The art of networking

A case study on the influence of boundary-spanning activities on the effectiveness of governance networks

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Summary

This thesis contains a case study on the influence of boundary-spanning activities on the effectiveness of governance networks. Governance networks are put forward as way to deal with complex societal issues. Numerous factors with an expected influence on network effectiveness are identified over the previous decades. However, relational factors were never one of them. This research aims to examine the relationship between boundary-spanning activities and network effectiveness, while taking into account particular characteristics of the governance network, namely the form of network governance and the size of the network. The research is conducted with a single case study in a governance network of the municipality of Dordrecht, in which wind energy development is the main goal. The network consisted of nine legally autonomous actors. Fourteen respondents are interviewed. In addition, five relevant documents are reviewed. Three boundary-spanning activities are discerned: connecting/linking actors and processes, selecting information and translating information. All activities are performed in the network, in varying scope and quality. Results indicate a positive influence of boundary-spanning activities on network effectiveness. The form of network governance directly affects this influence. The size of the network matters for the functioning of the network, but not directly impacts the influence of boundary-spanning activities on network effectiveness.

Preface & acknowledgements

I wrote this thesis as final research for my MSc program in Public Administration at the Erasmus University Rotterdam. During the six months prior to the start of this research I followed courses incorporated in the track Management of Governance Networks. I developed a particular interest for the effectiveness of governance networks and in the early stages of my research design I decided to focus on this topic. For me, the most appealing elements of collaboration in networks are the activities people perform in a network to achieve something together. During one of the courses I learned about boundary spanning and the according activities, a topic I also included in my research design.

During the period in which I conducted this research I worked as a graduate intern for the municipality of Dordrecht. My main tasks were the assessment of the current networks of the municipality and the development of a methodology to assess governance networks. The first task, obviously, was too comprehensive. Therefore, I decided to examine one of the networks in-depth, namely the network around wind energy development. The outcome was a clear overview of the network and its current state of affairs and relationships. The second task resulted in the deliverance of a roadmap to assess governance networks, or, as one of my colleagues mentioned, “a useful checklist for a yearly network check-up”. While working for the municipality, I also conducted the research for my thesis. I am grateful for the opportunity to shape my research within the municipal organization, for which Paula Ragetlie, my internship supervisor, gave me all the freedom I needed. I am thankful for the help Heleen Kromkamp and Paul Bezemer offered to conduct my research within their policy field and area of expertise.

Finally, I want to thank dr. ir. Jasper Eshuis for his guidance as supervisor while I conducted the research. He pushed me in the right direction more than once and showed me how to apply focus to the research. I really appreciated our clarifying conversations about the conceptual model and the methodological choices. Dr. Ingmar van Meerkerk, as the second reader, provided very useful feedback in the end of process, which contributed to a worthwhile and successful completion of the research.

Johan Bosma
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Table of contents

List of tables & figures

Tables

Figures

1. Introduction

1.1 Motivation for the research

Governments are increasingly confronted with complex decision-making processes and a variety of involved actors (Klijn & Koppenjan, 2016). To ensure they remain able to deliver public services, governments set up or facilitate collaborations in networks (Raab, Mannak & Cambré, 2013). This way of delivering services is often referred to as governance, which is, theoretically, conceived as the process of governing. Networks of governmental actors, private sector actors and civil society actors can be involved in this process (Rhodes, 1996). Governance is undeniably put forward as a way to deal with the increasingly complex problems societies and governments are confronted with (see for example Klijn & Koppenjan, 2016; Rhodes, 1996).

The abovementioned development implies the usage of governance networks to govern and to attain certain goals. The attainment of predefined goals in networks is generally referred to as the effectiveness of networks (Turrini, Cristofoli, Frosini & Nasi, 2010). The evaluation of the effectiveness of networks proves to be complex, since multiple actors involved each produce one or more pieces of services (Provan & Milward, 2001). For about two decades scholars attempt to grab the concept of network effectiveness and define its determinants.

Several studies have examined the influence of a variety of factors on network effectiveness. In their review of existing literature Turrini et al. (2010) group the different determinants of network effectiveness in three groups: structural characteristics, functioning characteristics and contextual characteristics. Other studies have previously analyzed the role and importance of network management on the effectiveness of governance networks (see Van Meerkerk & Edelenbos, 2014). These studies focus on the management of interaction between different actors in a governance network, their influence on the effectiveness and their relation to the environment (see Agranoff & McGuire, 2001; Klijn & Koppenjan, 2016). Governance processes dealing with complex problems are likely to evolve at the boundaries of different public, private and societal organizations in governance networks. The connective activities of individuals in those organizations are therefore likely to matter for the effectiveness of the governance networks (Van Meerkerk & Edelenbos, 2014).

1.2 Problem statement

Two decades of both theoretical and empirical research have resulted in a long list of factors with an (expected) influence on network effectiveness. However, so far no agreement on the factors and their influence has been reached. This can partly be explained by a lack of studies, and partly by the purpose and nature of the already conducted studies. Therefore it seems to be extremely relevant to study in-depth, in a certain context, one of the factors that possibly has an influence on network effectiveness. The impact of interactions between different actors in governance networks on effectiveness has not been a main concern within the scope of the research so far. Boundary-spanning activities are a factor that has not been researched extensively and in-depth so far. The size of the network and the way the network is governed itself are used as moderating variables, because they characterize the network.

1.2.1 Goal of the research

Taking the abovementioned into consideration, the goal of this research is to contribute to theory on the influence of boundary-spanning activities on the effectiveness of governance networks, by testing and analyzing an expected influence in an existing governance network. A governance network around the policy issue of wind energy, in which the municipality of Dordrecht is an actor, is used as case for this research. This research attempts to in-depth analyze the influence of boundary-spanning activities. Accordingly, the goal is also to find out which meaning involved actors address to the boundary-spanning activities and how these activities exactly influence the effectiveness of governance networks.

Besides this research aims to identify relevant actors (organizations) in the governance network of the municipality of Dordrecht. The identification of boundary-spanning activities within these organizations can help the municipality to enhance the effectiveness of the network and provides insight in the current strength of the cooperation within the network, from both the viewpoint of the municipal organization and other actors in the network. This can assist the municipality in further improving the performance of the network.

1.2.2 Main research question

In accordance to the formulated goal of the research, the main question in this research is[1]:

> What is the influence of boundary-spanning activities on the effectiveness of governance networks in the municipality of Dordrecht?

1.2.3 Sub research questions

In order to arrive at an answer to the main question and to reach the goal of this research, the following sub questions are used to structure this research, to manage expectations and to clarify the focus of this research.

- How is network effectiveness defined in the existing literature?
- How are boundary-spanning activities defined in the existing literature?
- In which way can theoretical insights relating to boundary-spanning activities explain whether a governance network is effective?
- In which way can theoretical insights relating to the size of a network and the form of network governance explain the relation between boundary-spanning activities and (governance) network effectiveness?
- Can we find a relationship between boundary-spanning activities and network effectiveness in the case of the municipality of Dordrecht? And if so, how does this relationship look like?
- What is the influence of boundary-spanning activities on network effectiveness in the case of the municipality of Dordrecht?
- What is the influence of the size of the network and the form of network governance on the relationship between boundary-spanning activities and (governance) network effectiveness?
- Which meaning do involved actors address to boundary-spanning activities?

[1] To immediately prevent for indistinctness: when using the word '(governance) network', or the plural form '(governance) networks', in this research the meaning is attached to abstract networks consisting of three or more actors from state, economy and/or civil society (a governance network). The words 'network' or 'governance network' are used interchangeably, but are used to refer to the same thing. By no means the use of this word refers to other types of networks, such as electricity networks or computer networks, unless specifically defined or referred to in that way. For now this distinction satisfies. However, the next chapter contains further elaboration on governance networks and describes its characteristics.

1.3 Relevance of the research

This research attempts to contribute to both theory on network effectiveness and to the practice of using governance networks to govern. In order to do so, there needs to be relevance for this research.

1.3.1 Scientific relevance

Since Provan and Milward (1995) published their seminal article, scholars have been intrigued by network effectiveness and what determines it. Previous research identified a wide variety of factors with an influence on network effectiveness. However, results show different relationships between the identified factors and network effectiveness, even though the same factors were identified (compare for example Cristofoli & Markovic, 2015; Raab et al., 2013; Vasavada, 2013; Wang, 2015). Reflections on already conducted studies therefore suggest pursuing more cases to verify findings from previous studies, to challenge their results and to see what the exact influence of certain factors on network effectiveness is, or how they work (see Wang, 2015; Willem & Lucidarme, 2014). Besides, not all possible factors have been part of the scope of research on network effectiveness. In other words, there is a demand for studies on the effectiveness of networks. This study attempts to contribute to this demand, by conducting another study on network effectiveness in a specific governance network. Furthermore the focus in this research is on the influence of boundary-spanning activities. Although there have been conducted studies on this topic before, these studies were conducted in other type of networks and were less profound or less focused on explaining how relationships between boundary spanning activities and network effectiveness look like, as a result of methodological choices (see for example the quantitative study of Van Meerkerk & Edelenbos, 2014). This research tests whether the assumption of a positive influence of boundary-spanning activities on network effectiveness holds in a particular governance network. The results of this research can be used to both strengthen the conceptualization of network effectiveness and further shape the concept of boundary-spanning activities.

1.3.2 Societal relevance

Presumably, all actors in governance networks, all over the world, would like to know which factors actually influence the effectiveness of governance networks, in order to be able to use this knowledge to enhance the governance network's performance. One of these actors is the municipality of Dordrecht, a Dutch municipality with approximately 120.000 inhabitants

around the Dutch city Dordrecht in the Province of South-Holland (see chapter 4 for more detailed information). The municipality of Dordrecht is an actor in a wide variety of governance networks, but it does not clearly know whether it benefits from being an actor in these networks. Therefore it wants to know how effective its networks are and what role the activities of its employees play in enhancing effectiveness. The evaluation of effectiveness of governance networks has been pointed out as extremely relevant for public servants at both local and national level, in order to be able to efficiently allocate resources to optimize service delivery and serve public needs (Provan & Milward, 2001). The efficient allocation of these resources within its organization could enable the municipality of Dordrecht to accomplish its mission: "make the difference as a municipality".[2] Improving the effectiveness of its networks is therefore an important endeavor of the municipality of Dordrecht. The identification of the influence of boundary-spanning activities on network effectiveness and the actual existence of these boundary-spanning activities within one of their networks might help the municipality to improve the effectiveness of its networks. Given the need for studies on network effectiveness and the request of the municipality of Dordrecht for an analysis of their networks and the activities of its employees in these networks accordingly, this study tries to contribute two-sized. Firstly, its case is used to conduct a study on the influence of boundary-spanning activities. Secondly, the boundary-spanning activities of its employees in the researched governance network are identified and the effectiveness of this network is examined.

1.4 Structure of the thesis

This thesis is composed of a theoretical part and an empirical part. In the theoretical part the existing literature on network effectiveness and boundary-spanning activities is examined. The useful concepts are defined and translated into variables. These variables are brought together in a conceptual framework. This is all presented in the next chapter. Subsequently, in the third chapter the variables are operationalized in measurable items. Besides, the chosen methodology is elucidated. The fourth chapter includes a description of the context in which the empirical part of the research is conducted and describes the characteristics of the specific case. In chapter five the governance network is mapped and relationships between the actors in the network are illustrated. The analysis of the findings is the subject of the sixth chapter.

[2] Retrieved 2016, January 24, from https://cms.dordrecht.nl/Dordrecht/up/ZmqtaouIaC_missiegemeente.pdf

The seventh and final chapter contains the conclusions, a discussion of the research in respect of the contemporary societal and scientific debates, a brief methodological discussion, some recommendations for practitioners and avenues for further research.

2. Theoretical Framework

This chapter presents an overview of the existing literature on governance, governance networks and network effectiveness. Boundary-spanning activities are put forward as a factor with an influence on the effectiveness of governance networks. The chapter ends up with a conceptual framework consisting of the relevant variables for this research.

2.1 Governance networks and their effectiveness

Network effectiveness implies the involvement of networks. Networks consisting of state, economy and/or civil society actors have emerged over the last decades to deal with an increasingly ungovernable society because of the limitations of traditional modes of governance (markets and hierarchies). Networks both supplement and supplant these traditional modes of governance (Torfing, 2012). This section elaborates on (network) governance, networks and the effectiveness of governance networks.

2.1.1 Governance

Introduction

Recently, governance has become increasingly popular and governments have been experimenting with forms of governance, because of their changing role (Klijn, 2008). But what entails this concept of governance and what is the changing role of governments? Originally stemming from Greek (*kybernan*) and Latin (gubernare), governance effectively 'always has been there'. However, it lasted until the end of the 1970's before the concept was broadly used and further spread (Levi-Faur, 2012). In a rather broad definition Bevir (2012) states that "… governance refers … to all processes of governing, whether undertaken by a government, market, or network, whether over a family, tribe, formal or informal organization, or territory, and whether through laws, norms, power or language" (p. 1). This process of governing took shape in a shift in public organization since the 1980's: where governments used to focus on the state as main actor in the organization of society and political life, nowadays governance more focuses on social practices and activities apart from the state (Bevir, 2012). However, governance is a rather ambiguous concept and can, for that reason, be shaped to conform to every desirable interpretation (Peters, 2012). In accordance with the interpretability of the concept, Pierre and Peters (2000) point out the capacity of

governance to cover the whole range of institutions and relationships involved in the process of governing as the key reason for its popularity.

The process of governing

As Pierre and Peters (2002) put it: "thinking about governance means thinking about how to steer the economy and society, and how to reach collective goals" (p. 1). This clearly refers to a dynamic process. Bevir (2012) points out a few important features of this process. First, governance combines administrative arrangements with functions of the market. Second, governance is multi-jurisdictional and often transnational. Third, a wide range of involved stakeholders plays a role in governance. Fourth, governance reflects and responds to the increasingly hybrid and plural character of governing. Rhodes (1996) argues that there exist different structures in which this process of governing take place, namely markets, hierarchies and networks.

The changing role of governments

Building on the abovementioned change in the way of governing, Bevir (2012) points out a significant change in the relationship between state and society at the end of the twentieth century. Since, political actors become more constraint by mobilized and organized elements in society. Besides, governments increasingly govern together with private actors and civil society actors. This view is confirmed by Rhodes (2012), who uses governance "to refer to the changing role of boundaries between public, private and voluntary sectors, and to the changing role of the state" (p. 33). This trend reveals an interdependence between a wide variety of actors, but also requires new strategies to link stakeholders and asks for dissolution of additional jurisdictional problems, since problems not clearly fall under jurisdiction of an agency or even a nation state (Bevir, 2012).

Summarizing the above, the shift from government to governance is a result of a development in society that is accompanied by increasingly complex problems. Since governments alone are not able to deal with this complexity, governing is no longer an activity of governments solely, but also one of private actors and civil society actors. The process of governing by those actors is called governance. This concept of governance has rapidly spread over the world for two reasons. Firstly, social theories that accompany the increasing popularity of governance are changing and made people see the world differently. Secondly, the world has

changed and accordingly became more complex, which resulted in this shift from government to governance (Bevir, 2012).

