



RADBOD UNIVERSITY

MASTER THESIS

The Benefits and Challenges of Open Strategizing in the Dutch Water Infrastructure

A Qualitative Case Study on the Strategy Development Process at Vitens

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Abstract

This master thesis investigates the experienced benefits and challenges of open strategy practices at the individual, group and organizational level at Vitens. By employing open strategy practices, which emphasize stakeholder inclusion and transparency about the strategy development process, Vitens aims to create a new water infrastructure system capable of addressing future challenges. Through qualitative analysis of 16 semi-structured interviews and relevant policy documents, the study identifies specific benefits and challenges at each organizational level. This research contributes to the theory by providing detailed insights beyond the general understanding of open strategy and exploring open strategy practices in the previously unexplored infrastructure sector.

Benefits of open strategy experienced at the individual level include access to diverse knowledge sources and increased commitment by inviting contributions. Challenges of open strategy experienced at the individual level are compromising speed, flexibility and control over the strategy development process, undermining commitment due to unmet expectations about impact of contributions, and undermining competitiveness, trust and understanding.

At the group level, experienced benefits of open strategy include granting access to wider sources of knowledge and granting wider audiences a say in the strategy development process. A challenge of open strategy experienced at the group level is compromising speed, flexibility and control over the strategy development process.

At the organizational level, experienced benefits of open strategy are granting access to wider sources of knowledge, granting wider audiences a say in the strategy development process, and realizing benefits of openness. Experienced challenges of open strategy at the organizational level are compromising speed, flexibility and control over the strategy development process, undermining competitiveness, trust and understanding, and feeling burdened with the pressure of strategy.

This master thesis contributes to open strategy literature by detailing these nuanced impacts. Furthermore, it provides an initial insight into possible relationships between strategic concepts at different organizational levels, and benefits and challenges of open strategy, in an unexplored sector.

Key words

Open Strategy, Benefits & Challenges, Organizational Levels, Dutch Water Infrastructure

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Chapter 1. Introduction

The Dutch infrastructure faces major challenges (Kievit & Onland, 2024). Examples include transitions in the energy and transportation sector (Kievit & Onland, 2024; Ministerie van Economische Zaken en Klimaat, 2021; Oskam, 2023), urbanization (Kievit & Onland, 2024), digitalization (European Commission, n.d.; Ministerie van Economische Zaken en Klimaat, 2024), and the water transition (Hannema, 2024; Rli, 2023; Schilte, 2024). Regarding the Dutch water infrastructure, a transition is needed to a new water system that can handle both drought and extreme rainfall (Schilte, 2024) and ensure a reliable supply of drinking water to the Dutch community in the future (Vitens, 2021; Vitens, 2022). Vitens, the largest drinking water company in the Netherlands, is developing a long-term vision called the ‘Streefstructuur’ to realize this new water infrastructure system.

In developing the Streefstructuur, Vitens has applied open strategy practices. In contrast to traditional strategizing, open strategy involves the inclusion of more stakeholders in the strategy process (Hautz et al., 2019), and transparency about the input, process, and output of an organization’s strategy development (Chesbrough & Appleyard, 2007). As a result, open strategy involves deep participation and extensive information exchange with stakeholders (Amrollahi & Rowlands, 2017; Baptista et al., 2017; Heracleous et al., 2018). Open strategy has the potential to foster collaboration in strategy development (Appleyard & Chesbrough, 2017; Hautz et al., 2017; Hardy et al., 2006;).

1.1 Practical and societal relevance

This master thesis examines the experienced benefits and challenges of open strategy practices in the Dutch water infrastructure sector, more specifically at Vitens, during the development of the Streefstructuur. By doing so, it provides insights for the management of Vitens. This is practically relevant because Vitens gains insights into the experienced benefits and challenges of its open strategy practices. Understanding these experiences enables Vitens to make informed decisions to capitalize on the benefits and address the challenges of open strategy processes, ultimately fostering better collaboration among stakeholders. Ultimately, this can contribute to the development of a new water infrastructure system, ensuring a reliable supply of clean water to communities, which is crucial for society.

1.2 Theoretical relevance

The theoretical relevance of this master thesis lies in its contribution to the literature on open strategy by examining the experienced benefits and challenges of open strategy at the individual level, group level, and organizational level. Understanding these differences is crucial for effectively implementing open strategy, as it allows for tailored approaches that address the unique benefits and challenges at each organizational level. This can help policy makers in maximizing benefits of open strategy while mitigating potential challenges.

From literature it appeared that the individual level, group level, and organizational level each emphasize different concepts of strategy. For example, individuals value managerial trust (Mantere, 2008), groups benefit from interaction and coordination between members of the same department (Paroutis & Pettigrew, 2007), and organizations need integrative structures for departmental cooperation (Mantere, 2005).

The main benefits and challenges of open strategy are known and reflected in five dilemmas of open strategy (Hautz et al., 2017); however, it remained unclear which specific benefits and challenges are experienced at what organizational level. This gap in the literature presented a promising research area (Birkinshaw 2017; Hautz et al., 2017). By providing insights into the experienced benefits and challenges of open strategy at the individual, group, and organizational level, this master thesis addresses this gap.

Additionally, open strategizing has been explored in various contexts (e.g., Gratton & Case, 2010; Hautz et al., 2017; Hutter et al., 2017; Luedicke et al., 2017; Malhotra et al., 2017), but not in the infrastructure sector. The literature indicates that the benefits and challenges of open strategy are contingent on specific organizational and sectoral circumstances (Hautz et al., 2017). This thesis provides the first exploration of open strategy in the infrastructure sector, broadening the contextual understanding of open strategy. By offering insights into these experiences, this thesis supports the evolving concept of open strategy and addresses the need for further research in this area, as highlighted by Hautz et al. (2017) and Whittington et al. (2011).

