krachtige kernen hebben veel connecties met het werkveld, ook wel de buitenwereld. Mevrouw Abbring heeft veel connecties in bijvoorbeeld de woningcorporatie wereld waar zij met andere professionals spreekt. En mevrouw Melis doet onderzoek voor de Hogeschool van Arnhem en Nijmegen en spreekt hierdoor ook diverse mensen. Hierdoor zien ze diverse dingen die gaande zijn. Tijdens het sparren en de bijeenkomsten komen zij tot bepaalde issues in de samenleving. Op dit moment zien zij met name krimp, vergrijzing en ontgroening van het platteland (daardoor heeft dit te maken met dat het voorzieningsniveau onder druk staat) in Nederland. Ook zijn er transitievraagstukken in het sociale domein door stelselwijziging en decentralisaties in zorg en welzijn. Dit tezamen werd door het maatschappelijke veld in het werkgebied van de Hogeschool van Arnhem en Nijmegen als een maatschappelijk vraagstuk ervaren. De vraag kwam op 'Hoe zorgen we nu dat mensen echt zelfstandig kunnen blijven wonen in dorpen als de voorzieningen schaarser worden en vanuit de participatiedemocratie steeds vaker een beroep moet worden gedaan van het sociaal netwerk van de burger en de zorginstellingen vanwege stelselwijzigingen ook andere keuzen gaan maken.'"

- Hoe worden besluiten genomen binnen de thema's, wat is hiervan het proces?

“Mevrouw Abbring en mevrouw Cornelissen kijken naar waar de mogelijkheden binnen het onderwijs zijn en of er studentenprojecten zijn. Dan bepalen zij het thema van tevoren aan de hand van een onderwerp wat interessant is. In onderling overleg worden de besluiten binnen de thema's genomen. Er is sprake van overleg binnen het center of expertise en overleg met betrokken partijen. Ongeveer eens in de zes weken is er een bijeenkomst. Deze heten de community of learning. Voor de community of learning worden partners uitgenodigd. Aan deze bijeenkomsten zijn thema's gekoppeld. Naast het behandelen en bespreken van deze thema's is er ook uitwisseling van wie waar mee bezig is en welke projecten er gaande zijn. Zo zijn er een aantal grote projecten gaande en deze worden zo besproken. Op deze manier weten de mensen die aanwezig zijn maar niet betrokken bij het project wat er gaande is. Deze mensen kunnen wellicht helpen met behulp van hun connecties of kennis. De uiteindelijke beslissing na (enkele) communities of learning ligt in handen van de programmamanager. Daarnaast gaat de beslissing naar Raad van Advies bestaand uit instituutsdirecteuren, lectoren en bestuurders uit het werkveld (LVKK en woningcorporatie).”

- Wat is de duur van het beslissingsproces?

“Dat is lastig te zeggen, dit hangt heel erg af van meerdere factoren. De vragen die worden gesteld zijn: Zijn snel de juiste partijen benaderd en werken zij mee? Is er genoeg budget, zijn er subsidies en/of kunnen deze aangevraagd worden? Het aanvragen van subsidies alleen al is een langdurig proces. Daarnaast moet iedereen concreet met de plannen aan de slag gaan. Anders wordt er enkel een hoop gepraat maar komt er weinig uit.”

- Hoe worden beslissingen gecontroleerd op de uitvoer en haalbaarheid?

“Dit ligt aan het project. In januari zijn we bijvoorbeeld begonnen met het Interecht project, dit project heet Kraak en bestaat mede dankzij een Europese subsidie. Dit project gaat over leefbaarheid in kleine dorpen. Bij dit traject was er eerst een voortraject met name om de subsidie aan te vragen. Dit duurde twee jaar, je komt tussentijds, ervoor en erna bij elkaar. Je zoekt partners die nodig zijn bij het project, zoals in dit geval Duitse partners. Daarnaast kijk je welke lectoren, onderzoekers, studenten enzovoort met het onderwerp mee willen doen en zo heb je een groep van minstens zes lectoren en een groot aantal onderzoekers vanuit de Hogeschool van Arnhem en Nijmegen. Zo kan een idee in een keer ontstaan. Dan moet er gekeken worden of we voor dit idee een subsidie kunnen aanvragen. Waarna meestal een tweetal hiermee bezig gaat die dit serieus aanpakt. Het kan natuurlijk bij een idee blijven maar dan gaat het nergens heen, maar in dit geval zijn er ook echte partners die hierop ingezet hebben en zo is dit project in Lingewaard gelukt.”

10.1.2. Dirk de derde

10.1.2.1. Meneer van Luttervelt

- Hoe, waarom en wanneer is Dirk ontstaan?

“De eerste gedachte om iets als Dirk te beginnen kwam ongeveer 4-5 jaar geleden toen ik in Varik ben komen wonen. Mijn vrouw exploiteerde het veerhuis in Varik. En ik wilde wat goeds gaan doen in en voor de Betuwe. Op het gebied van duurzaamheid en maatschappelijk verantwoord ondernemen, waar ik altijd mee bezig ben.

Ik bedacht om het maatschappelijk verantwoord ondernemen café te starten. En ben toen onder andere met de Rabobank gaan praten omdat die zich hier ook mee bezig houdt. Zij zeiden dat ik met mensen met dezelfde ideeën een clubje van moest vormen. Volgens de Rabobank is duurzaam, succesvol ondernemen een interessant onderwerp. Ik heb toen met de Rabobank en een aantal ondernemers een aantal sessies in het Veerhuis gehad. Uit de sessie in Zaltbommel bleek dat het niet op schoot. We waren te veel bezig met duwen en trekken. Dus we besloten om dit mvo ondernemer café op te heffen. Ik heb toen besloten om samen met meneer de Kock en meneer Wink door te gaan. Met als begin thema duurzame energie. Meneer de Kock, meneer Wink en ik konden elkaar goed aanvullen en hadden dezelfde zienswijze waardoor de samenwerking wel werkte. Meneer de Kock had als toevoeging verstand van bouwkunde, meneer Wink verstand van bestuurszaken en regelgeving en ik ben altijd transities bezig. Daardoor vulden we elkaar aan en versterkten we elkaar.

Met deze gedeelde gedachte wilden we een lokale energie coöperatie op poten zetten. We zijn samen gaan brainstormen in een vergadering. Het eerste idee was om zonnepanelen op de daken van de schuren van de tuinders leggen. Zodat al die asbest tuindaken worden vervangen.”

“Ik zit in allerlei andere landelijke netwerken, waaronder economy transformers. Toen ik op een bijeenkomst was in de Caballero fabriek in Den Haag, ontmoette ik meneer Kerkhoven. Meneer Kerkhoven en ik kenden elkaar al jaren uit onder andere de economy transformers. Toen bleek dat we allebei in een ander dorp (Haaften en Varik) in de betuwe maar in dezelfde gemeente (Neerijnen) woonden, besloten we om de koppen bij elkaar te steken. En we zijn, met Dirk als geuzenaam van de stichting, verenigd. Dirk is een van de eerste coöperatieve graven. Een knipoog naar de Rabobank.”

- Op welke manier en hoe lang bent u verbonden aan de hub? Professioneel of vrijwillig?

“Jarenlang ben ik bezig geweest met medewerker betrokkenheid campagnes en community campagnes. Ik kwam bij het ontstaan van Dirk als aanvulling om iets in de Betuwe te doen en als aanvulling op mijn werk. Ik heb veel tijd en energie in de ontwikkeling gestoken, het met elkaar projecten op poten zetten, transities aanjagen, evenementen organiseren vanuit Dirk. In de beginperiode zijn er vanuit Dirk veel initiatieven ontstaan (coöperaties). Zoals de burger- en wind coöperatie, er is een energiespel ontwikkeld, wind- en voedsel coöperatie en een mobiliteit

coöperatie.”

- *Wat draagt u bij aan de hub?*

“Ik ben een meester in opzetten van stichtingen en het ontmantelen van stichtingen als ze hun doelstellingen hebben gehaald. Ik ben er niet rouwig om als het noodzakelijk is of beter is, om in een ander verband verder te gaan. Ik denk dat we altijd contact houden en elkaar in het netwerk tegen komen. Ik heb van mijn tijd 60% in Dirk en 40% in nevenwerkzaamheden gestoken. Ik maak een organisatie van een geheel waar een businessplan in ligt. Ik wil er met elkaar een inkomsten/kostendekkend model uit krijgen. Als een coöperatie op poten gezet wordt moeten de coöperatie wel leden hebben want anders zegt het niets en voegt het niets toe. Ik ben van mening dat men eerst met de poten in de klei iets moet bewerkstelligen voordat er allerlei juridisch vormen gecreëerd worden.”

- *Hebben alle partijen (ondernemende burgers, overheden, bedrijven, kennisinstellingen, kapitaalverstrekkers en maatschappelijke organisaties) een even groot aandeel binnen de hub?*

“Alle thema’s hangen samen. En staan in verbintenis met elkaar. Alleen het thema energie heeft in de Betuwe een enorme vlucht genomen. Het is een leerschool waar ze in zitten. Steeds ontdekken. Ik vind het interessant om te zien hoe je met vallen en opstaan, nieuwe burgerinitiatieven vormgeeft. Dat kan op alle vlakken en thema’s zijn. Maar als er weinig organisatie, wil en vermogen is bij de verschillende partijen en er is ook niet de wil om een echte eigen organisatie maken in de zin van met menskracht en financiële middelen, dan houdt het op. Dus het moet vanuit de partijen zelf komen vanuit een overtuiging en een wilskracht.”

- *Wat is het ontstaan geweest van de thema’s? Hoe worden besluiten genomen binnen de thema’s? Wat is het proces van besluitvorming?*

“De thema’s moeten passen bij wat we willen, worden niet specifiek met voorbedachten rade genomen, maar komen op hun door de omstandigheden af. Als er sprake is van transitie zoals in de fruitmotor is er sprake van vier systeemtransities. De waarde van het fruit in de regio, in ruil daarvoor de telers hun boomgaard laten verduurzamen en een stukje blauwe economie om de afvalstukken te gaan hergebruiken zoals van sap van fruit nieuwe producten te fabriceren en uiteindelijk de keten te kantelen opdat alle partijen met elkaar samenwerken en er een incentive systeem aan koppelen zodat de waarde van de regionale producten in de regio laten blijven. Hier zijn met alle coöperaties links te vinden. Er zit hier bijvoorbeeld een link met energie mee. Zo zetten wij de sateprikker door alle projecten heen, houden elkaar op de hoogte van alle trajecten die er lopen.”

- *Wat is de duur van het beslissingsproces? Was de beslissing bijvoorbeeld vanaf het begin duidelijk of is dit opgebouwd? Welke factoren zijn van invloed op het nemen van een beslissing?*

“Aan de hand van de maatschappelijke canvas wordt bepaald welke stakeholders zijn er relevant en hoe kunnen we meerwaarde in regio creëren met als doel meervoudige waard creatie. Dit moet gefinancierd worden, hoe worden handen en voeten aan gegeven in de regio. Dit heeft een economische, ecologische en sociale dimensie. Dat zijn de criteria waarlangs ze bij Dirk de projecten afwegen. Ook wordt er gekeken of de projecten leuk en interessant zijn. Een proces zoals voedsel is al 1,5 jaar bezig en mobiliteit ook en duurzame energie 2,5 jaar. Maar dit begint wel al handen en voeten te krijgen. Een aanloop traject kan kort zijn want als ze het leuk vinden pakken ze het op. Als er enthousiasme voor is moeten we het met elkaar oppakken.”

- *Welke rol vervult u bij de besluitvorming binnen de hub? Verschilt dit per thema?*

“Dirk heeft een sociocratische besluitvorming. Besluiten worden genomen op basis van consensus. Holocratie, is hiervan de moderne variant. De vier basisprincipes een regerend consent, kringorganisatie, dubbele koppeling en sociocratische verkiezing worden aangehouden. Als een van de besluitvormers zich hier niet aan houdt, wordt er geen besluit genomen. De meerderheid mag nooit de minderheid een keuze of een mening door de strot duwen.”

- *Wat zijn de beperkende factoren bij de besluitvorming?*

“Tijd en in termen van capaciteit. Verschillende dingen waar de mannen van Dirk heel enthousiast over zijn en ze veel mogelijkheden zien moeten ze wel kunnen waarmaken. De tijd en zowel onbetaalde als betaalde tijd. Er kan maar een bepaalde hoeveelheid tijd onbetaald gebruikt worden anders kun je het zonder financiering niet volhouden.

Het lastige was dat er niet altijd rondom een thema, of met partijen een organisatie gebouwd kon of wilde worden. En dan bleef alles zweven, als men niet iets kan bewerkstelligen op de grond. Als iets niet concreet gemaakt kan worden dan moet men niet hoog van de toren blazen. Concrete dingen doen is dan het belangrijkste in plaats van enkel praten.”

“Bijvoorbeeld Regio Rivierenland. Regio Rivierenland had mooie transitie agenda met alle thema's waar Dirk actief in was. Ze dachten dat ze door deze overlap goed met elkaar op konden trekken. Helaas heeft de politiek de regio teruggevloten om zich bezig te houden met de kerngebieden, agri logistiek en toerisme. Toen waren er geen middelen meer, dus geen mogelijkheid om een organisatie op te bouwen. Dat was een van de redenen om te zeggen hoe en willen we als Dirk verder. Want zonder middelen kan Dirk niet verder en is lastig. En daar is Dirk op dit moment gestrand.”

- *Wat is voor u het meest belangrijke aspect van de hub?*

“Ik wil met name een bijdrage leveren aan de Betuwe. En ik wil de ontwikkelingen in de regio en de regio zelf leuker en vrolijker maken en meer duurzaam.”

- *Hoe ziet de toekomst van de hub eruit?*

“Zolang ik in de Betuwe blijf wonen, blijft het gevoel van iets voor de regio te willen doen in de Betuwe. Ook al zou dirk undercover of in de slaapstand bestaan. De besluitvormers van Dirk blijven elkaar op allerlei manieren bevruchten door lid van de coöperaties te zijn. Elkaar op de hoogte houden van ontwikkelingen, maar ze worden ook gevraagd om mee te denken met fusies van gemeentes. Afgelopen jaren hebben ze hun stempel en gezicht en naam in de regio als ondernemende burgers met een groot netwerk en leuke ideeën gedrukt.