Forms of governance

The concept of governance remains rather vague, despite a motivation for its increasing popularity and its rapid spread over the world. Attempts to define the concept often result in more confusion. Several authors have discerned various forms of governance (see for example Rhodes, 1996; Klijn, 2008; Klijn & Koppenjan, 2016; Van Kersbergen & Van Waarden, 2004). Some of them are discussed below in order to clarify the perspective on governance and narrow it to the most common forms of governance.

In his review of European literature on governance and governance networks, Klijn (2008) discerns four meanings of governance based on a study of existing literature, which are governance as good governance or as corporate governance, governance as New Public Management, governance as multi-level governance or inter-governmental relations and governance as network governance. He points out that a variety of different conceptions of governance in the literature share common elements, for example the emphasis of the process of governing rather than the structure of government and the emphasis of the limitation of governmental power.

Scholars have distinguished several forms of governance, from which the most common are discussed here (Rhodes, 1996; Klijn & Koppenjan, 2016; Van Kersbergen & Van Waarden, 2004). The first form is commonly referred to as *good governance*. The second is *governing without government*, containing both *international relations* and *self-organization*. The third is *economic governance*. The fourth is *corporate governance*. The fifth is *New Public Management*. The sixth is *governance in and by networks*, within which a distinction can be made between *network governance*, *multilevel governance* and *network governance in the private sector*.

Good governance has been introduced by the World Bank and covers attempts to mainly achieve efficiency in public services, accountable and audited administration of public funds, a legitimate government and budgetary discipline (Rhodes, 1996). The OECD has promoted good governance by comparing best practices of countries in fields like social policies, public

management and relations between the public and private sector (Van Kersbergen & Van Waarden, 2004).

Governing without government stems from international relations theory, mainly in the form of global governance. This form contains cooperation between nation states in the development policies, without coercive means that prevent states from withdrawing (Van Kersbergen & Van Waarden, 2004). Often cooperation takes place in international organizations, which declare the 'without government' form of governance. Self-organization is another form, in which societal organizations and communities associate themselves to negotiate on relevant topics without governments or market mechanisms involved. Ostrom (1990) introduced this form and used common pool resources as example.

Economic governance is a result of the assumption that society in its natural condition is chaotic and uncertain, a condition in which conflicts prevail. This asks for rules, or institutions. Governments provide such institutions, as do for example contracts, companies and associations (Van Kersbergen & Van Waarden, 2004).

Good governance can also take the form of corporate governance or New Public Management (NPM). Corporate governance is a concept to ensure accountability and transparency in private corporations. The OECD developed and published a non-binding set of principles for corporate governance, mainly to ensure a system of control for companies (OECD, 2015). New Public Management aimed to introduce good governance in public organizations. It entailed mostly the marketing of management concepts from the private sector in the public sector (e.g. performance measurement and customer orientation), as well as the facilitating conditions, for example deregulation, outsourcing and privatization (Van Kersbergen & Van Waarden, 2004).

Governance in and by networks is characterized by the presence of multiple actors, self-organization and interactions between network participants in line with rules they agreed upon (Van Kersbergen & Van Waarden, 2004). Networks can either consist of public organizations, private organizations and/or societal organizations. Multilevel governance is a specific form of network governance. It refers to different government levels and the involvement of public and private actors at these levels and originates from the European integration (Van Kersbergen & Van Waarden, 2004). In the private sector cooperation

between firms occurs in networks, for example to share knowledge, resources, or to concentrate competencies in order to exert more power as a network. Forms vary between the extremes of contracting on the one hand and merging on the other, but between those extremes of connections between firms exist as well, in forms such as associations or consortia. Relations between involved actors have to be governed, to prevent for problems like opportunism or freeriding. Governance institutions like contracts and monitoring institutions can fulfill this function (Van Kersbergen & Van Waarden, 2004). The next section further elaborates on network governance.

2.1.2 Governance networks

Network governance

As mentioned above, some authors advocate that governance is inseparably connected to networks. As, for example, Klijn (2008) puts it after his review of literature on governance: "there is little that distinguishes governance from governance networks" (p. 507). To briefly illustrate this statement, for example Klijn, Van Buuren and Edelenbos (2012) explain governance as "more or less horizontal forms of steering, which take place in networks of essentially independent actors (public, private, and non-profit)" (p.295). They hereby explicitly relate governance to networks. As Torfing (2012) states: networks can produce governance and therefore governance networks can be seen as a mode of governance.

Network governance as a concept can be drawn from the existing literature. Klijn and Koppenjan (2016) define it as "the set of conscious steering attempts or strategies of actors within governance networks aimed at influencing interaction processes and/or the characteristics of these networks" (p. 11).

Networks

In their seminal article, Provan and Kenis (2008) define networks as "groups of three or more legally autonomous organizations that work together to achieve not only their own goals but also a collective goal" (p. 231). As proposed by Vos (2003) "actor refers to a social role rather than an individual" (p. 147). In this research actors are, consequently, defined as (parts of) organizations, which are represented by people. Different forms of networks can be categorized along two dimensions: firstly, whether or not a network is brokered, and secondly, within brokered networks, whether a network is governed by a participant or by an

external actor. This distinction results in three types of networks (Provan & Kenis, 2008). The first type is the participant-governed network. This type of network is not brokered. The network members govern the network themselves. This can be either done in a decentralized manner, in which the members equally interact in the process, or in a centralized way, in which one of the members governs the network. The second type is the lead organization-governed network, in which one of the members formally coordinates activities and decisions in the network, hereby acting as lead organization. This form is brokered and governed by a participant. Hence, the network becomes centralized. The third form is the Network Administrative Organization (NAO) network. This model contains an administrative entity that is established specifically for and with the sole purpose of governing the network. This form is brokered, centralized and governed by an external actor, which coordinates and sustains the network (Provan & Kenis, 2008). Based on this typology of networks, it is important to distinguish between the way the network is governed itself, or network management, on the one hand, and the way the network is used as governing structure. The three described types are forms in which the network can be governed itself. This is referred to as 'form of network governance' in the following sections.

Not all networks are governance networks. For example, private organizations might form alliances, therewith being a network. Hence, in such a situation a network consisting of three or more autonomous actors technically exists, but the governance aspect lacks. Therefore, to be categorized as governance network there is one additional distinguishing feature a network needs to possess: the network somehow needs to contribute to public governance, regardless of the particular aim of the network (Torfing, 2012).

The literature offers a wide variety of characteristics of governance networks. Firstly, actors in a governance network are interdependent and will cooperate to find solutions for the challenges they face, while remaining autonomous. These challenges are often complex problems that ask for actions of multiple actors. Secondly, the actors in a governance network interact with each other, mainly through negotiations. These negotiations might take the form of bargaining or deliberation and involve conflicts, power and formation of compromises, but in any form they are aimed at common understanding of the faced problems and the search for possible solutions to them. Thirdly, initially governance networks have no common institutions that regulate the interactions and facilitate the formation of compromises. This results in an unpredictable course of actions. However, over time networks tend to show

signals of institutionalization, as the regular patterns become rules or other types of institutions (Torfing, 2012). On the other hand, renegotiation of institutions might also lead to deinstitutionalization (Olsen, 2009). Fourthly, networks may show durability over time (Klijn & Koppenjan, 2016). Fifthly, Rhodes (1996) suggests that networks are self-organizing, which means that a network is autonomous and self-governing. Klijn (2008) explain this self-organizing capacity of networks, by stressing that actors in a network create the properties of the network (the institutions, interactions and outcomes) themselves.

As governing structure, networks are an alternative to markets and hierarchies. Networks have become a mechanism for delivering public services and implementation of policies, but they can also be used as mechanisms for policy development (Klijn, 2008; Provan & Milward, 2001). Policy-development networks consist of organizations that have an influence on the development of policies. Within such networks power relations play an important role in determining who sets the agenda and who makes the decisions. Service-delivery or policy-implementation networks focus on effective delivery and integration of services or policies and the required inter-organizational coordination to do so (Klijn & Koppenjan, 2016).

In the management of networks the number of participants, or the size of the network, matters for the way the network is managed itself. Brokered forms of network governance better suits networks with a higher number of participants, while for small networks (up to six to eight participants) shared governance forms make the better fit (Provan & Kenis, 2008). Apart from an influence on the way the network is governed, an increase in the number of participants results in a higher number of relations and consequently in a higher number of boundaries to span. Besides, although they have political advantages, large networks are not necessarily efficient mechanisms for service delivery (Provan & Milward, 2001).

2.1.3 Effectiveness of governance networks

It is important to understand how networks operate and whether the input is rightfully used to achieve certain goals (Provan & Milward, 2001). Generally, network effectiveness refers to the successful achievement of network-level outcomes (Provan & Milward, 1995). Somewhat more narrowly, Provan and Kenis (2008) define network effectiveness as "the attainment of positive network-level outcomes that could not normally be achieved by individual organizational participants acting independently" (p. 230). The word *normally* refers to the fact that is sometimes hard to say whether an organization is not able to achieve something

individually at all. Obviously, whether network-level outcomes are positive or not is subject to perception of the involved actors. Besides, it has to be taken into account that there is a possibility that goals are not attained at the moment of evaluation, but that there is a considerable chance goals will be attained in the nearby future, thus resulting in effectiveness in the future. The attainment of goals indicates nothing about the possibility for contestable quality these goals. The existing body of literature is inconclusive of the potential influence of a quality aspect in the assessment of effectiveness. All in all, these remarks demand for additional clarification exploration of the concept.

Networks consist of multiple stakeholders, which not naturally all pursue the same goals while being member of the same network. Therefore, effectiveness cannot be analyzed unambiguously, but instead it has to be assessed at different levels. In accordance, three levels of analysis emerge in the existing literature: first, the community level, second, the network level of the network itself, and third, the organizational level (Provan & Milward, 2001).

The community level is the broadest level. At this level, networks must be assessed by the contribution they try to make to the communities they serve, contributions that could not have been realized by the individual actors. Communities can be described as local areas that are served by the network. Effectiveness at this level means having significant legitimacy and external support by serving the community (Provan & Milward, 2001).

To ensure its viability, the operations of the network must contribute to the attainment of the goals of the network. Network level effectiveness can be measured by the extent to which the network delivers the services or products that it should deliver given its raison d'être. Operating as a network entails dealing with a number of contingencies and making particular choices regarding the way the network is governed (see section 2.1.2). Trust, the size of the network, goal consensus and the need for network-level competencies are put forward as most important contingencies for network level effectiveness (Provan & Kenis, 2008). Another way to evaluate network level effectiveness is to look at the strength of relationships between actors in the network. Provan and Milward (2001) put forward *multiplexity*, which is the strength of ties between actors in the network, as useful measure. Multiplexity is expected to gradually increase over time, especially between actors with complementary interests. More ties between actors signify a stronger relationship between those actors, while high multiplexity signifies a network that is able attain goals.

Effectiveness at the organizational level can be assessed by the fulfillment of existing self-interests of individual network member. In other words, for all actors, involvement in and the operations of the governance network should eventually contribute to fulfillment of the interests of their own organization, in order for the network to be effective at organizational level. However, it could happen that failure of an individual member contributes to success of the network overall, which shows the possibility for conflicting interests in the network (Provan & Milward, 2001).

Provan and Milward (2001) state that network effectiveness can only be fully realized by minimal satisfaction of all involved actors. Among involved actors distinction can be made between those who govern the network (funders, regulators, an NAO), those who work in the network (employees of member organizations) and the other stakeholders who are affected by the outcomes of the network.

2.2 Boundary spanning activities

The concept of boundary spanning originates from the organizational literature. It contains management of the interface between organizations and their environment (Van Meerkerk & Edelenbos, 2014). Boundary spanners are key agents that perform these management activities in inter-organizational theatres (Williams, 2002). The usage of boundary spanning activities as variable ask for elaboration on two aspects: boundary spanning as a concept and the activities that are classified within the concept boundary spanning.

2.2.1 Boundary spanning

Williams (2002) identifies a need for postmodern organization forms, because of the cross-boundary nature of the problems that asks for more inter-organizational capacity and because of wickedness of problems that requires a language that reflects holistic thinking (i.e. relationships, interconnections and interdependencies). Suitable organization forms are designed around starting points like networking, partnership and collaboration. Governance networks can be drawn as suitable form of organization from the previous sections.

The cross-boundary nature is an important characteristic of contemporary societal problems. Boundary spanning activities are put forward as way to deal with this feature. Boundary spanning generally entails the management of inter-organizational relations, and is, to put it in

other words, an aspect of network management. Individuals obviously play a role in building and maintaining relations. Williams (2002) describes inter-organizational relations as a result of collaboration between organizations. He points out that the triggers for this collaboration often suit the motivations of individuals working in the organizations. The need for boundary spanning thus stimulates the performance of boundary-spanning activities by individuals. Boundary spanning is characterized by negotiation of the interactions between organizations and their environment, with the goal of realizing a better fit. These negotiations relate to the meaning and terms of a relationship with another actor (Levina & Vaast, 2005). This often involves transformation of the practices of organizations in question. Boundary spanners are expected to be able to collect and transfer information from the environment to their home-organization and the other way around (Tushman & Scanlan, 1981; Van Meerkerk & Edelenbos, 2014). According to Marrone, Tesluk and Carson (2007) boundary-spanning activities cover a range of externally directed actions across organizational boundaries, which are performed to manage interorganizational relations.

2.2.2 Boundary spanning activities

Managers of governance networks constantly have to make choices about which actors and aspects they want to assess and incorporate in the process. These choices are influencing the in- or exclusion of actors and are often called 'boundary judgments'. Through these judgments actors determine the scope of the processes of the organization and consider what is relevant and what is not (Edelenbos, Van Buuren and Klijn, 2013). Therefore, these boundary judgments influence determination of which actors potentially could perform boundary-spanning activities within the network and concern choices between the network and its environment.

In order to accomplish a better fit between the organization and its environment, boundary spanners are mainly involved in three activities: connecting or linking different people and processes, selecting relevant information and translating this information. All these activities take place at both sides of the boundary: in the home organization of the boundary spanner and in the environment of the organization. The activities are interrelated (Van Meerkerk & Edelenbos, 2014). Robbins and Coulter (2002) consider these boundary-spanning activities to be crucial in the management of relations with stakeholders.

Connecting or linking different people and processes

Connecting or linking people concerns building and maintaining effective relationships between actors in a network, or, formulated differently, building social capital (Williams, 2002). It is necessary to discover and understand the people in the environment and the organizations they represent. Once relationships are built, they have to be maintained in order not to lose them. As emphasized by Marrone et al. (2007), connecting is an important activity to link to important interdependent actors, which possibly can provide valuable and needed resources. The valuable knowledge and resources contains information about roles, responsibilities, problems, aspirations, values and norms. This knowledge is necessary in identifying potential areas of interdependency and communality.