1.3 Research objective

The Dutch water infrastructure faces challenges demanding a transition to a new water system. In developing a long-term vision to realize this new system, Vitens has employed open strategy practices. This master thesis examines the experienced benefits and challenges of open strategy during the development of this long-term vision, offering insights in the experienced

benefits and challenges of the open strategy process for Vitens. From a theoretical perspective, this master thesis enriches the open strategy literature by examining the experienced benefits and challenges of open strategy at the individual, group, and organizational level, which remained unexplored, offering nuances in open strategy literature and its implementation. Additionally, by exploring open strategy within the context of the infrastructure sector, this master thesis provides a first exploration of open strategy in this previously unexplored context. Hence, the research objective of this master thesis is:

‘Contributing to the understanding of open strategy practices in the Dutch water infrastructure sector, by examining the experienced benefits and challenges of open strategy at the individual, group, and organizational level at Vitens.’

1.4 Main research question and sub-questions

Following the objective of this research, the main research question of this master thesis is formulated as: *‘What are the experienced benefits and challenges of open strategy at the individual level, group level and organizational level at Vitens?’*

Several sub-questions are formulated to assist in answering this research question:

1. Which benefits and challenges of open strategy are experienced at the individual level at Vitens?
2. Which benefits and challenges of open strategy are experienced at the group level in the at Vitens?
3. Which benefits and challenges of open strategy are experienced at the organizational level at Vitens?

1.5 Outline of this master thesis

To address the research question, the remainder of this master thesis is structured as follows: Chapter 2 provides a literature review on the main benefits and challenges of open strategy, and concepts of strategizing processes at the individual, group, and organizational level. It also includes a synthesis of this literature, establishing the focus of this master thesis. Chapter 3 explains the research strategy and design, detailing the qualitative methods used for data collection and analysis, and how research quality and ethics were maintained. Chapter 4 presents the findings of this master thesis, identifying experienced benefits and challenges at the individual, group, and organizational level at Vitens, addressing the sub-questions. Chapter 5 answers the main research question and provides a discussion.

Chapter 2. Theoretical background

This chapter provides an understanding and reflection on relevant literature. In section 2.1, it explains what open strategy is and how it differs from traditional strategizing. After that, it lays out the main benefits and challenges of open strategy in section 2.2. In section 2.3, it provides concepts from strategy literature at the individual, group, and organizational level. Section 2.4 provides a synthesis of the literature on open strategy, alongside concepts of strategizing at the individual, group and organizational level. This synthesis shows how the existing research gap is being filled.

2.1 Defining open strategy

The definition of open strategizing is ‘a dynamic bundle of practices that affords internal and external actors greater strategic transparency and/or inclusion, the balance and extent of which respond to evolving contingencies derived from both within and without organizational boundaries.’ (Hautz et al., 2017, p.2). Implementing open strategy is a dynamic process, where an organization's decision to adopt a more open or closed stance is neither fixed nor binary (Appleyard and Chesbrough, 2017).

Open strategy is an emerging concept that advocates for transforming strategizing processes into more participative arenas (Hautz et al., 2019; Whittington et al., 2011). Unlike traditional strategizing, which tends to be more secretive and is typically designed exclusively by organizational elites (Johnson et al., 2010; Montgomery, 2008), open strategy introduces new dimensions of inclusion and transparency (Hautz et al., 2017; Seidl et al., 2019).

Inclusion is defined as ‘internal or external consultation’ which ‘embraces both the external consultation and the more comprehensive co-strategizing’ (Hautz et al., 2017, p.2). It offers advantages as granting access to wider sources of knowledge (Hautz et al., 2017), enhanced creativity stemming from larger, more diverse groups of participants (Stieger et al., 2012), heightened commitment to the resulting strategy, and shared sense-making regarding trends that are important for the organization (Doz & Kosonen, 2008; Hutter et al., 2017; Ketokivi & Castaner, 2004)

Transparency means ‘the internal or external visibility of information about an organization's strategy’ and ‘it encompasses the exchange of ideas and knowledge’ (Hautz et al., 2017, p2). It provides more available strategic information, allowing more people to engage in strategic conversation (Whittington et al., 2011). Furthermore, it promises increased legitimacy of knowledge (Whittington et al., 2011) and reduced problematic information

asymmetries with shareholders (Yakis-Douglas et al., 2017). Open strategy has the potential to facilitate collaboration among stakeholders (Appleyard & Chesbrough, 2017; Hardy et al., 2006).

2.2 Benefits and challenges of open strategy

The main benefits and challenges of open strategy are reflected in the five dilemmas of openness, and are the result of gradually enhancing levels of inclusion and/or transparency (Hautz et al., 2017). These main benefits and challenges are presented in figure 2.1 and are being explained in detail right after.

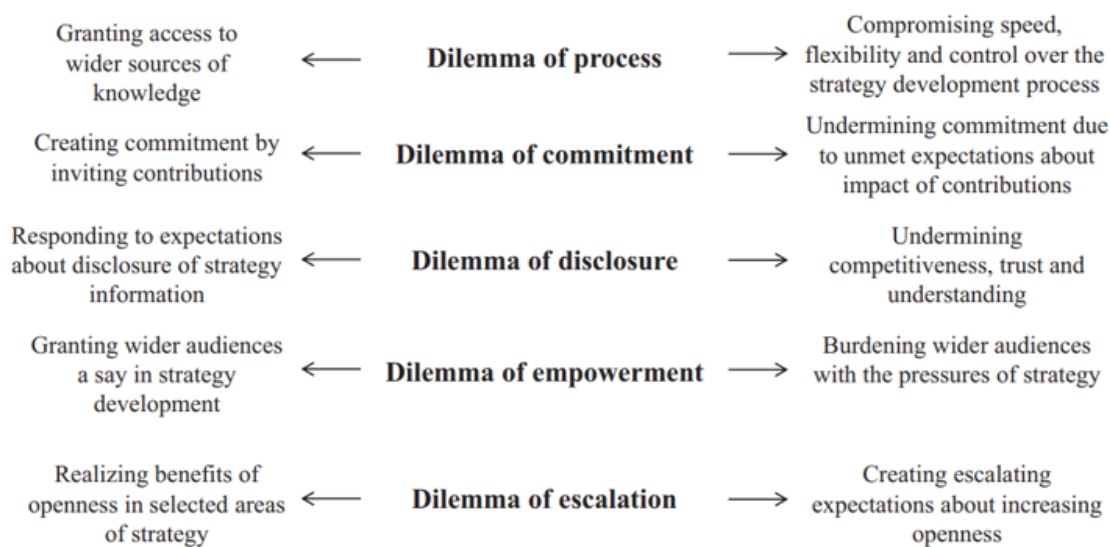


Figure 2.1: Main benefits and challenges of open strategy (Hautz et al., 2017)

