



Collaborative governance in Wageningen

A research into the role of collaborative governance in the climate mitigation strategy of the municipality of Wageningen

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I. Executive Summary

Due to climate change and urbanisation, cities have become increasingly important in both mitigating and adapting to climate change. The role of local governments herein is crucial; to achieve their climate goals, they are increasingly making use of collaborative governance; working together with partners. This has many advantages, but the question remains how these collaborations can be set-up most effectively. In this research, two theories are used to analyse the climate mitigation strategy of the Dutch city of Wageningen, in which collaborative governance is an important aspect. Scientifically, this research is relevant because these two theories have not been combined yet regarding (local) climate change. Societally, this research is relevant because it will provide an insight in how to use collaborative governance successfully, regarding climate mitigation at the local level.

In this research, the Integrative framework for Collaborative Governance as developed by Emerson, Nabatchi & Balogh (2011) is used. It consists of a system context and collaborative dynamics, containing three interactive components: principled engagement, shared motivation and capacity for joint action. The assumption on which this thesis is based that when these three components are all fully utilized, the collaboration will be successful in reaching its goals effectively. To analyse the system context, the Policy Arrangement Approach by Arts & Leroy (2006) will be used. This theory recognizes the interrelated dynamics within the policy domain, which encompasses four dimensions: actors, rules, resources and discourses.

This research is a single case study, focussed on the city of Wageningen and its collaborative governance strategy to deal with climate mitigation. Wageningen has the ambition to be climate neutral in 2030, which they want to achieve together with 'climate partners', which are local businesses and organisations. I have done semi-structured interviews with the relevant municipality employees and 27 of the current 31 climate partners. Additionally, I have spoken with municipality employees of Arnhem and Nijmegen, where a similar collaborative governance approach has been used for a longer period of time already as a validation of the findings. Besides the interviews, I have been a participatory observer in meetings between the municipality and partners. Lastly, I have done a policy document analysis.

The system context of Wageningen and the collaborative dynamics within Wageningen are presented. Findings indicate that not all aspects of the collaborative dynamics are well-represented in the approach of Wageningen. Despite the high motivation and commitment of the partners, the findings demonstrate that the desired results are not achieved. This could be due to, among others, a lack of rules, protocols and more concrete targets and projects. The obstacles towards a more effective collaboration influence the performance productivity, and therefore the involvement of the partners. To be fully functional, the collaborative governance approach will need further improvement. Recommendations as to how these may be addressed are presented at the end of this research.

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II. List of Abbreviations

CGR	=	Collaborative Governance Regime
GEA	=	Gelders Energie Akkoord
GHG	=	Green House Gases
PAA	=	Policy Arrangement Approach
SOW	=	Stichting Ondernemers Wageningen
WOC	=	Wageningen Ondernemers Contact
WUR	=	Wageningen University & Research
WWD	=	Wageningen Werkt Duurzaam

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1 Introduction

As the climate changes, cities especially are dealing with its effects. They experience more extreme weather, such as heat waves, heavy precipitation and storms (Huang-Lachmann & Lovett, 2016). Additionally, the urban heat island effect, air pollution and other events aggravated by and related to climate change are increasingly disturbing cities and their residents (Lehmann, 2014). Because more than half of the global population is living in cities, these urban consequences of climate change affect the majority of people on the planet (Lenhart, van Vliet, & Mol, 2015). Cities themselves constitute between 40 and 70% of greenhouse gas emissions and heavily impact water, energy, nutrient and waste cycles (Lenhart, van Vliet, & Mol, 2015). Local governmental actors such as municipalities thus have an important role, as they are responsible for their cities and have to implement policies to adapt to and mitigate climate change (Lenhart, van Vliet, & Mol, 2015). Climate adaptation entails the actions “designed to reduce the vulnerability of populations to climate-related risk” (Vogel & Henstra, 2015, p. 110), whereas climate mitigation includes the “policies to reduce greenhouse gas emissions” (Stone, Vargo, & Habeeb, 2012, p. 267) to prevent climate change. Climate adaptation and mitigation on the city level is thus crucial in dealing with these urban climate change problems; not only because cities feel the consequences, but especially because of their responsibility as large emitters.

The Netherlands, a country situated largely below sea level, is vulnerable to climate change; especially sea level rise would have “disastrous consequences for flood risks in the Netherlands” (Botzen & van den Bergh, 2008, p. 416). Thus, it is important that the country adapts to and mitigates climate change. The Dutch population density of 507 people per km² (Centraal Bureau Statistiek, 2018) and present industry sector mean that the country has high GHG emissions, taking the 26th position of the 28 in the EU ranking regarding the share of renewable energy (Reijn, 2017; FluxEnergie, 2017). The Dutch national government has decentralized parts of its climate policy towards the provincial and local government levels, meaning that they are responsible for their own climate policies, with some support from the national government. This has led many Dutch cities towards formulating their own climate ambitions (Klimaatpartners Wageningen, 2017; Rijksoverheid, 2017), as the issue becomes more urgent. In the rest of this introduction, the problem indication, research objective and questions, relevance and a reading guide are presented.

1.1 Problem indication

The role of local governments, especially regarding climate change, has become increasingly important; not only do they have the most contact with citizens, decisions made at this level directly affect their environment (Huang-Lachmann & Lovett, 2016; Vogel & Henstra, 2015; Lenhart, van Vliet, & Mol, 2015; Hoppe, van den Berg, & Coenen, 2014). Additionally, as mentioned above, local governments are given increasingly more responsibilities climate change and environmental policy, due to decentralization; making a successful approach more urgent. However, local governmental actors cannot accomplish these climate ambitions on their own, due to the complexity and ‘wickedness’ of the issue; therefore, non-governmental actors will need to be involved (Lenhart, van Vliet, & Mol, 2015; Hoppe, van den Berg, & Coenen, 2014). According to Vogel & Henstra (2015, p. 111), “public policy is a course of action chosen by public authorities to address a problem”. Environmental policy is thus a choice made by public authorities, in which decisions have to be made regarding the responsibilities, means and involvement of both the governmental and non-governmental actors (ibid.). This is why many local governmental actors have started to collaborate with these non-governmental actors, such as businesses and civil organisations to reach their goals, as a *collaborative governance* strategy (Lenhart, van Vliet, & Mol, 2015; den Exter, Lenhart, & Kern, 2015; Swart, et al., 2014). Collaborative governance is broadly defined as “the processes and structures of public policy decision making and management that engage people constructively across the boundaries of public agencies, levels of government, and/or the public, private and civic spheres in order to carry out a public purpose that could not otherwise be accomplished” (Emerson, Nabatchi,

& Balogh, 2011, p. 2). In the literature, the many advantages of using collaborative governance are widely discussed. It can help “enhance democratic participation” (Sørensen & Torfing, 2009, p. 234), contribute to a “more scientifically legitimate and publicly accountable decision-making” (Corburn, 2009, p. 413) and “improve relations between public managers and stakeholders, and lead to collective learning and problem-solving” (Pitt & Congreve, 2017, p. 1127). Additionally, it is believed that through these collaborations, incentives are created for better business performance and innovations, especially when combined with stricter environmental regulations (Huang-Lachmann & Lovett, 2016).

Many local authorities acknowledge these advantages and are integrating collaborative governance in their policies. In the Netherlands, collaborating with partners in local climate strategies is a current trend, in which many cities “look for additional partnerships” (den Exter, Lenhart, & Kern, 2015, p. 1076). Most cities “maintain an active steering role” (ibid.); according to van der Heijden (2015), city governments can take up three different types of roles within collaborative governance, of which the steering or leader role is one of them; the other two are that of guardian and support/facilitator (ibid.). Research done by Pitt & Congreve (2017, p. 1124), focussed on the USA and England, found that most of these collaborations were initiated “by local elected officials and/or high-level staff members”, supporting the notion that most local governments act as a leader and/or initiator in local collaborations. When focussing on climate change policies, especially mitigation, these actions are easily aligned to other governmental strategies, like managing the energy transition. By “linking climate change action to energy policy action”, it makes it attractive to many actors, as it is linked to saving costs (Hoppe, van den Berg, & Coenen, 2014, p. 2). Zooming in on the Netherlands, as will be done in this research, it seems that the implementation of climate policies at the local level due to decentralization has been successful. According to the national government, in 95% of the municipality’s, sustainability has become part of their coalition program (Ministerie van Infrastructuur en Milieu, 2011). Of course, collaborative governance has its challenges as well, like ensuring an equal sharing of power, a lack of enforcement power, or involving a lack of commitment (Pitt & Congreve, 2017; van der Heijden, 2015).

To understand the policy processes present at the local level, we will first need a better understanding of the context. Understanding who is involved, what the legal framework is, what resources are available to the local actors and especially the reasons and norms that drive these actors will provide insight in the system context of a city’s climate mitigation approach. To analyse this, the Policy Arrangement Approach (PAA) (Arts & Leroy, 2006) is very suitable as it views policy processes from these four dimensions. After the system context has been charted, the focus will be on the collaboration dynamics between the municipality and the local partners, to provide insight into their collaborative strategy. These dynamics, according to Emerson, Nabatchi and Balogh (2011, p. 6), “consist of three interactive components: principled engagement, shared motivation, and capacity for joint action”.

In this research, the focus will be on the Dutch city of Wageningen and the way its municipality is currently dealing with climate mitigation as the case study. The city will be introduced in more detail in chapter 3. Currently, the approach to climate mitigation in Wageningen focusses on collaborations with local businesses and organisations (Klimaatpartners Wageningen, 2017). Understanding how this collaborative governance is used in Wageningen helps shed some light on ways local governments can use collaborations to reach their climate goals. This will be explained in more detail in section 1.2 and 1.3, where the relevance of this research is discussed. Researching the collaboration dynamics present in Wageningen will help determine the current process performance (the functioning of these dynamics), which provides the basis for analysing the productivity performance (the resulting outcomes) (Emerson & Nabatchi, 2015). Understanding the effectiveness of the climate mitigation strategy of Wageningen, which includes these collaborations with partners, helps to formulate more effective strategies for local governments. The challenges associated with collaborative governance

raise the question whether collaborations at the local level are, or can be, truly effective. This research therefore not only focusses on identifying the effectiveness of local collaborations in Wageningen, but also explaining the lack thereof. The problem this research wants to address is that of climate change at the city level, focussing on the climate mitigation policy of Wageningen and how this could be organized more effectively. This will be done through the application of the PAA and Collaborative Governance theory to help understand the policy processes in Wageningen and be able to give advice on how they can increase their performance productivity.

1.2 Scientific relevance of the study

When discussing climate change strategies in the Netherlands, the focus in research has mostly been on climate adaptation, especially at the local level. This is most likely due to the focus in the Netherlands on flood risk management, as much research concentrates on this topic (Swart, et al., 2014; Botzen & van den Bergh, 2008). There has been some research on the role of local authorities regarding climate change in the Netherlands (Lenhart, van Vliet, & Mol, 2015; den Exter, Lenhart, & Kern, 2015), which focusses on both climate mitigation and adaptation. Regarding collaborative governance, much research has been done regarding its use in national governments, businesses and a more general exploration of the concept (van der Heijden, 2015). Research has been done regarding the application of collaborative governance in fields such as climate adaptation, energy initiatives and tourism, but it appears as though there is little research on local climate change mitigation (Pitt & Congreve, 2017; Ngar-yin Mah & Hills, 2012; Zeppel, 2012). The PAA has been used to analyse multiple topics; from Dutch forest policy, to local demographic decline to technology in Brazil (Veenman, Liefferink, & Arts, 2009; Verwest, 2011; Rittl, Arts, & Kuyper, 2015). However, the two theories have, to my knowledge, only been combined once in an article regarding collaborative communities of researchers (Bruzzone, Larrue, van Rijswijk, Wiering, & Crabbé, 2016). Therefore, in this research, I will use the Policy Arrangement Approach to analyse the local climate mitigation strategy of the Dutch city of Wageningen, focussing on their collaborations with local actors through the Collaborative Governance theory. This will provide an insight into the way these concepts and theories are combined; in this way, contributing to the academic body of knowledge as I believe they will complement each other. Additionally, this research will provide insight into the way local governments deal with climate change. This will be discussed in more detail below.

1.3 Societal relevance of the study

Urban climate mitigation is thus increasingly important due to cities emitting a large fraction of the GHG, the majority of people living in cities and because cities are especially vulnerable to climate change. Therefore, increasing our knowledge on effective local climate mitigation policies is crucial in ensuring a sustainable future (Lenhart, van Vliet, & Mol, 2015). Working together with local partners is gaining notice from local governments, and as these collaborations are taking up a larger role within climate mitigation, research into their organization is a meaningful contribution to the success of this strategy. Cities have an increasing need for climate mitigation policies and knowing how collaborations should be a part of that proves to be useful (Zeppel, 2012). This research hopes to contribute to this need by examining the policy of Wageningen, an ambitious city that makes use of collaborating with local partners (Klimaatpartners Wageningen, 2017). By analysing this city and understanding the collaborative processes that take place here, this research can contribute to the understanding of effective climate mitigation policies and provide suggestions as to why its effectiveness is lacking. Additionally, this will support the municipality itself in their efforts in climate mitigation by evaluating their policy and providing them with feedback regarding their own performance productivity.

1.4 Research objective and research questions

The objective of this research is to analyse the collaboration between the municipality of Wageningen and its 'climate partners' through the use of the Policy Arrangement Approach to examine the system context, and the Collaborative Governance theory to analyse the process performance and performance productivity of these collaborations within the local climate mitigation policy. To achieve this objective, the following main research question has been formulated:

What is the process performance of collaborative governance in the climate mitigation strategy of the municipality of Wageningen and its partners and how could they increase their productivity performance?

To help answer this main research question, the following sub-questions have been formulated:

1. What is the system context of the climate mitigation strategy of the municipality of Wageningen as defined in the actors, resources, rules and discourses dimensions of the Policy Arrangement Approach?
2. What are the collaborative dynamics regarding climate mitigation between the municipality and the other local actors?
3. What are the present obstacles to the process performance of the climate mitigation strategy of Wageningen?
4. How could the municipality increase the performance productivity of their climate mitigation strategy?

1.5 Reading guide

This thesis consists of four remaining chapters. Following this introductory chapter, is the chapter discussing the theoretical framework. In this chapter 2, the two main theories, the Collaborative Governance and the PAA, are presented in more detail. After this overview, a detailed description of all elements is given, followed by the operationalisation for their application through the conceptual framework of this thesis. Next, in chapter 3, the methodology is discussed, including the research philosophy, research strategy, data collection and data analysis methods. Chapter 4 then presents the findings as acquired through these methods, including an analysis of the present obstacles and the performance productivity. Lastly, in chapter 5, the research questions are answered, the research is concluded and reflected upon, and lastly, the limitations of this research are discussed and recommendations are given.

2 Theoretical Framework

This chapter provides an overview of the theoretical framework, including the conceptual framework and operationalisation of the theories, that will be used in this thesis. These will be used to analyse the system context, the collaboration dynamics and the process performance and performance productivity of the collaborations within the local climate mitigation policy of the case study. The two main theories used are the Policy Arrangement Approach (PAA), as developed by Arts and Leroy (2006), and the integrative framework for collaborative governance as developed by Emerson and Nabatchi (2015). The chapter is organised in four sections; the first section presents the general concept of collaborative governance. The second section focusses on the integrative framework for collaborative governance, with the third section exploring the PAA. The last section operationalises these theories and concepts and presents the conceptual framework.