Williams (2002) distinguishes three stages within the connecting activities, which are a result of the interdependency of actors in enhancing certain goals. Firstly, in the planning and formulation stage partners are found, problems are diagnosed, roles and responsibilities are defined, goals are negotiated and a joint agenda is developed, as a result of the interactions. Secondly, in the implementation and delivery stage relevant links are about contracts, agreements and budgets. Thirdly, in the evaluation stage contacts involve joint accountabilities and measurement of outcomes. Also this part of the interdependency is topic of interactions.

In addition to connecting people, connecting can also directly relate to network management. A connective management strategy can be considered as a specific boundary spanning activity that focuses on interrelating actors, layers, and domains or sectors (Edelenbos et al., 2013). By performing connecting and linking activities boundary spanners also fulfill a representation role. This can contribute to maintaining the image and the legitimacy of the organization, by providing information to specifically selected actors in the network. This activity not necessarily is a matter of connecting, but often more one of making the organization visible in the network (Aldrich & Herker, 1977).

Williams (2002) stresses the importance of networking (i.e. his term for the connecting and linking activities) and being a member of an interorganizational network. It is beneficial, because boundary spanners in such situations are at the leading edge of information, they have access to new ideas and gossips form other sectors and organizations, and they are able to gain support from or influence other people in the network. Networking is most effectively

undertaken outside the formal structures and especially in conversations. This suggests a contestable dependence on informal contacts, which is evidently useful. However, personal, informal relationships also cause vulnerability, because relationships might break down if boundary spanners are removed from the network.

Selecting relevant information

Tushman and Scanlan (1981) describe informational boundary spanning as a two-part process. The first part is obtaining information in the environment. Once a boundary spanner is well connected to its environment, its task is to select the relevant information. Processing all information from the environment would result in an information overload. Boundary spanners should safeguard their organization from this overload, by only selecting the relevant information (Aldrich & Herker, 1977). Receiving information and selecting the relevant parts accordingly can happen both via verbal interactions or non-verbal interactions (Leifer & Huber, 1977).

Translating information

Tushman and Scanlan (1981) name the dissemination (or translation) of information to internal users as the second part of the boundary spanning process. The dissemination of information could again result in an information overload, if all relevant information immediately had to be directed to internal users. Boundary spanners therefore selectively act on relevant information and filter it before directing it to internal users. They can do so by consolidating, delaying or storing the selected relevant information. They hereby prevent for another overload of information in the communication channels from the environment to the organization. This process requires a high level of expertise in summarizing and interpreting information (Aldrich & Herker, 1977).

In his attempt to conceptualize translations, Pel (2012) mentions that a translation summarizes what a translator does with the information he/she selects. This information can be appropriated and passed on in six ways. Firstly, non-translation could occur in case the information is considered as irrelevant. This happening could be part of the selecting process as well, but is mentioned by Pel (2012) as way of translating and therefore described as such here. Secondly, interference could occur if the information does not meet the expectations and is received and answered with resistance. Thirdly, embracement could occur when

information is easily accepted and processed. Fourthly, modification could occur if information is received, but modified by the translator. Fifthly, alien modification could occur if information is modified in a way that senders do not recognize it anymore. This could eventually result in interference between senders and receivers. Sixthly and last, self-translation could occur if senders adapt the information while sending.

2.3 Conceptual framework and expectations

In this research the relationship between the performance of boundary spanning activities and network effectiveness is studied. Consequently, these two key variables play a role. Boundary-spanning activities make the independent variable, since these activities are expected to continue regardless of the effectiveness of the networks in which they take place. Network effectiveness is the dependent variable and is expected to be influenced by the performance boundary-spanning activities. Increasing interdependency between governmental actors, companies and societal actors asks for network collaboration. Boundary-spanning activities are a mean to cope with the necessity of linking various actors. The form of network governance and the size of the network are expected to moderate the influence of boundary spanning activities on the effectiveness of the network. The variables are visualized and brought together in the conceptual framework (see figure 2.1 below). Based on the motivation for this research, the relevance and the theoretical and conceptual frameworks presented in the previous sections three expectations are derived.

E1 Boundary-spanning activities have a positive influence on network effectiveness.

E2 The impact of boundary-spanning activities on network effectiveness is influenced by the form of network governance in the network.

E3 The impact of boundary-spanning activities on network effectiveness is influenced by the size of the network.

The first expectation entails that the performance of boundary spanning activities in a governance network results in a higher effectiveness of the network and is directly derived from the idea of an increasing interdependency and a necessity for network collaboration and boundary-spanning activities to make such collaborations effective.

The second expectation contains an expected influence of the form of network governance on the relation between boundary-spanning activities and network effectiveness. Three forms of networks governance are discerned, namely the participant-governed network, the lead organization-governed network and the Network Administrative Organization network (see also section 2.1.2). In managing the interface between organization and environment, actors are expected to connect with other actors, collect relevant information and translate this information. However, the form of network governance might influence the (way actors perform) actions (or non-actions) and therewith the relationship between (boundary spanning) activities on network effectiveness. The form of network governance determines the position of actors in the network (in a lead organization-governed or NAO form, it can be expected that at least one actor has a very central position in the network, while this is not necessarily the case in a participant-governed network). A more central position of one of the actors in the network could imply in a higher number of boundary-spanning activities to be performed by this actor, or, the other way around, a lack of performance of these activities, and as a result could have certain effects on the effectiveness of the network. The relationship between the form of network governance on boundary spanning activities is not within the scope of this research, since all actors are expected to perform boundary-spanning activities, despite the form of network governance.

The third expectation, like the second, includes the expected influence of the size of the network on the relation between boundary spanning activities and network effectiveness. A higher number of actors in the network results in a higher number of relations between these actors and as such in an increase of 'boundaries to span'. In accordance with the first expectation, the size of the network is expected to moderate the relation between boundary spanning activities and network effectiveness.

The conceptual model is used as a framework for analysis in this research (see figure 2.1 on the next page). However, in order to measure the named variables, they have to be operationalized. This operationalization is presented in the next chapter (see section 3.3).

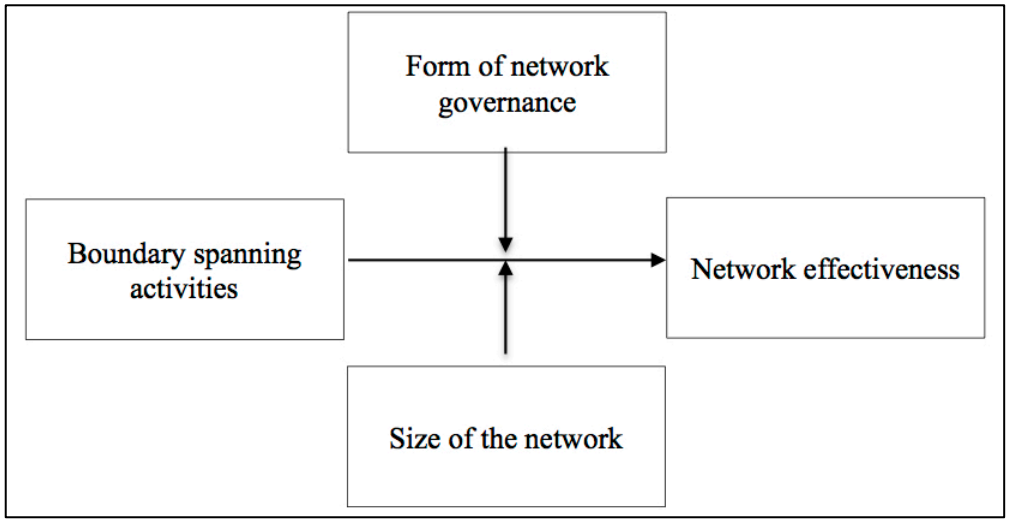

Figure 2.1 Conceptual framework

3. Methodology and operationalization

3.1 Research design

3.1.1 Research strategy

This research is an empirical research, which means that conducting observations of social reality is central in this research. The research is mostly conducted in a deductive manner. Based on the existing body of knowledge on governance networks, network effectiveness and boundary-spanning activities, a conceptual model is designed and expectations are formulated accordingly. Data are collected and analyzed to conclude whether the formulated expectations are met. However, the research aims to contribute to theory building on network effectiveness and therefore also contains an inductive aspect.

Two main research traditions exist: a quantitative research tradition and a qualitative research tradition (Vennix, 2006). In order to reach the formulated goal of this research, the latter is used in this research. In a qualitative research, the researcher searches for the perspective of the respondent. In doing so, the researcher uses him/herself as an instrument to achieve this. Part of the decisions on the research strategy is taken during the research process, in order to enable adjustments as response to developments in the context of the research (Boeije, 2005). A qualitative research, by formulating a research question and setting a goal, focuses on a topic, which concerns the way people address meaning to their social environment and the way they behave accordingly. The corresponding research methods enable to examine this topic from the perspective of people, with the aim to describe, to interpret, and, if possible, to explain the observed. Empirical phenomena are researched in their natural setting and attempted to make sense of, or interpret them (Boeije, 2005; Vennix, 2006).

In this research a qualitative approach is chosen, because it is suitable to study the way respondents make sense of the boundary-spanning activities of themselves and others around them, as well as the way they assess the effectiveness of the governance network their organization is a member of. Effectiveness and the attainment of goals are subject to perception of individuals. A qualitative approach allows for incorporating the meanings given by people and for interpretation of the collected data.

3.1.2 Design

As Ragin (1994) puts it: “a research design is a plan for collecting and analyzing evidence that will make it possible for the investigator to answer whatever questions he or she has posed” (p. 26). The conceptual model from the previous section and the corresponding expectations are researched with a single case study. Following Yin (1989) a case study is an empirical inquiry. It investigates a contemporary phenomenon within its real-life context. The boundaries between the phenomenon and the context are not evident and multiple sources of evidence are used. Case studies are an appropriate research design if there is a need to research something in-depth and if the phenomenon needs to be studied in its natural context, because the researcher cannot control the context or does not want to do so. In addition, as Flyvbjerg (2006) points out, case studies are especially well suited to produce context-dependent knowledge.

The selected case is a governance network of the municipality of Dordrecht (see chapter 4 for a detailed description). The case is purposefully selected. The selection is based on the presence of the independent variable and the characteristics of the network (see section 4.3 for an elaboration). Boundary spanning activities are clearly present in the network. Besides, the network has the characteristics of a governance network. The selected case therefore is a so-called critical case: the case meets all the requirements for testing the proposed expectations (Vennix, 2006). Consequently, the unit of analysis in this research is the selected case, which is the governance network around wind energy in the municipality of Dordrecht.[3]

In addition to the theoretical contributions of this research and the choice for this case accordingly, the case also contributes to identification of the boundary spanning activities of employees of the municipality of Dordrecht as actors in one of their governance networks. The municipality of Dordrecht therefore prefers research on this case over other possible cases. Granting this request both literally and figuratively opens doors for researching this case in its natural context.

[3] The municipality of Dordrecht is used as 'home organization' in this research and as starting point for mapping the network. Obviously the network consists of many more actors. For a detailed description of context and network, see chapters 4 and 5.

3.2 Methods

In accordance with the chosen research strategy and design, methods are carefully selected to gather data and analyze them afterwards.

3.2.1 Data collection

The data for this research are collected via two methods. Firstly, interviews are conducted with relevant actors. Secondly, documents are reviewed (content analysis).

Interviews

Boeije (2005) classifies interviews in categories based on their degree of structure. Structure contains four aspects: the content of questions, the formulation of questions, the sequence of questions and the answer choice. When these four issues partly depend on the situation in which the interview takes place, such an interview is called an open interview. Unstructured and semi-structured interviews belong to this category of open interviews, or qualitative interviews (Boeije, 2005).

In conducting qualitative interviews the researcher uses a topic list as instrument. This list is created by operationalizing the relevant variables. Consequently, the operationalized variables are converted into items in the form of interview questions, which can be imposed on respondents. The questions have to be relevant, but most importantly, the topic list has to be a workable instrument for researcher.

The interviews for this research are conducted in a semi-structured way. By doing so, flexibility is ensured, resulting in room for the respondent to talk about whatever is relevant to him or her (Boeije, 2005). However, steering on the topics is possible based on the loose structure used. In total a number of fourteen interviews are conducted (see appendix A). Respondents are selected purposefully, based on their involvement in the network. The respondents cover the different stakeholders in the network. The interviews are conducted within a period of two months (May 2016 – June 2016). The operationalized variables (see section 3.3) are translated into a topic list, which is used during the conduction of the interviews. The topic list can be found in appendix B.

Content analysis

In addition to the interviews, a selection of five relevant documents is reviewed. The selection consisted of two policy documents, an expert research report, a political plan and an organizational document discussing the state of affairs on a policy case. Collecting documents means collection of raw data (Vennix, 2006). The documents came into existence without effort from the researcher, but are collected by the researcher in order to be analyzed afterwards.

3.2.2 Data analysis

In their book on qualitative methods, Berg and Lune (2012) use discourse analysis, which can be understood as the study of language, as starting point for the analysis of data. Language includes, amongst others, spoken communication, and by extension the written versions of this communication. In the context of this research this relates to the transcripts of the interviews. "To the social scientist, however, the interesting aspect of this discourse is not merely what is said, or which words are used, but the social construction and apprehension of meaning thus created through this discourse" (Berg & Lune, 2012, p. 364). As Vennix (2006) puts it: qualitatively analyzing documents requires more than just reading. The researcher has to take into account the context of the data. Dangerous is the possibility of conducting aspects from the text that are not exactly there, but just are interpreted by the researcher without ground to do so. This requires a cautious approach.

The method for analyzing used in this study contained both a deductive template of codes approach and a data-driven inductive approach, which makes it a hybrid approach (see Fereday & Muir-Cochrane, 2006). This hybrid approach fits the research question. The deductive approach allowed organizing the data based on codes that are conducted from theory and that are directly related to the conceptual framework. In addition, the inductive approach offered the possibility to incorporate codes that emerged from the data. Codes for the deductive approach were logically drawn from the concepts and indicators in the operationalization (see section 3.3 below). The inductive codes relate to the unforeseen connections (those that are not included in the conceptual framework) between the concepts and indicators as appeared from the collected data.

3.3 Operationalization of variables

Four variables draw from the conceptual model (see section 2.3): network effectiveness, boundary-spanning activities, form of network governance and size of the network. In order to be able to measure these variables empirically, they need to be translated into measurable items. This process is called operationalization (Vennix, 2006). Below all relevant variables are operationalized. Sometimes certain values are assigned to the items. For some items this is not possible, because of the open character of the item.

Size of the network

As mentioned by Provan and Kenis (2008) and referred to in section 2.1, the size of the network is an important variable in examining network effectiveness. The size of the network is in this research defined as:

> The number of actors that are a member of the network.

In this research, an actor is a(n) (part of an) organization, which is member of the network. These actors are obviously represented by people, which fulfill jobs or volunteer in the organizations.