The first dilemma is called the dilemma of process. This dilemma arises from the inclusion of broader audiences in the strategy making process, and this has mixed effects (Hautz et al., 2017). Inclusiveness has several advantages such as facilitating the integration of diverse knowledge sources, which improves the quality of strategic decisions (Appleyard & Chesbrough, 2017; Stieger et al., 2012). Including a wider audience enables access to different technical expertise, industry-specific perspectives, and novel strategic ideas (Baptista et al., 2017; Hardy et al., 2006; Werle & Seidl, 2012). However, increased inclusiveness presents significant challenges to decision-making processes (Hautz et al., 2017), among which are reduced flexibility, a slowed down decision-making process, and diminished control (Ashmos et al., 2002; Collier et al., 2004). Furthermore, Gegenhuber & Dobusch (2017) state that more openness often consumes organizational resources and reduces management's control over discussions. Additionally, including wider audiences can lead to unpredictable discussions due

to the emergence of irrelevant topics, which makes it challenging to maintain focus (Stieger et al., 2012).

The dilemma of commitment is the second dilemma. This dilemma is related to the double effect of open strategy on organizational commitment (Hautz et al., 2017). On one hand, including a broader audience in the strategy development process enhances motivation and fosters commitment to the resulting strategy, and increased commitment is essential for successful implementation of the strategy (Stieger et al., 2012). However, processing participant's input can make them feel frustrated if their input is moderated or restricted, which makes them feel undervalued and could lead to disengagement of the participants to the strategy process (Baptista et al., 2017). Furthermore, if initiatives of people are not being implemented, it may result in a loss of their motivation to contribute to the strategy process the next time (Luedicke et al., 2017).

The third dilemma is known as the dilemma of disclosure. This dilemma stems from increasing transparency in the strategy process (Hautz et al., 2017). Increasing transparency enhances legitimacy in response to evolving societal norms and regulatory requirements (Whittington et al., 2011), and it reduces information asymmetries between the organization and shareholders (Appleyard & Chesbrough, 2017; Gegenhuber & Dobusch, 2017; Hardy et al., 2006; Yakis-Douglas et al., 2017). But, increasing transparency also poses significant risks to an organization's competitiveness (Hautz et al., 2017), because strategically sensitive information may be exposed to competitors (Appleyard & Chesbrough, 2017). Furthermore, it might lead to a reduction in understanding, especially when interpreted in disparate contexts (Etzioni, 2010; Tsoukas, 1997), called the 'paradox of information society'. This occurs because the interpretation of information may vary depending on the audience's interpretive context, potentially resulting in conflicting interpretations (Tsoukas, 1997). Last, cognitive biases and information overload may restrict understanding of increased knowledge, as is the case while increasing transparency (Etzioni, 2010).

Fourth, the dilemma of empowerment, states that including more participants in the strategy process has both benefits and challenges for those participants (Hautz et al., 2017). A benefit is that participants are given a say in strategic issues, which enhances their power (Kim and Mauborgne, 1998; Korsgaard et al., 1995; Mantere, 2008). However, participants should invest additional time and effort into strategy work beyond their regular tasks (Luedicke et al., 2017). Additionally, inclusion in the strategy process implies formal or moral accountability for the outcomes of their contributions (Oakes et al., 1998). As highlighted by Knights and Morgan (1990), individuals involved in strategy become subjects who derive meaning and identity

through participation in strategizing, which could lead to enhanced feelings of pressure and strain, stemming from the strategy process. (Clegg & Kornberger, 2015).

The last dilemma is called the dilemma of escalation and arises when organizations initiate selective openness in certain dimensions or domains of their strategy process, which creates pressures for further openness across all dimensions (Hautz et al., 2017). Hautz et al. (2017) elaborate in this, by stating that organizations find it difficult to restrict openness in other dimensions, if they have open up in certain dimensions. This could also lead to disappointed participants of the strategy process, who had expectations about opening other aspects of the process too. For example, if participants are included in the strategy process, they often expect access to strategic information, and involvement in strategy development (Baptista et al., 2017; Dobusch & Müller-Seitz, 2014). Furthermore, if organizations include more participants in the strategy process, other employees will often expect to be included too (Baptista et al., 2017). Last, the participants in the process may not only expect to contribute to discussions but also to have a say in decision-making (Dobusch & Müller-Seitz, 2014; Luedicke et al., 2017). Failure to meet these escalating expectations of openness may result in disappointed participants (Dobusch et al., 2013).

2.3 Strategic concepts of strategizing at the individual, group, and organizational level

Strategy formation takes place within a network of stakeholders. This network encompasses an organization, where strategies are crafted (Mintzberg, 1990; Teece et al., 1997). Within the organization, there exist various groups, called departments, each comprising individuals who play a role in shaping strategy (Ancona & Caldwell, 1992; Burgelman, 1983; Eisenhardt & Zbaracki, 1992; Freeman & McVea, 2001). How strategy making is experienced, differs across individual, group, and organizational level (e.g. Kolvereid, 2005; Mantere, 2008; Paroutis & Pettigrew, 2007). A summary of concepts during strategizing processes at each level is provided in table 2.1. Following this, each aspect is elaborated upon in detail.

Table 2.1: Concepts of strategizing processes at each level

| Level | Concepts of strategizing processes | References |
|----------------|--|---------------------------|
| Individual | Experience of support | Mantere (2008) |
| | Initiative | Antoncic & Hisrich (2001) |
| | Perception | Kanter (1984) |
| | Tasks | Bhatt (2002) |
| Group | Interaction and coordination within groups | Pettigrew (2007) |
| | Complementation | Astley & Fomrbun (1983) |
| | Collective group strategy | Hawley (1985) |
| Organizational | Integration | Mantere (2005) |
| | Revisioning | Rouleau (2011) |
| | Consensus | Michael (1973) |
| | Decentralization | Whittington (1997) |
| | Focus | Maitlis & Lawrence (2003) |

2.3.1 Individual level strategic concepts

At the individual level, people find it important to feel supported by their superiors (Mantere, 2008). Furthermore, employees are more motivated to be innovative if they have taken the initiative of introducing and implementing innovative strategies (Antoncic & Hisrich, 2001). Whether employees provide innovative strategic content, is determined by their perception of the extent to which the organization encourages innovation of the individual (Kanter, 1984). Finally, individuals perform better when assigned specific tasks (Bhatt, 2002).