2.1 Collaborative Governance

In this thesis, the concept of governance, and especially collaborative governance, takes centre stage. Governance itself has been used in many different contexts; according to van der Heijden, it is “an intended activity undertaken by one or more actors seeking to shape, regulate or attempt to control human behaviour in order to achieve a desired collective end” (van der Heijden, 2015, p. 6). Environmental governance has also been defined as “the set of regulatory processes, mechanisms and organizations through which political actors influence environmental actions and outcomes” (Lemos & Agrawal, 2006, p. 298). Governance can thus be understood as the act of governing, a method to reach policy goals, and it has been taken up not only by governmental actors, but also by businesses and the civil society. These non-governmental actors have started to introduce their own regulations and programmes, becoming increasingly involved in the governing of society. Presently, this changing relationship between these governmental and non-governmental actors has been named the shift from ‘government to governance’ (van der Heijden, 2015; Ngar-yin Mah & Hills, 2012). It has also been called “the transition from ‘top-down’ forms of bureaucracy to ‘bottom-up’ inputs into decision-making” (Zeppel, 2012, p. 604). This is part of a trend where governments are no longer the sole decision-making authority; besides governance, this also includes concepts like privatization and deregulation. It can also be linked to the previously mentioned decentralisation, as lower levels of government get more responsibilities, instead of the national government. This shift has attracted the interest of scholars, especially when addressing the questions of who is involved, and especially who is in charge and how we can make this work effectively (van der Heijden, 2015; Ngar-yin Mah & Hills, 2012; Meadowcroft, 2007).

To ensure the successful governing of society by these different actors through the shift from ‘government to governance’, multiple approaches have been developed. One of these is ‘collaborative governance’, which has become a quite common concept in research; its definition has however not been consistent. According to Emerson, Nabatchi and Balogh, collaborative governance is broadly defined as “the processes and structures of public policy decision making and management that engage people constructively across the boundaries of public agencies, levels of government, and/or the public, private and civic spheres in order to carry out a public purpose that could not otherwise be accomplished” (Emerson, Nabatchi, & Balogh, 2011, p. 2). Van der Heijden (2015, p. 62) calls it “the working together of governments, businesses and civil society groups and individuals in governing”. Since the 1990s, governance has been presented as a solution to problems associated with direct regulatory interventions. Examples of collaborative governance include negotiated agreements and covenants, with partnerships and networks as another way for private sector actors and governments to collaborate (van der Heijden, 2015). Collaborative governance is “expected to result in more efficient governance tools” as “it is generally assumed that non-governmental actors have better knowledge of their day-to-day behaviour and that of their peers than governments can ever obtain” (van der Heijden, 2015, p. 62). There are multiple advantages and disadvantages of (collaborative)

governance, which have been briefly mentioned in the introduction and will now be discussed in more detail.

As mentioned before, one of the reasons for collaboration is that governments have limited resources; they do not have “all the information, power, and finances” needed for successful governing (Fliervoet, Geerling, Mostert, & Smits, 2016, p. 356). Collaborations can introduce “valuable external knowledge and expertise” into the policy process, where individual input is asked towards the collective goals (Pitt & Congreve, 2017, p. 1136; Ngar-yin Mah & Hills, 2012). This involvement of multiple and diverse stakeholders into the policy process has many advantages, besides assisting the government with knowledge and other resources. Collaborative governance, compared to traditional and more bureaucratic forms of governing, can be seen as more democratic due to this direct involvement of multiple stakeholders. Developing policies and governance tools through collaborations is expected to result in the participants to “feel a shared responsibility for the outcomes of these tools, which in turn may improve their accountability” (van der Heijden, 2015, p. 63). Additionally, this new, more democratic type of governance includes that the accountability of these policies is better watched as more actors are involved, which may create new challenges for the public managers (Bodin, 2017). Besides increased accountability, this also means that the decision-making procedures have to be more transparent. Including non-governmental actors in the process of governing means that their voices have to be heard, increasing the legitimacy and accountability of these policies and governing tools as well. It is expected that this will lead to more acceptance of these tools, as they have been formulated in a more democratic and transparent process (van der Heijden, 2015; Fliervoet, Geerling, Mostert, & Smits, 2016; Bodin, 2017). Moreover, involving these stakeholders can “increase public support, reduce opposition, and improve implementation of government policy” (Fliervoet, Geerling, Mostert, & Smits, 2016, p. 356). Improving the relations between public managers and stakeholders has been mentioned as an advantage of collaborative governance, leading to collective problem-solving. Additionally, it allows creating opportunities for shared learning and increases the sharing of costs and risks (Pitt & Congreve, 2017; Ngar-yin Mah & Hills, 2012; Bodin, 2017). This is expected to lead in better outcomes as well.

However, there are also significant disadvantages associated with collaborative governance. Wanting to include all the relevant stakeholders makes the process of governing much more difficult. Ideally, everyone has an equal voice in the process; in reality, this desire will face inevitable practical issues. For example, including many different stakeholders into the decision-making process can lead to different forms of inertia and slow down the policy and implementation process (Ngar-yin Mah & Hills, 2012; Pitt & Congreve, 2017; van der Heijden, 2015). Reaching consensus is crucial to collaboration and enables the formulation of innovative policy recommendations. Having many different voices involved makes reaching consensus very difficult, if not impossible (Bodin, 2017; van der Heijden, 2015). Additionally, power imbalances may decrease the effectiveness of the collaborative efforts. As reaching consensus thus becomes difficult, powerful stakeholders may manipulate the process and information imbalances may also cause issues. This asymmetry of power and influence thus increases the chance of inertia, inhibiting effective collaborations (Bodin, 2017; Ngar-yin Mah & Hills, 2012; Pitt & Congreve, 2017). These inequalities may also lead to distrust among the negotiation partners. Other criticisms on collaborative governance ask “whether all community interests can effectively be included [...] and whether they truly provide an alternative to existing power structures, particularly given that they still take place within ‘top-down’ political frameworks” (Pitt & Congreve, 2017, p. 1128). Instead of broad stakeholder involvement and representation, collaboration only between the key interest groups may prove to be more fruitful (Pitt & Congreve, 2017). These advantages and disadvantages of collaborative governance will be discussed relating to the results of this research in chapter 5; for now, they provide an interesting theoretical background.

2.2 Integrative framework for Collaborative Governance

In this research, the Integrative framework for Collaborative Governance as developed by Emerson, Nabatchi & Balogh (2011) will be used. Other models for collaborative governance, such as the model by Ansell & Gash (2007), have been considered as well. The model by Ansell & Gash can be used to determine whether collaborative governance can be successful, which would be the case when all their identified variables are sufficiently present. They describe a “virtuous cycle of collaboration [which] tends to develop when collaborative forums focus on ‘small wins’ that deepen trust, commitment, and shared understanding” (Ansell & Gash, 2007, p. 543).

The framework developed by Emerson et al. (2011) is shown in Figure 1 below. Within their framework, they talk about a Collaborative Governance Regime (CGR) as the central concept. Regime is used in this context to “encompass the particular mode of, or system for, public decision making in which cross-boundary collaboration represents the prevailing pattern of behavior and activity” (Emerson, Nabatchi, & Balogh, 2011, p. 6). Similarly to the model by Ansell & Gash, this model includes variables that describe the collaboration process, shown in the figure as the Collaboration Dynamics. Considering the relatively short time that is available to execute this research, this framework has been chosen because of its focus on behaviour and concrete actions and outcomes. This allows a comprehensive overview of the current way these collaborations are taking place in Wageningen, while also understanding the system context and policy processes involved. This in turn enables me to give advice to the municipality regarding their role within this collaborative governance.

As mentioned in section 1.1, collaborative governance as defined by Emerson et al. (2011) consists of a system context and collaborative dynamics. The three interactive components of these collaboration dynamics are principled engagement, shared motivation and capacity for joint action. They work together, producing collaborative actions, which lead to impacts and adaptation. These concepts and interactions are all shown in the figure below. According to Emerson and Nabatchi, “the level of functioning of collaboration dynamics” defines the process performance (Emerson & Nabatchi, 2015, p. 185), whereas, “the actions of [collaborative governance] and the resulting outcomes” define the productivity performance, or the efficacy of the collaborations (ibid.). Each of these concepts will be explored in more detail in the rest of this chapter. The focus in this research is on the system context, the collaboration dynamics and the process performance and performance productivity. The other aspects will be briefly discussed and function as background information to this research.

2.2.1 System context

The system context encompasses all the influences that affect and are affected by the collaborative governance; thus, also affecting the collaborative dynamics. This context “creates opportunities and constraints and influences the general parameters within which a CGR unfolds” (Emerson, Nabatchi, & Balogh, 2011, p. 8). In the system context, many different ideas and concepts are involved, including the policy framework, power relations, conflicts and cultural diversity. Events like elections, disasters and other external conditions continuously influence the CGR as well. As mentioned in section 1.1, we need to understand who is involved in the CGR, what the legal framework is, what resources are available to the local actors and especially the reasons and norms that drive the actors to fully understand the policy processes; these dimensions are all included in the system context. Analysing the system context provides us with crucial insight to understand the collaborative dynamics. This will be elaborated upon in section 2.3, where we will delve into the Policy Arrangement Approach, which will be used to analyse the system context.

The drivers of collaborative governance, as visible in the Figure 1, are separated from the system context, but do originate from it. The drivers as employed in the research by Emerson et al. include leadership, consequential incentives, interdependence and uncertainty. Overall, these four drivers do appear to be linked together and their presence is often a clear indicator of the likelihood of developing collaborative governance. In this research, the drivers will not be analysed as the focus is on the collaboration dynamics, which will be explored in more detail in the next section.

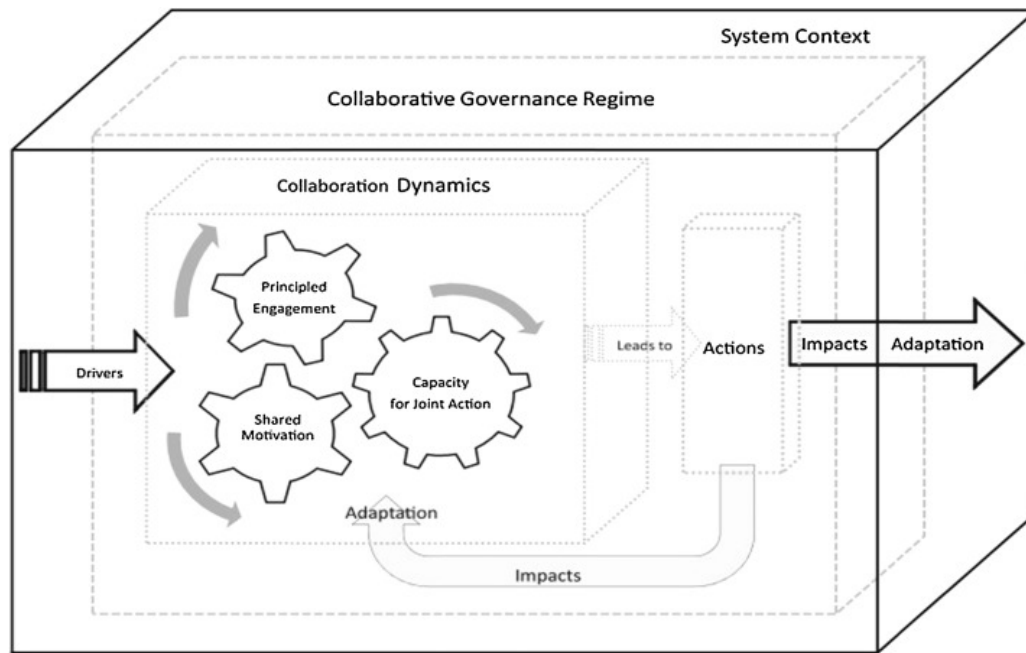


Figure 1 Collaborative Governance regime (Emerson, Nabatchi, & Balogh, 2011)

2.2.2 Collaboration dynamics

The collaboration dynamics of the CGR are shown in Figure 1 as the smaller box inside the system context. While the drivers and system context shape the initial form and direction of the CGR, the development and its effectiveness are formed by the collaboration dynamics. These consist of three interactive components: principled engagement, shared motivation, and capacity for joint action. As shown in Figure 1, the three components form a 'cycle', where they influence, reinforce and support each other. Linking these concepts allows us to "better specify the behavioural interactions, interpersonal relations, and functional components of collaboration dynamics" (Emerson & Nabatchi, 2015, p. 58). The functioning of the collaboration dynamics is defined as the *process performance* by Emerson & Nabatchi (2015). Analysing the process performance of the CGR thus does not focus on the outputs, which is defined in the performance productivity, but on the inputs and processes involved. In this research, this concept will be used to analyse and explore the three components of the dynamics. Together with the performance productivity, this will be operationalised and explored in more detail in section 2.4. Next, the three components of the collaboration dynamics will be discussed in more detail.

2.2.2.1 Principled engagement

Principled engagement refers to the involvement of the actors and their behavioural interactions. This engagement occurs over time and takes different forms, including face-to-face, virtual and public meetings. It allows people to work together, despite their differing goals and multiple boundaries. Emerson and Nabatchi (2015) call it "principled" engagement to refer to effective engagement, which broadly means "the use of processes that uphold core tenets" including open communication, fair discourse and balanced representation (Emerson & Nabatchi, 2015, p. 59). Inclusion and involvement are essential to this component and collaborative governance as a whole; without stakeholders, there is no collaboration. Previously, in section 2.1, the advantages and disadvantages of wanting true representation and involvement were discussed. To research collaborative governance, it is important to note who the actors are that are involved in the collaboration, which differs in each case. In section 2.3.1, this actor dimension will be explored in more detail as part of the PAA. Principled engagement exists of four basic process elements: discovery, definition, deliberation and determination. The definition of each element is shown in Figure 2 below. Many decisions and agreements take place repeatedly throughout the process and are therefore integrated into the framework. The dynamic

cycle of the four aspects of principled engagement thus help create and reinforce the other two components of shared motivation and capacity for joint action.

2.2.2.2 *Shared motivation*

Shared motivation refers to the interpersonal and relational elements of the collaborative dynamics, initiated partly by principled engagement. It reinforces the principled engagement process once it is initiated as well. Similar to principled engagement, it exists of four elements; mutual trust, mutual understanding, internal legitimacy and shared commitment, as shown in Figure 2. These components work over time as well, supporting, reinforcing and initiating each other towards successful collaborations. For example, having mutual trust in turn produces mutual understanding, and increases the likelihood of internal legitimacy and shared commitment. The beliefs about the worthiness and credibility of the participants generates a legitimacy of and confidence in the CGR itself and strengthens further collaboration. When people feel mutual trust, understanding and legitimacy, they will share a commitment to the CGR and its collective purpose. This allows participants “to cross the [...] boundaries that previously separated them and commit to a shared path” (Emerson, Nabatchi, & Balogh, 2011, p. 14). Next, we will dive into the last component of the collaboration dynamics: the capacity for joint action.

2.2.2.3 *Capacity for joint action*

The purpose of collaboration is to “generate a new capacity for joint action that did not exist before” (ibid.). According to Emerson et al. (2011), capacity for joint action is defined as “a collection of cross-functional elements that come together to create the potential for taking effective action”. In the integrative framework, these elements are the procedural and institutional arrangements, leadership, knowledge and resources, as shown in Figure 2. These overlap with some of the elements as discussed in the system context, as the context directly enables the capacity for joint action through these components and preconditions. Of these four, the last two show the largest overlap with others. Sharing knowledge is essentially the heart of collaborative governance. Through collaboration, knowledge is shared, generated, balanced and it guides actions. It plays into the other two components, because true knowledge sharing needs principled engagement and shared motivation for it to be successful. The presence of resources is important in realising a capacity for joint action, as they are usually not equally available, which can be managed through collaborative governance. Doing this properly increases the legitimacy of the collaboration dynamics, heavily influencing the principled engagement and shared motivation. The presence of certain resources may enable or disable effective collaboration as well, as for example time, funding and expertise are imperative in creating successful collaborations. This will be explored in more detail in section 2.3.