Variable	*Indicator*	*Item/question*
Size of the network	Number of actors	How many actors are member of the network?

Table 3.1 Operationalization 'size of the network'

Form of network governance

Based on the theoretical framework three forms of network governance are possible (see section 2.1.2): shared governance; lead-organization governance and network administrative organization. The form of network governance is in this research defined as:

> The way a network is governed itself.

A network is group of three or more legally autonomous organizations (actors) that work together to not only achieve their own goal(s), but also (a) collective goal(s).

Variable	*Dimensions*	*Indicator*	*Item/ indicative question*
Form of network governance	Brokerage of the network	Presence of a governing organization	Is there an actor with a leading role in governing the network?
	Administration of the network	External governing entity	Is there an external governing entity present in the network?

Table 3.2 Operationalization 'form of network governance'

Boundary-spanning activities

In the theoretical framework three boundary-spanning activities are distinguished: connecting/linking, selecting information and translating information. Boundary-spanning activities are in this research defined as:

> A set of externally directed actions across organizational boundaries, which are performed to manage interorganizational relations.

Variable	*Dimensions*	*Indicator*	*Item/indicative question*
Boundary spanning activities	Connecting and linking actors/processes	Planning and formulation • Finding partners/building relationships • Maintenance of relationships • Diagnose problems • Define roles and responsibilities • Negotiate goals • Develop a joint agenda	How did you • Find partners in the network and build relationships? • Maintain relationships? • Diagnose problems? • Define your role and responsibilities? • Define the goals in line with your organization's preferences? • Was/is a joint agenda developed?
		Implementation and delivery • Contracting • Agreements • Budgets	• Are contracts/agreements drafted? And if, how? • Are there shared budgets?
		Evaluation • Accountabilities • Measurement of outcomes	• How are outcomes measured and accountabilities discussed in the network?
	Selecting relevant information	Verbal selection	Do/did you select relevant information while having a conversation with others?
		Non-verbal selection	Do/did you select relevant information while reading?
	Translating information	Non-translation	How is the information received? • Considered to be irrelevant • With resistance • With acceptance
		Interference	

		Embracement	• Unrecognizable for the sender How is the information translated? • Unmodified • Modified by the boundary spanner/translator • Modified by receiver • Modified by sender while sending (in the process)
		Modification	
		Alien modification	
		Self-translation	

Table 3.3 Operationalization 'boundary-spanning activities'

Network effectiveness

In the theoretical framework several features of and problems with regard to the concept network effectiveness are discussed (see section 2.1.3). Effectiveness can be reached on different levels, i.e. community level, network level and organizational level. Network effectiveness is in this research defined as:

> The attainment of particular goals at community level, network level and organizational level.

An important note regarding this definition of network effectiveness is the precondition that it has to be reasonably impossible for individual actors to attain the same goals without collaboration with other actors in the network. Sometimes it is possible for a single actor in a network to attain a certain goal at such expenses (either money, time or other resources) that it is in no way reasonable to do so, while network collaboration enables goal attainment at reasonable expenses.

Variable	*Dimensions*	*Indicator*	*Item/indicative question*
Network effectiveness	Community level effectiveness	Goal identification	• Is there a local area served by the network? • If yes, how/with what goal in mind is the community served?
		Attainment	• Is/are the goal(s) reached? • Do you expect this goal to be reached in the nearby future? • Does the current process in the network make you expect goal attainment/does it contribute to it?

		Need for cooperation in the network	Could the goal(s) have been attained at reasonable costs by one of the individual actors?
	Network level effectiveness	Goal identification	What wants the network to achieve? What is the raison d'être of the network?
		Attainment	• Is/are the goal(s) reached? • Do you expect this goal to be reached in the nearby future? • Does the current process in the network make you expect goal attainment/does it contribute to it?
		Need for cooperation in the network	Could the goal(s) have been reached at reasonable costs by one of the individual actors?
		Number of ties between actors	How many ties exist between your organization and the other organization
		Strength of the relationship	How do you perceive the relationship between your organization and the other actors in the network?
	Organizational level effectiveness	Identification of self-interest	• Is/are there (a) self-interest(s) for your organization, for which involvement in the network is beneficial? • If yes, what is it/are they?
		Defense of self-interests	• Is/are these interests looked after or fulfilled? • Does the current process in the network make you expect defense of self-interest(s)?
		Need for cooperation in the network	Could the self-interest(s) have been looked after without involvement of other actors in the network?

Table 3.4 Operationalization 'network effectiveness'

3.4 Reflection on methods

The methodological choices made in this research have some implications regarding the reliability and validity of the research. Both are discussed in this section.

3.4.1 Reliability

Reliability refers to the extent to which the same results can be obtained if the research is repeated. The results have to be independent of the researcher (Vennix, 2006). The point of departure is therefore to minimize the biases of the researcher. To ensure this, a few measures are taken. Firstly, both fellow students and a supervisor reviewed the researcher during the process, while a second reader assessed the final concept of the thesis. Secondly, all steps taken in this research are carefully documented in this thesis. Thirdly, all the conducted interviews are transcribed. The transcriptions are open for review.[4] The used topic list is also displayed (see appendix B). The choice for a qualitative strategy and interviewing as corresponding method may result in an observer bias. By recording the interviews and transcribing them afterwards, the researcher is able to check the presence of biases and change behavior accordingly afterwards if required.

3.4.2 Validity

As Turrini et al. (2010) mentioned, there is a natural contingent flavor in public network effectiveness research, which hinders potent theory building. This is caused by the match between the behavior of a network and its environment, which obviously widely differs between different types of networks in various contexts. Nevertheless, to a certain extent this research tries to contribute to theory building, although this research also is conducted within a specific case with unique characteristics.

Generally, the choice for a case study design highlights some methodological problems. The demarcation of the governance network (the unit of analysis) is disputable. It could be problematic to isolate the network from its surroundings (e.g. other parts of the member organizations and their relations). To ensure the validity of the demarcation, the identified and isolated network is presented to the respondents as form of member-check. Moreover, the use of a case study design allows for interpretation of the collected data in their right context. Therefore, this design is the most feasible one for this research.

External validity concerns the generalizability of the research. As Flyvbjerg (2006) points out, it is a misunderstanding that one cannot generalize on the basis of one case, since formal generalization is overvalued. Besides, case studies can precisely contribute to theory building

[4] Requests for review of interview transcriptions can be send to the author.

via falsification, which is “one of the most rigorous tests to which a scientific proposition can be subjected” (Flyvbjerg, 2006, p. 228). This scientific proposition should already be rejected if one observation does not meet it, since it cannot be considered valid at large then (Flyvbjerg, 2006). Moreover, single case studies perfectly fit a view on case studies as force of example. They invite to look out for the one deviating case, which after scrutiny could appear to be less supportive to a proposition as originally seemed. Nevertheless, one’s eyes should not close up for the limited generalizability of single case studies, which obviously applies for this study as well. However, generalization never has been the goal of this study.

In addition, the internal validity concerns the logical consistency of the research design and the extent to which conclusions can be drawn from the research accordingly. In order to enhance the internal validity the used variables are operationalized transparently and carefully. Member-checks are performed with the collected data. The methods are chosen in accordance with the strategy and the design.

4. Context

In this chapter the empirical context of the conducted research is described to provide insights in the background of the societal problem (as outlined in chapter 1) and to build understanding of the context in which the governance network operates.

4.1 Municipality of Dordrecht

Dordrecht is Dutch city and municipality situated in the Southwest of the Netherlands (see figure 4.1 below). In 2014 the municipality had approximately 120.000 inhabitants[5]. The municipality is situated at the Island of Dordrecht, which is surrounded by five rivers. Water therefore plays an important role in Dordrecht and accordingly the city presents itself as a maritime city. From now on 'Dordrecht' refers to the whole municipality.

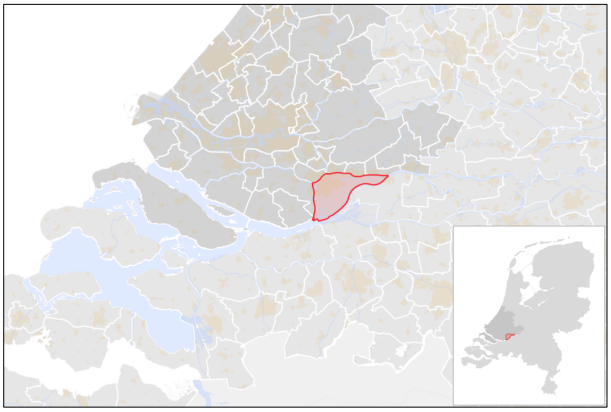

Figure 4.1 Location of Dordrecht

Like every Dutch municipality, the municipality of Dordrecht is governed by a Board of Mayor and Alderman. The Mayor is appointed by the national government for a renewable six-year period, while the Alderman are elected by the members of the municipal council. The municipal council is elected during the municipal elections, which take place every four years[6]. The municipal council of Dordrecht currently consists of 39 members. There are six Aldermen in the Board of Mayor and Aldermen. The Board is chaired by the Mayor, Arno Brok. The political parties of the Aldermen together designed a political agreement[7], which provides the governmental direction for the period 2014-2018.

4.2 Sustainability challenge and wind energy

One of the main priorities in the political agreement is sustainability, which is a boundary-crossing issue in nature. According to the political agreement, sustainability is a topic that

[5] In 2014 the municipality mentioned a number of 118.669 inhabitants in its yearly report; see: https://cms.dordrecht.nl/inwoners/over-de-gemeente/feiten-en-cijfers
[6] Via: https://en.wikipedia.org/wiki/College_van_burgemeester_en_wethouders
[7] See: https://cms.dordrecht.nl/Dordrecht/up/ZmlilzbJeB_Politiek_akkoord_2014-2018.pdf

recurs in all policy issues. Therefore it is highly relevant in this research. The political agreement contains three main goals in relation to sustainability:

- The installation of four wind turbines, with the explicit possibility for private initiatives
- Investigation on the possibility for 'sustainability loans'
- An innovative approach to the possibility for other renewable energy sources

Complex sustainability issues not only affect governments, but also private actors and actors from civil society. Achievement of the formulated goals is partly dependent on cooperation with a variety of actors in Dordrecht (also outside the municipality, e.g. the Province of South-Holland and the national government). Therefore networks are formed around these issues. As Van Meerkerk and Edelenbos (2014) put it: "in these networks, there is a strong diversity of involved organizations, interests, and perceptions within these kinds of networks" (p. 5). This is clearly visible in a network around the issue of wind energy (the first sustainability goal in the political agreement).

The wind energy challenge is a result of an ambition to work towards an energy neutral city in 2050 on the one hand[8], and a target from the Province of South-Holland to realize 20 megawatts wind energy by 2020 on the other. To realize this ambition, a variety of goals has been formulated, on short-, mid- and long-term. The overarching theme is labeled 'energy transition'. Wind energy is a sustainable source of energy, but in order to generate this sustainable energy, wind turbines need to be installed. Building turbines is a delicate policy issue in Dordrecht. Multiple actors are involved in this complex (political) process, which is constrained by legal and procedural obligations. Within the municipal organization multiple interests are at stake and different parts of the organization are involved accordingly.

4.3 Characteristics of the governance network

In chapter 2, a variety of characteristics of governance and governance networks is discussed. Many of them are clearly visible in the case. Multiple actors are involved in the network. The municipal organization fulfills administrative tasks and corresponding obligatory

[8] See for background information on the formulated goals with respect to sustainability the 'sustainability plan 2015-2018', via:
https://cms.dordrecht.nl/wijkensites.dordrecht/up/ZkqnkwfJiB_Opgaveplan_Duurzaamheid_definitief.pdf

arrangements play a role in the process, but private actors also have a stake in the process, hereby representing a market function with focus on efficiency and profitability. In coping with the sustainability challenge and by contributing to the realization of wind energy on the Island of Dordrecht, the network contributes somehow to public governance.

The sustainability challenge of the municipality of Dordrecht is complex and requires involvement of multiple actors, since the municipal organization is not capable of dealing with this challenge on its own. Interdependency, consequently, exists and cooperation with other actors is therefore needed. However, the actors remain autonomous, although they all have stakes on the table and negotiate to overcome different viewpoints.

5. Findings

In this chapter part of the findings of the empirical study are presented. Firstly, the governance network is mapped based on the collected data. The network consists of nine organizations. The relations between the actors in the network are explained. Secondly, in order to measure effectiveness, goals have to be distinguished. In accordance with the operationalization, these goals are discerned at three levels.

5.1 Mapping and explaining the network

As first step in the empirical part of the research, the governance network was mapped. The municipality of Dordrecht was expected to be a central actor in the network. Actors in the network can be categorized in four categories. First, governmental actors with formal authorities play an important role in the network. These are the municipality of Dordrecht, the Province of South-Holland and Rijkswaterstaat. Second, initiators look for opportunities to develop wind energy. POG Capital B.V., the Energiecoöperatie Dordrecht (ECD) and Drechtse Wind are such initiators. Third, landowners have authority. The Port of Rotterdam Authority, Rijkswaterstaat and the municipality of Dordrecht own relevant parcels at the Island of Dordrecht. POG Capital B.V. also secured the land for their initiative. Fourth, stakeholders that represent an interest are part of the network. Stichting LindtWind and Drechtse Wind represent such interests. Stichting LindtWind represents a group of opponents of wind energy on proposed locations, while Drechtse Wind represents citizens in support of wind energy development on proposed locations, with ambition to exploit one or more turbines.

After the first step of mapping the network, the respondents provided insights in the connections between the actors in the network. These findings are mapped in the image below (see image 5.1 on the next page).