2.3.2 Group level strategic concepts

At the group level, interaction and coordination between members of the same department is important to facilitate strategic group work (Paroutis & Pettigrew, 2007). Furthermore, if a department consists of people who complement each in other in the light of

their knowledge, this enhances interdependency and fosters strategic teamwork (Hawley & Fombrun, 1983). Additionally, a collective group strategy: the collaborative mobilization of resources and the development of action plans within the department, is recommended (Hawley, 1950).

2.3.3 Organizational level strategic concepts

For the organization as a whole, it is important that there are integrative structures, meaning that different departments work together to achieve the company's strategic goals (Mantere, 2005). For example, active negotiations and compromises between actors among different departments is helpful to integrate the strategy in the organization (Jarzabkowski & Balogun 2009). What is also helpful to implement strategy well, is a revision of financial numbers by middle managers (Fauré & Roulea, 2011). Furthermore, firms should prioritize revisioning organizational procedures and policies to stay up to date with evolving realities (Bhatt, 2002). Organizations should also create a shared understanding of the strategy among the entire organization (Michael, 1973). A shared understanding of assumptions and analytical frameworks among the organization, called consensus, facilitates employees in aligning activities, and effectively addresses complex organizational challenges (Bhatt, 2002). Organizational decentralization is also helpful, because decisions will be taken by line-managers who have knowledge of the work area (Witthington et al., 1999; Zenger & Hesterley, 1997). Last, organizational focus, a clear direction for the future, helps the organization in allocation of resources (Maitlis & Lawrence, 2003).

2.4 Syntheses

Open strategy studies primarily focused on the main benefits and challenges of open strategy. However, the perception of strategy processes varies across organizational levels. Different concepts of strategizing processes are emphasized at the individual, group, and organizational level, as detailed in Table 2.1.

This master thesis has addressed this research gap by examining the experienced benefits and challenges of the open strategy process at Vitens from individual, group, and organizational perspectives, utilizing the strategic concepts outlined in table 2.1. Figure 2.2 provides a summary of the focus of this study.

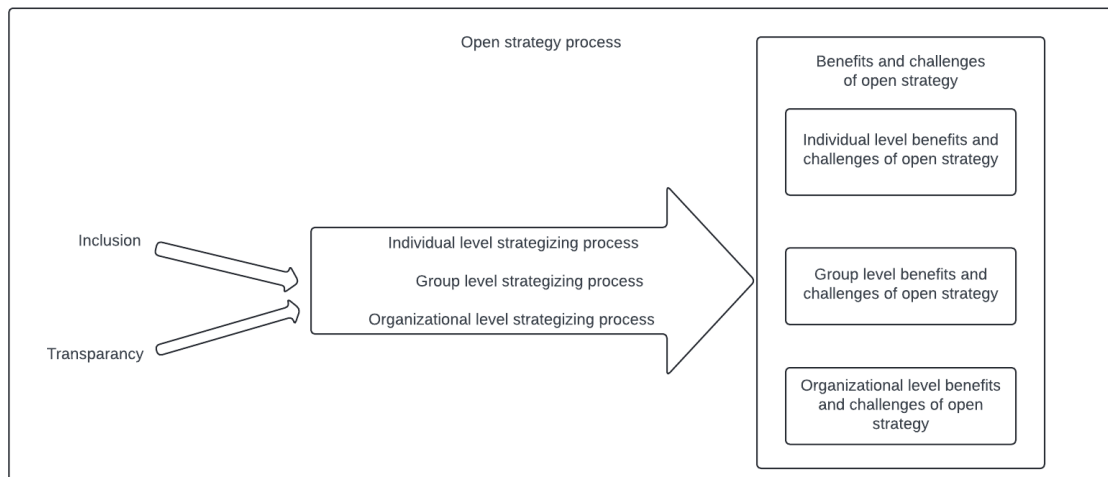


Figure 2.2: Illustration of the nuanced perspective on the main benefits and challenges of open strategy across the individual, group, and organizational level

Chapter 3. Methodology

This chapter presents the methodological choices of this master thesis. It first elaborates on the research strategy and the research design. Then the data collection methods are explained, after which the analysis methods of this data are elaborated on. Furthermore, sections also provide insights into how the research quality and research ethics have been maintained.

3.1 Research strategy

First of all, a positivistic philosophy was applied to this master thesis. A positivistic philosophy assumes that reality can be directly measured and understood by means of observable variables. It seeks to maintain objectivity (Meyers, 2019). This philosophy was suitable for this master thesis, since this master thesis applied variables from existing theory on benefits and challenges of open strategy and strategizing processes at different organizational levels. Furthermore, the structured approach enhanced objectivity in data analysis (Meyers, 2019).

Second, this master thesis conducted a qualitative study. Meyers (2019) states a qualitative study is most useful for delving deeply into a specific topic. It provides specific information about organizations and ‘it is useful to make statements about processes over time’ (Bleijenbergh, 2015, p.13). Bleijenbergh (2015) elaborates on that by stating that by interviewing employees within organizations, or by collecting documents, statements can be made about these processes. Therefore, a qualitative study fit the research objective of this master thesis of providing insight into the experienced benefits and challenges of the open strategy process during the development of the Streefstructuur.

Third, a deductive approach was adopted. A deductive approach involves examining the research subject within a well-defined theoretical framework (Bleijenbergh, 2015; Meyers, 2019). The benefits and challenges of open strategy have been well-documented in the existing literature, as have the strategic concepts at the individual, group, and organizational level. This literature provided a solid foundation for this master thesis. The aim of this master thesis was to use strategic concepts of each organizational level, to look at which benefits and challenges of open strategy were experienced at each organizational level. Consequently, both frameworks were employed to analyze the empirical data deductively. Furthermore, this deductive approach ensured that the analysis remained structured and systematic.