Collaboration Dynamics	Component	Definition
<i>Principled Engagement</i>	Discovery	Identification of shared interests, concerns and values, together with the analysis of relevant information
	Definition	Efforts to build shared meaning; defining the issue dealt with
	Deliberation	Communication across boundaries between the participants
	Determination	Decisions made by the participants
<i>Shared Motivation</i>	Mutual trust	Assurance of the truthfulness and reliability of participants
	Mutual understanding	Appreciation, toleration and respect of participants

	Internal legitimacy	Confidence in the worthiness and credibility of participants and the CGR
	Shared commitment	Dedication to the CGR and its collective purpose and goals
<i>Capacity for Joint Action</i>	Procedural/Institutional Arrangements	Protocols, structures and regulations involved in the CGR
	Leadership	Roles taken up by participants in the CGR
	Knowledge	Sharing and generation of information, data, expertise
	Resources	Finances, time, technical support and skills required by the CGR

Figure 2 Collaboration Dynamics (Emerson, Nabatchi, & Balogh, 2011)

2.2.3 Performance productivity

The performance productivity is, as mentioned before, focussed on the outcomes resulting from the CGR. Emerson & Nabatchi (2015) define it as “the actions (or outputs) of the CGR and the resulting outcomes and adaptation they generate” (Emerson & Nabatchi, 2015, p. 185). Collaborative governance essentially wants to generate and propel actions and impacts that could not have been achieved alone but can be realised through working together. Essentially, the effectiveness of the CGR is seen as the performance productivity. The performance productivity is also inherently linked with the process performance. According to Emerson & Nabatchi (2015), “it is also important to examine the interaction between the two, particularly because process performance directly affects productivity performance” (ibid.). In section 2.4, it will be explored in more detail how this research uses this concept. Next, the outcomes of the CGR are briefly discussed.

2.2.3.1 Collaborative outcomes

The collaborative actions can be seen as the outcomes of the collaborative process. They are usually defined by the collaborative partners within the CGR, depending on the preferred outcomes. These actions may include new laws, regulations, projects realized, enforcing compliance and other associated actions. Each CGR has different goals, aims and ways of reaching them; the system context and collaboration dynamics are needed to understand the outcomes. As shown in Figure 1, the collaborative actions are indeed the result of the collaboration dynamics and take place within the system context; however, they are not the final ‘product’ of the CGR. Following the collaborative actions are the impacts and adaptation; they will only be briefly explained, as they are outside the scope of this research.

The impacts of the CGR aim to “alter pre-existing or projected conditions in system context” (Emerson, Nabatchi, & Balogh, 2011, p. 18). They result from the collaborative actions and are the intentional (or un-intentional) “changes of state within the system context” (ibid.). The impacts may be economic, political, social, physical and/or environmental and can be quite unpredictable. The last aspect of the CGR, as shown in Figure 1, is the adaptation, which follows directly from the impacts. According to Emerson et al. (2011), the impacts of the collaborative actions may solve problems, produce challenges or opportunities and are likely to change the system context; thus, lead to adaptation. Additionally, the adaptation may focus on the CGR itself or on the collaboration dynamics; this could be through the before-mentioned changes in the system context or through direct impacts on the CGR or the dynamics that lead to adaptation. This adaptation is ultimately the goal of the CGR; when the preferred adaptation takes place, it motivates the participants to continue in the CGR.

2.3 Policy Arrangement Approach

Researching the collaborative governance as present within the case study of this research, it would be beneficial to do an institutional analysis, which focusses on the dynamics between the participants involved. Therefore, I have chosen to incorporate the Policy Arrangement Approach (PAA) in this research, as it defines a framework of dimensions that will help to better understand the collaborative governance approach between the participants. The PAA will be used to help understand the system context of the policy processes and provide background information for the collaboration dynamics. In section 2.4, we will explore the conceptualisation of the two theories in more detail.

The PAA has been developed by Arts & Leroy, and according to them, policy arrangements, or policy processes, consist of four dimensions, which are shown in Figure 3 below (Arts & Leroy, 2006).

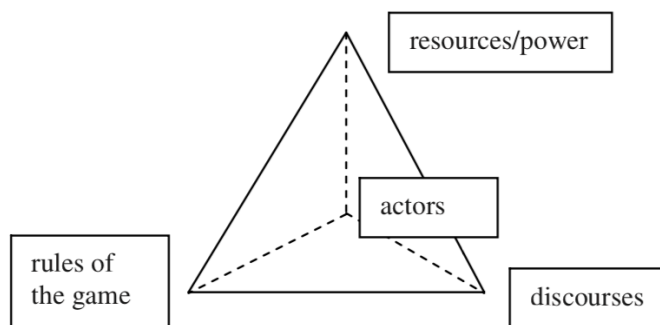


Figure 3 Policy Arrangement Approach (Arts & Leroy, 2006)

This theory recognizes the interrelated dynamics within the policy domain, which encompasses these four dimensions. The first three dimensions, actors, resources and rules, deal with the organisation of these policy arrangements; the last, discourses, deals with their content. All four aspects are interrelated, meaning that “a change in one dimension seldom stands alone and tends to have an impact on one or more of the other dimensions” (Arts & Leroy, 2006, p. 45). Therefore, to analyse a policy arrangement, all dimensions will have to be taken into account to capture the full dynamics of change within them. This approach thus provides “an excellent basis for an encompassing and dynamic analysis of policy processes” (ibid.). The PAA thus incorporates the complexity of society, through these interrelated dimensions, which is essential in understanding the policy domain and the associated policy processes.

In the framework by Emerson & Nabatchi (2011) as discussed in the previous section, there are also different components associated with the system context. However, I have chosen to use the PAA as this theory is very fitting to analyse policy processes and it helps to structure the analysis and chart all aspects of this policy. Therefore, this theory is suitable to analyse the system context and policy processes as present in the case study. The elements discussed in the framework by Emerson & Nabatchi (2011) are less structured and would require a longer time frame to adequately describe them and their effect of the collaboration dynamics. Additionally, the four dimensions of the PAA can be easily linked with the collaboration dynamics as well. Next, these four dimensions and their link with the CGR will be explored. In section 2.4, the relation between the two theories will be operationalised.

2.3.1 Actors

In this research, actors play a key role, as through people and their interactions the other three aspects develop. Analysing who is involved, at what level, what their role is and the coalitions and collaborations between them is crucial in understanding the policy processes (Arts & Leroy, 2006). The actors may include authorities from different levels, such as the municipality, the province or the national government. Additionally, actors may be experts, NGO's, businesses, civilians, organisations

and other involved players. In this research, actors play a central role of answering the research question; to understand how we can effectively incorporate collaborative governance, we will first need to understand the actors' role and perspective. Actors, or participants, are involved in the system context through e.g. power relations; they also play a role in the drivers of the CGR through for example their leadership role. Within the collaboration dynamics, the participants take centre stage in each component; they need to be engaged in the process, share motivation and have the capacity for joint action.

2.3.2 Resources

Actors are either empowered or limited by resources. Therefore, understanding the relationship between certain resources and actors provides us with insight into the impact of certain policy interventions. These can include the introduction or removal of certain resources, such as subsidies, expertise, technology and other facilities and/or competencies (Arts & Leroy, 2006). Understanding the effect of resources on the collaborations in the case study allows us to analyse their role in the process performance of this collaborative governance strategy. Resources are involved in different levels of the CGR; they play a role in the system context, the drivers and especially in the component of capacity for joint action. In each level, they influence the incentives for collaborative action and its eventual effectiveness through the empowering and/or limiting effect of certain resources. Analysing this allows us to better understand the effect of certain resources, their involvement in the CGR of the case study and will help answer the research question.

2.3.3 Rules

Rules can be characterized in two types; formal (laws and regulations) and informal rules (agreements) (Arts & Leroy, 2006). Understanding which rules are involved in the policy processes of the case study and their effect in the climate mitigation strategy is important in answering the research question. According to Veenman et al. (2009), rules "demarcate 'the room to manoeuvre' for policy actors, e.g. their access to policy arenas, their participation in decision-making, their role in implementation processes, etc." (Veenman, Liefferink, & Arts, 2009, p. 203). Thus, rules can, like resources, empower or limit actors and therefore influence the process performance of this collaborative governance through their influence on especially the capacity for joint action; similarly to the resources dimension. Changing rules might also be an outcome of the CGR and thus, rules could also be part of the performance productivity.

2.3.4 Discourses

The last dimension is that of discourses; discourses are defined as ideas and concepts influenced by a set of practices that induce actions (Arts & Leroy, 2006). An example is the sustainability discourse, "which brings together notions such as economic, ecological and social sustainability, a belief in the possibility to integrate economy and ecology, examples of win-win situations, etc." (Veenman, Liefferink, & Arts, 2009, p. 203). They are the ideas or perceptions that the actors have regarding the policy processes, the CGR, the intended aims, goals, etc. The views of the actors are crucial, as it influences their behaviour and thus their interaction and collaboration with others; it is therefore linked with the components of the collaboration dynamics. It influences the principled engagement, through their shared theory of change and action; individual ideas and concepts are developed into common ideas, values and concerns that are essential in the success of the CGR. Additionally, the discourses present are included in the shared motivation; because a shared motivation is impossible without a mutual understanding, trust and shared commitment. Analysing the discourses present in the system context and in the collaboration dynamics is crucial to fully understand the process performance (Emerson, Nabatchi, & Balogh, 2011).

2.4 Operationalisation

In this section, the theories and concepts that are used in this research are operationalised into a conceptual framework. According to Saunders et al., all theories in research have to be conceptualised so that the theory can be researched, and findings can be interpreted (Saunders, Lewis, & Thornhill, 2016). The concepts shown in Figure 2 will be the focus of this research, together with the PAA, the process performance and the performance productivity. In Figure 4 below, the conceptual framework is shown, wherein the theoretical frameworks as used in this research are combined. Below, the four sub-questions are presented again, as the conceptual framework is set up to help answer them.

- What is the system context of the climate mitigation strategy of the municipality of Wageningen as defined in the actors, resources, rules and discourses dimensions of the Policy Arrangement Approach?
- What are the collaborative dynamics regarding climate mitigation between the municipality and the other local actors?
- What are the present obstacles to the process performance of the climate mitigation strategy of Wageningen?
- How could the municipality increase the performance productivity of their climate mitigation strategy?

I will use the PAA to, first of all, analyse and understand the system context of the policy processes in the case study (the city of Wageningen). Through the analysis of the actors, resources, rules and discourses present, we will gain an insight into the system context, answering sub-question 1. This is shown in Figure 4 in the top bubble, where these concepts are combined. The four dimensions of the PAA are shown as parts of the system context, as explained before.

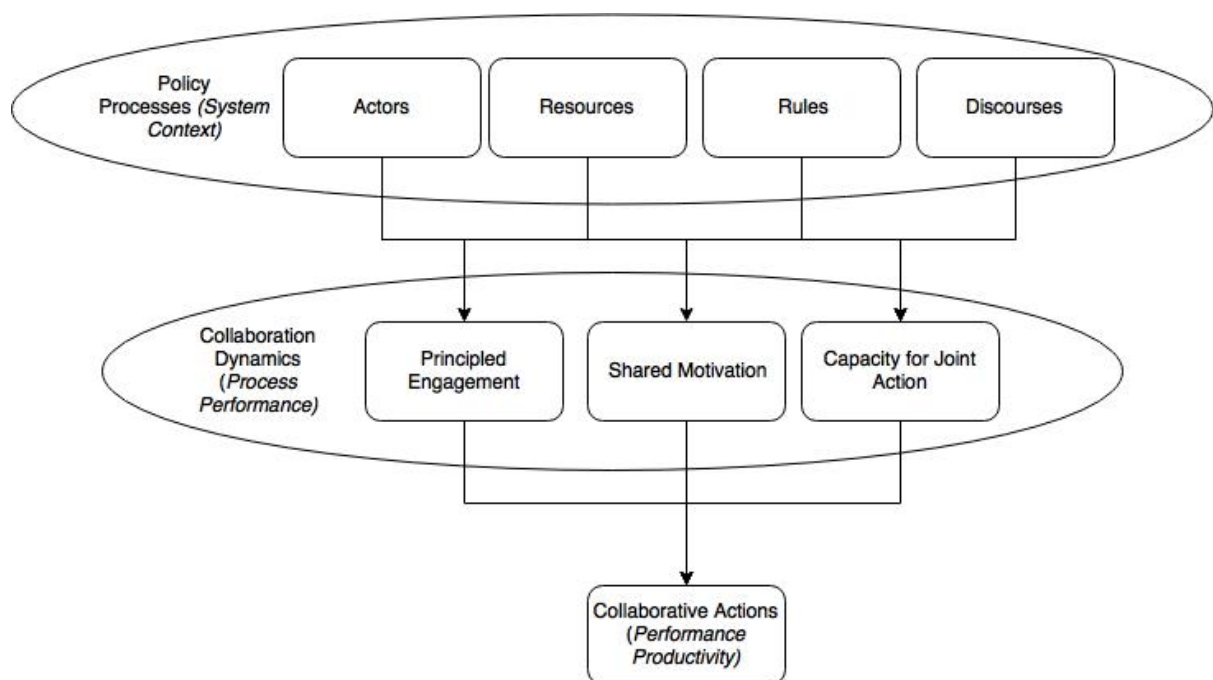


Figure 4 Conceptual Framework

The PAA helps us not only to understand the system context, but also provides a basis for the understanding and analysis of the collaboration dynamics and thus the process performance. As already mentioned above, all four dimensions of the PAA are also linked with the three components of the process performance of the collaboration dynamics. This is presented in the figure, as the arrows depict the influences that the factors have on one another. Through the analysis of the three

components, namely principled engagement, shared motivation and the capacity for joint action, and by using the PAA as the supporting theory, sub-question 2 will be answered. Here, Figure 2 will be used as well, as I will research how each component is present in my case study. In chapter 3, this will be explained in more detail. When understanding the collaboration dynamics as present in the case study, this will allow us to identify obstacles or bottlenecks which are hindering the full effectiveness of this strategy and thus the process performance. This will help answer sub-question three. The theoretical assumption here is that all three dimensions, including their four aspects, of the collaboration dynamics have to be fully utilized for the collaboration to be successful. Therefore, to determine these bottlenecks, I will have to analyse the presence of each component as explored in the answer to the previous sub-question. Together, these two sub-questions will allow me to analyse the process performance of the collaboration present in the case study. As shown in Figure 4, the process performance directly influences the performance productivity. This depends on how successful the collaboration dynamics are, defined in the presence of each component of the three dimensions. The performance productivity can be defined in the concrete outcomes of the collaboration, thus in the collaborative actions. These can be realized projects, passed regulation, new relationships, etc. As mentioned before, currently, 27% of the ambition has been met.

Analysing the process performance and performance productivity allows me to give advice to the municipality regarding their current approach. Establishing the current bottlenecks, successes and outcomes of the collaboration in Wageningen determines where the municipality could possibly improve their strategy, to increase the effectiveness of their collaborative governance approach. Analysing the collaboration through the application of the previously acquired knowledge will help answer the last question and allows me to give advice to help increase the performance productivity. This conceptual model and the table will help place findings into their context and ensures that all relevant data is interpreted correctly, providing structure to my research and help answer the questions adequately. Using all theoretical information, these results will be presented and analysed in chapter 4 and concluded and reflected upon in chapter 5.

3 Methodology

3.1 Research philosophy

Every research contains an underlying philosophy which affects the research, as it relates to the position of the researcher. According to Guba & Lincoln (1994), you can ask three types of questions; in order, the ontological question, the epistemological question and the methodological question. The ontological question focuses on the basic idea of what ‘reality’ is; what is real and what can we know about it? The epistemological question focusses on “the relationship between the knower or would-be-knower and what can be known?” (Guba & Lincoln, 1994, p. 108). Lastly, the methodological question focusses on how we can “go about finding out whatever he or she believes can be known?” (ibid.). This influences the research, as the methodology is at the core of it. Together, these questions and perspectives help us understand each of the four basic belief paradigms. These are positivism, post-positivism, critical theory and constructivism; they are shown in Figure 5 below.