Ik geef toe dat ze in de regio krediet hebben verloren door nog niet echt op lokaal niveau zichtbare projecten van de grond getrokken te hebben met veel deelnemers maar dat is niet erg. Dat moet geaccepteerd worden en vooral doorgaan. Hier in de betuwe gaan veranderingen met weerstand gepaard, eerst zien dan geloven. In de Betuwe is het een andere sfeer dan in de steden. In de steden zijn de transities volop op gang gebracht en in de Betuwe is het eerst zien dan geloven. Je moet dan eerst wat op poten hebben gezet. Belangrijke voorwaarde is om nergens tegen te zijn en af te keuren maar er een alternatief of een mogelijkheid naast te wat leuker en aantrekkelijker is. En dan de mensen over de streep trekken om naar het nieuwe te werken. Vernieuwen is nodig deze tijd. Niet oude is niet goed zeggen. Het oude was prima, maar niet meer van deze tijd.”

10.1.2.2. *Meneer Wink*

- *Hoe, waarom en wanneer is Dirk ontstaan?*

“Ik ben 4 jaar wethouder geweest parttime in de gemeente Buren, op het gebied van milieu en duurzaamheid. Door dit werk ben ik in aanraking gekomen met Cabellien in Vliedrecht. Zij introduceerden de term daktransitie bij mij. Het dak boven een huis wat beschermt in weer en wind. Cabellien kwam op het idee dat je met een dak meer kunt doen zoals groene planten kweken die hemelwater gebruiken, waardoor je minder hemelwater afvoert. Of zonnepanelen leggen op het dak. Een soort cassette hadden ze uitgevonden dat zowel zon als elektriciteit als co2 kon afvangen. Ik ging naar een bijeenkomst in Delft daar sprak hij meneer Rotman over transitiekunde. Toen ik in 2011 geen wethouder meer was ging ik aan de Erasmus academie Rotterdam transitie management volgen, over systeemkunde en systeemmanagement. Ik wilde hier in de praktijk iets mee doen. Ik wilde naast mijn werk op het gebied van transitie op het vlak van energie mobiliteit zorg en voedsel bewerkstelligen. Zo kwam ik in contact met meneer van Luttervelt en meneer de Kock gekomen. Op dat vlak hadden zij ook affiniteit. Om een soort energie coöperatie op te zetten.”

- *Op welke manier en hoe lang bent u verbonden aan de hub? Professioneel of vrijwillig?*

“Dirk is iets wat ik naast mijn werk doe. Professioneel zit ik in het interim management. Ik ben vandaag opdracht begonnen thuiszorgorganisatie. Op gebied van zorg ben ik met transities bezig. Met die zorg nodig hebben eerst kijken wat kunnen ze zelf realiseren, wat met de buurt of de familie, daar zit transitie in. Daarnaast ben ik bestuurslid bij de burger wind coöperatie Neerijnen Geldermalsen. Die coöperatie is voortgekomen mede uit Dirk.”

- *Wat draagt u bij aan de hub?*

“Ongeveer een halve dag in de week investeer ik aan Dirk. Evenals kennis uit eerdere werkervaring. Daar waar ik in mijn interim werk uurloon ontvang, is Dirk vrijwillig.”

- *Hebben alle partijen een even groot aandeel binnen de hub?*

“In 2013 is Dirk gestart en in 2014 is de burger wind coöperatie en gebied coöperatie opgezet. Dit heeft als gevolg gehad dat een aantal energieactiviteiten niet door de stichting gedaan worden maar door de coöperatie.

Dirk heeft bescheidener rol ingenomen, de rol van burgers is groter in Dirk dan bijvoorbeeld bedrijven, overheid en kennisinstellingen.

Dirk zit momenteel in de fase van herpositionering.

Meneer de Kock heeft met zijn thema mobiliteit en binnen dat project bedrijven aangesloten en de overheid en de provincie.

Bij meneer van Luttervelt zijn het met name de telers, bedrijven, overheid burgers en kennisinstellingen, rondom zijn thema voedsel.

Eni k heb met name te maken met zijn thema zorg met bedrijven, burgers en de overheid.”

- *Wat is het ontstaan geweest van de thema's? Hoe worden besluiten genomen binnen de thema's? Wat is het proces van besluitvorming?*

“Dirk handelt en faciliteert om de basisvoorzieningen van de Nederlandse huishoudens draaiende te houden. In een huishouden verloopt dat geïntegreerd, maar daarbuiten niet. Dirk wil dit bekijken vanuit de wens van de nieuwe en circulaire economie. Bij problemen binnen het huishouden komen de betrokkenen in aanraking met de bank, instanties en thuiszorgorganisaties. Dit is vaak bureaucratisch en lastig. De vraag die Dirk probeert te beantwoorden is hoe dit in een nieuwe economie meer geïntegreerd kan worden en op een menselijke manier kan bewerkstelligen in plaats van systeemgericht.”

- *Wat is de duur van het beslissingsproces? Was de beslissing bijvoorbeeld vanaf het begin duidelijk of is dit opgebouwd? Welke factoren zijn van invloed op het nemen van een beslissing?*

“Wanneer iemand met een initiatief komt, wat wellicht interessant is om binnen Dirk mee aan de slag te gaan, is het van belang te kijken naar de doelstelling van de stichting. Komt met dit initiatief het doel dichterbij en is dit realiseren zijn belangrijke vragen. Als het initiatief interessant is maar het doel niet dichterbij brengt, dan is dit geen initiatief voor Dirk. De individuen mogen dit echter wel los van Dirk aanpakken.

Het beslissingsproces hangt af of er binnen het initiatief snel partners gevonden worden. Dan is de vraag of ze met zijn allen de schouders eronder zetten. Als het idee, het projectplan en de financiering snel rond zijn is dit proces redelijk rap te voldoen. Maar het hangt van de kansen af die zich voordoen en van het team dat is samengesteld. Het is dus niet een voorbedacht of vastgesteld proces.”

- *Wat zijn de beperkende factoren bij de besluitvorming?*

“Soms komt het voor dat mensen die mee doen eerst ja zeggen maar uiteindelijk voor het individuele belang gaan, bijvoorbeeld omdat ze geld nodig hebben in plaats van het collectieve belang meenemen en nastreven. Dit is een afbreukrisico. Ook kan het voorkomen dat de mensen van het project niet binnen het team passen of dat het team uit elkaar valt. Of een geldkwestie dat subsidie niet gegeven wordt, maar dat deze wel nodig is anders valt het project stil.”

- *Wat is voor u het meest belangrijke aspect van de hub?*

“Het samen met een aantal mensen zijn die een ideaal hebben. En samen een betere wereld willen hebben. Deze mensen zien het als een collectief belang om met elkaar de schouders onder een collectieve ambitie zetten. Dit belang gaat verder dan alleen geld verdienen. Het gaat om de aandacht voor elkaar hebben en een passie delen en leren dat er meer waarden in het leven zijn dan geld verdienen. Het leren van de ontwikkelingen en de kansen binnen de nieuwe economie staat centraal. Doordat iedereen kijkt vanuit zijn eigen achtergrond kan dit aanvullend werken.”

- *Hoe ziet de toekomst van de hub eruit?*

“Door het ontstaan van de coöperaties moet Dirk zich als stichting herpositioneren. De vraag is waar ze wel of niet mee bezig moeten zijn. Dirk is momenteel verweekeld in een doorstartfase. Het is een feit dat uit Dirk mooie initiatieven zijn voortgekomen. Dus de rol van Dirk moet blijven bestaan als vernieuwer en aanjager.”

10.1.2.3. *Meneer de Kock*

- *Hoe, waarom en wanneer is Dirk ontstaan?*

“In 2007-2008 is bij mij de eerste gedachte rondom duurzaamheid ontstaan en dat daar meer mee gedaan moest worden dan dat er gedaan werd.

Dirk is zelf echt ontstaan in 2010. Toen ik in het gebied ben komen werken. Ik kwam erachter dat men in de regio niet verbonden was rondom het thema duurzaamheid. Er was nog geen infrastructuur aanwezig om duurzaamheid echt structureel te verbinden en deze naar een hoger plan te tillen.

Meneer Wink, meneer van Luttervelt en ik hebben elkaar gevonden bij een bijeenkomst van de stichting Succesvol en Duurzaam Ondernemen Rivierenland. Wij hebben samen een projectgroep uit gevormd. Ook mevrouw van Asperen was hier tijdelijk bij betrokken maar zij heeft vrij snel de groep verlaten. De heren zijn toen met zijn drieën verder gegaan, voor ongeveer een jaar. Zij praatten in deze projectgroep in eerste instantie met name over energie en hoe ze een coöperatie op konden zetten.

In januari 2013 is meneer Kerkhoven bij de projectgroep gekomen. Meneer Kerkhoven was al landelijk actief en hij kwam meneer van Luttervelt in Den Haag tegen. Meneer Kerkhoven was net op zoek naar een nieuwe uitdaging. De naam Dirk is via meneer Kerkhoven binnen gekomen. Later is mevrouw Franken bij Dirk gekomen. Zij heeft samengewerkt aan de Gelderlandfabriek in Culemborg met meneer de Kock. Waardoor zij bekend werd met de projectgroep.”

- *Op welke manier en hoe lang bent u verbonden aan de hub? Professioneel of vrijwillig?*

“Als waardenwerker voor de nieuwe economie. Vrijwilligerswerk dekt de lading niet (meer). Het is een way of life, want dit werk moet je passen anders kun je er niet met heel je hart en je ziel en zaligheid zo veel tijd en energie in stoppen. Om economische redenen moet dit niet gedaan worden, het levert geen vetpot op. Vanuit mijn eigen bedrijf Holistico ben ik bezig met projecten, nieuwe producten ontwikkelen en de begeleiding van bedrijven. En vanuit Dirk houd ik me bezig met het maatschappelijke belang.”

- *Wat draagt u bij aan de hub?*

“Heel veel tijd, een netwerk en energie, maar ook kennis vanuit werkervaring bij de bouw en politieke ervaring.”

- *Hebben alle partijen (ondernemende burgers, overheden, bedrijven, kennisinstellingen, kapitaalverstrekkers en maatschappelijke organisaties) een even groot aandeel binnen de hub?*

“Alles is organisch binnen Dirk is gegroeid. Er is eerst een beweging op gang gezet. En dat wil Dirk ook blijven volhouden. Hier zijn werkgroepen uit ontstaan. Dirk is nu nog een stichting, en vanaf 2014 is er een gebiedscoöperatie Rivierenland aan toegevoegd. Nu kom er nog een fonds. Mensen worden kenbaar gemaakt van wat er in het gebied gebeurt. Bij het begin in 2012 men vond het raar waar ze

mee bezig waren. Tegenwoordig worden ze meer geaccepteerd door alle partijen om nieuwe oplossingen in de samenleving te laten ontstaan. En willen deze partijen ook samenwerken. Afhankelijk van wat er per project nodig is worden de partijen betrokken die nodig zijn. Het meeste gebeurt uit eigen kracht, maar er zijn soms ook subsidies en opdrachten van de overheid om maatschappelijk vraagstukken op te lossen. Voor veel mensen zijn de korte termijn thema's meer van belang en ze kijken minder naar de lange termijn. Dit is meer ver van hen bed. Men zit nog erg in hun eigen hokje.

De middelen om de thema's te bewerkstelligen brengen de bedrijven, de overheid en de gemeente in. Ze vragen aan hen wat ze nodig hebben. Kost veel tijd om alle middelen en de focus bij de partijen te krijgen. Maar uiteindelijk komt de kennis naar je toe, als men bewust is van wat het idee is en dat ze het aandurven een nieuwe weg in te slaan. Dirk bereidt de weg voor, maar er is ook nog een oerwoud. En stapje voor stapje wordt het doel bereikt. De exacte middelen zijn onbekend maar deze komen ze onderweg tegen."

- *Wat is het ontstaan geweest van de thema's? (energie, vervoer, gezondheid, voedsel en leefomgeving) Hoe worden besluiten genomen binnen de thema's? Wat is het proces van besluitvorming?*

"Meneer Kerkhoven heeft een nieuwe richting gegeven aan de projectgroep met verdieping op de huidige thema's. De thema's waren er al voor de komst van meneer Kerkhoven, maar meneer Kerkhoven heeft met zijn kennis en achtergrond er meer vorm aan gegeven. Belangrijke bijdrage in de architectuur van de thema's. Hoe ze de huidige thema's beter konden verbinden. Toen is de eerste bijeenkomst ontstaan in 2013 nog voordat de stichting opgericht was. Er kwamen zes werkbijeenkomsten, hier werd veel kennis opgehaald uit het gebied. De belangrijkste vragen die ze zichzelf en elkaar stelden in deze werkgroepen waren 'wat voor potentieel zit er in het gebied' en 'waar zijn we trots op in het gebied' 'waar ligt de schat begraven, wat zien we over het hoofd'. Het eerste gezamenlijke project waren de windmolens. Ze waren naar energie gaan kijken als eerste thema. In twee windmolenparken zijn burgers via de coöperatie mede-eigenaar van beide parken en hebben zo een stem in de ontwikkeling.

Later de andere thema's erbij gaan komen. Het is volgens meneer de Kock een way of life. Het draait bij de thema's allemaal om, waar heeft het gezin mee te maken. Het gezin heeft namelijk te maken met vervoer, voedsel, energie, wonen, gezondheid en inkomenszorg. Eigenaarschap moet bij de burgers liggen en dat moet gestimuleerd worden dat ze zich daar bewust van zijn en bewust mee om gaan. Circulaire economie staat hoog in het vaandel.

Ze blijven zichzelf bij Dirk continu afvragen hoe beter te doen. Hun kracht is om mensen bij elkaar te brengen die eerst los van elkaar functioneerden op hun eigen domein maar samen een hoop kunnen bereiken door elkaar te versterken."

- *Wat is de duur van het beslissingsproces? Was de beslissing bijvoorbeeld vanaf het begin duidelijk of is dit opgebouwd? Welke factoren zijn van invloed op het nemen van een beslissing?*

“Het is onbekend hoe lang iets precies duurt en waar het project over een half jaar staat. 2 jaar geleden ben ik begonnen in Tiel voor een samenwerking. Dit ging om een project om te kijken naar de bereikbaarheid in Tiel. Er was een kleine bijdrage van de gemeente om deze gesprekken te voeren om tot de conclusie of een idee te komen hoe ze samen mobiliteit anders konden inzetten. De mobiliteitsmarkt verkend en een er staat een grote verandering te wachten. Er werden twee bijeenkomsten gehouden. Uit deze bijeenkomsten kwamen ideeën om de bereikbaarheid te verbeteren. Er werd een experiment gestart omtrent de bereikbaarheid. Het plan werd geschreven en uiteindelijk tot de goedkeuring duurde dit proces maar liefst 8 maanden. Veel tijd was er nodig om alle partijen bij elkaar te brengen, de gemeente, provincie, fiets- en autobedrijven. Met hen allemaal moesten afspraken gemaakt worden. Implementatie door de gemeente en de ondernemersverenigingen kwam pas bij het bestaan van een goed systeem en cofinanciering. Als dit succesvol is dan werd er gezamenlijk met bedrijven en burgers een coöperatie opgezet.