3.1.1 Research design

The methodology employed in this master thesis is a case study. A case study is the dominant methodology when the research is of qualitative nature (Bleijenbergh, 2015). A case study has been appropriate for this master thesis, because it allowed for an in-depth exploration of a specific phenomenon within its real-life context in a single organization (Meyers, 2019).

The organization at the center of this case study was Vitens. Vitens is the largest drinking water company in the Netherlands, managing an extensive water infrastructure network spanning 50,000 kilometers. They contribute to water management in the Netherlands and to the protection of water sources (Vitens, n.d.). Vitens has been working on a new water infrastructure system in the Netherlands, needed for a new, sustainable, and robust drinking water system in the future. This new water infrastructure system is called the ‘Streefstructuur’ (Hannema, 2024). In developing the Streefstructuur, Vitens has applied open strategy practices. The development of the Streefstructuur did start in 2021 and is still subject to constant change and continuous updates. Furthermore, open strategy is a dynamic process (Appleyard and Chesbrough, 2017) and Vitens is continually learning and evolving its open strategy practices. Therefore, a case study was appropriate, as it allowed for the use of empirical data spanning a significant time period of open strategy practices within Vitens. This approach enabled the study of a real-world application of open strategy within a key player in the Dutch water infrastructure sector.

Part of the theoretical contribution of this master thesis is to investigate the benefits and challenges of open strategy in the infrastructure sector, a sector where open strategy practices have not yet been explored. While a case study may not be ideal for broad generalizations (Bleijenbergh, 2015), the aim of this master thesis is not to generalize findings to the entire sector, but rather to provide an initial understanding of the benefits and challenges of open strategy in the infrastructure sector. Therefore, a case study was appropriate to obtain in-depth insights into these benefits and challenges.

3.2 Data collection methods

This master thesis used secondary interview data from an ongoing study on large-scale open strategizing processes in the Dutch infrastructure, supplemented with data from various policy documents. The subsequent part of this section provides detailed explanations regarding the utilization of the data collection methodologies in this research.

3.2.1 Secondary interview data

Most empirical data have been derived from secondary interview data from an ongoing study on open strategizing processes on a large scale in the Dutch infrastructure sector. In that study, 16 interviews with employees of Vitens were conducted at the end of 2023. During those semi-structured interviews, employees of Vitens have been questioned about their experiences of the open strategy process during the development of the Streefstructuur. With a total of 838 minutes of interview time, respondents elaborated comprehensive on strategizing processes at each level. Furthermore, the employees were also asked specifically about the benefits and challenges of the open strategy processes. By using these interviews with employees of Vitens as empirical data sources, this master thesis has captured firsthand experiences and perceptions related to the experienced benefits and challenges of the open strategizing process at each organizational level, which were helpful in answering the research question.

Furthermore, During some interviews, a colleague of the author was present, focusing on internal conceptions about strategizing within Vitens rather than just the Streefstructuur process. This broader focus included the development of the Streefstructuur and other strategic processes within the organization, providing additional information about the concepts of strategizing at each organizational level.

An overview of the interviewed employees, their department, the duration of each interview and if the other colleague was present, can be seen in table 3.1. The respondents are anonymized. The IDs are known to the author of this master thesis.

Table 3.1: Overview of interview respondents, their respective departments, and the duration of each interview.

| Respondent | Department | Duration | Colleague present |
|------------|--------------------------------|----------|-------------------|
| 1 | Regional environmental manager | 52 min. | No |
| 2 | Regional environmental manager | 41 min. | Yes |
| 3 | Extraction & Purification | 54 min. | Yes |
| 4 | Asset Management | 31 min. | No |
| 5 | Regional environmental manager | 60 min. | Yes |
| 6 | Governance | 36 min. | No |
| 7 | Governance | 62 min. | No |
| 8 | Regional environmental manager | 79 min. | No |
| 9 | Governance | 66 min. | Yes |
| 10 | Regional environmental manager | 57 min. | Yes |
| 11 | Governance | 58 min. | Yes |
| 12 | Asset Management | 57 min. | Yes |
| 13 | Asset Management | 50 min. | Yes |
| 14 | Business Development | 60 min. | No |
| 15 | Asset Management | 45 min. | Yes |
| 16 | Asset Management | 30 min. | Yes |

3.2.2 Documents

Besides interviews, documents were also gathered as empirical data. The first document gathered, document 1, is an initial document about the development of the Streefstructuur from

September 2021. It contained information about the first version of the Streefstructuur, called the Streefstructuur 2021. Furthermore, it detailed about its further development process, including who will be involved and how it will be developed. The second document gathered, document 2, is an updated version about the Streefstructuur, published in February 2023. This document provided information about the process of the development of the Streefstructuur up to that point and outlined the aspirations for its further development process. Because of the readability of this master thesis, the documents are not included in then appendix. documents can be requested from the author of this master thesis up until the defense of this master thesis.

Documents are useful sources of data. They provide supplementary evidence in addition to that obtained from interviews (Meyers, 2019). The documents were used additionally to the interviews, since collection of documents spanning various time periods ideally depicts decision-making processes and recorded information over time, providing a more accurate reflection of changes over time than interviews (Bleijenberg, 2015). Therefore, the documents were used to complement and cross-verify the interview data. By spanning various time periods, these documents depicted decision-making processes over time and provided additional insights beyond those obtained from the interviews. A potential disadvantage of documents is that they could be hard to have access to, and the authenticity, credibility and representativeness are sometimes hard to judge (Meyers, 2019). However, the authenticity, credibility and representativeness are present since it are official documents of Vitens.

3.3 Data analysis methods

After the data had been gathered, the analysis process began. A summarization of the data analysis process is presented in table 3.2. After that, each step is carefully elaborated on.