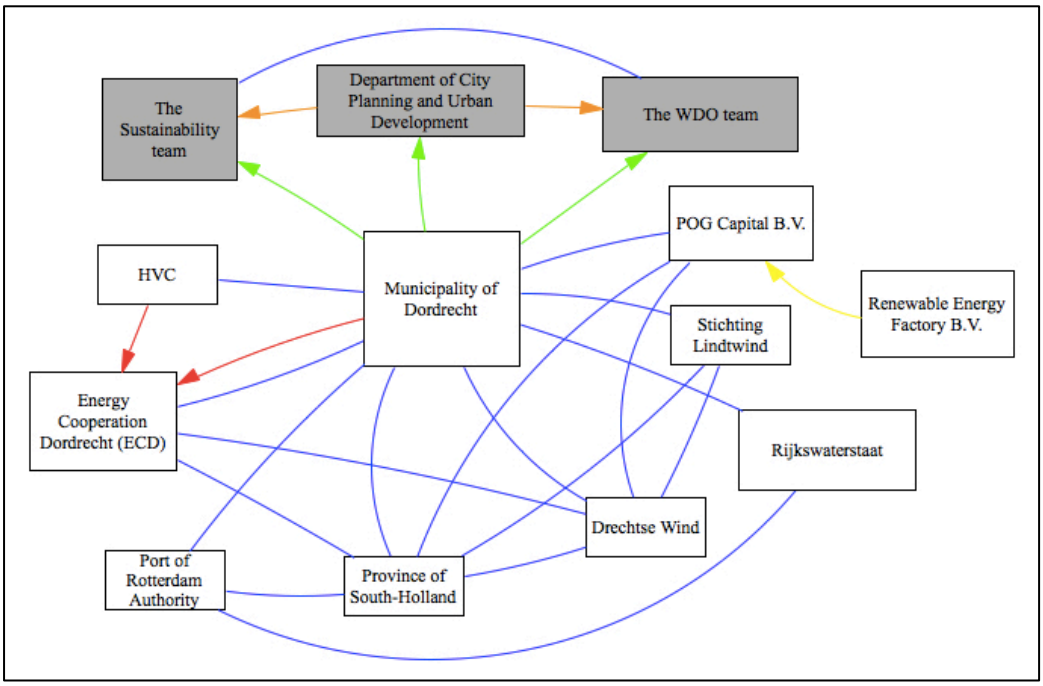

Figure 5.1 Map of the governance network

The municipal organization is an important actor itself. It is involved with multiple interests, which sometimes contradict. Firstly, from sustainability point of view the municipality is in favor of building turbines, in order to reach its ambition of being an energy neutral city in 2050. Building turbines would evidently contribute greatly to reaching this objective. The Sustainability team of the municipal organization represents this interest and is installed with the assignment to initiate projects to enhance the sustainability of the municipality. Secondly, from spatial planning point of view the municipal organization is continuously developing the Island of Dordrecht. Building wind turbines strongly influences the landscape. Determining possible locations therefore is a complex process, which has to be conducted carefully, while taking into account other developments and interests as well. One of the areas in the municipality that is currently developed is the WDO area, an industrial area where parcels are to be issued. The WDO team of the municipal organization is responsible for development of this WDO area and therefore represents the accompanying interests. Finally, the municipal organization has the responsibility for facilitating the process, both within its own organization and in the network, since it has the decision-making authority on e.g. locations. Besides, a lot of content knowledge on wind energy is clustered within the municipal organization and valuable for process control and support to other parts of the organization (i.a. the spatial planning department and the Sustainability team). This function is has been assigned to the department of City Planning and Urban Development of the municipal

organization. From this department, two policy advisers are detached to the Sustainability team to take care of the wind energy development process. Internally, there are different teams involved in the network. However, external actors always perceived the municipal organization as one actor. They do not discern between the Sustainability team and the WDO team.

Next to the municipal organization a few other organizations are formally involved in the network, based on their procedural role in wind energy development. These are Rijkswaterstaat (a governmental implementing/executive body for everything related to infrastructure), the Province of South-Holland and the Port of Rotterdam Authority. Rijkswaterstaat manages lots of infrastructure and has to approve initiatives for turbines with regard to the safety and management of the infrastructure. The Province officially assigned a task to develop wind energy to the municipal organization. The Port of Rotterdam Authority exploits the harbor area in Dordrecht and therefore has a say in the land use in this area.

Initiators of realizing generation of wind energy on the Island of Dordrecht are the ECD and POG Capital B.V. (a private company in project development and consultancy). The ECD is a public-private entity with two shareholders: the municipality of Dordrecht and HVC, an energy and waste company.

Two interest groups are involved in the network. Drechtse Wind (a foundation) represents a group of active supporters in favor of sustainable initiatives (and in particular wind energy). On the other hand, Stichting LindtWind is a foundation in which opponents of the wind energy project on the Island of Dordrecht are united. Stichting LindtWind claims to represent about 2100 households and about 5000 people that live within 800 meters of the proposed turbines. Therewith they have legitimacy as a resource, since they can withhold legitimacy from the decision made to realizes turbines on the Island of Dordrecht (Klijn & Koppenjan, 2016).

5.2 Determining goals

In previous chapters network effectiveness is defined as the attainment of particular goals at community level, network level and organizational level.

5.2.1 Community level goal

The community level is the broadest level. At this level, networks must be assessed by the contribution they try to make to the communities they serve, that could not have been realized by the individual actors. Communities can be described as local areas that are served by the network (Provan & Milward, 2001). In this research the local area is defined as the municipality of Dordrecht.

The governmental actors derive their community goals from political plans, which are established at national level and distributed to decentered governmental bodies (the Province of South-Holland and the municipality of Dordrecht). The overarching goal towards the local area is creating a more sustainable Dordrecht. This goal is widely supported among the actors in the network. As one respondent put it: “in fact we all want to be more sustainable”. Even Stichting LindtWind, an actor with a somewhat aberrant interest for involvement in the network (see section 5.2.3 on organizational level goals) stated to be “supportive towards investments in sustainable energy”.

As mentioned in the previous chapter, the municipal organization specifically works with the political agreement as starting point. The sustainability plan 2015-2018 is derived from the political agreement. The main goals are:

- The installation of four wind turbines, with the explicit possibility for private initiatives
- Investigation on the possibility for 'sustainability loans'
- An innovative approach to the possibility for other renewable energy sources

These goals are specifically set to contribute to a more sustainable Dordrecht and function thereby as service for the local area. At the same time, the community level goals are long-term oriented. Somewhat more concretized the sustainability goal is best expressed in the target of an energy-neutral Dordrecht in 2050.

5.2.2 Network level goal

Although connections between some of the actors in the network also concern other matters, the network has been established to realize wind energy at the Island of Dordrecht. In fact,

some actors in the network were established because of the issue of wind energy (e.g. Drechtse Wind and Stichting LindtWind; see section 5.2.3 below for an elaboration on the self-interests of actors). Respondents affiliated with governmental actors refer to political-governmental goals as network level goals. Realizing wind energy in Dordrecht is the very reason for existence of the network and is therefore perceived as the main network level goal.

Realizing this goal requires a process containing several stages. Except for the need for an initiator, a landowner and permissions, the municipality first has the obligation to develop a spatial development plan, a kind of legal framework, which provides direction to the process of development of plans and installation of turbines. Developing this plan was initiated by the municipal organization accordingly and happened in close cooperation with actors in the network. Delivering a widely accepted and supported spatial development plan was one of the accompanying network level goals.

5.2.3 Organizational level goal

In addition to community and network level goals, effectiveness can also be assessed at the level individual actors in the network. To achieve this organizational level effectiveness, actors have to benefit themselves from involvement in the network with regard to their self-interests. Throughout the network a variety of self-interests exist. They are shown in the table below. For all self-interests mentioned, involvement in the network could work out beneficially. Whether this actually is the case, is argued in the analysis (see chapter 6).

Table 5.1 Overview of self-interests of actors

Actor	**Self-interests**
Municipality/the WDO team	(Re)-development of WDO area in a sustainable way.
	A good, competitive and robust economy in Dordrecht.
	Make Dordrecht an attractive city. Modern, good for working, living, recreating and culture, coherently.
Municipality/the Sustainability team	The best possible living conditions in Dordrecht in accordance with the sustainability goals.
	We have a target from the Province: so many megawatts have to be delivered.
	Delivering a spatial development plan.
	Realizing wind energy. It is one of the core goals of the sustainability challenge.
	An energy-neutral Dordrecht in 2050.
	Realizing additional turbines in 2020.

Province of South-Holland	A frame based on national energy agreement: 6000 megawatts wind energy on land, including 735,5 megawatts for the Province of South-Holland in 2020.
	Get the targets from an agreement with municipality of Dordrecht about realizing a number of megawatts in accordance with the provincial plans: 20 megawatts wind energy in Dordrecht in 2020.
Rijkswaterstaat	Manage our three networks: main roads, main waterways and main water systems.
	Earn revenues, by deploying activities on our areal.
	Attainment of a government-broad energy goal, by installing solar cells or wind turbines.
ECD	Facilitate and fasten sustainable developments in Dordrecht.
HVC	Help shareholders with attaining their sustainability goals.
	In Dordrecht we try to do this at the local level, following a locally shaped route.
Stichting LindtWind	Prohibit turbines at Groote Lindt and Duivelseiland.
Drechtse Wind	Realizing and exploiting turbines in the Drechtsteden.
	Increase support for wind energy among citizens.
	Enable new sustainable projects.
POG Capital B.V.	Develop a wind park on the eastside of the A16 in Dordrecht. As soon as possible realize seven turbines at this location.
Port of Rotterdam Authority	We want to be the most sustainable port in 2030.
	Development of the port area.
	We support the development of renewable energy, but we prioritize the issuance of parcels.

Differences

At some points, the organizational level goals differ and show contradictions between actors' interests. Within the municipal organization, the self-interests of the Sustainability team and the WDO team are not aligned, although not insurmountable. In the WDO team perceptions exist that the presence of a turbine negatively influences the value of the parcels in the WDO area, which could at the expense of the revenues, or the attractiveness of the parcel, which could result in a situation of non-issuance of the parcel eventually. Rijkswaterstaat prioritizes the management of their three infrastructural networks over working on their energy goals and the development of activities to increase revenues (for which provision of land for installation of a turbine is a possibility). Since Rijkswaterstaat owns a location at Duivelseiland, which is included in the spatial development plan, this decision comes at the expense of stimulation of the wind energy development process at the Island of Dordrecht. Stichting LindtWind is member of the network for the sole purpose of prohibiting the installation of turbines at Groote Lindt (a location in Zwijndrecht, a neighboring municipality)

and Duivelseiland. Regarding the location at Groote Lindt, this interest is in direct violation of the interests of the Province. The common direct interests of the municipal organization, the Province, the ECD and Drechtse Wind are at stake with regard to the proposed location at Duivelseiland, which Stichting LindtWind tries to block. Indirectly, the involvement of Stichting LindtWind also affects the interests of HVC, because HVC also intends to install a turbine at Duivelseiland and, although it is a different spot, this also results in resistance from Stichting LindtWind. The interests are thus conflicting.

Similarities

Some actors' goals show overlap. The WDO team, the Sustainability team, the ECD, HVC, Drechtse Wind and the Port of Rotterdam Authority explicitly mention sustainability goals with overlap. In addition, the Sustainability team, the Province and Drechtse Wind have the specific interest of developing wind energy at the Island of Dordrecht, an interest that indirectly is in line with the interests of the ECD and HVC as well. Although their raison d'être is an interest in initiating wind projects in general, in the specific case of Dordrecht the only interest of POG Capital B.V. is realizing turbines at the eastside of main road A16, in accordance with their plan. However, this plan still overlaps with the goal of realizing wind energy at the Island of Dordrecht. The Province has a specified goal of 735,5 megawatts wind energy generated in 2020, which they partly assigned to the municipality of Dordrecht.

6. Analysis of variables

This chapter contains an analysis, based on the collected data and the findings described in the previous chapter. It includes the interpretation of the data by the researcher. Firstly, the effectiveness at different levels is determined. Secondly, the presence and performance of boundary-spanning activities are analyzed. Subsequently, the relation between boundary-spanning activities and effectiveness, as well as their value, are assessed. Thirdly, the influence of the size of the work and the form of network governance are analyzed. Finally, the network as mapped in the previous chapter is analyzed in the light of possible missing actors.

6.1 Analysis of goal attainment

6.1.1 Community level goal attainment

As mentioned in the previous chapter, the main community level goal is a long-term goal. The municipality's concretized sustainability goal is targeted in 2050: an energy-neutral Dordrecht in 2050. It is impossible to assess the degree of attainment yet. However, perceptions of the respondents concerning the process so far give an indication of the progress made. In general, respondents are skeptical about this progress. They admit additional efforts are necessary to ensure goal attainment on the long-term and point out that the municipal organization cannot realize this goal alone. The involvement of other actors is therefore necessary. An existing halfway goal in this context is generating 20% renewable energy in 2020. This target is set by the municipal organization. With the current plans, the realization will only be 10% renewable energy in 2020. Additional efforts are also necessary to attain the halfway goal. Wind energy development can make major contributions to this goal. This also proves the connection between the community level goals, the network level goals and the self-interests of actors.

6.1.2 Network level goal attainment

With regard to the raison d'être of the network and network level goal accordingly, respondents indicate divergent degrees of goal attainment. The network level goal is realizing wind energy at the Island of Dordrecht. Four turbines are currently installed at the Island of Dordrecht. Therefore, the goal of realizing wind energy is formally attained. However, the

installation of these turbines is not a result of operations of the network. These four turbines are granted to Kilwind, under the jurisdiction of the Province of South-Holland. None of the other actors in the network has been involved in this trajectory. Also for the Province the installation of these turbines and consequently the realization of wind energy in Dordrecht are not perceived as a result of operation of the network. For that reason, this cannot be and is not perceived as goal attainment at network level.

In addition to the turbines currently installed, plans for additional turbines exist.

- The ECD has a concretized proposal for a turbine at the HVC terrain at Duivelseiland.
- POG Capital B.V. has a plan for a wind park at the eastside of main road A16.

The respondents have mixed perceptions of the attainability of these additional turbines. The landowners (the WDO team, HVC and Rijkswaterstaat) are positive about the chances for success. The ECD expects their turbine at the HVC terrain to run in 2018, under the precondition Stichting LindtWind will not file a lawsuit. Otherwise the delay will be six to twelve months. POG Capital B.V. is confident about realization of their plan in the future. However, for their plan to succeed, political accordance has to be obtained. This will not happen before the elections in 2018. As a consequence, their plan will not be realized before 2020.

The development of a widely supported spatial development plan has been attained with measurable success, although the plan has been delivered with a delay (the plan was delivered in May 2016 instead of January 2016). Respondents from the municipal organization indicate that the additional five months allowed them to carefully finalize the spatial development plan. As a result all involved and affected actors could all be consulted, with support for the spatial development plan as result. As one of the respondents mentioned: the number of filed opinions has been remarkably low, which shows measurable support for the plan. Also the Province, which initially became impatient, allowed the delay and gave the benefit of the doubt by not intervening. This shows justification for the delay and points out the importance of the involvement of various actors.

6.1.3 Organization level goal attainment

The table below presents an indication of the extent to which actors benefit from membership of the network with regard to their own interests.

Table 6.1 Overview of attainment of self-interests of actors

Actor	Self-interests	Indication for attainment
Municipality/the WDO team	(Re)-development of WDO area in a sustainable way.	Yes, based on consultation of involved actors by the WDO team, attainment might be expected.
	A good, competitive and robust economy in Dordrecht.	No indication. Data are inconclusive.
	Make Dordrecht an attractive city. Modern, good for working, living, recreating and culture, coherently.	No indication. Wind energy development might contribute, but does not necessarily.
Municipality/the Sustainability team	The best possible living conditions in Dordrecht in accordance with the sustainability goals.	No indication. Wind energy development might contribute, but does not necessarily (very subjective)
	We have a target from the Province. The according number of megawatts has to be delivered.	Partly. 20 megawatts in 2020 is going to be hard, since there is delay already. However, progress is made and currently 10 megawatts are realized.
	Delivering a spatial development plan.	Yes, the plan has been delivered with a low number of filed opinions.
	Realizing wind energy. It is one of the core goals of the sustainability challenge.	Yes, four turbines are currently installed.
	An energy-neutral Dordrecht in 2050.	No indication, long-term goal. However, other measures contribute to this goal.
	Realizing additional turbines in 2020.	No final indication yet, but respondents expect at least one additional turbine to be installed in 2020, which seems realistic. Therefore this goal is expected to be attained.
Province of South-Holland	A target based on the national energy agreement [9] : 14% renewable energy in 2020; 6000 megawatts wind energy on land in 2020, including 735,5 megawatts	No indication yet. Data are inconclusive. Goal is very ambitious.