Dirk werkt als neutrale tussen het aanbod en het vraag gedeelte. Je moet een lange adem hebben om dergelijke kwesties te kunnen volbrengen. Iedereen wil eigen maximale rendement. Dus alles moet langzaam opgebouwd worden. Soms val je naar beneden en soms naar boven. Eerst is Dirk groter geworden en nu kleiner. Want ze willen alleen met mensen samenwerken die er helemaal voor willen gaan. Om dan deze mensen mee te nemen in deze gedachte. Dirk wilt een betrokken kern en mensen die beweging willen en durven maken. Het is afhankelijk van het project wie er betrokken is. Er is namelijk geen blauwdruk hoe het proces zal gaan. Het gaat om vallen en opstaan. Steeds beter willen worden door de ervaring.”

- *Welke rol vervult u bij de besluitvorming binnen de hub? Verschilt dit per thema?*

“Alle initiatiefnemers hebben hun eigen thema waar zij zich mee bezig houden. Meneer Wink houdt zich bezig met gezondheid, meneer van Luttervelt met voedsel en ik met vervoer en leefomgeving in zijn eigen omgeving. Binnen die thema's worden besluiten geleidelijk genomen waar de situatie om vraagt. De besluiten groeien en ontstaan organisch.”

- *Wat zijn de beperkende factoren bij de besluitvorming?*

“Beperkend is dat een transitie erg lang duurt. Op een nieuwe manier kijken kost tijd en moet je willen en kunnen overwinnen. Men moet vertrouwen hebben in het idee. Het dient vanuit je hart te komen. Er echt voor willen gaan. En anders willen kijken. Dan komt er een beweging door tijd en vertrouwen. Projecten moeten niet alleen gedaan worden uit een economisch oogpunt, maar ook uit sociaal en ecologisch oogpunt. Het dient dat ze zelfstandig kan bestaan binnen niet al te lange tijd. Het gaat om de beweging die op gang gebracht moet worden.”

- *Wat is voor u het meest belangrijke aspect van de hub?*

“En er is angst bij de partijen om samen te werken. Dirk wil een neutrale positie innemen, geen bedreiging maar wel helder de visie neerleggen. En de beweging in gang zetten en houden. Er moet een duurzame samenleving blijven bestaan, sociaal, ecologisch en economisch. Het moet wel je interesse zijn, niet zomaar te leren. Vraag en aanbod beter bij elkaar zetten.

In dit werk is veel zelfontwikkeling en bewustzijn nodig. Het ontvangen en delen moet in evenwicht zijn. Hoe kun je idealistisch en realistisch zijn. Er moet een balans zijn. Ook al denken veel mensen dat het meer idealistisch dan realistisch is. Dirk staat pas aan de vooravond van een beweging. Als de knop van een bloem, het begin is gemaakt. Bewustzijn creëren bij de mensen dat dingen op een andere manier kunnen.”

- *Hoe ziet de toekomst van de hub eruit?*

“Dirk staat over ongeveer een half jaar in de zijns toestand. We vinden dat ze genoeg hebben losgemaakt, beweging in gang gezet en de thema's lopen nu. Het gaat steeds sneller dat dingen op gang worden gezet. Mensen worden ondersteund met behulp van Dirk en de coöperaties in hun vragen. Want we krijgen onvoldoende ondersteuning van de overheid. Dus er is een plaats nodig waar ze die steun wel kunnen vinden, bij Dirk bijvoorbeeld. Er zit in sommige burgerinitiatieven te weinig structuur en middelen maar wel meer dan genoeg intrinsieke motivatie.

Het moet economisch haalbaar zijn om een project aan te gaan en een beweging op gang houden. Dirk zal minder actief zijn in de toekomst als stichting want daar hebben ze nu de coöperaties voor.”

10.1.3. Gloei

10.1.3.1. Meneer Boonekamp

- *Hoe, door wie, waarom en wanneer is Gloei ontstaan?*

“In 2010 is de gemeente Peel en Maas ontstaan uit de voormalige gemeente Helden, Kessel, Maasbree en Meijel. De gemeenteraden van deze gemeenten afzonderlijk, hebben voor de nieuwe gemeente een kaderstellend beleidsdocument vastgesteld, de zogenaamde “Perspectievennota” waarin de ambitie en de koers van de nieuwe gemeente is vastgelegd. Daarbij zijn drie kernwaarden benoemd die richting moeten geven aan het gemeentelijk beleid. Deze kernwaarden zijn Diversiteit, Duurzaamheid en Zelfsturing.

Verder is in de perspectievennota bepaald dat de gemeente zich als een netwerkorganisatie dient te gaan ontwikkelen waarbij wisselende rollen zullen zijn vereist.

Als opdracht kreeg ik daarom voorgelegd om binnen 2 jaar een duurzaamheidsplatform binnen de gemeente Peel en Maas op te richten. Ik heb deze opdracht deels aangenomen omdat hij geen platform

van de gemeente wilde creëren maar een platform van de gemeenschap en omdat hij in dat geval niet kan toezeggen dat dit platform in een tijdsbestek van 2 jaar een feit zal zijn.

In het najaar van 2009 heb ik een 30-tal mensen uitgenodigd waarvan ik wist dat deze op de een of andere wijze een passie hadden voor duurzaamheid.”

- *Hoe lang bent u al betrokken bij Gloei?*

“Ik ben betrokken bij Gloei vanaf het allereerste begin. Gloei als kennisplatform duurzaamheid en netwerkorganisatie is formeel op 21 juni 2013 opgericht.”

- *Wat draagt u bij aan Gloei?*

“De belangrijkste bijdrage van mij is de relatie tussen Gloei en gemeente vanuit de “Perspectievennota” vorm en inhoud geven. Dit vooral op strategisch niveau. Wat betekent netwerksturing voor de gemeente? Wat is de rol van de gemeente enerzijds als facilitator en ondersteuner van Gloei en anderzijds als participant voor Gloei. Kan de gemeente ook daadwerkelijk “loslaten”? En wat betekent Gloei voor de besluitvormingsprocessen van de gemeente?”

- *Hebben alle partijen waar Gloei mee samenwerkt een even groot aandeel binnen de hub? Waarom wel of waarom niet? En welke partijen zijn dit?*

“Gloei heeft een partnerschapsovereenkomst afgesloten met de gemeente Peel en Maas, de Rabobank Peel, Maas en Leudal en Accountantskantoor Koenen & Co. De bijdrage van laatstgenoemde is bescheiden. De ondersteuningsbijdrage van de gemeente bedraagt €25.000,- per jaar en die van de Rabobank €50.000,- per jaar.”

- *Bestaat er een gemeenschappelijke gedachte en doel binnen Gloei? In welke mate hangen de verschillende partijen dit ook aan?*

“Wat partijen verbindt is een gemeenschappelijke ambitie en visie. Vanuit een eigen visie en ambitie hebben partijen elkaar gevonden omdat iedereen ervan overtuigd is dat zij elkaar nodig hebben om deze te kunnen realiseren.”

- *Wat is het ontstaan geweest van de thema's om te behandelen binnen Gloei?*

“De thema's worden niet door Gloei bedacht maar door de Gloei community, de leden, partners en sympathisanten van Gloei. Iedereen is vrij om te agenderen. Of dat nu de overheid is of een lid van de buurtvereniging of de bestuurder van de voetbalvereniging. Zij kunnen het thema aandragen bij de coöperatie Gloei die op haar beurt een themabijeenkomst gaat organiseren. Gloei gaat daarvoor binnen haar eigen netwerk kijken welke partijen mogelijk interessant kunnen zijn voor het desbetreffende thema en als deze niet binnen het bestaande netwerk voorhanden is, op zoek naar de juiste partijen buiten het directe netwerk. Gloei zorgt derhalve niet alleen voor verbindingen binnen het netwerk

maar ook voor verbindingen tussen netwerken. Uitgangspunt voor Gloei is daarbij dat mensen bereid moeten zijn om kennis te brengen, deze vervolgens te delen om vervolgens te komen tot perspectiefvolle valuecases. Dit is fundamenteel iets anders als de bekende businesscases.”

- *Hoe worden besluiten genomen binnen de thema's, wat is hiervan het proces?*

“Zoals gezegd is de coöperatie Gloei een duurzaamheidsplatform en netwerkorganisatie. Zij brengt mensen en organisaties met elkaar in verbinding, zorgt daar waar mogelijk voor het ontsluiten van kennis dan wel het verzamelen van kennis zonder daarbij in de verantwoordelijkheid van de ander te treden. De initiatieven en ideeën die vanuit de community ontstaan, zijn primair eigendom van de mensen zelf. Zij staan dan ook aan de lat om beslissingen te nemen. Uiteraard kunnen zij daarbij gebruik maken van Gloei.”

- *Wat is de duur van het beslissingsproces? Was de beslissing bijvoorbeeld vanaf het begin duidelijk of is dit opgebouwd?*

“Ik ben een facilitator en niet een initiatiefnemer van de bepaalde onderwerpen en thema's vandaar dat ik geen invloed of zeggenschap heb op dit proces.”

- *Hoe worden beslissingen gecontroleerd op de uitvoer en haalbaarheid?*

“Op het moment dat initiatiefnemers een beroep doen op facilitering door de coöperatie Gloei, op welke wijze dan ook, zullen zij zich moeten conformeren aan de Gloei uitgangspunten en visie. Daarbij hoort ook uitvoerbaarheid en haalbaarheid. Niet alleen de controle daarop maar meer het meedenken en meehelpen om te komen tot uitvoerbaarheid en haalbaarheid.”

- *Welke factoren zijn van invloed op het nemen van een beslissing? En in welke mate?*

“De coöperatie Gloei kent leden. De leden betalen geen contributie maar brengen een x-aantal uren van hun kennis en deskundigheid in. De coöperatie faciliteert haar leden door o.a. een back-office en het organiseren van themabijeenkomsten. Het zijn de leden die het bij de coöperatie voor het zeggen hebben. Op partnerniveau is het Gloei dat de regierol heeft. De partners, in dit geval de gemeente en de Rabobank, ondersteunen Gloei daarbij zonder de verantwoordelijkheid van Gloei over te nemen. Met andere woorden, als de visie en ambitie van Gloei niet langer aansluit bij die van de partner, gaat Gloei verder zonder deze partner.”

- *Zijn er beperkende factoren bij de besluitvorming?*

“Ja, die zijn er wel degelijk. Enerzijds bestaan deze uit zaken waarvan het primaat bij de andere partij ligt. Een voorbeeld hiervan vormen wet- en regelgeving waarvoor de overheid verantwoordelijk is. Anderzijds vormt het bestaande systeem een beperkende factor bij de besluitvorming.”

- *Hoe ziet u de toekomst van Gloei?*

“Gloei als beweging van onderop is niet meer tegen te houden. Gloei geeft handen en voeten aan de transitie. Snelheid en mate waarop zal vooral bepaald gaan worden door de mate waarop Gloei in staat zal zijn om nieuwe verbindingen zowel binnen al buiten het netwerk tot stand te brengen.”

10.1.3.2. *Meneer Hinssen*

- *Hoe lang bent u al betrokken bij Gloei?*

“Ik ben sinds 1,5 jaar op afstand betrokken bij Gloei. Sinds april 2016 ben ik actiever als bestuurder”.

- *Wat draagt u bij aan Gloei?*

Mijn bijdrage aan Gloei is dat ik overzicht heb van de maatschappelijke transitie die gaande is en ik heb hier inzicht in. Ik heb kennis van filosofie en de grondslag van inclusieve sociaal economische innovatie. Daarnaast ben ik bereid om een aandeel te nemen en de bereidheid tot niet-weten.”

- *Hebben alle partijen waar Gloei mee samenwerkt een even groot aandeel binnen de hub? Waarom wel of waarom niet? En welke partijen zijn dit?*

“Gloei bestaat uit mensen uit het bedrijfsleven, maatschappelijke organisaties, ondernemers, overheid en betrokken burgers. Zij nemen in verschillende samenstellingen deel aan werkgroepen of nemen een andere taak op zich.”

“De betrokkenheid en inzet van personen heeft gradaties. Dit gaat dan om mensen die affiniteit hebben met place based identity en mentaal eigenaarschap en dat willen koesteren. Motieven, mens- en wereldbeelden verschillen. Voor sommigen is de drang groot om tot innovatieve aanpakken te komen (je kunt dat WEconomy noemen), anderen beseffen dat inclusiviteit ook rust vraagt.”

“Het begrip samenwerken suggereert dat Gloei iets 'doet'. Het is meer faciliteren en steunen vanuit kernwaarden wat er aan de oppervlakte komt wat Gloei doet. Gloei genereert spinn offs, die als cellen in zelfstandigheid ontwikkelen, zoals ZERegio. De relatie is op het niveau van samenhang, niet op het niveau van activiteit (energie coöperatie, thema gezonde voeding etc) als zodanig.”

- *Bestaat er een gemeenschappelijke gedachte en doel binnen Gloei? In welke mate hangen de verschillende partijen dit ook aan?*

“Gloei, heeft zelf géén projecten en financiert ook geen projecten; GLOEI faciliteert mensen in werkgroepen die zich met projecten bezig houden om tot wasdom te komen en zelfstandig verder te gaan. GLOEI kan wel helpen om financiering te vinden of de juiste mensen bij elkaar te brengen.

Leden van GLOEI kunnen zich aansluiten bij één of meer werkgroepen die met concrete projecten bezig zijn. Sommige projecten bevinden zich nog in de fase van pril idee, andere zijn verder uitgewerkt of al (deels) gerealiseerd.”

“Alle projecten zijn te zien in ons interne communicatiesysteem NING, waar leden elkaar online ontmoeten. Daar is ook te zien wie er bij een project betrokken is. NING is alleen toegankelijk voor leden. De kernwaarden zijn benoemd, niet iedereen heeft hetzelfde beeld of dezelfde kennis hiervan. Mensen werken vanuit hun eigen percepties en wereldoriëntaties. De mate van inclusiviteit is tegelijkertijd een afspiegeling van persoonlijke ontwikkeling.”

- *Wat is het ontstaan geweest van de thema's om te behandelen binnen Gloei?*
Hoe worden besluiten genomen binnen de thema's, wat is hiervan het proces?