Table 3.2: Overview of the data analysis process

| Step | Action |
|------------------------------|---|
| 1 | Coding interviews. Used concepts of strategizing processes at each level from table 2.1 as deductive codes |
| 2 | Coding interviews. Used benefits and challenges of open strategy from figure 2.1 as deductive codes |
| 3 | Coding documents. Used concepts of strategizing processes at each level from table 2.1 as deductive codes |
| 4 | Coding documents. Used benefits and challenges of open strategy from figure 2.1 as deductive codes |
| 5 | Exported data from Atlas.ti to an Excell-file (quotation manager) |
| 6 | Analyzed the data to identify which benefits and challenges of open strategy were experienced at each organizational level. |
| From 17 January till 17 June | Keeping memos |

Both interviews and documents were analyzed through deductive coding, using Atlas.ti software. Coding proves to be useful for retrieving, organizing, and expediting the analysis process (Meyers, 2019). It helps to make connections between the data and abstract theories (Bleijenbergh, 2015), and therefore has proven to be useful in analyzing the empirical data of this master thesis. By starting with deductive coding - meaning looking at the data through the lens of existing theory on open strategy and strategic concepts (Bleijenbergh, 2015) - the analysis process became structured and systematic. This ensured that the analysis remained focused on answering the research question. With a large volume of data from interviews and documents, deductive coding provided a systematic approach to manage and analyze the data efficiently. By taking this approach, validity of the analysis process was enhanced since the analysis has been anchored in established theory from prior research (Elo & Kyngäs, 2008).

The data analysis process started by deductively coding the interview transcripts, looking for the presence of concepts of strategizing processes of the individual level, group level, and the organizational level, as highlighted in table 2.1 of the theoretical background chapter. For example, it was examined whether individuals experienced if they had specific tasks, if there was interaction and coordination within groups, whether there was an organizational focus, and so on. The words or sentences where these strategic concepts were apparent, have been coded.

After that, the interview transcripts were deductively coded by identifying the experienced benefits and challenges of open strategy. The main benefits and challenges of open strategy, as presented in figure 2.1 of the theoretical background chapter, were used as deductive codes. For example, it was examined whether access was granted to wider sources of knowledge, whether there was created commitment by inviting contributions, whether competitiveness, trust and understanding was undermined, and so on. The words or sentences where these benefits and challenges were apparent, were coded.

Last, the transcripts were analyzed by looking for which benefits and challenges of open strategy were experienced at each level. For example, if a respondent felt commitment to the development of the Streefstructuur when he had the specific task of advising the management, a benefit of open strategy that was experienced at the individual level was ‘creating commitment by inviting contributions’. Or, if a respondent experienced access to wider sources of knowledge when he was part of a complementary team, a benefit of open strategy that was experienced at the group level was ‘granting access to wider sources of knowledge’, and so on. The documents were analyzed in the same way. The findings from the documents were compared with those from the interviews, either verifying or contradicting the interview results.

Appendix A presents the quotation manager, which includes all the relevant quotes and codes from the interview transcripts and documents. The interviews were conducted in Dutch, and therefore the quotations in appendix A are also in Dutch. The quotations used in the results chapter and conclusion and discussion chapter have been translated into English.

Another data analysis method used included methodological, theoretical, and reflective memos. These have proven to be valuable in qualitative data analysis (Bleijenbergh, 2015; Meyers, 2019). Systematically recording findings and thoughts of the researcher facilitated the extraction of insights. These memos were generated throughout both the research and analysis phases, capturing the researcher's cognitive journey and contributing to the depth of understanding attained.

3.4 Research quality

The most important criteria for positivistic qualitative research and a deductive approach are internal validity, control over data collection, external validity, and usability (Baarda, De Goede, & Teunissen, 2009; Bleijenbergh, 2015). This section outlines how internal validity, control over data collection, external validity, and usability of results have been upheld in this master thesis.

3.4.1 Internal Validity

Internal validity refers to the extent to which the research accurately measures what it intends to measure, ensuring the results are not systematically biased (Bleijenbergh, 2015). In this master thesis, internal validity has been maintained by employing a well-defined theoretical framework based on established literature on open strategy and concepts of strategizing processes at different organizational levels. Furthermore, triangulation was applied by using multiple data sources, including interviews and documents, to cross-verify the findings. This approach helped in identifying consistent patterns and discrepancies, thereby enhancing the internal validity of this master thesis.

3.4.2 Control over data collection

Controllability of data collection involves making the data collection process transparent and replicable (Bleijenbergh, 2015). In this master thesis, detailed records were maintained for each step of the data collection process. Interviews were transcribed verbatim, and comprehensive memos were kept, documenting the context and nuances of the interviews. The use of Atlas.ti software facilitated systematic coding and organization of the data. Additionally, the respondents and their respective department were carefully documented. This transparency has ensured that the data collection process can be followed and scrutinized by other researchers, thereby enhancing the reliability and credibility of the findings.

3.4.3 External Validity

External validity, or generalizability, concerns the extent to which the findings can be applied to broader populations (Bleijenbergh, 2015). Bleijenbergh (2015) elaborates on that by stating that in qualitative research within an organization, there are several limitations regarding this criterion. For instance, the literal outcomes of a case study cannot be generalized, but the patterns may potentially be. This is referred to as analytical generalization (Yin, 2010). Therefore, external validity has been considered as the least important criterion for this master

thesis. However, this master thesis grounded its analysis in established theoretical frameworks, specifically the benefits and challenges of open strategy and strategic concepts at different organizational levels. By employing these well-defined frameworks, this master thesis sought to identify broader patterns and themes that could possibly extend beyond the immediate case of Vitens.

3.4.4 Usability

The usability of research results is increasingly important, particularly for the organizations involved (Verhoeven, 2010). The findings of this master thesis are directly relevant to Vitens. It provides insights for Vitens into the experienced benefits and challenges of its open strategy process. By understanding these experiences, Vitens can make well-informed decisions to leverage the benefits and tackle the challenges of open strategy processes. This, in turn, promotes enhanced collaboration among stakeholders.

3.5. Research ethics

Regarding the analysis of interviews, the author of that study informed the participants by e-mail that the conducted interviews were analyzed by a student regarding his master thesis. Furthermore, transcripts have been anonymized and shared with participants for potential edits before the audio recordings will be deleted.

Memos made during interviews, along with their analysis, are not included in the final document but can be requested from the author of this master thesis up to the defense of this master thesis. After the defense, the memos will be deleted.

The data has been securely stored on the university's cloud and will be deleted after the final grade of the master thesis is received. Transparency has been maintained regarding the use of documentation with the supervisor of this master thesis. Furthermore, Vitens was contacted to check whether they had any objections to being mentioned in this thesis, and sharing the document files. They stated that they had no issues with it.