TABLE 6.1 Basic Beliefs (Metaphysics) of Alternative Inquiry Paradigms

<i>Item</i>	<i>Positivism</i>	<i>Postpositivism</i>	<i>Critical Theory et al.</i>	<i>Constructivism</i>
Ontology	naive realism— “real” reality but apprehendable	critical realism— “real” reality but only imperfectly and probabilistically apprehendable	historical realism— virtual reality shaped by social, political, cultural, economic, ethnic, and gender values; crystallized over time	relativism—local and specific constructed realities
Epistemology	dualist/objectivist; findings true	modified dualist/ objectivist; critical tradition/community; findings probably true	transactional/ subjectivist; value- mediated findings	transactional/ subjectivist; created findings
Methodology	experimental/ manipulative; verification of hypotheses; chiefly quantitative methods	modified experi- mental/manipulative; critical multiplism; falsification of hypotheses; may include qualitative methods	dialogic/dialectical	hermeneutical/dialectical

Figure 5 Basic belief paradigms (Guba & Lincoln, 1994)

In this research, elements of multiple paradigms are used, which influence the methodology. The aim here is to understand the various perceptions and interactions between the actors involved in collaborative governance. It is assumed that reality is socially constructed, leading to a constructivist approach. This encompasses a subjectivist epistemology, meaning that there is no ‘real’ reality but a reality that is shaped by interactions between humans and their surroundings. Therefore, studying these human interactions provides information on the collaborative governance present in my case study. As will be discussed in the following sections, this research includes interviews, observations and a document analysis. These are all mostly qualitative methods and follow from the ontological and epistemological perspectives. In the following sections, the methodology is elaborated; included the research strategy, case selection, data collection & analysis and lastly, the research ethics.

3.2 Research strategy

To answer the research question and sub-questions, I will use a pluralistic approach where, as mentioned before, multiple theories are used to analyse the climate policy of Wageningen and the collaborations with local partners. Additionally, multiple qualitative research methods are used to collect the data. Because I am interested in a profound analysis of this complex situation, I will use a single case study (Verschuren & Doorewaard, 2007; Yin, 2003). According to Yin (2003, p. 1), “the case study is used in many situations to contribute to our knowledge of individual, group, organizational,

social, political, and related phenomena”. Additionally, “case studies are the preferred strategy when ‘how’ or ‘why’ questions are being posed [...] and the focus is on a contemporary phenomenon within some real-life context” (ibid.). These are definitely true for this research, as it focusses on the climate mitigation strategy of the municipality of Wageningen. However, even though case studies are well-suited to this type of research, they are often seen as lacking rigor, biased and providing little basis for scientific generalization (ibid.). In section 3.4, I will delve deeper into the research methods that I will use, and in section 3.5 the reliability and validity of this research are discussed; elaborating on my efforts to deal with these issues with case study research. First, I will elaborate on my choice of Wageningen as the focus of this case study.

3.3 Case selection

In this research, I will look into the municipality of Wageningen; a city in the centre of the Netherlands (shown on the map in Figure 6). The city has over 38 000 inhabitants, of which around 25% are students at the Wageningen University & Research (WUR) (van Zijl, 2018; CBS, 2018). The municipal council of Wageningen has a majority of green, left-wing political parties, which provides an interesting policy context due to the high awareness of sustainability issues on the political agenda (Wijnacker, 2018). The municipality itself has around 300 employees, divided over 17 teams of which the team ‘climate and sustainability’ contains 3 people and several others that assist in certain topics. Lately, the municipality has started to include climate and sustainability more integrally in the organisation. In 2008, the city has formulated the ambition to be a ‘climate neutral’ city in 2030, which includes a climate change mitigation strategy (Klimaatpartners Wageningen, 2017; Gemeente Wageningen, 2012).



Figure 6 Wageningen on the map
(Bookman Websites Leiden, 2018)

Urgenda, a Dutch organisation aimed at making the Netherlands more sustainable, has made a list of Dutch municipalities and their ambitions; the municipality of Wageningen is one of 10 that aims to be climate-neutral in 2030. More than fifty other municipalities have formulated ambitions, varying between 2020 and 2050 and between CO₂ neutral, energy-neutral, climate-neutral and CO₂ reduction of varying percentages (Urgenda, 2009). So, Wageningen is one of the more ambitious cities, which played a role in choosing it as the case study in this research.

Wageningen established this rather ambitious plan in 2008 and every four years, it is broken down into an implementation plan. The municipality council is involved in every major step; they were the ones to have chosen the current ambition level back in 2007. This has been developed over the years, until the current implementation plan was made which runs from 2017 till 2021. For the first time, local partners have joined the ambition; including the WUR, the library, a supermarket, housing association, energy companies and other organisations and businesses (Klimaatpartners Wageningen, 2017). At the start of this research, there were 27 partners. At the end, 5 more had joined. Besides the goal to be climate neutral in 2030, Wageningen has formulated three other targets. In 2030, there has to be a 50% reduction in CO₂ through saving energy, 25% through producing renewable energy and lastly, 25% through purchasing renewable energy (Gemeente Wageningen, 2012; Klimaatpartners Wageningen, 2017). Additionally, climate has to be taken into account with every municipal decision; both within the municipality and with local tenders (ibid.) Over the last 10 years, the ambition has been met for 27% of its total goal. This means that the next 73% will have to be done in the next 13 years, which is a challenging task (ibid.).



*Figure 7 Wageningen:
City of Life Sciences (Taxi
& Meer, 2018)*

Because Wageningen is the home of the WUR, this provides an interesting context; this university is known as one of the most sustainable universities in the Netherlands and people often speak about Wageningen as a very 'green' city. This is the main reason why I have chosen Wageningen as my case study, with their political situation, their ambition and my personal knowledge of the city as additional factors.

As shown in Figure 7, Wageningen calls itself the 'City of Life Sciences', showing the strong link with the WUR. This image and perception of Wageningen as a very sustainable and 'green' city has contributed to the ambition of the municipality and its partners, and this research will analyse how this green image plays a role in the collaborative governance (Gemeente Wageningen, 2012)

3.4 Data collection and analysis

Different research methods are used here to collect the data to be able to answer the research question and sub-questions. All of the discussed methods are qualitative methods (Verschuren & Doorewaard, 2007; Flick, 2006). Firstly, I did six semi-structured interviews with relevant civil servants. Their names and functions can be found in appendix I, although their answers have been processed anonymously. Besides the three people working in the 'climate and sustainability' team, I have spoken with two people working on similar topics that often sat in the same meetings. Additionally, I have spoken with the alderman responsible for climate and sustainability at the time. The questions I have asked the six of them can be found in appendix III. I also carried out semi-structured interviews with the other climate partners within the collaboration. I have spoken with 27 of the 32 partners. Most of these interviews happened face to face, while 2 have been done over the phone and 3 via e-mail due to logistical considerations. The companies and the roles of the interviewees within them can be found in appendix I, with the questions I have asked them in appendix III. The interview data has been used in answering the research questions, the results of which will be presented in the next chapter.

These interviews provided an insight into the perspective of both the municipality and the partners of the collaboration and into its organisation; helping me answer sub-question 2, 3 and 4 as the partners gave feedback on the current situation and suggestions on how they would like to improve the effectiveness of the collaboration.

Besides these interviews, I have been a participatory observer (Bryman, 2012) at several internal meetings in the municipality and between the municipality and its partners, to collect data on the collaboration dynamics, its effectiveness and how this takes place. This helped me gain an insight into the multiple actors that are involved and the different role these actors play within this local collaboration. This will be discussed in more detail in section 3.5. A list of the relevant meetings where I was an observer can be found in appendix II. Lastly, I have conducted a policy document analysis of public documents written by the municipality related to their climate plans; these can be found in the references. As both the policy documents and the interviews were in Dutch, quotes from them have been translated to English.

In my data analysis, I made use of coding to analyse the policy documents, interview results and observations. The coding method throughout my research has been a combination of deductive and inductive methods; basing it partly on theory and partly on my own experience and knowledge to minimise the chance of missing something important and improve the quality of the results (Verschuren & Doorewaard, 2007; Bryman, 2012). Furthermore, this was done to make sure that all relevant information is taken into account. The deductive coding included the elements of PAA, as it provided a structure to the aspects that I looked for, as the system context will be described through the four dimensions of the PAA. Additionally, the twelve aspects of the collaboration dynamics were included as well, as the presence of these aspects is related to my theoretical assumption. Having

done semi-structured interviews, this allowed me to process the results qualitatively, using the suggestions and other information that the climate partners provided inductively.

To validate my findings, I have briefly explored two other municipalities, namely Arnhem and Nijmegen, that have a similar collaborative strategy regarding climate mitigation. This has been done through document analysis and one semi-structured interview with the responsible civil servant in each of the respective municipalities. However, this is not a comparative research; the data from Arnhem and Nijmegen is solely used as a validation and contextualisation of my findings in Wageningen, which were collected first. As the collaboration in these two cities has been taking place for a longer period than in Wageningen, they provided an insight in other success factors and obstacles that are related to this collaborative strategy. These will be discussed in the next chapter, to help answer the fourth sub-question. The details of the two civil servants and the questions I asked them can be found in appendix I and III. This analysis has thus been done to better understand the situation in Wageningen and additionally, to determine how other collaborations take place containing this collaborative strategy. This helped me to gain more information on their organization and bottlenecks; also, it helped to provide realistic recommendations (Verschuren & Doorewaard, 2007).

3.5 Research validation and ethics

The validity, reliability and ethics within research ensure that it is done well, and the results are scientific. To make sure this happens, the research will first of all have to be repeatable (*reliability*). By using public documents and semi-structured interviews coded deductively and inductively, it will be possible to do my research again both at Wageningen but also at other municipalities (Bryman, 2012; Verschuren & Doorewaard, 2007). This will provide insight in their individual climate mitigation strategy but also validate my results regarding the place collaboration has within this strategy; I already partly include this by using information gathered in two other municipalities that use a similar approach in this area as explained in the previous section.

As mentioned before, the results from a single case study especially can lack rigor, be biased and are more difficult to generalise. Generalisation of the results of a case study, according to Yin, can help us to make a contribution to broader theory and policy; even though this research contains a single case study, certain results could still be generalised. This relates to the *external validity* of my research; using both an inductive and deductive approach, the accuracy of my interpretations will be higher. In the main research question, *what is the process performance of collaborative governance in the climate mitigation strategy of the municipality of Wageningen and its partners and how could they increase their productivity performance*, both a 'what' and a 'how' question are asked. Especially the answer to the how question could be generalised, as it generates recommendations on how municipalities could more successfully formulate collaborative climate strategies (Yin, 2003). Because of the use of qualitative research and doing a single case study, it is possible that other municipalities generate different results; however, the methods used here could be applied similarly and by basing the indicators and interpreting the results through existing literature, I believe the validity and reliability of this research are warranted (Verschuren & Doorewaard, 2007).

Besides external validity, internal validity also plays a role within research. Internal validity includes that "certain conditions are believed to lead to other conditions" (Yin, 2003, p. 34). In my research, data triangulation is used to increase the internal validity. Triangulation is the use of more than one method or source of data, which is the case in this research as discussed in the previous section. Using multiple methods allows me to gather different types of data on the collaboration within Wageningen; when they provide similar results, this relates to the internal validity of this research. Lastly, using the theories as explained in section 2.4 together with the data gathered from Arnhem and Nijmegen, this will allow me to provide valid recommendations and conclusions, through the use of these different results.

Ethics are crucial in research as well; by being a participating observer, I will become part of the organisation and decrease the likelihood of people behaving differently due to my presence as I will be immersed in the organisation for a longer time (six months). This also allows me to be present at 'closed' meetings and at informal meetings at the municipality, to further gain insight into the actors' role and perspective of the collaboration. Additionally, I will explain my presence, role and the purpose of this research when participating and observing during meetings, allowing the other people involved to voice their informed consent at their input possibly being used in this research. When doing interviews, I explicitly asked for their consent for using their answers as well, after explaining this research and its purpose, and they will be informed that their answers are processed anonymously (Bryman, 2012).

4 Findings

In this chapter, the findings of this research are presented. Firstly, the system context of Wageningen which comprises the climate mitigation strategy of the municipality of Wageningen as defined in the actors, resources, rules and discourses dimensions of the Policy Arrangement Approach. This is, as explained in chapter 3, based on (1) policy documents, (2) participatory observations and (3) the interviews with the civil servants. Secondly, the results of the research into the collaborative dynamics of the climate mitigation strategy of Wageningen will be presented. These are based on the observations, interviews with the climate partners and the civil servants. Lastly, the process performance and performance productivity will be analysed in section 4.3. Here, the results from the interviews with Arnhem and Nijmegen will be presented as well, to substantiate the results from Wageningen and help formulate recommendations.

4.1 System context

To recap, before we can understand the collaborative dynamics in the case of Wageningen, we will first need to understand the policy processes present in this city, together with a better understanding of the local system context. Understanding who is involved in climate mitigation in Wageningen, what the legal framework is both at the city and higher levels of government, what resources are available to the local actors and especially the reasons and norms that drive these actors will provide insight in the system context of climate mitigation in Wageningen. These will be discussed in terms of the Policy Arrangement Approach.

Before we delve into the four dimensions of the PAA, a brief general impression of the system context of Wageningen is presented. As indicated before, the municipality council consists of a majority of green, left-wing parties. After the elections of March 2018, which took place at the beginning of this research, the executive board of the municipality consisted of only green, left-wing parties. Sustainability and the climate strategy have taken centre stage in their coalition agreement (Wijnacker, 2018). The size of Wageningen, together with their location and resident's composition, influences the system context as well. According to the Klimaatplan (2017, p. 15), "Wageningen especially is a municipality with great potential to combat climate change. [...] Wageningen has almost 38 000 inhabitants in an area of approximately 3200 ha. It is not highly urbanised, but there is a relatively high concentration of people living in a limited area. Wageningen is therefore careful with and aware of its use of this space". Naturally, there are more aspects that influence the policy of the municipality of Wageningen, such as the presence of knowledge institutes and the influence of other levels of government, among others. These influences on the system context will be discussed below, starting with the actors' dimension; who is involved in the policy process in Wageningen?

4.1.1 Actors

At the start of this research, there were 27 climate partners, including the municipality. Currently, there are 32 partners (Klimaatpartners Wageningen, 2017), a list with all of their names can be found on www.wageningenduurzaam.nl. In Figure 8 below, the different types of climate partners are shown; visibly, the majority are commercial businesses. The others are either non-commercial organisations, such as educational institutes, or others, such as the municipality and the entrepreneurial association. This is an appropriate representation, as around 70% of the energy in the city is used by businesses and organisations (ibid.). Within the climate partners, a coordination group has been formed, consisting of the municipality and five major partners; including the WUR, the housing association, the Wageningen Ondernemers Contact (WOC) (*Wageningen Entrepreneur Organisation*) and Wageningen Werkt Duurzaam (WWD) (*Wageningen Works Sustainable*). This group meets every couple of months to discuss the progress of the climate strategy, its execution and other relevant topics.

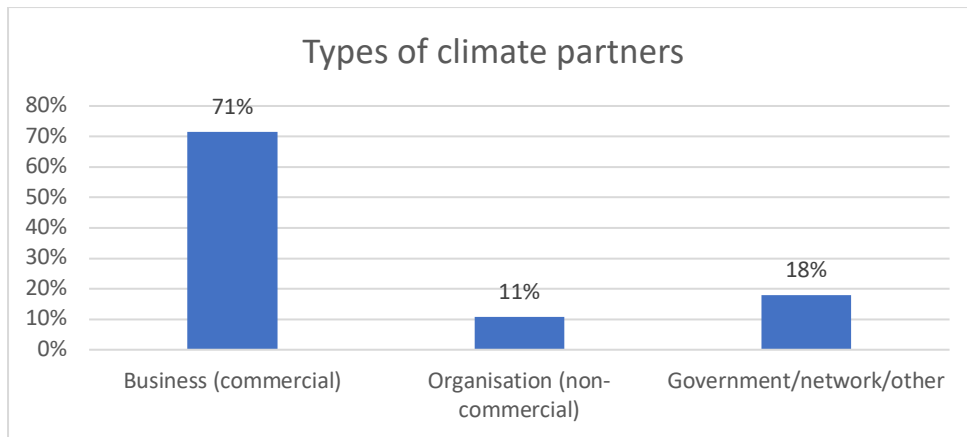


Figure 8 Types of climate partners

Besides the climate partners, other actors influence the policy process and context in Wageningen as well. All businesses, “around 400 in total in the entire city” (WWD employee, observation), organisations and inhabitants play a role in the system context. They have played a role in the initial phase of the formulation of this strategy: “with input from council members and other involved Wageningen citizens and entrepreneurs, all those figures and scenarios from the studies have been processed into the Wageningen Climate Neutral Roadmap. It was approved by city council and B & W [executive board] in the spring of 2012” (Gemeente Wageningen, 2012). The influence of these business and inhabitants outside the initial formulation of the climate plan also contains their voting behaviour, protests, meetings with the municipality and other ways they interact with the local government. This however is outside the scope of this research and won’t be researched here in more detail.