[9] See: http://www.zuid-holland.nl/onderwerpen/energie/windenergie/ (retrieved on 5 July 2016).

	for the Province of South-Holland.	
	Get the targets from an agreement with municipality of Dordrecht about realizing a number of megawatts in accordance with the provincial plans: 20 megawatts wind energy in Dordrecht in 2020.	Not clear yet; it is going to be hard to attain this goal. There is delay already.
Rijkswaterstaat	Manage our three networks: main roads, main waterways and main water systems.	On-going process, in which the actor seems to succeed.
	Earn revenues, by deploying activities on our areal.	No indication. Data are inconclusive. No priority of the actor.
	Attainment of a government-broad energy goal, by installing solar cells or wind turbines.	No indication. Data are inconclusive. No priority of the actor.
ECD	Facilitate and fasten sustainable developments in Dordrecht.	On-going process, in which the actor seems to succeed.
HVC	Help shareholders with attaining their sustainability goals.	On-going process, in which the actor seems to succeed via the ECD.
	In Dordrecht we try to do this at the local level, following a locally shaped route.	On-going process, in which the actor seems to succeed via the ECD.
Stichting LindtWind	Prohibit turbines at Groote Lindt and Duivelseiland.	A recent newspaper article suggests the installation of turbines at Groote Lindt.[10] Therefore that goal will not be attained. Other actors are positive about possibilities at Duivelseiland.
Drechtse Wind	Realizing and exploiting turbines in the Drechtsteden.	No final indication yet, but respondents expect at least one additional turbine in 2020, which seems realistic. Therefore the goal is expected to be partly attained.
	Increase support for wind energy among citizens.	No clear indication. Data are inconclusive. Support exists within the network.
	Enable new sustainable projects.	No indication. Data are inconclusive.
POG Capital B.V.	Develop a wind park on the eastside of the A16 in Dordrecht. As soon as possible realize seven turbines at this location.	No indication yet. The plans exist, but there is no political accordance yet. The actor is convinced of future success. This plan serves as

[10] See: http://www.ad.nl/dossier-dordrecht/windmolens-groote-lindt-staan-buiten-kijf~ae754683/ (retrieved on 5 July 2016).

		back-up option for the municipal organization after 2018.
Port of Rotterdam Authority	We want to be the most sustainable port in 2030.	No indication. Data are inconclusive.
	Development of the port area.	No indication. Development of the port area in general seems not very much to be affected by operations of the network.
	We support the development of renewable energy, but we prioritize the issuance of parcels.	Likely, since current initiatives do not involve parcels of the Port of Rotterdam Authority.

The WDO team benefits from being member of the network regarding the sustainable development of their parcels. Other interests could benefit from operations of the network, but no evidence suggests so yet.

The Sustainability team managed to deliver a widely supported spatial development plan in cooperation with other actors. Installation of at least one additional turbine by 2020 seems realistic. Regarding their responsibility for attainment of long-term sustainability goals, the Sustainability team benefits from being member of the network.

The Province currently asks itself whether its current approach suffices with regard to their interests. They admit that non-started wind energy initiatives are probably to late to be up and running in 2020, since the procedure will take too long to manage all the formalities in time. Realization of 735,5 megawatts in 2020 is unsure, as is the compliance to the agreement for 20 megawatts wind energy in Dordrecht in 2020. Although membership of the network contributes to development of wind energy, for the Province it seems to be insufficient to match their interests.

Regarding their involvement in wind energy development initiatives of others as manager of the most important infrastructural networks, Rijkswaterstaat succeeds in securing their interests. On the contrary, they currently do not put effort in deploying additional activities to earn revenues. This also applies to efforts to attain government-broad energy goals. All in all, Rijkswaterstaat does not use its position in the network for contribution to attainment of these goals.

By being member of the network, the ECD facilitates and fastens sustainable developments in Dordrecht. In line with the interests of its shareholder HVC, this happens at a local level, following a locally shaped route in Dordrecht. This also directly contributes to attainment of the sustainability goals of the municipal organization.

Stichting LindtWind seems not to benefit from being member of the network. The Province allows realization of turbines at Groote Lindt anyway. Other actors in the network expect at least one additional turbine to be realized in 2020, for which Duivelseiland is the most obvious location.

Drechtse Wind seems to benefit from involvement in the network, since all their interests relate to the development of wind energy and other sustainable initiatives. However, none of their goals is attained yet. Their representative function for citizens in stimulating wind energy could yield results with the installation of an additional turbine.

POG Capital B.V. so far not directly benefits from involvement in the network. However, they are aware of the current political deadlock and they acknowledge new opportunities will arise after 2018. Until then, they patiently wait, while maintaining relationships with actors in the network. Installation of the other proposed turbines could benefit their plan, since this finally allows for real-life experiences with installed turbines, which could contribute to a decrease in resistance against turbines, thereby increasing chances for accordance for the POG Capital B.V. plan for turbines at the eastside of the A16 main road.

The collected data give no indication for beneficial operations with respect to the development of the port area and the process towards becoming the most sustainable port in 2030. However, so far no plans for the installation of turbines at the terrain of the Port of Rotterdam Authority are submitted, which is in line with their interests.

6.1.4 Analysis of network effectiveness

First thing to be deducted from the sections above is the elusiveness of the community level goal. Sustainability is after all something all network actors are supportive to. The sustainability challenge has been concretized by setting a long-term goal, namely an energy-neutral Dordrecht in 2050. It is currently impossible to conclude whether the goal is attained or will be attained in the future. Besides, the identified community and network level goals all

require a process to be gone through before they eventually will be attained. Therefore the goals mentioned in previous sections are also assessed based on the progress made in this process. Consequently the reasoning towards determining effectiveness is trapped, starting with the self-interests of the actors and determination of their contribution to the network level goals, followed by the network level goals and assessment of their contribution to the community level goal.

At organizational level, goals are attained to a certain extent. Involvement in the network is effective for the WDO team, the Sustainability team, Rijkswaterstaat, the ECD, HVC and the Port of Rotterdam Authority.

Goal attainment is more doubtful for the other actors. On the one hand, the Province of South-Holland not entirely benefits. On the other hand, it is questionable to what extent they could have achieved *more* to protect their interests *without* involvement in the network. Therefore, their involvement in the network is not per se ineffective. For Stichting LindtWind involvement has not been effective at organizational level, since it has not been able to secure its interests. There are no indications that Drechtse Wind and POG Capital B.V. are explicitly benefitting from involvement, since their self-interests are not evidently defended. However, their involvement does not harm their self-interests until now. After all, the steps taken in the process could benefit the attainment of their goals.

With respect to the network level goals, it can be concluded that the network so far has made progress towards realization of wind energy at the Island Dordrecht. Strictly factual, the goal has not been attained yet. However, deliverance of the spatial development plan explicitly contributes to goal attainment at network level, since it enables initiators to apply for permissions and concretize their plans for turbine installation. Respondents hint at the added value of involvement of the actors in the network in the creation of the spatial development plan, which proves the categorization as network level goal. Besides, the actors have taken steps towards the realization of wind energy at the Island of Dordrecht, with more attainments to be expected before 2020. Therefore, the network can be considered fairly effective at network level.

The operations of the network so far have contributed to the sustainability goals at community level. With the knowledge of this goal, which can be, mostly concretized, described as the

generation of 100% renewable energy in 2050 and consequently an energy-neutral Island of Dordrecht in 2050, it makes no sense to further assess goal attainment at this point in time, or to declare the network effective at community level. Efforts of the actors evidently directly and indirectly contribute to community goal attainment. Therefore the network is evidently not ineffective at community level. However, as side note it should be mentioned that some actors are skeptical towards to chances for realization of an energy-neutral Island of Dordrecht in 2050.

For most actors, goal attainment on short notice is currently not the main concern. The governmental actors operate with established deadlines in mind: 735,5 megawatts wind energy in 2020 in the Province of South-Holland, 20% renewable energy in Dordrecht in 2020 and an energy-neutral Island of Dordrecht in 2050. Stichting LindtWind also operates under pressure of a deadline. However, if they do not attain their goal, it most probably has a beneficial effect on the attainment of network and community level goals.

6.2 Analysis of boundary-spanning activities

In this section the analysis touches upon the practice of boundary spanning activities by the networks actors. Consequently the analysis shows how they relate to the perceived effectiveness, as spelled out in the previous section. The analysis follows the operationalization (see section 3.3) and contains everything respondents mentioned related to boundary-spanning activities.

6.2.1 Connecting/linking activities

The WDO team appointed someone with specific knowledge and understanding of sustainability issues to cooperate with partners in the WDO area and in the network. The manager of the WDO team bilaterally discusses the progress made with the manager of the Sustainability team. In these conversations, the relationship between the teams is maintained, potential problems are identified and mutual reconciliation is pursued. The WDO team consciously and continuously looks for partners to cooperatively pursue the collective sustainability goals with. They try to connect with businesses in the WDO area and try to find common ground and goals. They invest time in maintenance of relations with partners. One of the tangible results is the establishment of Platform WDO, in which companies, civil servants and the Port of Rotterdam Authority are united. They point out goal negotiation and

alignment as biggest challenge: “you are part of a network, there are other stakeholders and the challenge is to fold cooperation in the way you can attain the goals”. All in all, the WDO team performs considerably strong connecting activities.

The Sustainability team had several discussions with initiators in the network, to hear their side of the story. The nature of the relationships with network partners allowed the Sustainability team to have these discussions. The team had tough discussions with the Port of Rotterdam Authority about wind energy development in the port area, but compromised in the end and reached an agreement about how usage of port area for wind energy development could be incorporated in the spatial development plan without bothering the plans of the Port Authority. Important was also the relationship with the WDO team, the other internal actor in the municipal organization. In fact, both teams are working towards the same political goals. However, there is a conflict of interest regarding the specific tasks. Discrepancies were identified and discussed, to eventually reach agreement upon by developing a joint agenda on the main line: looking for possibilities to incorporate wind energy development in the development of the WDO area. Generally, the Sustainability team performs strong and high quality connecting activities.

The Province of South-Holland mentioned to have good relations with other actors, both administratively and governmentally, which stimulated the process. First line communications were held with the municipal organization. The Province considers the municipality as the most appropriate negotiating partner for other actors in the network and developed their relation with the municipal organization accordingly. An agreement between the municipality and the Province was reached about a number of megawatts to be realized by the municipality, which comes along with a norm for measuring the effectiveness (see section 6.1).

The Port of Rotterdam Authority entered the network relatively late. However, after a tough start, they built a relationship with the municipal organization and came to an agreement about the use of the port area for wind energy development. Ideas about possible locations for turbines and alternative possibilities for sustainable energy development were exchanged during the process. Potential problems were discussed and solutions were found. Besides, the Port of Rotterdam Authority talked to initiators to discuss the possibilities and preconditions for wind energy development in the port area. The activities of the Port of Rotterdam

Authority resulted in a strong connection with the municipality, but besides they were not extensive.

Drechtse Wind had administrative and governmental contacts with the Province to figure out what role the Province would take in case of municipal failure to realize wind energy in Dordrecht. Members of Drechtse Wind consciously approached various actors, including political parties to gain political support, but other actors approached them as well. This resulted for them in an overview of the network, insight in goals, in roles and in problems of other actors. Relationships with civil servants always have been pleasant. Potential constraints were identified in contacts with the municipal organization. Connections with many actors were realized, but contacts did not result in strong, extensive relationships.

Stichting LindtWind had contact with the municipality of Dordrecht and agreed upon the existence of nuisance in Zwijndrecht as result of turbines in Dordrecht. Stichting LindtWind has been approached by the municipality, with which contact was relatively pleasant. Open conversations always have been possible. Contacts with actors outside the network, most importantly the neighboring municipality of Zwijndrecht, have been difficult. Attempts were made by Stichting LindtWind to discuss the issues at stake with the municipality of Zwijndrecht, but after a new alderman was installed, contacts had to start all over again. Conversations barely took place. Therefore, other communication happened via e-mail, open letters and voice. The connecting activities of Stichting LindtWind did not result in strong relations with other actors in the network.

POG Capital B.V. built relationships with the municipality, the Province and Drechtse Wind. They reached agreements about participation in turbines with the responsible alderman in Dordrecht and maintained contacts with the Province to ensure continuation of the process despite problems and therewith put pressure on the municipal organization. In addition they talked with landowners, in particular a French family that owned land at the eastside of main road A16, which they eventually secured for installation of turbines in the future. POG Capital B.V. performed relatively few connecting activities, but those performed were of high quality, which resulted in a strong position in the network.

The ECD encountered a lot of stakeholders during the process of developing wind energy. They built and maintained relations with all of them. The relationship with the municipal

organization, despite its special character with the municipality as shareholder of the ECD, has been shaped professionally, also in relation to HVC. A joint agenda has been developed with the municipality and contracts were drafted accordingly. Contact with Drechtse Wind took place to exchange ideas and find out each other's plans. All in all, the ECD performed the necessary connecting activities to pursue its own agenda.

Rijkswaterstaat acted passively in the network and did not approach actors. The relationship with the municipality has been maintained, although specifically in relation to wind energy development. This relationship is good. Nevertheless, it cannot be concluded that Rijkswaterstaat performed extensive and high-quality connecting activities.

From the above it can be concluded that all actors report connecting and linking boundary-spanning activities. They perform these activities to find the right partners in the network, to build and maintain relationships, to identify the problems or issues at hand and to negotiate on goals and identify mutual goals. In two situations this resulted agreements: between the Province and the municipality and between the Port Authority and the municipality. These activities mainly relate to planning/formulation and implementation/delivery. One actor touches upon the evaluation of the development of the spatial development plan, by referring to the number of filed opinions, which indicates activities of evaluation, although not explicitly linked to as an activity performed together with other actors in the network. The fact that the Port of Rotterdam Authority never filed an opinion against the final spatial development plan can be perceived as a result of boundary spanning activities, an evaluation which is made by the municipal organization as well, but again without involvement of other actors in the network.

6.2.2 Selecting relevant information

The WDO team selects information in conversations. If there is a need to talk to actors that are, for example, willing to build a turbine, the team manager usually does these talks with one of his assistants. The team also gathers information in the Platform WDO, where businesses and civil servants meet each other. As one respondent put it: "by exchanging ideas and information, you can capture a place in the other's mindset". Their experiences are that other actors select information that is relevant to them, and there is no need to help them in doing so. In other words, you can offer them information, but do not push it. The information

mainly consists of interests and preferences of the actors in the WDO area and spatial development information about how to develop the area.