“Thema's volgen de opportuniteiten en wil binnen de gemeenschap, op het collectieve niveau. Activiteiten die te zeer belang- geladen zijn en te weinig vanuit wederkerigheid, non-competitie en co creatie acteren vallen vroeg of laat af.”

- *Wat is de duur van het beslissingsproces? Was de beslissing bijvoorbeeld vanaf het begin duidelijk of is dit opgebouwd? Hoe worden beslissingen gecontroleerd op de uitvoer en haalbaarheid?*

“Besluiten kunnen zich ook voltrekken zonder dat ze genomen worden, ze emaneren als het ware. Sommigen zijn in staat om dat proces actief te sturen.”

- *Welke factoren zijn van invloed op het nemen van een beslissing? En in welke mate? Zijn er beperkende factoren bij de besluitvorming?*

“Gloei als beweging of zwerm is 'gelaagd'. Dat wil zeggen dat gebruikelijke schema's over functionaliteit, effect, rollen en dergelijke beperkt betekenis hebben. De interne organisatie is relatief smal en daardoor ook kwetsbaar”.

- *Hoe ziet u de toekomst van Gloei?*

“Mensen en daarmee de samenleving bewegen zich van expansie via beleving naar waardering en waardigheid. In economische paradigma's vertaald: van consumptie economie via belevenis economie naar een waarden economie. Macro gezien de omslag van welvaart naar welzijn. Gloei is een bundeling van mensen die in deze richting meebewegen en daar gaandeweg invulling aan geven.”

“Ik verwacht dat er meer en vergelijkbare initiatieven opkomen, zoals de Community of Practice Alliantie Venlo, maar ook transitie-achtige bewegingen elders. RvO Nederland en ook NWO-SIA groene brein hebben dat wel in beeld.

Wat ik graag zou zien is actieve inzet op 'lerende regio's', met als focus de betekenis van inclusiviteit. Dat in het economisch domein het circulaire principe (CE, C2C) in opkomst is. Geleidelijk aan herkennen we de meerwaarde van ecosysteembenaderingen als antwoord op uitputting t.g.v. lineaire economie met het bijbehorende idee dat meer='goed'. Er is daarmee een herkenning van de relaties tussen de fysiek-mechanische sfeer, de biosfeer, de sociaal-economische sfeer en de geestelijke sfeer (zie o.a. Spiral Dynamics en The Natural Step). De geestelijke sfeer wordt doorgaans in de academische omgeving uitgesloten van onderzoek.”

10.1.3.3. Meneer Koenen

- *Hoe, door wie, waarom en wanneer is Gloei ontstaan?*

“Volgens mij is het als volgt gegaan: meneer Boonkamp heeft initiatief genomen en meneer Reijnders en mevrouw Stroucken hebben het verder vormgegeven.”

- *Hoe lang bent u al betrokken bij Gloei?*

“Ik ben betrokken vanaf 2013 bij Gloei. In mei 2013 heeft hij een presentatie gegeven in een bijeenkomst in Meijel. De presentatie ging over energieneutraal wonen. Vanaf november 2013 tot juli 2015 ben ik bestuurslid geweest van Gloei. Daarna was ik, vanaf juli 2015, alleen nog Gloeilid.”

- *Wat draagt u bij aan Gloei?*

“Op dit moment draag ik niet meer zoveel bij aan Gloei als bestuurslid of actief lid. Ik heb erg veel tijd in een project gestoken. SIF, daar zat meer dan 800 uur aan vrijwilligerswerk in.”

- *Hebben alle partijen waar Gloei mee samenwerkt een even groot aandeel binnen de hub? Waarom wel of waarom niet? En welke partijen zijn dit?*

“Ik denk van niet. Ik ben op dit moment niet meer betrokken bij de projecten dus hij kan niet zeggen wat op dit moment de status is en wat de projecten zijn.”

- *Bestaat er een gemeenschappelijke gedachte en doel binnen Gloei? In welke mate hangen de verschillende partijen dit ook aan?*

“De gemeenschappelijke gedachte binnen gloei is: Duurzaamheid in zal zijn facetten. En alle partijen hangen dit aan.”

- *Wat is het ontstaan geweest van de thema's om te behandelen binnen Gloei?*

Hoe worden besluiten genomen binnen de thema's, wat is hiervan het proces?

“De leden zijn de baas binnen Gloei. En het bestuur voert de wens van de leden uit. Besluiten worden door het bestuur genomen, met eventueel raadpleging van de leden die erbij betrokken zijn.”

- *Wat is de duur van het beslissingsproces? Was de beslissing bijvoorbeeld vanaf het begin duidelijk of is dit opgebouwd? Hoe worden beslissingen gecontroleerd op de uitvoer en haalbaarheid?*

“De duur van het beslissingsproces is heel verschillend. Als er consensus bestaat dan kan de beslissing snel gaan, maar dingen kunnen ook nooit beslist worden. Dus het is van de situatie en het project afhankelijk.

Gloei is een zeer flexibele en lerende organisatie. Het gehele proces is niet van tevoren vastgelegd. De controle op uitvoer en haalbaarheid is zeer lastig. Het is aan de groep en de mensen die daarin zitten, de mensen die met een project bezig zijn om zichzelf te controleren. Beslissingen over events en dergelijke worden genomen door het bestuur en de leden van de werkgroep en op de juiste wijze uitgevoerd.”

- *Welke factoren zijn van invloed op het nemen van een beslissing? En in welke mate? Zijn er beperkende factoren bij de besluitvorming?*

“De beschikbare financiën zijn de meest beperkende factor. En hoe verstrekkend zijn de gevolgen van een beslissing. Hier moet rekening mee gehouden worden.”

- *Hoe ziet u de toekomst van Gloei?*

“Als het doel dat nagestreefd wordt, door iedereen ondersteund wordt en op de juiste manier toegepast wordt, kan hetgeen wat uit Gloei komt en zich vormt als spin-off nog veel mooier worden. Ik bedoel daarmee dat niet alleen de duurzaamheid, maar ook dat er oprechte samenwerking plaatsvindt.”

10.1.4. Questionnaire

The questionnaire can be found on the following link:

http://fmru.az1.qualtrics.com/SE/?SID=SV_cYNzKVyBNJfLdjf

Make Cense

Q1 Geachte lezer, De Radboud Universiteit Nijmegen doet onderzoek naar regionale samenwerkingsverbanden. In het kader van dit onderzoek vragen wij u om mee te werken aan deze enquête over besluitvorming in samenwerkingsverbanden. In het onderzoek maken wij gebruik van de term ‘hubs’. Onder een hub verstaan wij een breed, lokaal of bovenlokaal, samenwerkingsverband waarin uiteenlopende partijen (zoals overheid, bedrijven, burgerinitiatieven, maatschappelijke organisaties, instellingen) en individuele burgers op gelijkwaardige basis samenwerken. De enquête bestaat uit 22 meerkeuze vragen. Het kost u ongeveer 10 minuten van uw tijd om deze in te vullen. Bedankt voor uw medewerking! Hilde Engels Moniek Kamm Yara Kamps RU Nijmegen

Q3 Wat is uw geslacht

- ☐ man (1)
- ☐ vrouw (2)

Q4 Onder welke leeftijdscategorie valt u?

- ☐ tot 18 jaar (1)
- ☐ 18 - 35 jaar (2)
- ☐ 35 - 50 jaar (3)
- ☐ 50 - 65 jaar (4)
- ☐ 65 jaar en ouder (5)

Q5 In welke provincie bent u actief in een hub?

- ☐ Limburg (1)
- ☐ Gelderland (2)
- ☐ Noord Brabant (3)
- ☐ Zeeland (4)
- ☐ Overijssel (5)
- ☐ Friesland (6)
- ☐ Groningen (7)
- ☐ Drenthe (8)
- ☐ Flevoland (9)
- ☐ Utrecht (10)
- ☐ Noord Holland (11)
- ☐ Zuid Holland (12)
- ☐ Anders (13)

Q20 Op welke manier bent u verbonden aan de hub?

- ☐ professioneel: ik ben in dienst van de hub (1)
- ☐ professioneel: ik participeer in de hub vanuit mijn (betaalde) functie elders (2)
- ☐ vrijwillig: op persoonlijke titel (3)
- ☐ vrijwillig: ik participeer in de hub vanuit mijn onbetaalde functie bij een van de aangesloten partijen (4)

Q21 Waarom participeert u in de hub (meerdere antwoorden mogelijk)

- ☐ Het is een middel om het doel / de doelen van mij zelf / mijn organisatie te bereiken (1)
- ☐ Het is onderdeel van mijn werk (2)
- ☐ De missie / visie van de hub spreken mij aan (3)
- ☐ De doelstellingen van de hub spreken mij aan (4)
- ☐ Vanwege het netwerk (5)

Q22 Wat draagt u bij aan de hub? (meerdere antwoorden mogelijk)

- ☐ geld (1)
- ☐ middelen (2)
- ☐ kennis (3)
- ☐ netwerk (4)
- ☐ projecten (5)
- ☐ tijd (7)
- ☐ anders, namelijk (6) _____

Q8 De oriëntatie van onze hub is met name

- ☐ lokaal (1)
- ☐ regionaal (2)
- ☐ provinciaal (3)
- ☐ nationaal (4)

Q6 Met welke thema's houdt uw hub zich bezig (meerdere antwoorden mogelijk)

- ☐ energie (1)
- ☐ mobiliteit (2)
- ☐ educatie (3)
- ☐ gezondheidszorg (4)
- ☐ leefbaarheid (5)
- ☐ afval (6)
- ☐ voedsel (7)
- ☐ landbouw (8)
- ☐ grondstoffen (9)
- ☐ water (10)
- ☐ regionale economie (12)
- ☐ anders, nl (11) _____

Q7 Wat voor type partijen / organisaties participeren in uw hub (meerdere antwoorden mogelijk)

- ☐ burgerinitiatief (1)
- ☐ belangenorganisaties (2)
- ☐ ondernemers: zzp (3)
- ☐ ondernemers: mkb (4)
- ☐ overheid: lokaal (5)
- ☐ overheid: provinciaal (6)
- ☐ overheid: nationaal (10)
- ☐ non profit organisaties (7)
- ☐ onderwijsinstellingen (8)
- ☐ anders, namelijk (9) _____

Q10 Heeft uw hub een visie geformuleerd? De visie beschrijft de gewenste situatie op lange termijn.

Zo ja kunt u deze kort benoemen?

- ☐ ja, namelijk (1) _____
- ☐ nee (2)
- ☐ niet mee bekend (3)

Q11 Heeft de hub een missie geformuleerd? In haar missie definieert de organisatie haar bestaansgrond, haar waarden en identiteit. Zo ja kunt u deze kort benoemen?

- ☐ ja, namelijk (1) _____
- ☐ nee (2)
- ☐ niet mee bekend (3)

Q27 Geef uw mening over de volgende stellingen

	Helemaal mee eens (6)	Mee eens (7)	Neutraal (8)	Mee oneens (9)	Helemaal mee oneens (10)
In onze hub is er een collectieve doelstelling (1)	☐	☐	☐	☐	☐
Onze hub heeft een vastgesteld plan om aan de doelstelling te werken (2)	☐	☐	☐	☐	☐
Binnen onze hub worden beslissingen genomen die tot concrete projecten leiden (3)	☐	☐	☐	☐	☐
Binnen onze hub worden concrete projecten uitgevoerd (4)	☐	☐	☐	☐	☐

Q26 Geef uw mening over de volgende stellingen

	Helemaal mee eens (1)	Mee eens (2)	Neutraal (3)	Mee oneens (4)	Helemaal mee oneens (5)
In onze hub evalueren we op gezette tijden onze plannen (2)	☐	☐	☐	☐	☐
In onze hub evalueren we op gezette tijden onze projecten (3)	☐	☐	☐	☐	☐
In onze hub gebruiken we evaluaties om onze doelstellingen te toetsen (1)	☐	☐	☐	☐	☐

Q15 Welke rechtsvorm heeft uw hub?

- ☐ geen, omdat (1) _____
- ☐ coöperatie (2)
- ☐ stichting (3)
- ☐ vereniging (4)
- ☐ besloten vennootschap (5)
- ☐ anders, namelijk (6) _____

Q14 Hoe zou u de functie van uw hub in de omgeving omschrijven? (meerdere antwoorden mogelijk)

- ☐ facilitator van activiteiten (1)
- ☐ initiator van activiteiten (2)
- ☐ verbinder (tussen partijen) (3)
- ☐ belangen behartiger (4)
- ☐ uitvoerder (van activiteiten) (5)
- ☐ anders, namelijk (6) _____

Q16 Worden besluiten vastgelegd en gedeeld tussen de participanten in uw hub?

- ☐ ja (1)
- ☐ nee (2)
- ☐ niet mee bekend (3)

Q18 Kent uw hub een centraal besluitvormend orgaan?