The different actors from within the municipality play a role as well. The municipality itself as an organisation is an important actor, as the initiative for this collaborative governance has come from the municipality. The organisation also contains important actors. The climate mitigation strategy has to be approved by the local council, so their influence is substantial. The influence of civil servants is substantial as well, as they often formulate these proposals and perform the day-to-day communications and executions of plans within the city. Lastly, the aldermen and mayor play an important role as well; they have influence not only in Wageningen, but also on other levels of government. Those other levels include the local region (the Food Valley) with its associated municipalities, the province of Gelderland (where Wageningen is situated) and lastly, the national government and parliament. These levels of government all play a role to different extents in the local climate mitigation strategy of Wageningen. As the actors are bound by certain rules, these will be explored in the next section.

4.1.2 Rules

What laws, regulations and agreements are present in the policy process and context of the climate mitigation strategy of Wageningen? Besides the formal and informal rules made at the local level, those made at higher levels of government also have an influence. Starting at the international level, there are several agreements made regarding climate mitigation. In the Klimaatsplan 2017-2021 three are mentioned; the Kyoto protocol, ‘Europe 2020’ and the Paris agreement made in 2015. They provide a larger framework, as the Dutch national government has signed all three and will have to ensure that the agreed targets are reached. These international agreements won’t be discussed in more detail; instead, the focus here will be on how they are implemented within the Netherlands. Additional Dutch rules and agreements will also be explored as part of the system context.

The Dutch government has signed the SER Energy Agreement in 2013, which entails that in 2023, 16% of the Dutch energy has to be renewable. Additionally, they will have to decrease the CO₂ emissions with 40% compared to 1990 (Klimaatpartners Wageningen, 2017). Following the 2015 Paris agreement, which goes into effect in 2020, the Dutch cabinet has started to formulate its own climate

agreement and law. The current target of this agreement is a CO₂ reduction of 49% by 2030 (Rijksoverheid, 2018). Besides these national targets, the national government has also recognised the importance of local actions and policy, following the decentralisation, and supports the local levels of governments in reaching their climate targets (Rijksoverheid, 2018; Ministerie van Infrastructuur en Milieu, 2011). The province of Gelderland, where Wageningen is situated, has formulated their own energy agreement: the Gelders Energie Akkoord (GEA), which was also signed by the municipality of Wageningen. It is an operationalisation of the SER agreement, entailing concrete targets to make the province climate neutral in 2050 (Klimaatpartners Wageningen, 2017).

The laws, regulations and agreements made at higher levels of government influence the policy process and context within Wageningen. The municipality will have to ensure that these targets are reached within its borders and is responsible for the enforcement of laws and regulations. However, according to the municipality, “for quick results, the national government will have to create the right conditions” (Gemeente Wageningen, 2012, p. 17). The municipality lobbies to the higher levels of government for stricter laws and better conditions (ibid.). This often came up in conversations with the civil servants. When asking them what they feel the role of the municipality is in reaching the climate targets, almost all of them mention the need for better conditions from the national government to ensure they can do their jobs well. “Our policy actually is ahead of the national policy, which means that we often face obstacles” (interview 2). This causes the municipality to have to deal with problems that could possibly be prevented through introducing laws and regulations at a higher level. One civil servant mentioned that “if the government adjusts laws, it saves municipalities from a lot of unnecessary work” (interview 3). This situation has led the employees to feel disappointed in the government; they feel that “the government has dropped the ball here” (interview 9). These current laws and regulations, and especially the lack of stricter ones, affect the collaborative climate strategy of Wageningen through influencing the ‘room to manoeuvre’, as explained in section 2.3.3. For example, as the Netherlands will have to change from fossil gas to other methods of cooking and warming our homes, Wageningen has made a start in helping inhabitants to convert their homes (Wageningen Duurzaam, 2017). However, because it is not yet obligatory for inhabitants to do this, there are several obstacles for the municipality to successfully enforce their plans, as not all inhabitants and business are open to this change (interview 2, observations). Some of these relate to resources, such as money needed to convert homes; this aspect of the system context will be explored in more detail in the following section. Because besides providing laws, regulations and agreements, the different government levels and actors also plays a role in providing resources which empowers or limits the collaboration in a similar manner to the rules dimension.

4.1.3 Resources

As mentioned in section 2.3.2, there are many types of resources that can play a role within policy processes. Here, we will focus on three types and their influence on the policy process in Wageningen; namely finances, time and expertise.

Firstly, an important resource is finances; this could come from either the higher levels of government or directly from the municipality and the local partners. Examples include subsidies from the national government, such as the SDE subsidy (a subsidy from the national government to stimulate renewable energy production), or the energy fund from the municipality of Wageningen (Klimaatpartners Wageningen, 2017). The energy fund was introduced in April 2018 and allows business and inhabitants to loan money under favourable conditions from the municipality, to help them to take energy saving or energy producing measures in their buildings or homes.

Most of the civil servants do feel that they are limited in their actions through the lack of sufficient funding, both from the national government, province and the municipality itself. As one said: “I agree with the direction and thought that municipalities have a key position [in climate mitigation]. However, financial support must come from the government or province for this to happen. We need to be able to employ enough staff in this field. [...] That is still missing now, unfortunately” (interview

16). So, besides financial support in the form of larger budgets or subsidies, the ability to employ enough people is important as well. This relates to the resource of time; being able to spend enough time on the collaboration, to ensure its proper execution. Within the system context of Wageningen, this is especially important due to the relatively small size of the municipality, as mentioned before. This relates to the capacity for joint action and will be discussed later on as well.

Lastly, expertise is an important resource in this policy process. Having the knowledge available to the municipality to ensure the right steps are taken is essential in ensuring a successful climate mitigation strategy. This knowledge could come from both other levels of government, civil servants, local partners and inhabitants. For example, the municipality is in charge of the monitoring of their targets, and they “will use this monitoring the next few years and share the progress with the climate partners” (Klimaatpartners Wageningen, 2017, p. 30). Additionally, the municipality has created platforms for both businesses and inhabitants where they can find and share information regarding their climate mitigation strategy (Klimaatpartners Wageningen, 2017). The city of Wageningen contains a high concentration of knowledge institutes, and especially the presence of the WUR is key in this context, as many of their students and employees are inhabitants of Wageningen. It is mentioned in the Klimaatplan that “the presence of knowledge institutes such as the WUR, NIOO and MARIN leads to a strong commitment to innovation. That makes Wageningen a municipality with a large knowledge and innovation power, which is very useful for the energy transition. This offers great opportunities for making Wageningen structurally sustainable and thereby taking a leading role in the Netherlands” (Klimaatpartners Wageningen, 2017, p. 15). This position of the city and the many higher-educated inhabitants has led, among others, to a higher awareness among these inhabitants on the importance of climate mitigation. This relates to the discourses present in this policy process and will be discussed in more detail in the next section.

4.1.4 Discourses

The last dimension of the PAA is discourses; which ideas or perceptions do the actors have regarding both the policy process and on broader ideas, such as ‘climate’, ‘governance’ and ‘collaboration’. What ideas and beliefs are present in the system context of Wageningen?

As mentioned before, the wide-spread perception of Wageningen is that of a green and sustainable city. This image is clearly present in the climate mitigation strategy of the municipality. In their Klimaatplan, it is mentioned that “Wageningen has a positive and environmentally conscious image. We want to live up to and reinforce this image” (Klimaatpartners Wageningen, 2017, p. 7). Additionally, it is mentioned that “Wageningen has had a positive image in the field of climate for years. It is a progressive city in this area, fed by the high-quality knowledge sector. There is ample potential to retain and strengthen this image. Knowledge, research and innovation are self-evident and there is a great need to take concrete steps” (Klimaatpartners Wageningen, 2017, p. 15). This relates to the resource of expertise and the presence of certain actors, explored in the previous sections; they influence both the green image of Wageningen and also stimulate further reinforcement of this perception.

These statements certainly show that the perception of Wageningen as a green city is strongly present within the municipality. I have asked the partners specifically whether they agree with this green image of Wageningen. Most of them answered positively. “Yes, the willingness to take action is more present here. Awareness, because of the WUR, is higher here as well” (interview 5). “Yes, through the presence of the WUR, people talk about it more and the awareness is higher. You also see this in the voting behaviour of inhabitants. Wageningen has its own character” (interview 10). “Yes, definitely! You see this reflected in politics and in how the municipality formulates their policy. Things are envisioned here, that is really nice to see” (interview 12).

In the words of one civil servant, “every municipality in the Netherlands has corporations like the Woningstichting (housing corporation), however, they do not all have inhabitants that are so aware and critical of environmental issues; that makes us different” (interview 8). One of the partners

mentioned that “this is one of the reasons why we see Wageningen as a frontrunner; many inhabitants are involved in this field, which you also see back in their voting behaviour” (interview 22). However, as the alderman mentioned: “if I look at what we have already realized and if you compare that with other municipalities, then I actually think that as a leading municipality regarding awareness, policy and collaboration, we should stand out there as well, but that is not the case”. Other partners felt similarly, saying that the image is too optimistic and that you should be careful with self-congratulating. Thus, even though most partners feel that Wageningen is indeed quite environmentally conscious, it was often remarked that this does not apply to everyone in the city. Additionally, they mentioned that Wageningen is not unique, as more cities in the Netherlands are working towards reaching climate targets. However, most partners do agree with this perception of Wageningen, indicating the wide-spread presence of this discourse. Again, especially the higher awareness among inhabitants and the influence of the WUR were mentioned as contributing factors to the green image of Wageningen.

In many meetings and events that I observed, this perception of Wageningen as a green city was reinforced. For example, during several breakfast sessions people talked about how things happen “especially here in Wageningen” or how “we as Wageningen have to [work on climate mitigation]”. Many people appeared to take pride in this image of the city; being from Wageningen seems to create a sense of identity that in turn creates a sense of responsibility to live up to its image. However, as mentioned, this has so far not appeared to lead to significant results; so far, the target of climate neutral in 2030 has only been met for 27% (Klimaatpartners Wageningen, 2017). So, does the belief that Wageningen is ‘the place to be’ regarding climate mitigation actually influence its success or could it lead to inaction? This will be discussed in 4.3.

4.2 Collaborative dynamics

In this section, the findings of the collaborative dynamics between the municipality and the climate partners will be presented. As explained previously, the collaborative dynamics consist of three interactive components: *principled engagement*, *shared motivation*, and *capacity for joint action*. Understanding these components will help us to better understand the collaboration in Wageningen. The theoretical assumption here, as discussed in chapter 2, is that the collaboration is more likely to be successful and effective when each of the twelve components (as shown in Figure 2) is sufficiently present within the collaboration.

As explained in chapter 3, from the interview data the collaborative dynamics indicators, thus the presence and content of each of the twelve aspects, has been analysed and will be presented in the rest of this chapter, supplemented when needed with data found in the literature and observations. For each of the components, the results for their four aspects will be presented, complemented with quotes from the interviewees. The differences in results between the partners and the municipality will be analysed as well. In section 4.3 and in chapter 5, these results and their implications will be discussed.

4.2.1 Principled Engagement

Principled engagement is the component that relates to the involvement, inclusion and representation of the actors within the collaboration; it entails the aspects of **discovery**, **definition**, **deliberation** and **determination** (see Figure 2). I have asked the partners and municipality how sustainability is part of their organization, helping to identify shared interests between them (‘discovery’). Also, I asked why they became a partner, which aims to identify shared interests but also concerns the shared meaning (‘definition’). Lastly, they were asked how they felt about the collaboration, helping to determine the presence of communication (‘deliberation’) and decisions made (‘determination’). For example, when asking how they feel about the collaboration, one partner responded that they felt that because of the collaboration, “it is easier to contact each other now”,

signifying they feel positive towards to the aspect of deliberation and thus the communication. The results for each of these four aspects are presented below.

The aspect of **discovery** deals with the identifying of shared interests; in the case of Wageningen, climate mitigation and sustainability. Almost all partners indicated that sustainability and climate mitigation are important to them and a part of their business or organisation; shown in the following interview quotes. “We are aware of the urgency and importance of sustainability” (interview 1). “Sustainability is importance to us, and we try to make this a part of our organisation to the best of our abilities” (interview 30). Several climate partners (see Appendix I) are businesses and organisations of which sustainability and climate mitigation is actually their core business. The partners thus have noticeable shared interests; however, they have to identify these between themselves to become aware of this and to help their principled engagement. Currently, there appears to be no (formal) setting for this within the set-up of the collaboration.

The civil servants however feel that this aspect is going well. “I am happy with the plan, because so many partners have joined [...] that apparently it is attractive to be a part of this” (interview 9). However, one mentioned that “I find it difficult to say if it lives enough among the people in the city” (interview 8). However, as mentioned in section 4.1.4, the climate partners and the municipality do share their green perception of Wageningen and the related sense of identity. In section 4.3, these findings will be discussed in more detail.

The second aspect, **definition**, relates back to that of discovery as both try to determine the common grounds and goals of the collaboration. The findings of this aspect are based on the answers of the climate partners, when asking them how they think of the ambition and goal of ‘Wageningen Klimaatneutraal’. Partners had mixed responses here. Most partners were positive that the stakes are set this high. “You have to set high targets, if you want to arrive somewhere. It is too easy to say that we will not reach this target; I believe that that is a discussion stopper. A high ambition forces people to think in different concepts, which is very good” (interview 11). However, several partners, especially the larger business and organisations, critiqued the ambition. One partner formulated it like this: “the ambition is commendable, but you have to ask yourself how realistic it is to want to achieve it in 2030. I have always learned that you have to set goals that are achievable, and this one is not achievable. Every municipality says 2050, but Wageningen wants to be ahead and better than the rest. Therefore, they make it quite difficult for themselves” (interview 20). Another partner echoed this sentiment, saying that “sometimes sustainability appears to be the highest ambition [of the municipality], however, we also have other things we need to accomplish” (interview 24). Several partners mentioned that they do not think the deadline of 2030 will be reached, but many do not care whether this is the case. Most partners see this ambition more as a guideline and an inspiration, instead of a ‘hard’ goal and target.

The municipality also recognizes that the ambition it is quite high, but to them this is a good thing. “The ambition is high, but I think you need to have that, especially regarding this topic” (interview 3). “But if we continue on this path, we won’t reach it. In my opinion, that is largely dependent on the conditions made by the national government” (interview 9). This refers back to the rules and resources dimension, as discussed earlier.

The **deliberation** between the partners and municipality is an important aspect of the collaboration. This includes the communication from the municipality towards the partners, the communication from the partners towards the municipality and the communication between the partners. The results here are fairly mixed. There was critique on both the form and the content of the communication from the municipality to the partners. One partner remarked that “the communication should be better coordinated”, given that currently “there are two newsletters and there is quite some overlap” (interview 7). This thus deals with the form of the communication. Another mentioned a need and interest to be kept up to date regarding the monitoring, saying that “I have no insight in this process”

(interview 15), which was echoed by another partner (interview 12); thus dealing with the content of the communication. Several partners however felt that the communication between them and the municipality could be improved, experiencing this to be inadequate at the moment. In interview 17 and 19 for example, the partners mentioned that they had not been reached by the municipality after meetings, even though they would like this to happen. Most partners are however quite positive, saying that the municipality is very visible and easily reachable (e.g. interview 14).

The communication from the partners to the municipality has received some critique. Some partners feel that the municipality could live up to their leadership role more, and that they do not always adequately listen to them. Sustainability is obviously very important to the municipality, and they would very much like to make this collaboration a success; one partner remarked that they have to “work on expectation management” when working together with the municipality and that “[the municipality’s] listening ability is sometimes limited” (interview 24). Lastly, several partners mentioned that they have more contact with other partners now, and that when they see each other, they usually discuss the ambition and climate mitigation in Wageningen (e.g. interview 12).