The results of this master thesis will be publicly available on the Radboud Repository, with permission granted by the interview participants. All participants will be given the option to receive the research results, which will be shared via email. The methods and findings of this this master thesis do not pose any harm to any stakeholders.

Chapter 4. Results and analysis

This chapter presents the findings of this master thesis. The findings are organized into subcategories reflecting the experienced benefits and challenges of open strategy at the individual, group, and organizational level at Vitens. Each section explicitly addresses how the findings answer the research questions.

4.1 Individual level

This section addresses the experienced benefits and challenges of open strategy at the individual level at Vitens. The first subsection outlines the experienced benefits, while the second subsection outlines the experienced challenges. The final subsection answers sub-question 1.

4.1.1 Experienced benefits of open strategy at the individual level at Vitens

Respondent 3, an advisor to the management team, described how his role involved specific tasks to advise the management team, and thereby the management team was not working solely, but made use of wider sources of knowledge. In document 2, a policy document about the Streefstructuur 2022, it was also stated that the developers of the Streefstructuur made use of wider sources of knowledge, by getting input from plan formers and strategic environmental managers. Furthermore, respondent 3 stated that there were individuals who took initiative in improving the strategy of Vitens. Respondent 3 had the specific task to guide them and thereby granting them a say in the strategy development process.

Respondent 5, responsible for the sustainability performance of Vitens, underscored the benefits of making use of wider sources of knowledge; he took initiative in gathering insights from various departments like '*business development, asset management, design and construction, extraction and purification, financial control*'. Thereby he ensured that sustainability was embedded in the strategy, contributing to a more focused and integrated organizational approach. Furthermore, by taking this initiative in gathering people from different departments together, he also made use of wider sources of knowledge.

Respondent 6 also took initiative; he created commitment from stakeholders by inviting them to make contributions to the Streefstructuur. He sought feedback from politicians and the public as part of these contributions. This aligned with his specific task of being responsible for media relations and public affairs.

4.1.2 Experienced challenges of open strategy at the individual level at Vitens

Respondent 2 expressed frustration with the top-down design of the Streefstructuur, which led to unmet expectations about contributions. Not much was done with contributions according to respondent 2. He stated: *'you can talk till the cows come home'*. Respondent 2 also noted a perception that the organization did not encourage innovation, and described a feeling of undermined commitment.

Similarly, respondent 8 shared a comparable experience of feeling discouraged from contributing ideas, which undermined his commitment to the strategy process. He also noted a lack of environmental sensitivity within the organization, which further eroded trust and understanding of the strategy development process.

Respondent 9 also recognized that internally, there was a lack of commitment and frustration due to the top-down process. Employees felt no experience of support and confused because the Streefstructuur contradicted other organizational strategies, leaving them uncertain about the direction to take

On the other hand, respondent 4 did feel experience of support from his supervisor. However, because of this support he experienced speed was compromised in the strategy development process, as consulting with his supervisor took time.

4.1.3 Answering sub-question 1

A summary of the findings regarding the experienced benefits and challenges of open strategy at the individual level at Vitens, along with the corresponding respondents who mentioned these benefits and challenges, is presented in table 4.1.

Table 4.1: Experienced benefits and challenges of open strategy at the individual level at Vitens

| Benefits | Challenges |
|---|--|
| Granting access to diverse knowledge sources (3, 5) | Compromising speed, flexibility and control over the strategy development process (4) |
| Creating commitment by inviting contributions (6) | Undermining commitment due to unmet expectations about impact of contributions (2, 8, 9) Undermining competitiveness, trust and understanding (8) |

The findings are helpful in answering sub-question 1: ‘Which benefits and challenges are experienced at the individual level at Vitens?’

From the findings, it is concluded that the benefits of open strategy experienced at the individual level at Vitens are: ‘Granting access to wider sources of knowledge’ and ‘creating commitment by inviting contributions’. The challenges of open strategy experienced at the individual level at Vitens are: ‘Undermined commitment due to unmet expectations about the impact of contributions’, ‘compromised speed in the strategy development process’ and ‘undermined competitiveness, trust and understanding’.

4.2 Group level

This section addresses the experienced benefits and challenges of open strategy at the group level at Vitens. The first subsection outlines the experienced benefits, while the second subsection outlines the experienced challenges. The final subsection answers sub-question 2.

4.2.1 Experienced benefits of open strategy at the group level at Vitens

Respondent 3 was part of a project board and noted the positive group dynamics within these project boards. These project boards included representatives from asset management and other departments. There was interaction and coordination within these boards, which allowed different functional employees to consider various aspects of strategy collectively. In other words, employees made use of wider sources of knowledge which fostered a more

comprehensive approach to strategy development. Furthermore, because the project boards had the collective group strategy of providing advice to the management team, respondent 3 felt that the management team made use of the knowledge that the project boards provided. This was also supported by document 2, where it was stated that the developers of the Streefstructuur made use of wider sources of knowledge by getting input from plan formers and strategic environmental managers.

There was also a separate department that was responsible for strategizing and respondent 9 was team manager of that department. He stated it was a very complementary team with about 20 permanent workers, complemented with five a six flexible workers, trainers, interns and graduate students. In total there were about six expertise within the team. In this way, there had been made use of wider sources of knowledge. His team had the collective group strategy of being responsible for strategizing and planning. They facilitated integration within the organization by working together with other departments, such as Finance and Control and Asset Management, thereby making use of wider sources of knowledge.

As part of the portfolio management team, respondent 13 discussed the benefits of interaction and coordination within his department. He highlighted the complementary expertise within the team, which allowed for a more comprehensive understanding of Vitens' priorities because there had been made use of wider sources of knowledge.

Respondent 14 stated that there was a department called 'Innovation Commission' who had the collective group strategy of facilitating integration within Vitens. Group members of this department did this by granting wider audiences a say in the strategy development program, such as four MT members from different departments.

4.2.2 Experienced challenges of open strategy at the group level at Vitens

Respondent 9 highlighted initial challenges in the use of speed and control. Because he had a complementary team with group members of diverse expertise, there was initially less speed and control over the strategy development process.

4.2.3 Answering sub-question 2

A summary of the findings regarding the experienced benefits and challenges of open strategy at the group level at Vitens, along with the corresponding respondents who mentioned these benefits and challenges, is presented in table 4.2.