- ☐ ja (1)
- ☐ nee (2)
- ☐ niet mee bekend (3)

Q17 Beslissingen binnen onze hub worden genomen op basis van

- ☐ unanimiteit (1)
- ☐ meerderheid (2)
- ☐ consensus (3)
- ☐ anders namelijk (4) _____

Q25 De onderwerpen voor besluitvorming worden besproken via (meerdere antwoorden mogelijk)

- ☐ Fysieke bijeenkomsten voor alle leden (1)
- ☐ Fysieke bijeenkomsten van besluitvormend orgaan (2)
- ☐ social media (facebook, twitter etc) (3)
- ☐ (e) mailings (4)
- ☐ anders, namelijk (5) _____

Q28 Geef uw mening over de volgende stellingen

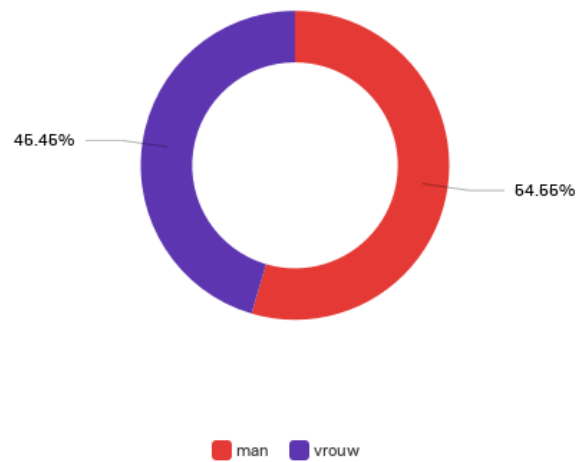
	Helemaal mee eens (1)	Mee eens (2)	Neutraal (3)	Mee oneens (4)	Helemaal mee oneens (5)
Onze hub draagt bij aan veranderingen in de regio (1)	☐	☐	☐	☐	☐
Onze hub heeft invloed op ontwikkelingen in de regio (2)	☐	☐	☐	☐	☐
Onze hub is aanjager van ontwikkelingen in de regio (3)	☐	☐	☐	☐	☐

Q23 Bent u bereid om mee te werken aan vervolgonderzoek? (Indien u 'ja' invult ontvangt u nadere informatie op basis waarvan u kunt beslissen of u wilt participeren in ons onderzoek)

- ☐ Ja, vul in: naam, mailadres, naam hub (1) _____
- ☐ Nee, bedankt (2)

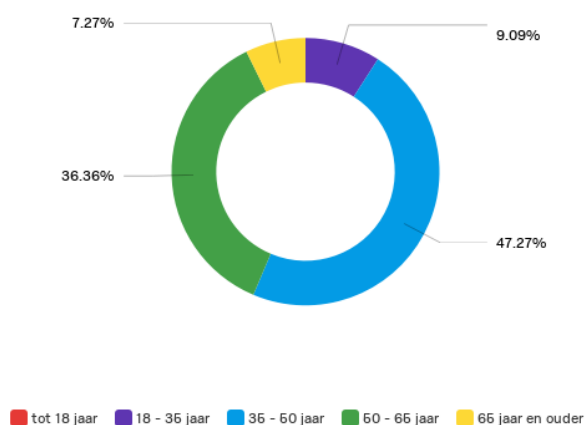
The questionnaire results

Q3 - Wat is uw geslacht



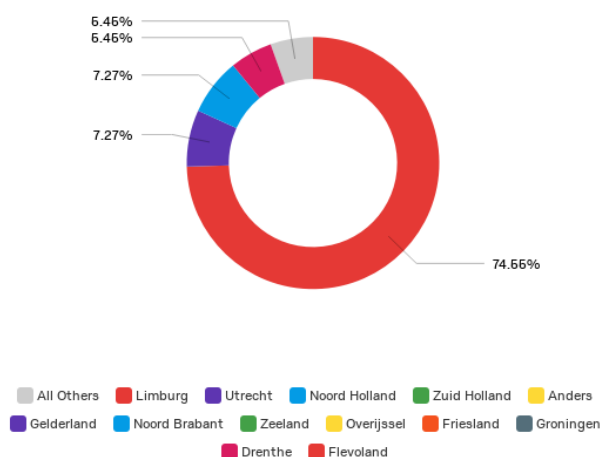
Answer	%	Count
man	54.55%	30
vrouw	45.45%	25
Total	100%	55

Q4 - Onder welke leeftijdscategorie valt u?



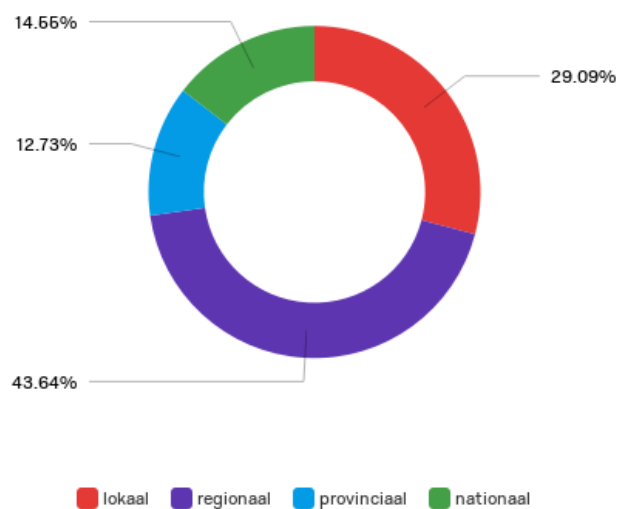
Answer	%	Count
tot 18 jaar	0.00%	0
18 - 35 jaar	9.09%	5
35 - 50 jaar	47.27%	26
50 - 65 jaar	36.36%	20
65 jaar en ouder	7.27%	4
Total	100%	55

Q5 - In welke provincie bent u actief in een hub?



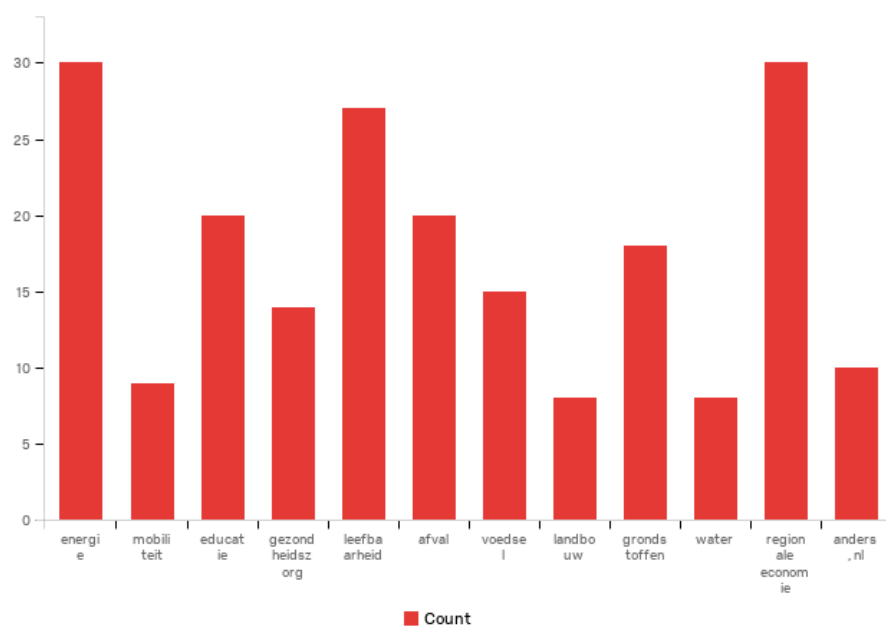
Answer	%	Count
Limburg	74.55%	41
Gelderland	7.27%	4
Noord Brabant	7.27%	4
Zeeland	0.00%	0
Overijssel	1.82%	1
Friesland	0.00%	0
Groningen	3.64%	2
Drenthe	5.45%	3
Flevoland	0.00%	0
Utrecht	0.00%	0
Noord Holland	0.00%	0
Zuid Holland	0.00%	0
Anders	0.00%	0
Total	100%	55

Q8 - De oriëntatie van onze hub is met name



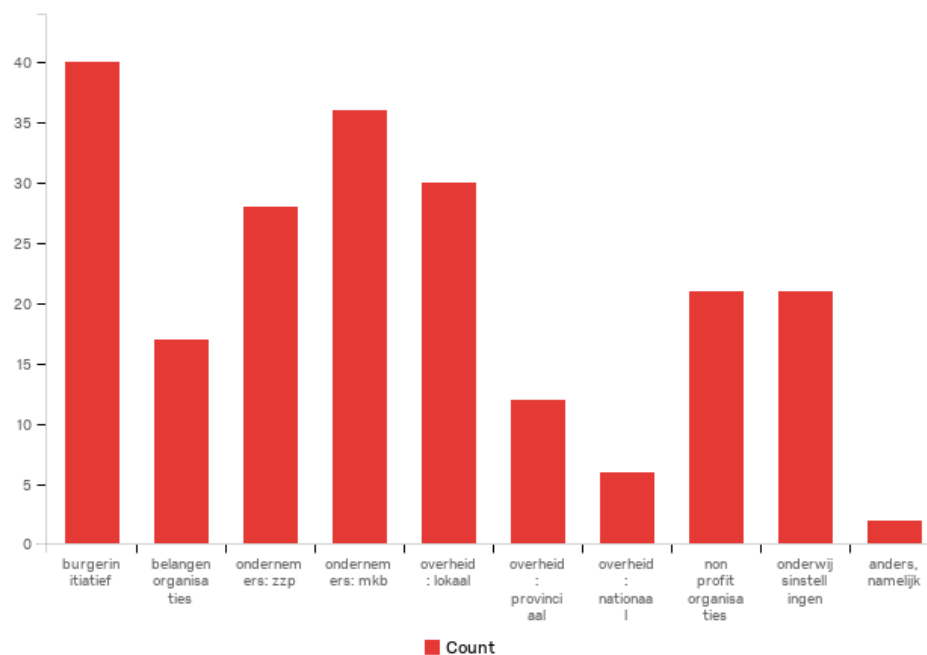
Answer	%	Count
lokaal	29.09%	16
regionaal	43.64%	24
provinciaal	12.73%	7
nationaal	14.55%	8
Total	100%	55

Q6 - Met welke thema's houdt uw hub zich bezig (meerdere antwoorden mogelijk)



Answer	%	Count
energie	54.55%	30
mobiliteit	16.36%	9
educatie	36.36%	20
gezondheidszorg	25.45%	14
leefbaarheid	49.09%	27
afval	36.36%	20
voedsel	27.27%	15
landbouw	14.55%	8
grondstoffen	32.73%	18
water	14.55%	8
regionale economie	54.55%	30
anders, nl	18.18%	10
Total	100%	55

Q7 - Wat voor type partijen / organisaties participeren in uw hub (meerdere antwoorden mogelijk)

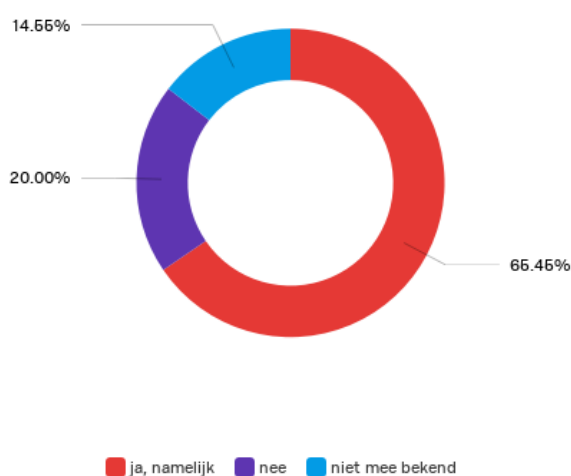


Answer	%	Count
burgerinitiatief	72.73%	40
belangenorganisaties	30.91%	17
ondernemers: zzp	50.91%	28
ondernemers: mkb	65.45%	36
overheid: lokaal	54.55%	30
overheid: provinciaal	21.82%	12
overheid: nationaal	10.91%	6
non profit organisaties	38.18%	21
onderwijsinstellingen	38.18%	21
anders, namelijk	3.64%	2
Total	100%	55

anders,, namelijk

financiële instellingen

Q10 - Heeft uw hub een visie geformuleerd? De visie beschrijft de gewenste situatie op lange termijn. Zo ja kunt u deze kort benoemen?



Answer	%	Count
ja, namelijk	65.45%	36
nee	20.00%	11
niet mee bekend	14.55%	8
Total	100%	55

ja, namelijk

inclusieve samenleving en waardevolle economie

dorpen en buurten begeleiden die de ambitie hebben uitgesproken binnen 10 jaar helemaal energie-neutraal te zijn

Sociale innovatie voor een groene economie

Volhoudbaarheid van de wereld (duurzaam)

samenwerken in slimme allianties voor een coöperatieve samenleving

zorgen dat het dorp toekomstbestendig is (prettig wonen en werken in een veranderende wereld)

parkstad Limburg energie transitie palet

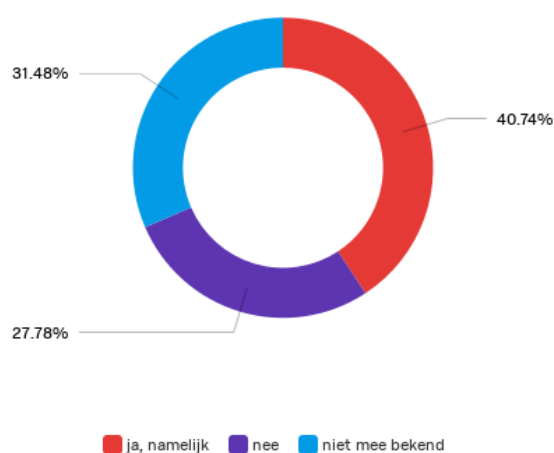
zie www.energiepunt.nl

duurzaam, diversiteit, zelfsturing

zorgen voor een duurzame toekomst

voorzien of bijdragen bij het realiseren van het basis inkomen in de gemeent Peel en maas
een leefbare wereld
natuurlijk Sithard wilin de gemeente Sithard-Geleen daadwerkelijk duurzaamheid handen en voeten geven
duurzaam persoonlijk ontwikkeling en leren
bewust maken verandering
betaalbare eigen lokaal duurzaam opgewekte energie als motor van lokale economie en duurzame projecten
duurzaam door visie
afvalloze regio
goed voedsel, biologisch, duurzaam, fairtrade beschikbaar maken voor iedereen door bewustwording, kennismaking en good practicus te stimuleren in regio venlo
afvalloze regio
leefbare wijk
afvalloze regio
ecosysteem van bedrijven
afvalloze regio
afvalloze regio
wereldpaviljoen om scholieren wereldburgers te maken. En fairtrade om een eerlijke handel te bevorderen.
Zeurige niets en niemand aan de straat
gezond materiaal gebruik+hergebruik van meterialen
people
de promotie van bouwen met biobaseel materialen en deze circulair
het landschap als uitdaging in lokale gemeenschappen leggen
niets en niemand aan de schaal
vergroten van de burgerparticipatie in Lingewaard
verbeteren leefbaarheid
Wij participeren in verschillende hubs. Visies daarin: Energieneutraal wonen in 2040, versnellingvan energiebesparing bij particulieren, versterking van lokale collectieven op gebied van duurzaamheid, versterken van circulaire economie in Drenthe.
energie neutraal over 20 jaar

Q11 - Heeft de hub een missie geformuleerd? In haar missie definieert de organisatie haar bestaansgrond, haar waarden en identiteit. Zo ja kunt u deze kort benoemen?