The municipality is quite content with the current practices regarding communication. One civil servant mentioned that the collaboration has “made it easier to contact partners and in my eyes, we are on the right track” (interview 3). The civil servants feel that they can reach all the partners when needed, that they are doing the right things regarding their communication and that they have this mostly under control, even though they report a lack of resources in this area.

Lastly, **determination** deals with the decisions made within the collaboration. This aspect is viewed quite negatively; several partners indicate that not enough decisions are made and steps taken. They often mention the (lack of) obligations to be a climate partner, as you can easily become a partner and are not obligated to attend meetings, pay a fee or join in projects. Thus, there are neither outcome-oriented obligations nor process-oriented obligations. One partner in their interview said that “I feel that it is very non-committal, but I can make myself look good by becoming a partner and putting it on my website. It’s okay to put some more pressure on it” (interview 6). Some partners also feel that the plan is a little vague. For example, one partner mentioned that “it is a nice target. However, with my technical background, I still find it quite vague” (interview 17). This indicates that they would like more concrete targets and obligations within the collaboration.

The municipality recognizes the need for common projects within the collaboration. “We are currently looking for how we can actually ensure that big steps are taken. So that many parties do not keep looking back to us. There have been projects formulated, of which I believe, that when the municipality does not initiate them, the rest will also lean back” (interview 8). So, the municipality does feel that the majority of the responsibility lies with them. They indicate that in their experience, it is their role to come up with plans and ideas.

4.2.2 Shared Motivation

Shared motivation deals with the interpersonal and relational elements of the collaborative dynamics. It contains four aspects: **mutual trust**, **mutual understanding**, **internal legitimacy** and **shared commitment** as shown in Figure 2; when these four aspects are well presented in the collaboration, people are more likely to commit to the collaboration and achieve the desired results, as stated in the theoretical assumption discussed before. I have asked about people’s perception of the climate plan (related to legitimacy and commitment), the role of the municipality (legitimacy) and their perception of the collaboration itself (trust, understanding and legitimacy).

The first aspect, **mutual trust**, deals with the truthfulness and reliability of the partners. In their answers, nearly none of the partners explicitly discussed or mentioned this aspect of the collaboration. This could have several reasons, including that I did not ask a question directly relating to this aspect, that the partners felt this was self-evident, did not realise this or lastly, that this aspect is not developed within the collaboration in Wageningen. The municipality has a similar result.

Mutual trust does relate however to the aspect of **mutual understanding**, which deals with appreciation and respect towards the other partners. Several partners did comment on this aspect. One said that “through the collaboration we [the partner and the municipality] have come to understand each other better” (interview 28). Another added that “they are partly different worlds [between the municipality and the partners] but we know that about each other; there is more understanding and awareness between everyone” (interview 15), which has been echoed by several partners. This understanding relates especially to the different methods and approaches between the municipality and the partners, their expectations and what they are able to do.

However, this relates specifically to the understanding and collaboration between the partners and the municipality. Many partners said that being a climate partner has changed their interaction with the municipality, but not with other partners (e.g. interview 27). For example, one partner said that “I do not notice that, now that we are climate partners, we have more contact with the other partners” (interview 17). Many partners actually appear to see the collaboration as being between them and the municipality. This could partly be due to their already existing ties with each other, as some said (interview 21 and 30) and the set-up of the collaboration. This will be discussed in more detail in section 4.3. Some partners however did notice that because of their climate partnership, they meet new or different people and it is easier to talk to each other regarding this topic (interview 12). For some, it even broadened their client base as other partners became a client of their business (interview 5 and 7).

The municipality appears to be more positive towards the aspects of mutual understanding, compared to the partners. They appreciate the number of climate partners, as mentioned before, and are very positive towards the current approach of collaborating with local partners. “You really want to do it together with the partners. [...] It truly creates a connection” (interview 3). The alderman added in her interview that “you really want it to be a joint assignment”. Another civil servant said in her interview that “I really enjoy the collaboration, not only with the commercial business and organisations, but also with the non-profits. The variation is nice and works well in our small city” (interview 13). Collaborating here entails mostly meeting with relevant partners for events or projects and the sense of partnership between the municipality and local actors.

The third aspect, **internal legitimacy**, relates to confidence in the credibility of other partners. As already mentioned, many partners see the collaboration as being between them and the municipality. Therefore, the results here focus on the legitimacy of the municipality itself, regarding its exemplary role. Many partners mentioned the exemplary role of the municipality as a crucial factor in legitimacy; one remarked that as a municipality “you have to remain credible” (interview 10) towards the partners by keeping their word and by setting an example. Another said that the municipality will have to work harder to implement a more integral approach within their own organisation, instead of only “looking at the participation society” (interview 6) to take steps. Finally, one partner said that “it appears as though [the municipality] isn’t working on sustainability themselves and that’s a pity” (interview 30), indicating that they would like to see the municipality to take steps themselves as well. Many partners would like to see the municipality take more concrete steps, such as installing solar panels on their own buildings, besides only stimulating the partners to take these steps.

How does the municipality see its own exemplary role? According to one civil servant, the role of the municipality is “mostly our exemplary role, by showing that we are working on it ourselves” (interview 2). Another said that “I notice that sustainability and climate is slowly becoming a fixed part of everyone’s work” (interview 8). This is echoed by several other civil servants; that over the years, they have noticed that many of their colleagues have started to include it in their work. The alderman repeats this as well but included a side note. “Within the municipality, it is approached much more integrally than when I started. However, I often see that the climate team has to fight for certain things; against finances, against judicial limitations, etc., within the organisation. That really has to improve. We have invested in this, but I am not yet satisfied” (interview 16). Thus, the municipality itself sees improvement over the years and are quite happy with their current approach to

sustainability within the organisation. This gap between their own perception and that of the partners, and its effect, will be discussed in section 4.3.

The last aspect of shared motivation is **shared commitment** and relates back to *principled engagement*, as it deals with 'dedication to the CGR and its collective purpose and goals' (see Figure 2). It is different however, as principled engagement deals with the involvement of and interaction between the partners. For this aspect, most partners indicated that they do see the need and purpose of the collaboration and are committed to making it work. Several partners have said that "it is useful to work together" (interview 25) and that "[the collaboration] helps tremendously" (interview 11). This refers to projects and events set up to help reach the goal of Wageningen being climate neutral in 2030, as people recognize the need to work together to ensure results. Other partners said that "[the collaboration] is very stimulating" (interview 6) and that "we cannot afford it to not be a partner" (interview 21); again, indicating their recognition of the effect of and need for this collaboration. Many other partners referred to their sense of responsibility, the goal of their company or the sense that regarding this topic, collaboration is necessary (see both section 4.1.3 and 4.2.3 for details). Therefore, even though many partners would like to improve the collaboration one way or another, they all feel positive regarding the general presence of this collaboration. They all joined voluntarily and thus see the importance of it.

The municipality perceives commitment as positive as well; they are very happy with the collaboration and feel this is both crucial in reaching their goals and currently going quite well, as indicated in several of their responses recorded in previous sections.

4.2.3 Capacity for Joint Action

The last dimension of the collaborative dynamics is *capacity for joint action*; it refers to the potential created through the collaboration for taking collaborative action. This is done through four aspects, namely **procedural & institutional arrangements**, **leadership**, **knowledge** and **resources**, as shown in Figure 2. As mentioned before, there is some overlap with the system context through the presence of rules and resources that can inhibit or encourage a successful collaboration. I have asked how people see the role of the municipality (leadership, resources), the collaboration between the actors (arrangements, leadership, knowledge) and what they want to achieve within the collaboration (arrangements, knowledge).

The first aspect is that of the **procedural & institutional arrangements**; dealing with the protocols, structures and regulations within the collaboration. As stated regarding determination, many partners feel that currently, there are not enough concrete projects, steps and regulations within the collaboration. One partner actually answered: "concrete projects will have to be carried out; that is where this should lead" (interview 17), when asked what they would like to achieve with the collaboration. The current experienced lack of protocols, structures and regulations within the collaboration could lead to fewer concrete results, as partners are less obligated and stimulated to take actions. This likely makes it more difficult to reach the ambition of Wageningen to be climate neutral in 2030. The municipality barely mentions the procedural & institutional arrangements; the implications of this will be discussed in section 4.3.

Regarding **leadership**, the partners are more positive. Partners state that to them, the role of the municipality entails (but is not limited to) guiding the process, facilitating the collaboration, bringing people together, taking the lead, informing people, organising meetings and inspiring others to take steps. Partners are positive towards the municipality of Wageningen in their execution of this role, indicating that "what the municipality is initiating, is working well" (interview 5). Another said that it is "logical that the municipality is taking the lead" (interview 6). Several mention that the municipality "is proactive and doing well", "they are well prepared to cooperate", "they carry out the ambition well" and "they bring people together well" (e.g. interview 5, 7, 12, 14, 21 and 26), which are all

positive statements towards the leadership role of the municipality. This result appears to contradict with what we've seen regarding the exemplary role of the municipality, referring to internal legitimacy. Apparently, partners feel that the municipality is doing well regarding their leadership role, but not so much regarding their internal climate policy.

The municipality is quite positive towards their leadership role as well, and the way this is dealt with in the collaboration. One employee mentioned that "there has to be a driver, someone that keeps track, which is often the municipality", with another saying that "there is a very active role for the local government regarding this topic".

The aspect of **knowledge** is mentioned by several partners, with sharing knowledge being one of the largest advantages to them within this collaboration. Partners mention that they "feel positively stimulated [by the sharing of knowledge]" (interview 6), "it is valuable to see what others are doing, as you don't have to reinvent the wheel" (interview 10) and "you can learn an awful lot from each other" (interview 11). This indicates that they perceive knowledge to be shared well within the collaboration and that this is very valuable to them. Knowledge here could entail technical information on new methods or techniques, information on new rules and regulations, and (sustainable) initiatives. Most of this happens through the newsletter and during the regular breakfast meetings with all the partners (see section 4.3.2 for details), while some also meet with the municipality in smaller settings (observations). Several partners would like to see the sharing of knowledge and information happen on even a larger scale, mentioning that they would like more information from the municipality, regarding new ideas or initiatives (both in Wageningen and on the regional and national scale), the progress monitoring (as previously mentioned) and themed meetings instead of the present general breakfast sessions.

The municipality sees the sharing of knowledge as less important to them, compared to the partners. However, the civil servants "do see that [they] do not have all the required knowledge [themselves]" (interview 13) and thus need to share knowledge with others.

Lastly, the aspect of **resources** within the collaborative dynamics is obviously linked with the resources in the system context. From the interviews, the aspect of resources has generated varying responses. The partners are mostly positive towards the resources, including finances and support in their endeavours, coming from the municipality; one partner mentioned that "the municipality supports initiatives from companies well" (interview 21). An example of a municipal resource is the previously mentioned energy fund, introduced in April 2018 (Klimaatpartners Wageningen, 2017). Additionally, the municipality wants to help business and organisations to become more sustainable, for example through supporting them to get the appropriate permits and helping them to organising events. Several partners do recognize the need for more rules and resources coming from other levels of government and thus recognize the system context; "the national government will have to bring instruments to us to help get things done" (interview 23) and "the most important role is that of the national government [...] who must come up with stricter rules, price incentives and other measures" (interview 6).

As mentioned in the results from system context, the civil servants feel strongly towards the responsibility of the national government; they agree that the government has to help them through providing adequate rules and resources. This is thus quite similar to the perception of the partners of the responsibility of the national government.

4.3 Process performance

In this section, the collaborative dynamics and thus the process performance are analysed to determine the current obstacles towards an effective collaborative governance strategy. In the previous sections, the results from both the system context and the collaborative dynamics have been presented. In this section, it will be explored how these results can act as obstacles towards a successful collaboration in Wageningen, together with obstacles mentioned by the partners and/or

found through observations. This is done through an analysis of the results, based on the theoretical assumption which states that every aspect of the collaborative dynamics will have to be sufficiently present to ensure a beneficial collaboration. Finally, the process performance and the performance productivity will be explored and analysed.

4.3.1 Obstacles

The system context of Wageningen, analysed through the four dimensions of the PAA, appears to be quite favourable towards the climate mitigation strategy of the municipality. The presence of most actors, rules, resources and discourses in both Wageningen and other levels of government facilitate this approach towards climate mitigation, including the collaborative governance. These results were mostly expected, as climate mitigation at the local level has gained increasing attention in the Netherlands and Wageningen especially focusses on this topic (see sections 1.1 and 3.3 for details). The set-up of the policy arrangement empowers the municipality and the partners in their efforts to make Wageningen climate neutral in 2030. The appropriate representation of actors in Wageningen within the current climate partners and the fact that the largest actors within Wageningen are part of the collaboration has a positive influence on it. This support enables the municipality to more effectively carry out their climate mitigation strategy. Additionally, agreements, such as the Paris Agreement, signed by the Dutch government and support (in the form of subsidies, expertise and other resources) from these higher levels of government likewise enable a better execution of the local climate policy. However, some of the PAA dimensions also work as an obstacle towards the process performance. The previously mentioned lack of strict rules and laws, together with the lack of sufficient finances and capacity to hire more civil servants limits the municipality of Wageningen in their efforts to make the city climate neutral in 2030.

Besides these dimensions of the system context, the discourses dimension was particularly interesting in the case of Wageningen, considering their green image. As asked before, does the belief that Wageningen is 'the place to be' regarding this topic actually influence its success or does it lead to inaction? Many partners have acknowledged its presence and it has been determined that this perception creates both a sense of identity and responsibility for partners in Wageningen. For many, it was one of the reasons they became a climate partner. However, as the alderman and some partners have indicated, this does not mean that Wageningen is necessarily a frontrunner as shown in their results. It also wasn't found that this perception necessarily leads to concrete results. The discourse that being in Wageningen, you will have to be concerned with climate and sustainability, influences not only the system context, but also the collaborative dynamics. This shared sense of identity and urgency regarding climate mitigation has shaped the principled engagement and shared motivation, through the identification of these shared values and goals. This even influences partners not based in Wageningen; these are mostly larger businesses with a more regional playing field, that have sustainability at the core of their business. The perception of Wageningen plays a major role in why they have chosen to join this collaboration in Wageningen. As mentioned before however, due to several obstacles, this motivation is currently unable to be effectively translated into concrete results. Being aware of this discourse and its effect on the collaboration, together with the obstacles hindering successful collaboration, allows us to formulate recommendations to adjust the current situation towards a more favourable one; these can be found in section 5.3.

Next, the collaborative dynamics will be analysed. In the previous section, the results have been presented regarding their functioning. Here, the obstacles towards a better functioning of these dynamics, and thus towards an improved process performance, will be explored.

Starting with the first aspect of the collaborative dynamics, *principled engagement*, it was shown that regarding **definition** (issue defining), **deliberation** (communication) and **determination** (decisions made) the situation was not optimal. Of these three, definition of the issue and concrete decisions could be developed more. One obstacle that has been mentioned several times by partners and previously in this chapter is the lack of concrete projects and results related to the climate plan and

the collaboration. One partner said that “more will have to be done, it is all very abstract now. We would like to contribute where necessary, but then we will need more clarity” (interview 17). Another agreed: “it lacks a more concrete elaboration; we would like to do more!” (interview 19). These partners and others thus mentioned the need for ‘less talk and more action’. This definitely relates to the aspect of determination and therefore influences the principled engagement of the partners. Additional efforts to define the issue between the participants appear to be mostly missing from the collaboration, with many partners waiting for the municipality to take the lead. Communication between the participants is not executed sufficiently within this collaboration either, generating many negative comments from the partners.

This influences the principled engagement of the participants, and because these three aspects are not sufficiently present, it follows from the theoretical assumption that this likely leads to less involvement and inclusion of the partners. Currently, it does appear as though many partners do feel a lack of ownership regarding both the collaboration and the ambition to be climate neutral in 2030. Many have said that they do not feel that it is important whether the goal is met; instead, they find the efforts taken and results achieved most important. As mentioned before as well, the municipality currently feels largely responsible for the collaboration and its results. Increasing the sense of ownership of the partners will be discussed in more detail later on.