The Sustainability team collected information by approaching actors for exchange of knowledge. “You first bring information to them and collect their responses afterwards”. Interactions were used to find out what they were dealing with. The Sustainability team collected legal information about guidelines for building turbines and technical information about turbines. In the process of developing the spatial development plan, the Sustainability team carefully selected information about the preferences of stakeholders. The team was constrained by the political-governmental balances and had to take the opinions of political parties into account. The Sustainability team has a strong position to select information and does so accordingly.

The Province of South-Holland mostly obtained information about the preferences of the involved actors and the political-governmental situation in Dordrecht by having conversations with other actors in the network.

The Port of Rotterdam Authority non-verbally received information from the municipal organization. The municipality sent concepts of the spatial development plan and therewith fully disclosed information to the Port Authority, enabling selection by them. The Port Authority partly based its sustainability strategy on information gathered from partners and also used selected information for the development of their undisclosed Masterplan for the port area in Dordrecht.

Drechtse Wind had contact with the municipal organization to find out what was going on and to identify potential constraints. As the respondent affiliated with Drechtse Wind put it: “selecting information is like journalism. You gather pieces at different places to construct the whole picture. By doing so, I think we had a strong information position in the network.” Also the abovementioned contacts with political parties resulted in useful information. Herewith, Drechtse Wind mostly collected political information, with which they acquired a strong information position in the network.

Stichting LindtWind gathered a lot of information by looking into the past. This covered non-verbal selection of information from reports and other documents. Stichting LindtWind

mainly collected information about the political situation in the municipalities of Dordrecht and Zwijndrecht, to find out how to use this in their attempt to prevent the installation of turbines. To underpin their statement, the Stichting also used technical information to prove the adverse effects of turbines for nearby residents.

POG Capital B.V. gathered information everywhere they could. As they put it: "you need a lot of information to come up with a solid plan for wind energy development". They also propose another way to gain knowledge or information: hire it. After arriving in the wind energy business, they learned a lot in a short time. Nevertheless, they put forward the usage of knowledge of others as valuable. That is why they cooperate with guys that "have been in the business for years". POG Capital B.V. collected all kinds of information. Firstly, legal information was obtained to build knowledge concerning the restrictions for building turbines. Secondly, technical information was gathered about turbines and their functioning in general. Thirdly, political information was collected about the standpoints of political parties, the vision of the local government and the ambition of the Province of South-Holland. Regarding its relatively unimportant position in the network, POG Capital B.V. performed strong selecting activities.

The ECD collected information from actors in the phase in which they explored the opportunities for development of renewable energy. After drafting a plan, they had to talk to the Port Authority, the Province, HVC and the electricity company to find out whether they still approve the ECD plan for turbine installation. Their information, accordingly, mostly consisted of preferences and viewpoints of stakeholders.

Rijkswaterstaat indicated to always listen to actors approaching them, since they sometimes come up with interesting thoughts, which contributes to knowledge building. They valued information based on the whether ideas of other actors seemed attractive and feasible to them. Rijkswaterstaat learned about all aspects of wind energy from other actors. Selecting activities are very important for Rijkswaterstaat.

Actors select information from the network, mainly via conversations (verbal selection), although some actors report non-verbal selection as well, mainly in relation to development of the spatial development plan. After discussing the selected information, actors generally decided how to act in the network and how to prioritize actions. The selected information

mostly consisted of interests and preferences of stakeholders, political-governmental views, technical information about turbines and legal information about restrictions on turbine installation.

6.2.3 Translating information

The WDO team has two-weekly meetings, in which information is exchanged internally among team members. One of the respondents stated to translate information back to the team, after which they decide what their strategy would be based on that information. The respondents suggest information is embraced and translated unmodified.

The Sustainability team organized walk-in meetings for citizens to bring information to citizens, thereby translating it from the network to other actors. Besides, the team meets every two weeks. During these meetings members share currently on-going activities and information and team members ask for help if needed. Meetings usually last one and a half hour, which is long enough to share the main concerns, but not to discuss problems in-depth. Therefore, team members meet bilaterally to spar on issues at hand. This is also a result of the division of tasks within the team. Each member has its own specialty, so you just go to the person with the right specific knowledge if needed. Sometimes team members just drop information in the team, without expecting a response. One of the key players mentioned to share gathered information with another key player in the team. “We try to do everything together. If one of us is not at a meeting, we provide feedback to the other, in order to ensure everyone in the process has up to date knowledge”. All in all, this suggests embracement of information or non-translation of information within the team. Accordingly, following the operationalization, the information is received with acceptance by the team; the respondents do not report resistance or irrelevance.

The respondent from the Province of South-Holland told to use obtained information to inform the governors of the Province and therewith translates information from the network into his own organization.

The Port of Rotterdam Authority discussed and used the received concepts of the spatial development plan internally to determine a strategy and a point of view. In negotiations with the municipal organization, both parties had delegates, and both delegations provided

feedback tot their own organizations. Negotiating with delegations is perceived to be much more efficient than talking with all involved people altogether.

Rijkswaterstaat internally has weekly meetings, in which all initiatives that came at them are discussed, including strategies on how to act on them.

Not all actors specifically report translating activities. This could be due to the fact that some actors only consist of few persons. If all of them are involved in information selection, this eliminates the need to translate information for them. Concertation could be perceived as something ordinary and inherent to their way of working. Actors (organizations) in which more persons are involved (the WDO team, the Sustainability team, the Province, the Port Authority and Rijkswaterstaat) mention the translating activities, while actors in which only few persons are involved (Drechtse Wind, Stichting LindtWind, the ECD and POG Capital B.V.) do not mention them. According to the data, the Sustainability team performed by far the most and strongest translating activities.

6.2.4 Analysis of the influence of boundary spanning activities

Main concern of this research is the influence of the abovementioned activities on the effectiveness of the governance network. Since it is impossible for actors to solely realize the community level and network level goals, there is a need to work together with partners in the network. By doing so, they can possibly benefit with regard to their self-interests.

The Province of South-Holland has been confronted with a complex and challenging assignment to realize 735,5 megawatts wind energy by 2020. The Province consequently decided to assign part of this task to the municipality of Dordrecht. However, the municipality cannot realize this wind energy task on its own. Therefore, there is a need to cooperate with other actors. As a result, the governance network was created.

Three levels of goals are visible in the network, which together enable measurement of the effectiveness of the network. As argued in section 6.1.4, organizational level, network level and community level goals are partly attained, partly expected to be attained in the nearby future and partly not attained.

Quotes like “you cannot do it alone, you need to work together with partners in the network”, “yes, it contributed to delivering a good spatial development plan” and “connecting activities definitively contribute to goal attainment” confirm a picture that has been outlined by all respondents: boundary spanning activities have a positive influence on network effectiveness. Respondents emphasize the importance of interactions for the quality of relationships, and in extension the quality of relationships for the outcomes of cooperation. Respondents admit that actors cannot deal with the challenges in the network on their own, which forces them to cooperate. Good relations are a requirement for good collaboration in the perception of respondents, while boundary-spanning activities improve the quality of relations.

Respondents more often mention connecting and linking activities, compared to selecting and translating information. In line with what has been argued above, translating seems to be a more urgent matter in organizations in which more people are involved in the issue at hand. In cases of reported translating activities, the respondents’ perceptions contain no signs of modification of the collected and selected information. This results in categorization of the translating activities as unmodified translation, or embracement. Boundary-spanning activities are often initiated by the municipal organization, which also seems to be a result of the position of the municipal organization in the network (see section 6.3.2 below for further elaboration). Connecting activities are more often reported and seem to have the biggest influence on effectiveness, since they enable and stimulate collaboration between actors, which is a precondition for the attainment of goals. Respondents report less selecting and translating activities. However, these activities also contribute to determination of strategies to attain the set goals and therewith have a positive influence on network effectiveness.

Boundary-spanning activities are clearly present in the network and connecting/linking activities are more reported than selecting and translating information, but there are also differences in the scope of the boundary-spanning activities. The municipal actors (the WDO team and the Sustainability team) perform many boundary-spanning activities. Both teams pro-actively initiated contact with other actors. To a lesser extent, this was also the case for Drechtse Wind, Stichting LindtWind and POG Capital B.V. Rijkswaterstaat acted passively in the network, while the Province of South-Holland and the ECD showed a more waiting attitude. The Port of Rotterdam Authority performed high quality boundary-spanning activities, to compensate for their lack of involvement in the process in earlier stages, in order to leave their mark on the spatial development plan.

The three boundary spanning activities are interrelated and respondents recognize a certain sequence in the performance of these activities. First, connections are made between actors, before information is exchanged and selected and/or translated. Second, boundary-spanning activities also provide an opportunity to prevent for the need to deliberate with a big number of people, since boundary spanners could perform these activities in small gathering, and afterwards translate the useful information back in to their organization, which also improves efficiency. This also touches upon the point of a relation between efficiency and effectiveness. Although they are different concepts, efficiency can directly influence effectiveness, in case of a goal in which a time element is involved. To exemplify, if a goal includes a deadline, efficiency is needed to attain the goal in time, and consequently achieve effectiveness.

6.3 Analysis of the influence of the moderating variables

Two moderating variables are included in the conceptual framework: the size of the network and the form of network governance.

6.3.1 Size

According to many respondents, the involvement of many actors did not make the process more difficult, it just made it time-consuming, since a higher number of relationships, and therewith a more complex network, had to be built and maintained. However, respondents also declare that you have to involve a variety of actors in the network in order to enhance support and acceptance for the decisions made by actors in the network. Some actors even prefer to do so, in order to gain support for decisions. Therewith it contributes to goal attainment in the network, although it is not always necessary to gain support to be able to attain a goal. After all, if you have all the resources needed, you do not need support from other actors. Others mention the number of actors does not matter, as long as you have the right actors in the network to attain the set goals, which especially applies to situation in which one actor not has all the resources needed. Anyway, goal alignment could become an issue if the number of actors increases.

It has been easier for the municipal organization to make arrangements with other parties than it has been for the Province, according to a respondent from the Province, even though the Province is the formal authority regarding wind energy. This apparently hints to influence of

the position of an actor in the network in relation to the size of the network. The municipality had closer links with a higher number of actors in the network compared to the Province and a more central position in the network. If this led to better possibilities for making arrangements with other stakeholders, the size here clearly influences the relation between boundary-spanning activities and network effectiveness, when assuming making arrangements benefits effectiveness. Other actors found it comfortable that the municipal organization maintained the majority of the contact with actors in the stakeholders, while other actors only had to maintain a bilateral relationship with one or two other actors. Consequently, it can be concluded that the size here influences the way the network is organized, or the form of network governance.

Actors also name downsides of a bigger number of actors. As a respondent from the municipal organization mentioned: "a general comment from outside actors is: it takes a long time. Sometimes actors think they are waiting for one civil servant, while there actually is a need for reconciliation with a number of actors by the municipality. I can imagine, and some things took too long and could have been organized more efficiently". This perception is not self-contained. Another actor states: "some people are already working on this for five years. They wonder: is any progress made"? Some actors also think a higher number of actors works very prohibitive, because of possibilities for interference in the process by all actors. The size makes the network less insightful.

All in all, the data indicate an effect of the size of the network on boundary-spanning activities: a higher number of actors in the network increases the need for these activities. On the other hand, the size also influences the effectiveness. This influence on effectiveness could be both positive and negative: a higher number of actors could increase support for decisions, but it could also slow down the process and result in a lack of goal alignment among actors, in case there are too many differing interests involved.

6.3.2 Form of network governance

Except for those affiliated with POG Capital B.V. and Rijkswaterstaat, respondents explicitly acknowledge a leading role for the municipality of Dordrecht. This implies a lead-organization form of network governance, in which one of the actors in the network has a leading role in the network (see section 2.1.2). The Province admitted to have assigned the directing activities to the municipal organization, although they still retain the formal

authority to take decisions. As they state: “it is pushing and pulling, but if the municipality wants to take it up, we allow them to do so. It is also easier for us to assign the directing activities to the municipality.” Rijkswaterstaat does not perceive one of the actors as the leading actor and therewith hints towards a participant-governed network. POG Capital B.V. points out the Province as formal leading actor, since they have the formal authority and could impose a plan in case the municipality seems to not reach the set target, something other respondents agree upon. However, they admit that the municipal organization is currently in the lead in the development of wind energy at particular locations within the municipality.

One respondent points out that the leading actor could easily change over the process. For example, as soon as an initiator has permission to install a turbine and secured the land, this initiator becomes in the lead of the process; or once the Province imposes a plan, they regain a steering position.

Remarkable is the statement of one of the civil servants that “external actors always have been leading in initiation of contacts”. Nevertheless, as leading actor, the municipal organization guided the process towards deliverance of a widely supported spatial development plan. They facilitate the installation of turbines and coordinated and wrote down the spatial development plan. Initiators have to come to the municipality for permission anyway, although the initiative rests with them. The obligation to develop a spatial development plan forced the municipal organization to take the lead in the part of the process towards wind energy development.

All in all, the network has mostly characteristics of a lead organization-governed network: the network is centralized; one of the actors coordinates the activities of the network and acts as the lead organization. The municipal organization fulfills this role. The other actors accept this form of network governance.

Summarizing the above, in line with the characteristics, one of the effects of this form of governance is centralization. As clearly appears from the visualization of the network (see section 5.1), the municipal organization is the central actor in the network. This is partly caused by a lack of political decisiveness. The status quo provides no direction for actors outside the municipal organization, since they are not aware of the possibilities. For example, the spatial development plan provides a framework for the development of wind energy.

However, this plan only contains a few locations. Some locations are left out, because of political resistance (for example the location on the eastside of main road A16, in line with the plan of POG Capital B.V.). Other actors might not be aware of the possibility to develop wind energy at this location and therefore do not initiate lobbies to convince political parties and aldermen of the feasibility of other locations within the municipality. This is a result of the non-central position of other actors in the network. Besides, politicians and governors are inclined to postpone decisions about other locations to 2018, after the elections. All these elements influence the performance of boundary-spanning activities and their influence on the effectiveness of the network. Especially indecisiveness and postponement negatively influence goal attainment. As a result of these actions, some boundary-spanning activities are not performed. Here the effect of the position of actors in the network on the relationship between boundary-spanning activities and effectiveness is clearly visible.

The municipality has the responsibility to deliver a spatial development plan, which is one of the main steps taken in the process of realizing wind energy. As a result, some actors lean back and wait for the municipal organization to take action, which puts the responsibility with the municipal organization. As a consequence of the form of network governance, the municipality often initiates boundary-spanning activities. This requires the presence of boundary spanners within the municipal organization. If this requirement cannot be fulfilled, this could have influence on the attainment of predefined goals. In line herewith, a few respondents emphasize the importance of good contacts with the municipality, because of their position in the network. Poor relationships with the municipality can jeopardize the self-interests of actors, which is an effect of the position of the municipal organization compared to other actors.