Answer	%	Count
ja, namelijk	40.74%	22
nee	27.78%	15
niet mee bekend	31.48%	17
Total	100%	54

Q11_1_TEXT - ja, namelijk

ja, namelijk

De missie van HeelNederlandDeelt is om de deeleconomie in Nederland verder te bevorderen door deze voor iedereen en overal toegankelijk te maken, middels samenwerking, verbinding en krachtenbundeling met bestaande deelplatformen in Nederland.

realiseren van inclusieve, ondernemende wijken

energie-neutraliteit en sociale cohesie en sociaal-economische vooruitgang

Sociale innovatie voor een groene economie

Transitie/kanteling vorm geven, verbinding tussen 4 O's, Bottum-Up beweging,

vanuit dorpskracht en doenersmentaliteit bruggenbouw aan een gezonde toekomst van het dorp voor en door het dorp

het doel is her verduurzamen van de particulierenwoninggebouw

parkstad Limburg energie neutraal 2040

zie www.energiepunt.nl

een leefbare wereld

duurzaam leren en ontwikkeling

verschilt per ondersteuningsproject

in ontwikkeling

voor en door de wijk

in 5 jaar 5 ipnleefcentra uit de hele wereld. En fairtrade gemeente te promoten.

people en educatie

transitie van eindige grondstoffen naar hergroeibare grondstoffen en deze circulair toepassen

bekend maken en promoten

Alle Limburgers maken Limburg mee

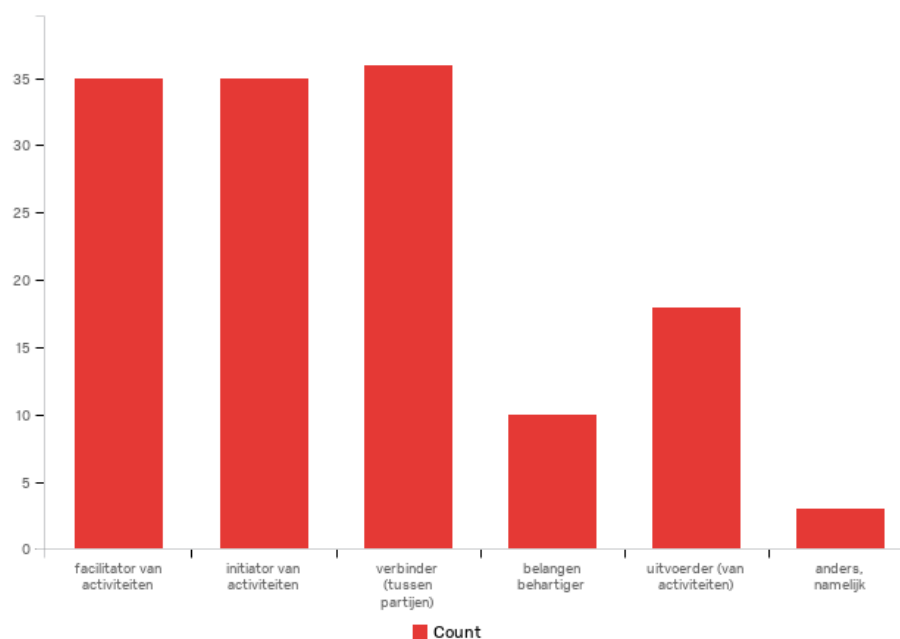
duurzaamheid in elke facetten

zie vorige vraag

Q26 - Geef uw mening over de volgende stellingen



Q14 - Hoe zou u de functie van uw hub in de omgeving omschrijven? (meerdere antwoorden mogelijk)



Answer	%	Count
facilitator van activiteiten	63.64%	35
initiator van activiteiten	63.64%	35
verbinder (tussen partijen)	65.45%	36
belangen behartiger	18.18%	10
uitvoerder (van activiteiten)	32.73%	18
anders, namelijk	5.45%	3
Total	100%	55

anders, namelijk

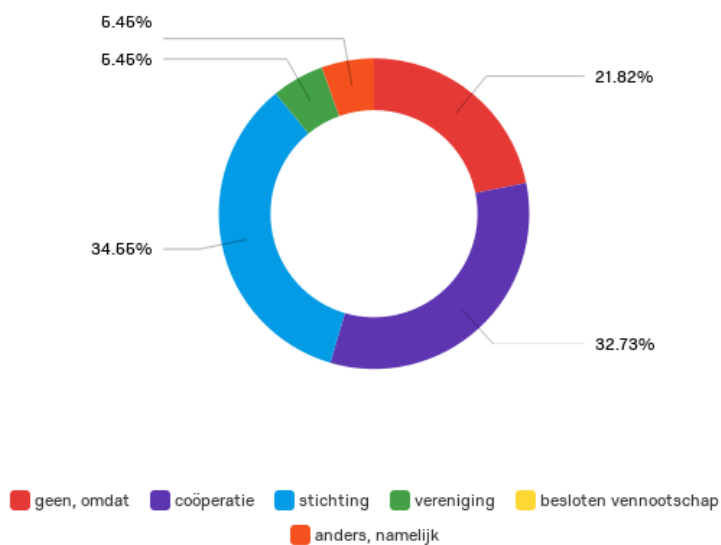
anders, namelijk

begeleiden van lokale projectgroepen

Ontmoetingsplaats

founder and chairman

Q15 - Welke rechtsvorm heeft uw hub?



Answer	%	Count
geen, omdat	21.82%	12
coöperatie	32.73%	18
stichting	34.55%	19
vereniging	5.45%	3
besloten vennootschap	0.00%	0
anders, namelijk	5.45%	3
Total	100%	55

Ja, namelijk

in oprichting. wordt coöperatieve vereniging en/of stichting

we nieuwe organisatie vormen onderzoeken

good food community en het beleg van venal zijn in fusie

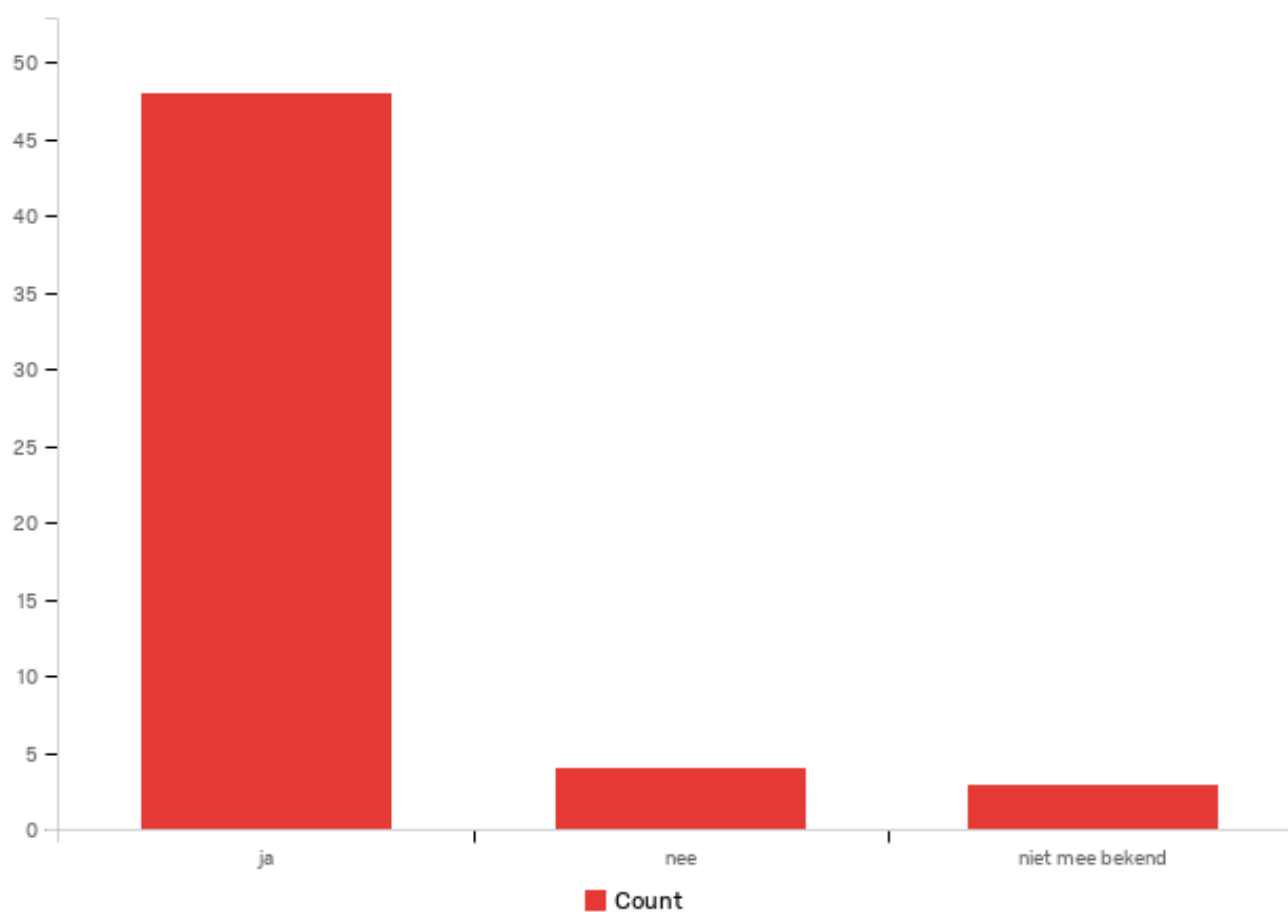
we gewoon doen

we zetten voortdurend lokale verbanden rond het landschap op

Kleinschalige initiatieven

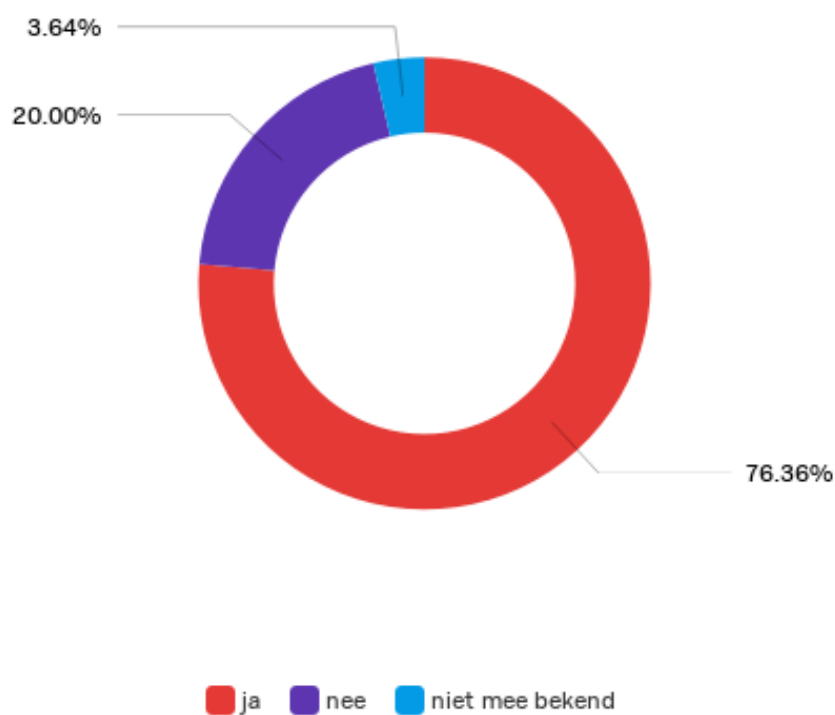
We merken dat rechtsvormen soms beperkend zijn n snelheid van handelen en vrij samenwerken.

Q16 - Worden besluiten vastgelegd en gedeeld tussen de participanten in uw hub?



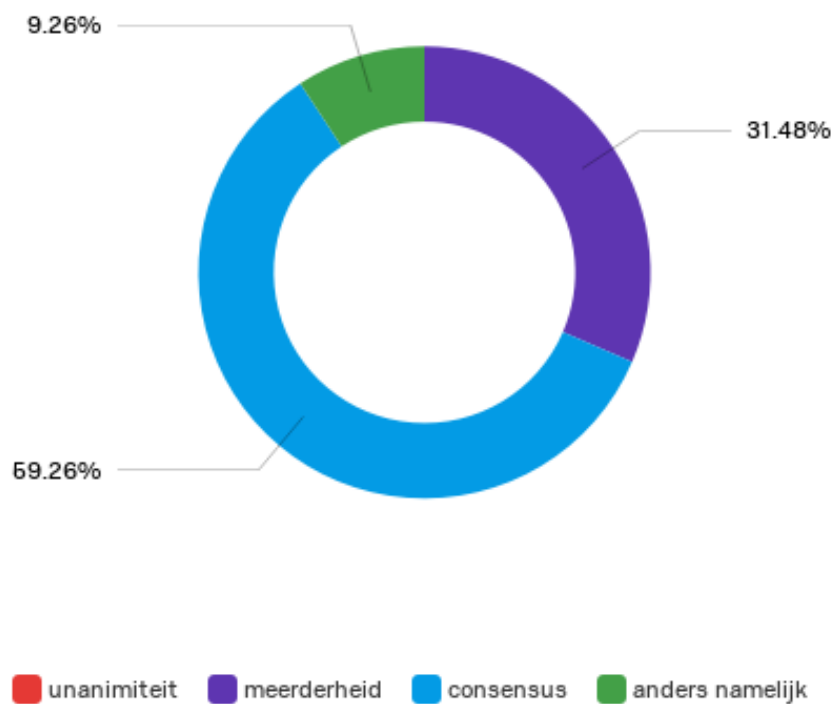
Answer	%	Count
ja	87.27%	48
nee	7.27%	4
niet mee bekend	5.45%	3
Total	100%	55

Q18 - Kent uw hub een centraal besluitvormend orgaan?