The second aspect of the collaborative dynamics is that of *shared motivation*. In the previous section, it was shown that especially regarding **mutual trust** and **mutual understanding**, improvement is needed. Even though most partners are committed to the CGR and show dedication to its collective purpose and goals, the lack of mutual trust and understanding are obstacles to a successful process performance. Most partners appear to lack mutual trust and there appear to be no aimed efforts towards creating more appreciation, toleration and respect towards the partners within the collaboration. This is shown in the perception of many partners that the collaboration is only between them and the municipality. Additionally, regarding internal legitimacy, many partners have mentioned that they feel that the municipality is dropping the ball concerning their exemplary role. As apparent from the results, the municipality does not seem to fully recognise the influence their internal policies regarding climate mitigation has on how the partners view them and the collaboration. Setting a good example will influence the partners motivation, which will be discussed in chapter 5.

Concerning the last dimension of the collaborative dynamics, the *capacity for joint action*, it was established that the **procedural & institutional arrangements** is the least developed aspect in the current collaboration in Wageningen. These include the protocols, structures and regulations involved in the collaboration and their absence influences the other aspects and dimensions as well, as (the lack of apparent) results influences people’s motivation and involvement. Of the other three aspects, **leadership** and **knowledge** appear to be sufficiently present; most of the partners are satisfied regarding these two and they do not act as obstacles. **Resources** however are seen as an obstacle by some; this mostly relates to resources and rules coming from the national government, as many partners are satisfied with the support they receive from the municipality. The municipality itself does see resources as a major obstacle, especially related to internal capacity, finances, time, and rules and support from the national government.

Besides the perceived functioning of each aspect by the partners, there are also some differences between the partners and municipality in their perception of the collaborative dynamics. This could act as an obstacle as well, as a different perception could lead to actions that are less effective than they could be. For example, if the municipality perceives an aspect as going well, such as internal legitimacy, they are less likely to act towards this aspects’ improvement, even though many partners would like to see that in this area. Besides internal legitimacy, the municipality perceives deliberation, mutual understanding and shared commitment as more positive than the partners. Furthermore, the municipality perceives the aspects of discovery, knowledge and resources as more negative than the

partners. These discrepancies can thus act as obstacles towards a successful collaboration as well, by leading to ineffective actions.

4.3.2 Performance productivity

The process performance, and thus the performance productivity, is not functioning optimally yet in the case of Wageningen. As explained in section 2.2.3, the performance productivity deals with the outcomes of the collaboration. In this section, we will analyse how the municipality of Wageningen could improve their process performance and their performance productivity. As mentioned in section 2.2.3.1, collaborative actions or outcomes may include new laws, regulations, projects realized, enforcing compliance and other associated actions.

According to the Klimaatplan, the goal of the current approach and collaboration is to achieve the targets set in the Routekaart and the Klimaatplan (Gemeente Wageningen, 2012; Klimaatpartners Wageningen, 2017). This includes being climate neutral in 2030, the beforementioned 50% decrease in energy use, 25% of renewable energy production and 25% renewable energy purchasing. Currently, the collaborative outcomes in Wageningen include the present Klimaatplan, the coordination group, a newsletter and regular (breakfast) meetings for all the partners. During those meetings, new partners have the opportunity to introduce themselves, all partners can pitch new ideas, their plans or ask for help. There may also be presentations from external organisation regarding new technologies, ideas or to inform the partners of other interesting developments such as new laws from the national government. Additionally, in the Klimaatplan, for each topic projects have been formulated, which have been combined in an overview (Klimaatpartners Wageningen, 2018; Klimaatpartners Wageningen, 2017). These are all in different stages, from not yet started, to ongoing, to completed. This differs from the impression we got from the partners, where many mentioned their need for more concrete results and projects within the collaboration. This apparent lack of knowledge and/or involvement by the partners is startling, as many partners are indicated to be involved in these projects as well. This could have different reasons, such as that the projects have been formulated top down, only a few partners have been included or a lack in communication. Communicating these projects more clearly and allowing all partners to be involved to their own preferred extent, will allow them to feel a greater sense of ownership and involvement in the collaboration.

To increase their results from these collaborative outcomes and to enable Wageningen to achieve their goal of being climate neutral in 2030, we will have to look back to the obstacles discussed above. I have also asked the partners how they would like to improve the collaboration. Most of their suggestions have already been mentioned before, such as wanting more concrete goals and projects, sharing knowledge and ideas, working together towards tangible results, sharing the monitoring and progress and making the meetings more focussed on a certain topic. Some added that they would like to broaden the collaboration towards other topics, such as food waste, would like to involve the inhabitants of Wageningen more and some actually mentioned that they are completely satisfied with the current situation.

These suggestions complement the previously mentioned obstacles and the current state of the collaborative dynamics. The aspects that will need improvement include the establishing of a shared definition, together with expectations and goals; improving the communication between every actor, introducing possible rules/protocols within the collaboration to make it less vague and improving the legitimacy of the municipality through developing their example role. This exemplary role of the municipality is important, as there is a different perception of the municipality as a leader within the collaboration than as an example to the partners. In the climate plan, it is mentioned that “collaboration on equal footing is crucial to take steps towards a climate-neutral Wageningen” (Klimaatpartners Wageningen, 2017, p. 31). Therefore, increasing the efforts to build a community through a larger focus on shared motivation and working on the current lack of ownership among the partners is crucial to improve the process performance. In chapter 5, concrete recommendations and

advice to the municipality will be given; these have been presented to the coordination group on the 12th of November, which will be reflected upon in the next chapter as well.

4.3.3 Validation of findings

Other suggestions to improve the process performance in Wageningen stem from comparing their situation to that of Arnhem and Nijmegen, where comparable collaborations have been present for a couple of years longer. Their results will be used as validation of the findings from Wageningen, and thus are not other case studies. The research into them has also been less extensive, as explained in chapter 3, as it is based on policy documents and one interview at each municipality. In the next chapter, these results will be reflected upon and used in the recommendations to Wageningen.

In Arnhem a co-creation process regarding energy has been in place since 2011. Currently, the program 'New energy made in [Arnhem]' exists; it was started in 2015. It was formed with the input of local partners; currently, the programme contains a network which has 137 partners (interview 31). The goal is to make Arnhem energy neutral by 2050. The current program focusses on strengthening the Energy- and Environmental Technology sector in and around Arnhem, on energy saving and sustainable energy production, and lastly, on an 'exemplary municipality'. This means that the municipality wants to give a good example by ensuring that they themselves are making an effort to reach to goal of being energy neutral in 2050. This is achieved through a directing role of the municipality and through co-creation and collaboration with partners (Gemeente Arnhem, 2015). A steering group consisting of 5 partners and the municipality meet 2-4 times per year and organise a monthly energy café for the partners; it is also open to non-partners and concerns a wide range of topics, including sustainable fashion, health care, innovation and mobility. At these meetings, new partners can introduce themselves as well, and also, the monitoring and progress of the program can be discussed. Partners are also provided the opportunity to make an appeal for help or share an idea; directly afterwards, during the drinks, they can discuss this and connect with each other. This is working well, according to the municipality employee interviewed. The municipality is also working on inspiring their colleagues to visit these meetings, to further anchor the program in the organisation. Before a new partner can join New energy made in [Arnhem], they meet with the municipality to discuss their expectations and they are asked to perform a task towards achieving the goals, additional to their daily work load. This is done to stimulate them, but also to ask for their commitment. Intrinsic motivation is very important to Arnhem; they don't want to just organise a network club. Therefore, they ask the partners to get out of their comfort zone to help achieve these goals. Some people do not like this and have therefore not become a partner, but most find it very logical. The focus in Arnhem within the collaboration is therefore very much on achieving concrete results and monitoring the progress; according to the civil servant interviewed, they have received mostly positive feedback from their partners on the current set-up.

In Nijmegen, the network 'Power2Nijmegen' has been introduced in April 2012 and fully started in 2013. It is set up to help achieve an energy-neutral city in 2045, with targets of 50% energy saving and 50% renewable energy production (Gemeente Nijmegen, 2013). Currently, the network contains around 600 members, including businesses, knowledge institutes, societal organisations and other local partners (interview 32). The municipality has €100,000 available every year in the form of a subsidy for innovation, where the partners have a claim to. Once per 2 to 3 months, a steering group meets to discuss the current projects and new ones that applied for the subsidy. In this way, they aim to help energy saving ideas improve and expand.

Twice a year, they meet with all the partners, during which new partners can give pitches, share ideas and the progress is evaluated. Additionally, at these meetings, new initiatives are introduced, the current subsidy projects are discussed and sometimes there is a keynote speaker. There is also the possibility to give workshops. Besides the meetings, there is a newsletter and a monthly sustainable café that discusses different topics. There are no further obligations to the partnership or

membership; people can become a member directly through the website. Nijmegen focusses very much on their communication within the network; they ask for feedback from all partners after meetings and make an effort to keep in touch with them. Social media is also very important to them and they spend ample time on this. Currently, they are quite happy with their approach and only want to expand their network.

5 Conclusion and Reflection

In this final chapter, the findings of this research are discussed and the research is concluded. The objective was to analyse the collaboration between the municipality of Wageningen and its 'climate partners', through the use of the Policy Arrangement Approach to determine the system context and the Collaborative Governance theory to analyse the process performance and performance productivity of this collaboration. In the previous chapters, the findings of this research have been presented.

Firstly, the research questions will be answered, and afterwards the research will be concluded in section 5.1. In section 5.2, the research will be reflected upon, including a theoretical and methodological reflection and the limitations will be discussed. Lastly, in section 5.3, the recommendations will be presented. The main research question of this thesis is: *what is the process performance of collaborative governance in the climate mitigation strategy of the municipality of Wageningen and its partners and how could they increase their productivity performance?* This was broken down in four sub-questions, which will be answered below before we return to the main research question.

Sub-question 1: What is the system context of the climate mitigation strategy of the municipality of Wageningen as defined in the actors, resources, rules and discourses dimensions of the Policy Arrangement Approach?

The system context of Wageningen consists of both local, regional and national actors, rules and resources and is quite favourable towards the climate mitigation strategy of the municipality. This includes the support from the well-represented local actors, which enables the municipality to more effectively carry out their climate mitigation strategy. Regarding rules and resources, climate agreements signed by the Dutch government and support in the form of finances and expertise from higher levels of government enable a better execution of the climate policy of Wageningen. However, these rules and resources can also work as an obstacle towards the process performance, which will be discussed later. Lastly, regarding the discourses dimension, the perception of Wageningen as a green and sustainable city, creates a sense of responsibility and identity among the actors. However, as mentioned in section 4.3.1, this shared discourse does not necessarily lead to collaborative results.

Sub-question 2: What are the collaborative dynamics regarding climate mitigation between the municipality and the other local actors?

The collaborative dynamics between the municipality and the partners have been outlined in the previous chapter. In Figure 9 below, a new version of Figure 2 is shown as a reminder, where the definitions have been shortened. Also, it shows the findings in Wageningen as a +, - or +/- indicating whether the partners saw an aspect as positive, negative or had mixed responses.

Collaboration Dynamics	Component	Definition	Findings Wageningen
<i>Principled Engagement</i>	Discovery	Identification of shared interests, concerns and values	+
	Definition	Efforts to build shared meaning; defining the issue	+/-
	Deliberation	Communication between the participants	+/-
	Determination	Decisions made by the participants	-
<i>Shared Motivation</i>	Mutual trust	Assurance of the truthfulness and reliability of participants	-

	Mutual understanding	Appreciation, toleration and respect of participants	+
	Internal legitimacy	Confidence in the worthiness and credibility of participants and the collaboration	-
	Shared commitment	Dedication to the collaboration and its collective purpose and goals	+
<i>Capacity for Joint Action</i>	Procedural/Institutional Arrangements	Protocols, structures and regulations involved	-
	Leadership	Roles taken up by participants	+
	Knowledge	Sharing and generation of information, data, expertise	+
	Resources	Finances, time, technical support and skills	+/-

Figure 9 Collaborative dynamics in Wageningen

As visible in Figure 9, regarding *principled engagement*, the aspects of definition and deliberation determination are not sufficiently present, with determination needing the most improvement. Many partners indicated their need for more concrete decisions and steps taken within the collaboration, together with a better communication and a more shared and clear goal and ambition. Regarding *shared motivation*, mutual trust and internal legitimacy need attention, with many partners indicating the importance of the exemplary role of the municipality. Lastly, regarding the *capacity for joint action*, especially the procedural & institutional arrangements need enhancement. Partners want more structure and regulations within the collaboration, as it is currently quite non-committal and unclear to some what is expected of them.

The other aspects, including discovery, mutual understanding, shared commitment, leadership, and knowledge, appear to be executed well within the collaboration. Partners are positive towards these aspects and happy with their execution within the collaboration.

The municipality perceives the aspects of deliberation, mutual understanding and internal legitimacy as more positive than the partners. Additionally, they perceive the aspects of discovery, knowledge and resources as more negative than the partners. These discrepancies can act as obstacles towards a successful collaboration and will be discussed next.

Sub-question 3: What are the present obstacles to the process performance of the climate mitigation strategy of Wageningen?

Based on the literature, the most important obstacles include the aspects of the collaborative dynamics that are insufficiently developed in Wageningen. The shortcoming of these aspects influences the results from the collaboration and the motivation and involvement of the partners. Therefore, they will need improvement. Partners mentioned that especially the lack of concrete projects is an obstacle to them and hinders their full commitment. Additionally, the difference in perception of the collaboration between the municipality and the partners can also work as an obstacle, as it may lead towards ineffective actions taken by either party.

Sub-question 4: How could the municipality increase the performance productivity of their climate mitigation strategy?

The performance productivity is based on the process performance, which is the functioning of the collaborative dynamics. This has been discussed in the previous two sub-questions. Suggestions to increase the performance productivity include the establishing of a shared definition, together with expectations and goals; improving the communication between every actor, introducing possible rules/protocols within the collaboration to make it less vague and improving the legitimacy of the municipality through developing their example role. Additionally, increasing the efforts to build a

community through a larger focus on shared motivation and working on the current lack of ownership among the partners is important to improve the process performance. These all link back to the theoretical assumption, and in section 5.3, these will be translated into concrete recommendations for the municipality of Wageningen.

5.1 Conclusion

The main research question of this research was: *what is the process performance of collaborative governance in the climate mitigation strategy of the municipality of Wageningen and its partners and how could they increase their productivity performance?* In the previous chapters, the collaborative governance approach and the PAA, the two theories used in this thesis, have been explained and applied to the case of Wageningen. The results, found through interviews, observations and document analysis, from the system context, collaborative dynamics, and process performance have been presented, together with the obstacles towards the productivity performance and suggestions for improvement. The theoretical assumption was that when every aspect as presented of the collaborative dynamics' framework is fully utilized within the collaboration, it will be successful.

According to the presented results, the process performance of the collaborative governance of the climate mitigation strategy of the municipality of Wageningen has some aspects that are working well, including the commitment of the partners, the leadership role of the municipality and the sharing of knowledge between the partners. However, several aspects are not sufficiently present in the current collaboration. The most important ones include the lack of rules, protocols and concrete plans within the collaboration, the establishment of shared definitions, goals and expectations between the municipality and the partners and lastly, the insufficiently developed example role of the municipality. Improving these will increase the feeling of ownership among the partners, lead to more results and thus increase the productivity performance of the collaboration. This will help Wageningen to more effectively carry out their climate mitigation strategy, which is increasingly important as the role of local governments in dealing with climate change has become more urgent.

5.2 Reflection

The results of this research have been presented and the research questions have been answered. In this section, the process of the research will be reflected upon, including a theoretical and methodological reflection, followed by the limitations of this research.

Beforehand, I expected several aspects of the collaborative dynamics to be falling short, as the collaboration in Wageningen has only been set up quite recently. I did not expect so many aspects to need attention, as only a few are fully utilized in this collaboration. The difference in perception between the municipality and the partners was something that I did notice quickly, both during my observations in meetings and talking with the municipality employees and the partners. Fortunately, the aspects of the collaborative dynamics that need improvement do appear to be easier to change, as the motivation and commitment of the partners is high. If it were the other way around, meaning a low shared commitment but many rules and decisions made, partners might be more likely to drop out of the collaboration. In the current situation, they want to be more involved, which is a great starting point for a more successful collaboration in Wageningen.