7. Conclusion and discussion

This chapter provides answers to the sub questions and the main research question. It discusses the research in the context of the societal debate and the scientific debate. Besides, the chapter contains a reflection on the methodology. At last, some recommendations are made for further research on this topic, as well as for practitioners in the field.

7.1 Conclusion

This research aimed at in-depth researching of the relationship between boundary spanning activities and the effectiveness of governance networks. It is conducted with a single case study in the municipality of Dordrecht. A governance network with nine legally autonomous actors was identified and purposefully selected, because of its characteristics. Fourteen interviews are conducted with respondents that covered all actors in the network. In addition some documents were reviewed. The main research question is:

> What is the influence of boundary-spanning activities on the effectiveness of governance networks in the municipality of Dordrecht?

In order to arrive at an answer to this question, the following sub questions are used to structure the research:

- How is network effectiveness defined in the existing literature?
- How are boundary-spanning activities defined in the existing literature?
- In which way can theoretical insights relating to boundary-spanning activities explain whether a governance network is effective?
- In which way can theoretical insights relating to the size of a network and the form of network governance explain the relation between boundary-spanning activities and (governance) network effectiveness?
- Can we find a relationship between boundary-spanning activities and network effectiveness in the case of the municipality of Dordrecht? And if so, how does this relationship look like?
- What is the influence of boundary-spanning activities on network effectiveness in the case of the municipality of Dordrecht?

- What is the influence of the size of the network and the form of network governance on the relationship between boundary-spanning activities and (governance) network effectiveness?
- Which meaning do involved actors address to boundary-spanning activities?

First, the research is motivated by an increasingly ungovernable society, in which traditional modes of governance do not suffice. Governance networks are put forward as mode of governance to govern contemporary society. A governance network is defined as a group of three or more autonomous organizations that work together to achieve not only their own goals, but also a collective goal, that somehow contributes to public governance. A governance network is characterized by interdependency, negotiations between actors, the absence of common regulatory institutions, durability over time and self-organizing capacity. Effectiveness is defined as the attainment of network level goals and can be measured at three levels: organizational level (or self-interest), network level and community level (Provan & Milward, 2001).

The cross-boundary nature is an important characteristic of contemporary societal problems and boundary-spanning activities are put forward as a way to deal with this feature. Boundary-spanning activities are defined as a set of externally directed actions across organizational boundaries, which are performed to manage interorganizational relations. Three boundary-spanning activities are distinguished: connecting and linking actors and processes, selecting relevant information and translating information (Van Meerkerk & Edelenbos, 2014).

Based on theoretical insights, boundary-spanning activities are expected to have a positive influence on network effectiveness. The conceptual model contains two moderating variables, with an expected influence on the relationship between boundary-spanning activities and network effectiveness: the form of network governance (the way the network is governed itself) and the size of the network (the number of actors who are member of the network).

Based on the analyzed findings it can be concluded that the network is fairly effective at organizational level, since the majority of the actors is able to secure its interests and attain its goals. The network level goals are attained or are expected to be attained in the nearby future, indicating considerable effectiveness. The community goal has not been attained so far, but

includes a long-term goal for 2050, for which attainment cannot be assessed currently. A relationship between boundary-spanning activities and network effectiveness is found. Boundary-spanning activities contribute to building good relationships between actors, creating support for decisions and agreement upon goals. All respondents perceive the influence of boundary-spanning activities on network effectiveness as positive. Therefore, the first expectation is matched. Connecting comes forward as the most important activity. It contributes to building and maintaining relationships. These relationships enable and stimulate collaboration between actors, and therewith contribute to goal attainment. Good relationships also create a situation in which open and honest discussion of preferences and viewpoints is possible without adverse effects. Respondents report less selecting and translating activities. However, these activities also contribute to determination of strategies to attain the set goals and therewith have a positive influence on network effectiveness.

The size of the network, nine legally autonomous actors, is of influence on boundary-spanning activities and on network effectiveness, but the data do not suggest an influence on the relationship between those two. In this respect, the position of the various actors in the network seems to be more important. The municipal organization is identified as lead-organization. This resulted in a centralized network, in which the municipal organization performed many boundary-spanning activities to attain the goals. Respondents indicate that the presence of more actors in the network has both positive and negative effects. More relations have to be built and maintained. On the one hand, involvement of more actors could contribute to widespread support for actions and decisions in the network. On the other hand, respondents indicate that involvement of more actors is time-consuming. The time spent on boundary-spanning activities to build and maintain relationships could distract from performance of other activities to attain the set goals. Size affects the network, but not evidently the impact of boundary-spanning activities on network effectiveness. The third expectation is therefore not confirmed.

Also the form of network governance has an influence on the relationship between boundary-spanning activities and the effectiveness. The researched network has mostly characteristics of a lead-organization network, in which the municipal organization is the leading actor. As a result, some actors lean back and perform fewer activities to attain the goals. Besides, relationships with the municipal organization become more important. The municipal organization also is forced to initiate boundary-spanning activities, which requires sufficient

competences in the municipal organization. All in all it can be concluded that both the size of the network and the form of network governance influence the impact of boundary-spanning activities on network effectiveness. Therefore, the second expectation is matched.

From the analysis it can be deducted that in the case of the municipality of Dordrecht (1) boundary-spanning activities are performed, (2) the network is considerably effective, (3) these activities are important for building and maintaining relationships and improving the quality of these relations, and (4) good relationships between actors are a necessary precondition for effective cooperation and, ultimately, goal attainment.

7.2 Discussion

7.2.1 Societal discussion

In the context of the current societal debate, this research proves the value of networks in governing society. The examined governance network is related to a wind energy challenge, which directly derived from a broader sustainability challenge. This sustainability challenge is one of the most urgent and complex challenges with which societies are faced nowadays (KNAW, 2011). Governments are not able to deal with these challenges and need help from other actors. Networks in which governments, private actors and civil society organizations congregate are currently a widely used mode of governance to deal with such issues. In this context, research on the effectiveness of networks, especially the factors with an influence on the effectiveness, can make a truly valuable contribution.

7.2.2 Scientific discussion

In respect of the contemporary scientific debate, this research above all confirms the importance and relevance of research on governance networks. With complex societal challenges as starting point, previous research has proven the value of governance networks. Enhancing the effectiveness of these networks requires research on factors with an influence on effectiveness. This research attempted to contribute to proving and underpinning the value of relational factors for effective networks.

In respect of existing literature, this research confirms the value of boundary spanning activities. Respondents especially acknowledge the value of connecting/linking activities. The

proposition that size matters in governance networks, although this research shows a nuanced view, touching upon its influence in terms of time-consumption and a complex whole of relationships, while rejecting a possibility for negative influence on effectiveness. These findings indicate decrepitude in research on this variable, which is expected to be very case-specific. Provan and Kenis (2008) clearly distinguish three forms of network governance. The lead-organization form has been considered appropriate for categorizing the examined governance network and therewith confirms the accuracy of this categorization. Turrini et al. (2010), in their review of existing literature on network effectiveness, did not take the potential influence of relational factors into consideration. This research shows the importance of such factors, which should not be undervalued in future research on effectiveness.

7.2.3 Methodological discussion

Throughout conducting the interviews, it appeared that the use of the topic list did not work the way it was expected to do. The questions built up from theory did not match the language and the reality of the respondents. Therefore, over the course of the series of interviews it has been decided to choose a more inductive approach, in order to match the topics of the research with the reality of the respondent. Although a semi-structured approach towards the interviews was embraced from the beginning, it did not work out the way it was expected to. Despite its open character, the topic list had a restrictive effect on the interviews, especially because the concepts in this research are obvious for the respondents, while the relations between them are not. Respondents do not see boundary-spanning activities as something special, which deserves extra attention. This required an approach that aligned the topics of the interviews with the context of the respondents. In future research it would be better to release the topics more up front and to immediately focus on the context, after which the topics of the research could be brought into the conversation later on. At the end of the series of interviews, this appeared to be a much better approach to gather useful data. It also allows taking into account previously collected data.

A prerequisite for an approach that takes the context more into account up front to succeed has been to show interest in the respondent and his/her practices. This requires topic specific knowledge from the researcher. In order to obtain the right knowledge for conducting the research in a topic specific governance network, the researcher was an intern at the

municipality of Dordrecht during the research period. This also contributed to gaining access to respondents.

Mapping a governance network requires judgments on what to include and what to exclude in the network: so-called boundary judgments. Behind almost every actor in a network lies a connection to a whole new network of actors. Mapping a network therefore involves a risk of either mapping it to narrowly or to broadly. The network as mapped by the researcher was presented to the respondents, as form of member-check. Respondents confirmed the presence of the actors in the network. Relationships between the various actors are mapped based on the data collected during the interviews, in which these relationships have been topic of conversation. An advantage of this approach is provision of an opportunity to suggest missing actors. On the other hand, an already mapped network could have a distracting effect on respondents, since it might be hard for them to consider which actors are lacking in the network. It also could be hard for them to assess the accuracy of the relations. Therefore, everything said afterwards is taken into account to complement the relations between actors.

Among the group of initiators enlargement of the network could have been possible. However, two reasons impeded their inclusion in the network. First, other initiators for wind energy in Dordrecht were not willing to talk about their involvement. Second, other initiators were by far not as concrete in their plans as were POG Capital B.V. and the ECD. Therefore, they have been excluded from the definite network. However, it is possible that there exist unknown actors with an interest in the network. To a certain extent, this is a limitation to this research. Excluded actors could shed a different perspective on, in particular, the willingness of other actors to realize wind energy, as well as the way relationships between various actors influence the ability to realize wind energy. However, the excluded actors are no key players in the network, which puts their absence in perspective.

As a result of the nature of this study (research for a thesis), the data were collected, coded and analyzed by one person. As mentioned in section 3.4.1, the researcher is guided by a supervisor and reviewed by fellow students, while a second reader assessed the final concept of the thesis. The analysis is discussed with the supervisor. These measures allowed for consistency of the process and method. However, they failed to provide a variety of perspectives on the process and the collected data and lacked the involvement of people with

diverse expertise. Discussion of data and analysis could be improved by involvement of other researchers or experts in the field.

7.3 Recommendations

7.3.1 Scientific recommendations

Based on the conducted research, two avenues for further research are recommended. First, respondents indicate the importance of the right competencies to perform boundary-spanning activities. In this context it is interesting to explore the role of the form of network governance, since, as shown in this research, the form of network governance could result in a centralized network with the presence of one organization that performs more boundary-spanning activities than other organizations in the network. A lack of competent people in the central organization could influence the effectiveness of the network. However, it could be interesting to not limit this research to networks, but to also research this more extensively in different contexts. Second, this research was demarcated at the three boundary spanning activities. The results of this research only indicate that information is collected in the network and sometimes translated into the organization. However, it is unclear how translated information is further processed within organizations and how information is used (or not used) to make decisions and determine strategies. In other words, it is unclear whether another information selection process occurs once information is translated across organizational boundaries. This opens opportunities for research on knowledge management. Finally, this research indicates the value of relational factors in researching network effectiveness and puts forward an occasion to elaborate research on such factors.

7.3.2 Practical recommendations

Based on the conclusions of this research it is recommended to the actors in the network to not undervalue the importance of the good relationships with other actors. All actors in this research, without exceptions, perceive good relationships as a precondition for fruitful collaboration. Actors appreciate proper provision of information. This should be taken into account in further operations in the network, as it should in maintenance of the existing relationships inside and outside the network.

With respect to the composition of the network, it can be concluded that reconciliation between the municipality of Dordrecht and the municipality of Zwijndrecht has been insufficient. One of the recommendations is therefore to include the municipality of Zwijndrecht in the network.

One of the assumptions of the municipal organization beforehand was a lack of external orientation of its employees. This research clearly shows the importance of collaboration with other actors, as well as activities to enhance this collaboration. It is therefore recommended to highly appreciate willingness to cross the boundaries of the organization, to value the presence of competent boundary spanners in the organization and to commend the performance of boundary-spanning activities.

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2.1 Conceptual model, own design.

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5.1 Map of the governance network, own design.

Appendix A: list of respondents

Number	Date of interview	Affiliation of respondent
1	May 2016	Municipality of Dordrecht/the WDO team
2	May 2016	Municipality of Dordrecht/department of City Planning & Urban Development
3	May 2016	Province of South-Holland
4	June 2016	Municipality of Dordrecht/the Sustainability team
5	June 2016	Port of Rotterdam Authority
6	June 2016	Drechtse Wind
7	June 2016	Stichting LindtWind
8	June 2016	Stichting LindtWind
9	June 2016	POG Capital B.V.
10	June 2016	POG Capital B.V.
11	June 2016	HVC/Energiecoöperatie Dordrecht (ECD)
12	June 2016	Rijkswaterstaat
13	June 2016	Municipality of Dordrecht/department of City Planning & Urban Development
14	June 2016	Municipality of Dordrecht/the WDO team

Appendix B: topic list

Size of the network

- How many organizations are members of the network?
- How does the number of members influence the progress within the network?

Form of network governance

- Are any of these organizations governing the network?
- If yes, is it an external, particularly appointed organization or not?
- How do you experience this form of governance of the network?

Network effectiveness

- *Discern goals on different levels*
- Is there a community level goal?
- Is there a network level goal?
- Is there self-interest for your own organization that requires involvement in the network?
- Which of these goals are reached?
- Do you think there is a chance these goals will be reached?
- When are you/is your organization satisfied with the outcomes?
- Could the formulated goals have been achieved without efforts of other actors in the network?

Boundary-spanning activities

- *Explain concept and discern activities*
- Are you involved in connecting activities?
- Do you use connections in the network to obtain valuable/useful information?
- Do you translate selected information from the network to the organization?
- How do these activities stimulate progress making in the network?
- What is the value of information in the network?

In-depth

- How does the size of the network influence the way actors cooperate?
- How do you experience the way the network is governed?
    - Does this stimulate networking, selecting and translating [i.e. boundary-spanning activities]?
    - How does it influence goal alignment?
- How do you perceive and value boundary-spanning activities in respect of the community, network and organizational goals?
- Do you consider the network as effective?
- Do you consider these boundary-spanning activities, consequently, as influential in respect of enhancing/attaining effectiveness?

Appendix C: overview reviewed documents

1. Gemeente Dordrecht (2016). Personal communication.

2. Bosch & Van Rijn. Personal communication.

3. Gemeente Dordrecht (2015). *Opgaveplan duurzaamheid: Op weg naar een energieneutraal eiland in 2050.* Retrieved from Gemeente Dordrecht: https://www.dordtduurzaam.nl/wijkensites.dordrecht/up/ZcmphhjJeD_Opgaveplan_Duurzaamheid_definitief.pdf

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5. De Sain, M., Janssen, P., Van der Wind, F. & Pondera Consult (2015). *Startdocument planMER. Partiële herziening VRM windenergie Zuid-Holland* (No 715037). Retrieved from Province of South-Holland: http://www.zuid-holland.nl/publish/pages/11096/startdocumentplanmervrmwind.pdf