Answer	%	Count
ja	76.36%	42
nee	20.00%	11
niet mee bekend	3.64%	2
Total	100%	55

Q17 - Beslissingen binnen onze hub worden genomen op basis van



Answer	%	Count
unanimiteit	0.00%	0
meerderheid	31.48%	17
consensus	59.26%	32
anders namelijk	9.26%	5
Total	100%	54

anders namelijk

via bestuurs comissie ruimte parkstad+gemeente raden

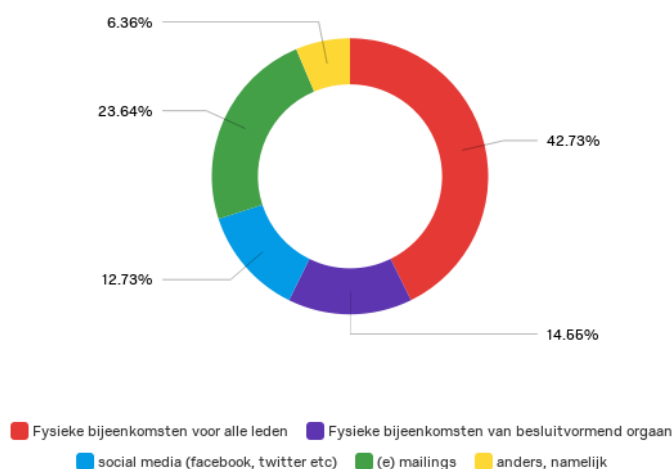
organiseren met combinatie samenwerken

geen idee

verschillend - niet echt beslist

variabel

Q25 - De onderwerpen voor besluitvorming worden besproken via (meerdere antwoorden mogelijk)



Answer	%	Count
Fysieke bijeenkomsten voor alle leden	87.04%	47
Fysieke bijeenkomsten van besluitvormend orgaan	29.63%	16
social media (facebook, twitter etc)	25.93%	14
(e) mailings	48.15%	26
anders, namelijk	12.96%	7
Total	100%	54

anders, namelijk

anders, namelijk

individuele gesprekken

buurtmagezine

schrijven

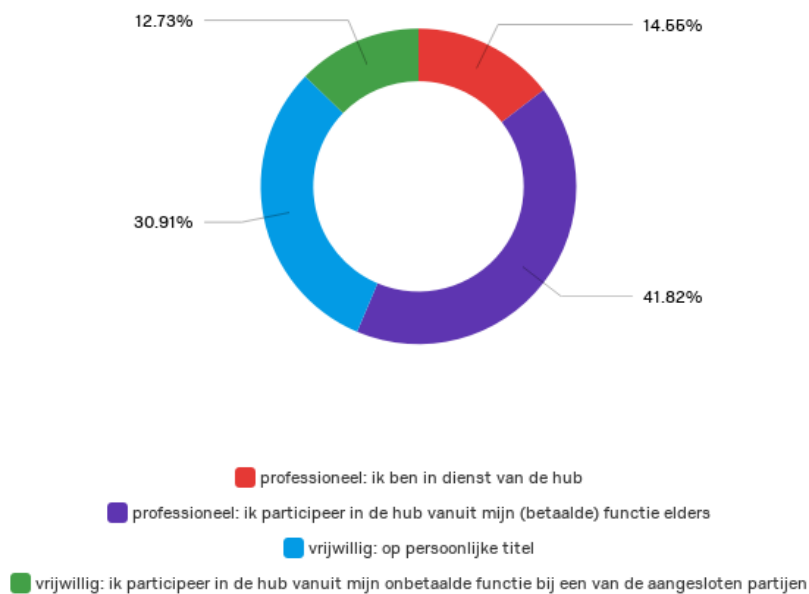
geen idee

worden niet echt voorgelegd - dingen ontstaan

in de wandelgangen

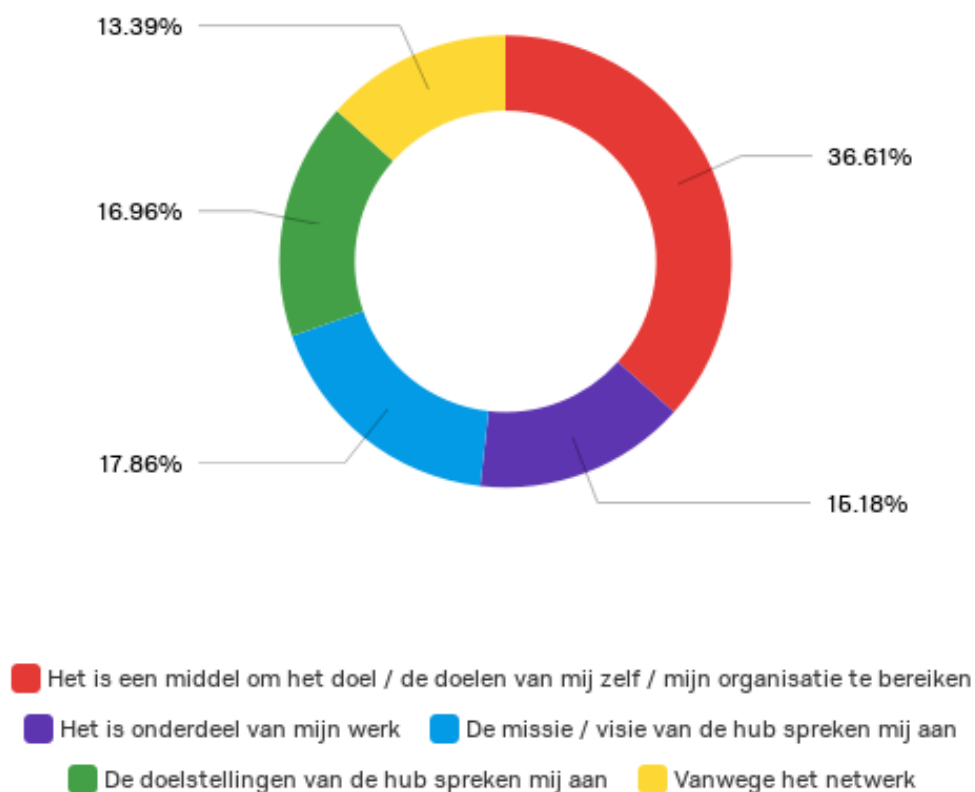
werkgroep met uitdaging

Q20 - Op welke manier bent u verbonden aan de hub?



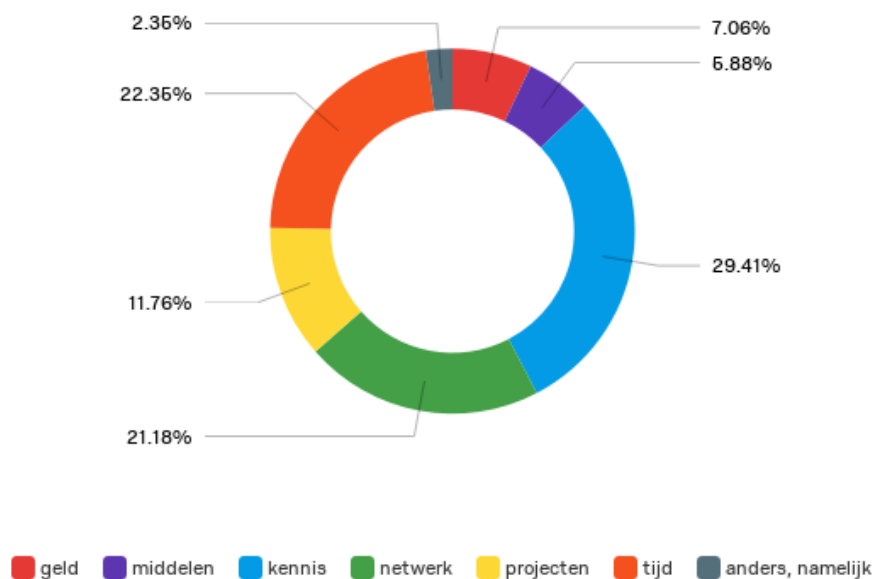
Answer	%	Count
professioneel: ik ben in dienst van de hub	14.55%	8
professioneel: ik participeer in de hub vanuit mijn (betaalde) functie elders	41.82%	23
vrijwillig: op persoonlijke titel	30.91%	17
vrijwillig: ik participeer in de hub vanuit mijn onbetaalde functie bij een van de aangesloten partijen	12.73%	7
Total	100%	55

Q21 - Waarom participeert u in de hub (meerdere antwoorden mogelijk)



Answer	%	Count
Het is een middel om het doel / de doelen van mij zelf / mijn organisatie te bereiken	74.55%	41
Het is onderdeel van mijn werk	30.91%	17
De missie / visie van de hub spreken mij aan	36.36%	20
De doelstellingen van de hub spreken mij aan	34.55%	19
Vanwege het netwerk	27.27%	15
Total	100%	55

Q22 - Wat draagt u bij aan de hub? (meerdere antwoorden mogelijk)



Answer	%	Count
geld	21.82%	12
middelen	18.18%	10
kennis	90.91%	50
netwerk	65.45%	36
projecten	36.36%	20
tijd	69.09%	38
anders, namelijk	7.27%	4
Total	100%	55

anders, namelijk

anders, namelijk

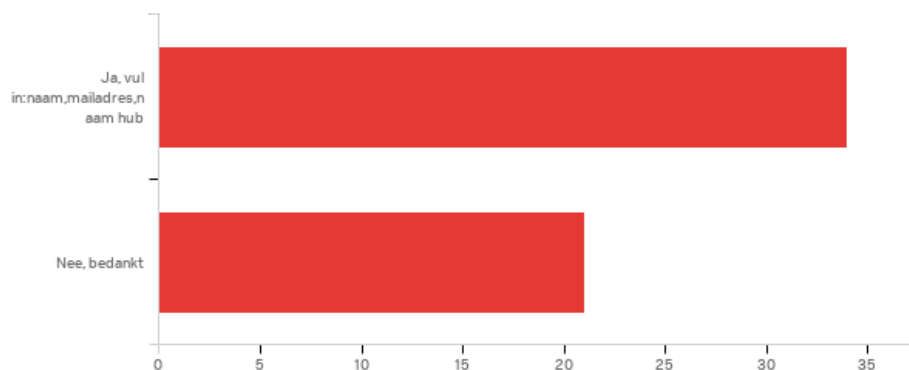
Ben mede oprichter / kwartiermaker

uitdagen

initiatief/organisatie

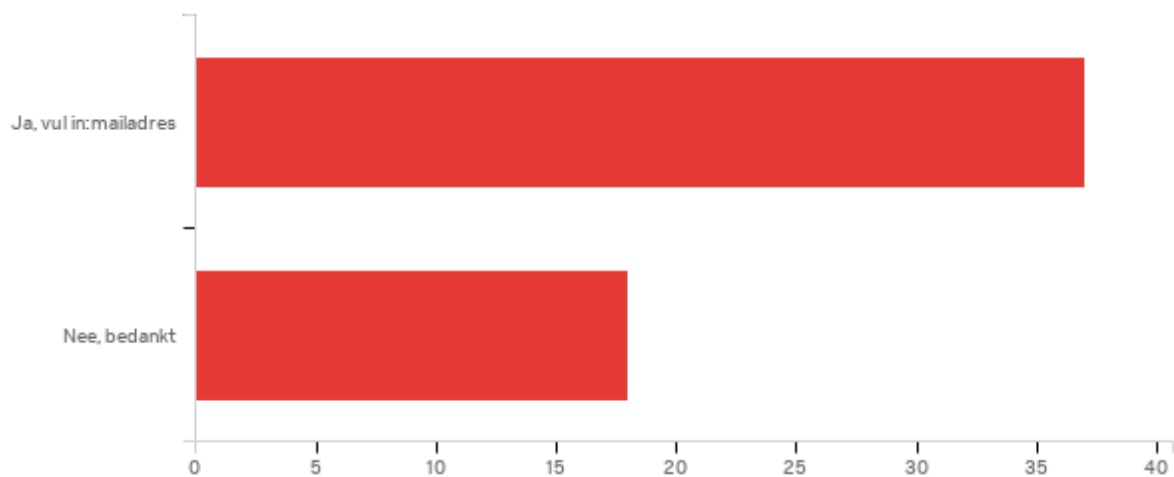
verbinden van vraag+aanbod

Q23 - Bent u bereid om mee te werken aan vervolgonderzoek? (Indien u 'ja' invult ontvangt u nadere informatie op basis waarvan u kunt beslissen of u wilt participeren in ons onderzoek)



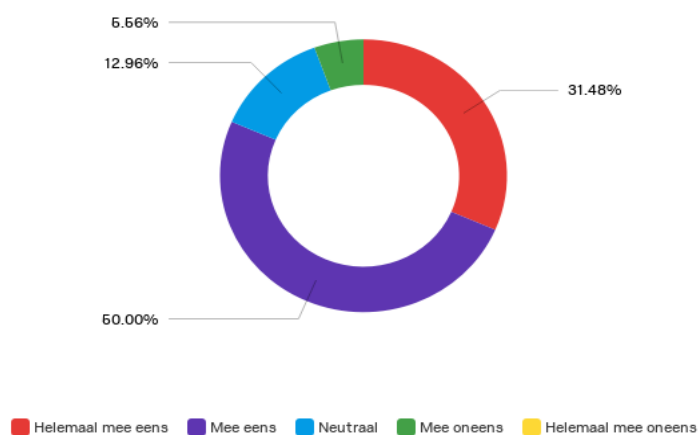
Answer	%	Count
Ja, vul in: naam, mailadres, naam hub	61.82%	34
Nee, bedankt	38.18%	21
Total	100%	55

Q24 - Wilt u op de hoogte worden gehouden van de verdere resultaten van dit onderzoek?



Answer	%	Count
Ja, vul in: mailadres	67.27%	37
Nee, bedankt	32.73%	18
Total	100%	55

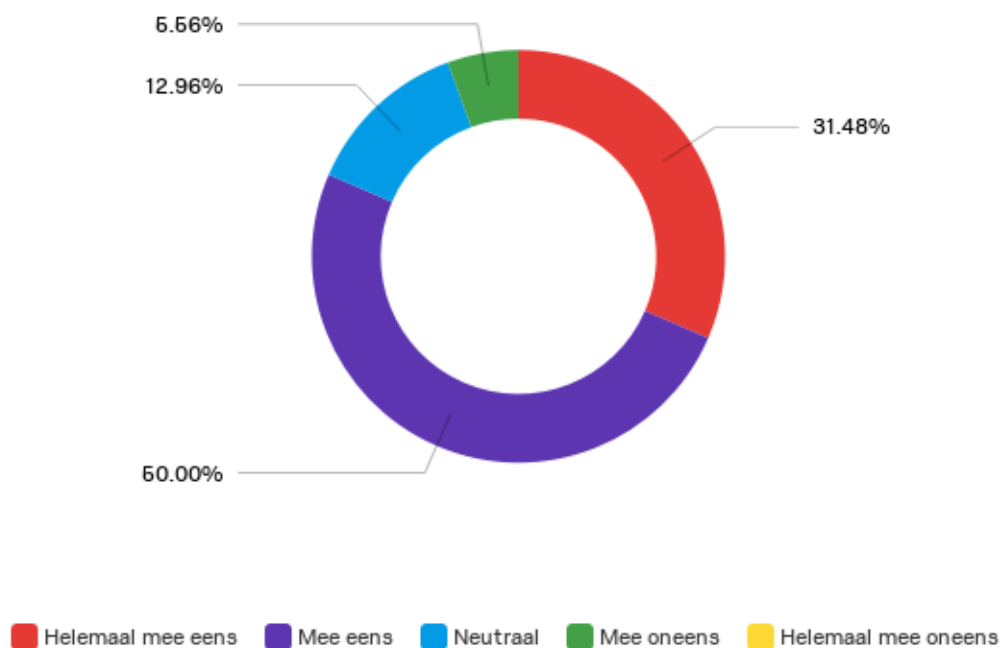
Q27 - Geef uw mening over de volgende stellingen