Having the municipality guide the partners towards achieving concrete results and the goal of 'Wageningen Klimaatneutraal', appears to be a doable and desirable approach and will help increase the performance productivity, as discussed before. The aspects of the collaborative dynamics that will need improvement will be made more specific in the recommendations. Having the commitment of the partners as high as currently is, is as mentioned a great starting point for this collaboration and I believe that, based on these findings and with my proposed recommendations, the collaborative governance strategy of Wageningen will be more effective in the future.

At the coordination group meeting of 12 November, I have presented my findings and recommendations to the municipality and the rest of the coordination group. This has validated my results and will be discussed in more detail in section 5.3. The results of Arnhem and Nijmegen were

interesting, as both cities have a different approach than Wageningen, but their suggestions and methods can be quite useful in Wageningen. In the recommendations presented in section 5.3, these will be discussed in more detail as well.

Doing my research at the municipality of Wageningen was very interesting, as it provided me with an insight into their approach and methods. Additionally, it made doing the research easier as I was close to all the important events and actors. This also allowed me to specify my recommendations to the municipality's needs. Doing the interviews was very rewarding, as the partners were very interested in this research and motivated to help improve the collaboration. This study has taught me valuable communication skills, while experiencing a real-life working situation. The process of researching and gaining an in-depth understanding of the topic was very enjoyable and it enabled me to apply these theories to a real-life case. Formulating recommendations that can be applied in a real-life situation was very rewarding and I feel that it has been a great practice for my future career.

5.2.1 Theoretical and methodological reflection

The theoretical reflection is largely based on statements made in chapter 2. Firstly, the advantages and disadvantages of collaborative governance were discussed, and the question arose whether local collaboration can truly be effective, despite its challenges. One of core concepts of collaborative governance is that it includes a shift from top-down governance to more bottom-up governance. In Wageningen, so far, this has not completely been the case. Here, several partners do have an influence on the process; especially the ones in the coordination group. However, more input from the other partners is needed to create a more balanced collaboration and a more bottom-up type of governance. This would also help to increase the partners' responsibility for the outcomes of the collaboration; currently, this does not appear to be the case as partners often look to the municipality for guidance.

As stated in chapter 2, wanting to include many different voices for the sake of true representation may also have a negative influence on the collaboration, in the form of inertia. Pitt & Congreve (2017) suggest that collaborating with key interest groups only may be more effective. In Wageningen, the coordination group contains key interest groups that have more influence than the regular partners. However, this does not mean that the other partners cannot be more involved. A better balance between these influences and involvements will likely lead to a larger sense of ownership among all of the partners; in section 5.3, this is elaborated into recommendations for Wageningen.

According to Emerson et al. (2011), the three dimensions of the collaborative dynamics influence, reinforce and support each other. In this research, this was found as well. The different aspects are all linked and can all potentially influence the others. For example, the lack of good communication also influences people's sense of shared motivation and their capacity for joint action. Additionally, the lack of procedural and institutional arrangements was also influenced by (among others) leadership, definition and determination. Emerson et al. (2011) also mentions that the sharing of knowledge is essentially the heart of collaborative governance, as knowledge is shared, generated, balanced and guides actions through collaboration. It is linked with the other two components as well, because true knowledge sharing needs principled engagement and shared motivation for it to be successful. In Wageningen, this aspect appears to be doing well, as the majority of the partners is satisfied regarding the sharing of knowledge. For many, this was even an important reason to become a partner; linking the case of Wageningen adequately to the literature.

Using the two theories, and especially the one by Emerson et al. (2011), allowed me to look at aspects that I otherwise might not have. For example, the aspect of definition, part of the principled engagement, was something which I would have overlooked the importance of to the collaboration. Having such a structured framework to help analyse the results was very useful and I do believe I have presented all the important aspects, both working well and needing improvement, in the case of Wageningen due to using this framework.

In this research, qualitative methods were applied to the case, including semi-structured interviews, participatory observations and a document analysis. Using qualitative measures allowed me to gain an in-depth understanding of the feelings, opinions and perspectives of the interviewed partners. This made it possible to understand their motivations to join, their hesitations and perspective on the future of the collaboration. It was quite difficult, especially time-wise, to interview this many people. Some interviews were much more helpful than others, especially as some were done over the phone or via e-mail. However, interviewing almost everyone directly involved helped me make sure that I included all of the important perspectives, opinions and aspects. Sometimes it was difficult to determine whether an aspect was part of the collaboration in Wageningen, as it was not always clearly present in the interview answers. Supplementing the interview data with both the document analysis and especially with observations provided help, as using this data helped me to understand the collaborative dynamics better. Additionally, interviewing the municipality employees was useful; observing them during meetings and joining them in internal meetings proved most useful however as this allowed me to understand their perspective more fully. Thus, the use of participatory observations was crucial in this research.

Using the two theories was helpful, as they provided a good foundation for this research. However, using them together was more difficult than I thought and especially combining them and finding the overlap between them proved a bigger challenge than anticipated. However, I do feel that using the PAA as well alongside the integrative framework for collaborative governance did make the system context more understandable. Especially the addition of the discourse dimension was very useful, as this is not a part of the system context aspects used by Emerson et al. (2011). As this was such an important aspect of the collaboration in Wageningen, using the PAA for analysing the system context proved very valuable. By combining the PAA and the collaborative governance framework, I feel that the collaborative governance strategy of Wageningen has been adequately analysed.

5.2.2 Limitations

Doing a single case study was a limitation of this research; studying more cities to the level of detail of that of Wageningen would not have been possible due to the time needed for that. However, interviewing municipality employees and reading policy documents from Arnhem and Nijmegen proved very useful. It provided me with recommendations and suggestions that I would not have formulated myself. In this research, the focus was only on one, more formal, collaboration between the local government and local partners. Although this set-up allows for more internal reflection and possible regulations, it might be a limitation not to look at other forms of collaboration within Wageningen regarding climate mitigation. By including Arnhem and Nijmegen and by basing this research on a structured theoretical framework, I do believe that my recommendations are valid. Lastly, the translation of data (from the interviews and policy documents) from Dutch to English may have caused a loss of certain nuances in people's answers; I have tried to prevent this to the best of my abilities.

5.3 Recommendations

In this final section, I will present the recommendations to the municipality of Wageningen, together with a more general advice to municipalities regarding their use of collaborative governance and lastly, ending with some recommendations for further research.

The advice to Wageningen is firstly to invest time in the current expectations from the partners. I recommend them to, similarly to Arnhem, meet with all the current and future partners to discuss their expectations from their partnership. Additionally, the goals and plans can be discussed here and possible concerns and suggestions from the partners. This will allow the partners to feel more involved in 'Wageningen Klimaatneutraal', which will positively affect their sense of ownership and both the principled engagement and shared motivation. New partners will have to meet with the municipality to discuss their expectations, goals and possible obligations before being able to join; currently, this process may be too simple and non-committal.

Additionally, the formulation of more concrete goals, targets, projects and possible obligations are important to ensure that it is clear what being a partner entails, yields and costs. Partners especially mentioned their need for more clear targets and guidance into how they can help reach these targets. Their motivation and commitment are high, but they struggle to turn this into results. This relates to the discourses present in Wageningen; part of partner's identity and responsibility are linked to the green perception of the city. Many partners have indicated that they would very much like this to be reflected in the results of the collaboration. As mentioned in chapter 2, visible results and outcomes also motivate the partners to continue within the collaboration. Some suggestions included an obligated membership to 'Wageningen Werkt Duurzaam', concrete targets such as making their building more sustainable and creating common projects, related for example to transport and waste. Regarding the projects, it has already been mentioned that it is important to communicate more about the present projects as formulated in the Klimaatplan. Allowing all partners to be involved to their own preferred extent will allow them to feel a greater sense of ownership and involvement in the collaboration. Some of these projects may also be developed from a more bottom-up approach; reviewing them together with the partners that want a greater involvement may also prove to be fruitful.

Another recommendation is that during and especially after meetings with partners, it is important for the municipality to take advice and suggestions from them seriously and to use them in decisions and actions taken by the municipality. Nijmegen focusses extensively on their communication, which they also suggested to Wageningen. This also relates to the exemplary role of the municipality, which needs more attention. Arnhem has made this exemplary role one of their three main targets, as part of their current program. By ensuring that the municipality itself is doing their own part in reaching the targets, they will be taken more seriously, and it will provide the possibility for further connection with the partners.

By putting the focus more on the quality of the partnership than on the quantity of partners, the collaboration is more likely to be sustainable and successful; according to, among others, Pitt & Congreve (2017) and van der Heijden (2015). Developing the sense of ownership among the partners, by discussing the expectations and obligations and involving them more, will hopefully lead to a shift in the leadership role of the municipality towards that less of a motivator and more of a facilitator and guide. This will allow the collaboration to be more balanced and the ambition to be shared more clearly among everyone involved, as the municipality currently feels largely responsible for the success of the collaboration. Additionally, these suggestions will hopefully decrease the present difference in perception of the situation between the municipality and the partners as well.

As mentioned before, at the meeting of 12 November, I have presented by findings at the municipality. The coordination group recognized themselves and others in them and found them to be true to the actual situation. My recommendations were accepted and already several suggestions were made. At the next breakfast meeting, they proposed to ask the partners afterwards for their suggestions for these meetings. Additionally, they wanted to discuss the targets and goals of the collaboration in more detail, to make them less vague. The importance of this was recognized by all of them. Another suggestion for a type of obligation for the partners was that they would have to present their plans for how they intend to green their own organisation in the next six months. The municipality could then help partners to connect to others, to speed up this 'greening' process and to learn from others.

Generally, my advice to municipalities wanting to set up collaborative governance, especially regarding climate mitigation, can be summarised in 3 points related to the theory. Firstly, to ensure a good representation and inclusion of key voices, it is important to establish a coordination or steering group. This also ensures more effective collaborative dynamics, as including several partners in the set-up of the collaboration besides the municipality increases their commitment and involvement.

Secondly, it is very important to formulate clear targets and goals, possibly together with the partners. This will help to achieve the desired results, keep the partners involved and committed and help maintain everyone's motivation. Thirdly, a core dimension of collaborative governance is the shift from top-down government to more bottom up governance. This includes a shift in the role of the municipality; from being the leader and driver, to being more of a facilitator and guide to the partners. Communication in this is very important, especially taking in the feedback of the partners and including them in the decisions made. In both Arnhem and Nijmegen, these suggestions appear to have already been executed.

Recommendations for further research include the possibility to look also at climate adaptation and other dimensions of sustainability at the local level, as the focus of this research has been on climate mitigation measures taken in Wageningen. Studying collaborative governance on other levels of government could be useful as well, because even though cities are very important in the movement towards climate mitigation, collaboration at higher levels likely has a larger impact. It would be interesting to see if the aspects of the collaborative dynamics are well-represented here as well and whether the suggestions made here could apply there. The possible involvement of citizens in a collaboration with different levels of government could likewise be interesting. Lastly, the importance of the system context has not been fully explored in this research and deserves a more in-depth understanding.

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Appendix I: List of interviewees

Municipality of Wageningen:

Ine Botman	-	Civil servant Climate & Sustainability
Sanne Meelker	-	Project leader Sustainability
Niki Jansen	-	Civil servant Climate & Sustainability
Jacqueline Oosterwijk	-	Civil servant public space policy
Roos Hollenberg	-	Civil servant Food
Lara de Brito	-	Alderman Environment/Sustainability

Climate partners:

Alliander DGO	-	Business developer
Bblthk	-	Director
De Lynx	-	Director
De Woningstichting	-	Director
Eetvallei	-	Director
Ennatuurlijk	-	Senior Account Manager
Gemeente Wageningen	-	See above
GloedEnergie	-	Project leader/Manager
Hoom	-	Project Employee
Idealis	-	Real estate specialist
Jumbo Verberne	-	Entrepreneur/Manager
Keygene	-	Manager Finance & Control
Kinderopvang Wageningen	-	Director
MARIN	-	Manager Finance & Control
NIOO	-	Managing Director
Plant-E	-	Founder/CEO
Platform Water Vallei & Eem	-	Consultant Strategy & Policy
QING	-	Managing Director
Rabobank Vallei en Rijn	-	Asset Manager
RijnIJssel	-	Director
Stichting Ondernemersfonds Wageningen (SOW)	-	City Managers
Vallei Energie	-	Chairwoman
Wageningen University & Research (WUR)	-	Employee Social Responsibility
Wageningen Werkt Duurzaam	-	Director
Wageningen Ondernemers Contact (WOC)	-	Board Member

Other municipalities:

Arnhem:

Maud Wolf	-	Board advisor New energy made in Arnhem
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Nijmegen:

Angela Roes	-	Account manager Power2Nijmegen
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Appendix II: List of observed meetings

- Coordination group meeting climate plan (22-01-2018)
- Gelders Energie Akkoord (GEA) – Annual conference (01-02-2018)
- Climate breakfast meeting partners (06-02-2018)
- SNS Bank – exploratory meeting (08-02-2018)
- Team meeting municipality (13-02-2018)
- Initiatives Circular Economy within Wageningen (13-02-2018)
- Monitoring municipal emissions (13-02-2018)
- Biweekly meeting WWD & Municipality (15-02-2018)
- Team meeting municipality (20-02-2018)
- Communication strategy – progress meeting (13-03-2018)
- Supervisory Board WWD meeting (20-03-2018)
- Team meeting municipality (10-04-2018)
- Business meeting sustainable buildings (27-04-2018)
- Climate breakfast meeting partners (15-05-2018)
- Regional meeting municipalities (22-05-2018)
- WUR – meeting with municipality (05-06-2018)
- Sustainability Grebbedijk – Water Board Vallei en Eem (11-06-2018)
- Coordination group meeting climate plan (25-06-2018)
- Exploratory meeting circular economy (25-06-2018)
- Climate breakfast meeting partners (26-06-2018)
- Coordination group meeting climate plan (12-11-2018)

Appendix III: Interview questions

Interview questions (employees) municipality

1. What is included in your task description?
2. What do you feel is the most important thing you are working on?
3. What do you believe is the role of the municipality regarding climate?
4. How do you feel about the current 'climate plan'?
5. How do you feel about the collaboration between the municipality and local partners?
6. What do you believe could be better/more effective regarding the collaboration and the general climate plan? What else do you want to achieve with it more?
7. Do you think Wageningen is different from other municipalities, considering its reputation?
8. Do you have any other remarks, tips or suggestions?

Interview questions (employees) partner organisations/companies

1. What is the role of sustainability within this organisation?
2. Why have you chosen to become a 'climate partner'?
3. How do you feel about the ambition of the municipality to be climate neutral in 2030 and the plan accompanying this?
4. What do you believe is the role of the municipality in achieving this goal and in the collaboration?
5. How do you feel about the collaboration with the municipality and with other partners? Has this changed since this collaboration format?
6. What do you believe could be better/more effective regarding this collaboration, what else do you want to achieve within it?
7. Do you think Wageningen is different from other municipalities, considering its green image?
8. Do you have any other remarks, tips or suggestions?

Interview questions (employees) municipality of Arnhem & Nijmegen

1. How and when has the collaboration/network in your municipality with local partners regarding climate mitigation started?
2. What is the goal/ambition of the collaboration?
3. How many partners are there? What type of organisations are they and how have they joined the collaboration?
4. What type of activities are part of the collaboration? How is it executed? (meetings, projects, events, etc.)
5. Who has the leading/steering role within the collaboration? Has this changed over time?
6. What is the role of the municipality within this collaboration? What are their tasks/activities?
7. What are in your opinion the biggest successes and positive sides of this collaboration?
8. What are in your opinion the biggest obstacles and negative sides of this collaboration?
9. Have you evaluated the collaboration with the partners? Has there been feedback and how do you deal with this?
10. Are there other ways the partners are involved in the collaboration?
11. Are you satisfied with the current situation? What else would you want to see happen and how do you see the future?
12. Do you have tips and/or suggestions for Wageningen?