Question	Helemaal mee eens		Mee eens		Neutraal		Mee oneens		Helemaal mee oneens		Total
In onze hub is er een collectieve doelstelling	36.36%	20	54.55%	30	7.27%	4	1.82%	1	0.00%	0	55
Onze hub heeft een vastgesteld plan om aan de doelstelling te werken	12.73%	7	47.27%	26	25.45%	14	12.73%	7	1.82%	1	55
Binnen onze hub worden beslissingen genomen die tot concrete projecten leid...	29.09%	16	49.09%	27	18.18%	10	1.82%	1	1.82%	1	55
Binnen onze hub worden	36.36%	20	52.73%	29	7.27%	4	3.64%	2	0.00%	0	55

concrete projecten uitgevoerd												
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Q28 - Geef uw mening over de volgende stellingen



Question	Helemaal mee eens		Mee eens		Neutraal		Mee oneens		Helemaal mee oneens		Total
Onze hub draagt bij aan veranderingen in de regio	31.48%	17	50.00%	27	12.96%	7	5.56%	3	0.00%	0	54
Onze hub heeft invloed op ontwikkelingen in de regio	22.22%	12	62.96%	34	9.26%	5	3.70%	2	1.85%	1	54
Onze hub is aanjager van ontwikkelingen in de regio	24.07%	13	59.26%	32	11.11%	6	3.70%	2	1.85%	1	54

10.1.5. Output of reconstruction interviews

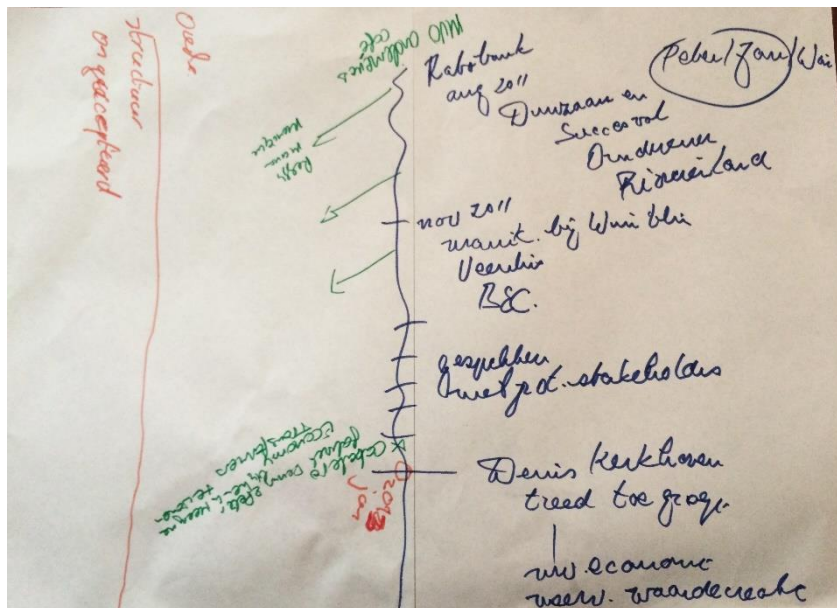


Image 1 Part one of the decision making process.

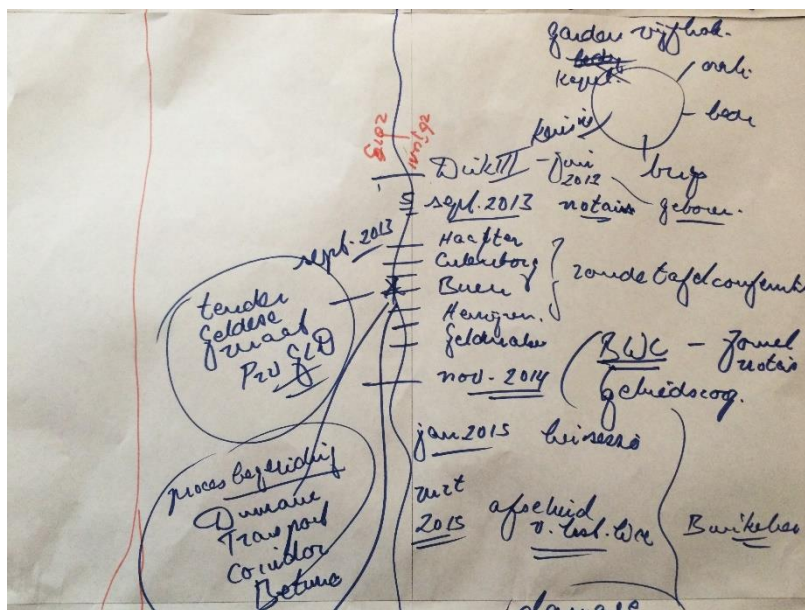


Image 2 Part two of the decision making process.

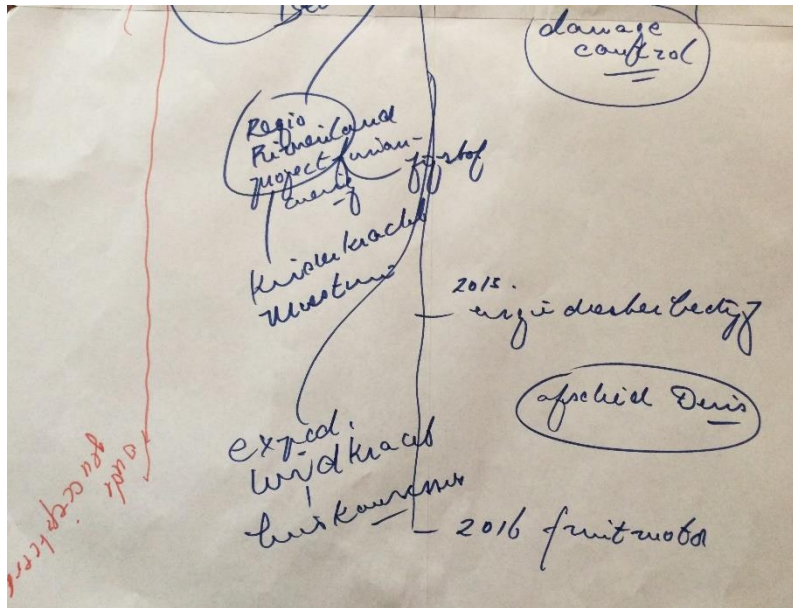


Image 3 Part three of the decision making process.

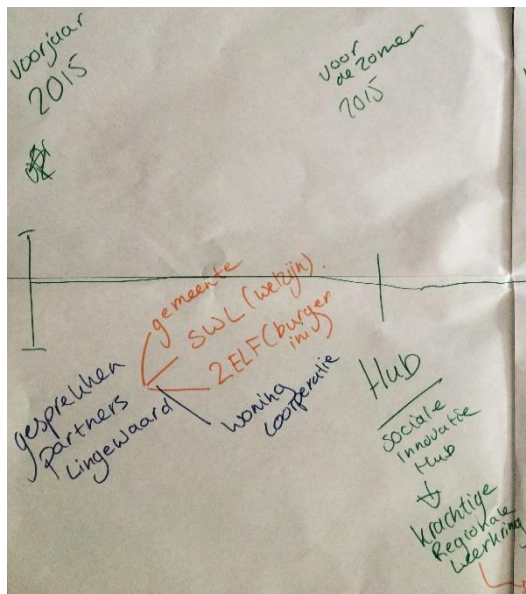


Image 4 Part one of the decision making process Krachtige kernen.

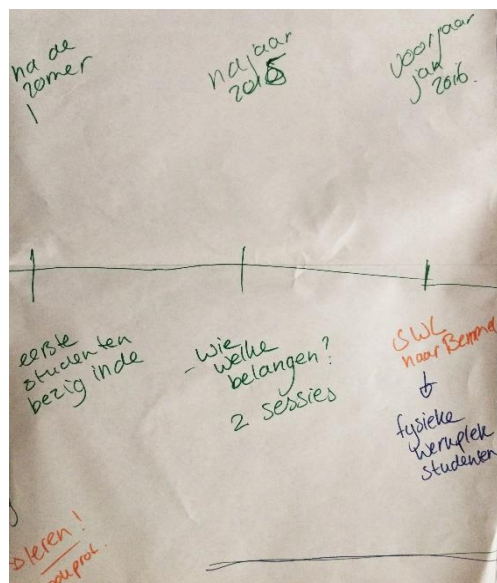


Image 5 Part two of the decision making process Krachtige kernen.

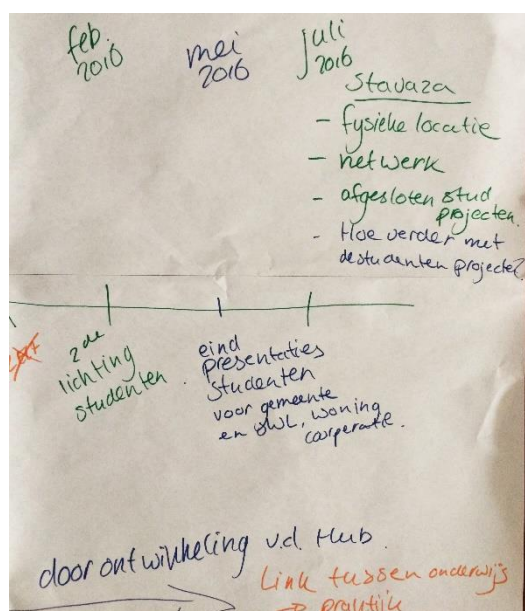


Image 6 Part three of the decision making process Krachtige kernen.

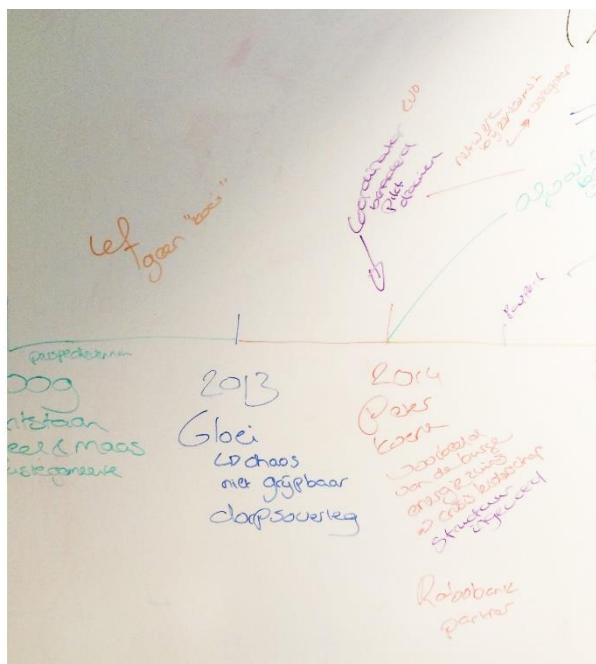
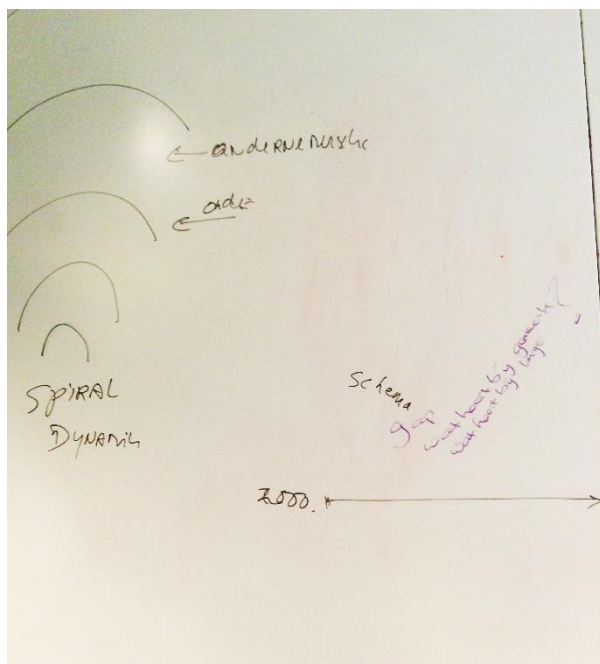


Image 7 Part one of the decision making process of Gloei.



Image 8 Part two of the decision making process of Gloei.

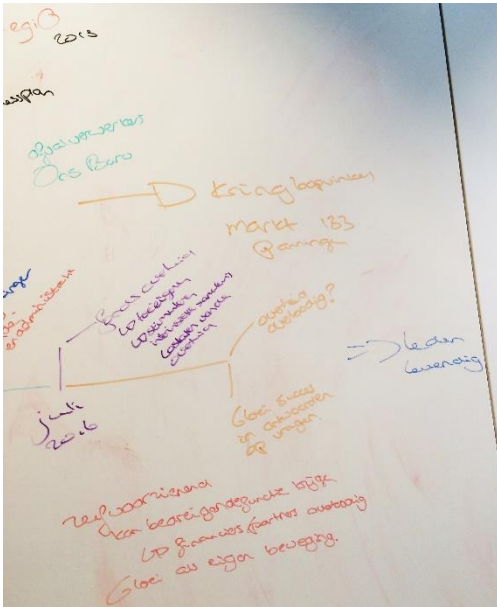


Image 9 Part three of the decision making process of Gloei.

Research Integrity Form – Master Thesis

Name: Yara Kamps	Student number: 4060407
RU e-mail address: yara.kamps@live.nl	Master specialisation: Strategic Management
Thesis title: Knowledge Sharing and Collective Decision-making in Hubs	
Brief description of the study: The Dutch government aims, with the help of the top sector policy, to be one of the five top economies in the world. By achieving the top sector policy, the Dutch government wants to stimulate research, development, innovation and sustainability. To stimulate this, new types of public-private collaborating are necessary because the traditional types of public-private collaborating are superseded. Hubs are this new type of public-private collaborating which involves the government, knowledge institutions, entrepreneurs, organizations and residents of the Netherlands. The members of the hub share besides their individual goals a or several common goals. To achieve its common goal, is in the hub knowledge sharing between the members of the hub in specific working groups and collective decision-making necessary.	

It is my responsibility to follow the university's code of academic integrity and any relevant academic or professional guidelines in the conduct of my study. This includes:

- providing original work or proper use of references;
- providing appropriate information to all involved in my study;
- requesting informed consent from participants;
- transparency in the way data is processed and represented;
- ensuring confidentiality in the storage and use of data;

If there is any significant change in the question, design or conduct over the course of the research, I will complete another Research Integrity Form.

Breaches of the code of conduct with respect to academic integrity (as described / referred to in the thesis handbook) should and will be forwarded to the examination board. Acting contrary to the code of conduct can result in declaring the thesis invalid

Student's Signature: Date: _____ To be signed by supervisor

I have instructed the student about ethical issues related to their specific study. I hereby declare that I will challenge him / her on ethical aspects through their investigation and to act on any violations that I may encounter.

Supervisor's Signature: Date: _____