Table 4.2: Experienced benefits and challenges of open strategy at the group level at Vitens

| Benefits | Challenges |
|---|--|
| Granting access to wider sources of knowledge (3, 9, 13) | Compromising speed and control over the strategy development process (9) |
| Granting wider audiences a say in the strategy development process (14) | |

The findings are helpful in answering sub-question 2: ‘Which benefits and challenges are experienced at the group level at Vitens?’

From the findings, it is concluded that the benefits of open strategy experienced at the group level at Vitens are: ‘Granting access to wider sources of knowledge’ and ‘granting wider audiences a say in the strategy development process’. The challenge of open strategy experienced at the group level at Vitens is: ‘Compromising speed and control over the strategy development process’, although challenges at the group level were only mentioned by one respondent.

4.3 Organizational level

This section addresses the experienced benefits and challenges of open strategy at the organizational level at Vitens. The first subsection outlines the experienced benefits, while the second subsection outlines the experienced challenges. The final subsection answers sub-question 3.

4.3.1 Experienced benefits of open strategy at the organizational level at Vitens

Respondent 1 realized the benefits of openness, by stating that if the Streefstructuur would have been developed bottom-up, so more people would have been engaged, it would have helped in integrating departments within the organization. This statement, suggesting that the Streefstructuur was not developed bottom-up, contradicted some other findings which indicated that the Streefstructuur was developed in consultation with diverse employees. For instance, in document 1 employees were encouraged to contribute to its development. The document stated: "*Streefstructuur Vitens. Thinking along? If you have suggestions, let us know! You can submit them on the department site of Asset Management.*" Also document 2 stated that different colleagues of Vitens have contributed by the means of an innovation project of integral

asset management. However, in the appendices of that same document, it was stated that '*We note that our long-term infrastructure strategy (or asset strategy) and our organizational strategy are not yet managed and shaped hand-in-hand enough*'.

Respondent 3 explained that regarding the development of the Streefstructuur there was integration and there had been made use of wider sources of knowledge, since different people of different departments worked together on developing the Streefstructuur. Document 2 supported this, where it was stated that the developers of the Streefstructuur made use of wider sources of knowledge by getting input from plan formers and strategic environmental managers. Furthermore, respondent 3 stated that there was consensus about realizing benefits of openness since throughout the whole organization there was the awareness that further developing the Streefstructuur required cooperation with stakeholders. He noted that for strategies other than the Streefstructuur, there was a lack of integrated decision-making on the total costs of ownership. This lack of integration could have been improved by granting wider audiences a say in the strategy development process. He stated, "*I don't recognize that integral decision on the total costs of ownership,*" highlighting the need for greater inclusion.

Respondent 5 stated that regarding the development of the Streefstructuur there had been made use of wider sources of knowledge: all necessary knowledge sources were gathered to develop the Streefstructuur and there was integration regarding this development. He felt that granting access to wider sources of knowledge was helpful in ensuring an organizational vision, embodied by the Streefstructuur. His statements were supported by document 1, which noted that Vitens used the Streefstructuur as an organizational focus. Furthermore, this document also encouraged employees to contribute to the Streefstructuur's development, thereby the management team was making use of wider sources of knowledge.

Respondent 8 stated that the Streefstructuur had been '*totally written by people who are working their whole life in the infrastructure sector*' and he called it an arrogant attitude that so few people have had a say in the strategy development process. By his cite he meant that also external stakeholders should contribute to the development of the Streefstructuur, which was also acknowledged by respondent 3.

The findings from respondent 9 supported the findings from respondent 1, stating that only a few people were involved in developing the Streefstructuur. Furthermore, in document 2 it was acknowledged that the Streefstructuur 2021 was fully based on the expert of only two employees. Respondent 9 realized benefits of openness by explaining that if the Streefstructuur would have been developed bottom-up, '*It would have led to a completer picture.*' He elaborated on that by making clear that he felt it was obvious departments should cooperate

more; achieve better integration. This is partly due to his observation that the world around him was changing fast, so he also saw benefits in open strategizing because he taught there should be a revisioning of organizational procedures and policies and that could be accomplished by cooperation.

Benefits of openness were also realized in stating that external stakeholders were needed to revision organizational procedures, as stated by respondent 11. Therefore, external stakeholders were granted a say in the further development of the Streefstructuur. Document 2 verified respondent 11's view that benefits of openness were realized, as it stated that the Streefstructuur would be developed in an even more open process from then on.

Respondent 14 stated that within the organization there was consensus about *'the fundamental awareness that the Streefstructuur will only succeed if you are willing to let go some of your autonomy as the management team, and include more people in the strategy process'*. Therefore, he stated that there was an organizational wide consensus about realizing benefits of openness.

Additionally, respondent 16 discussed the ongoing efforts to revise organizational procedures to prioritize long-term goals over short-term objectives. Respondent 16 claimed that a lot of employees within Vitens were working on this revisioning. Wider audiences were granted a say in the strategy development process regarding the revisioning of organizational procedures, such as balancing short-term and long-term goals. Departments came together to put their insights on posters. In other words, there was integration to facilitate the revisioning.

4.3.2 Experienced challenges of open strategy at the organizational level at Vitens

Respondent 1 pointed out that the lack of disclosure about the Streefstructuur was not helpful in realizing integration across the organization, with each department making its own interpretation, causing confusion and undermined trust. He noted, *"every department is just making its own interpretation"* and *'nobody knows when they are doing it right'*." Another consequence of the lack of disclosure about the Streefstructuur to employees, was that employees did not share the Streefstructuur with external stakeholders, while these stakeholders stated they would have wanted that. This again was experienced as undermining competitiveness of Vitens and undermined trust in the Streefstructuur of employees.

Respondent 3 stated that there was not much integration; no good cooperation between departments that were working on short-term strategies, and departments who were working on long-term strategies. This was experienced as not having much control over the strategy development process. He stated: *'discussions and decisions and interests are not always on the*

same place in this company'. Furthermore, he stated that in these strategy development processes there was no organizational focus. These statements applied to other strategy development processes than the Streefstructuur, since regarding the Streefstructuur there was integration within the organization.

Respondent 8 stated that regarding the Streefstructuur the organization shifted to area teams, while originally Vitens operated per cluster. He stated that this was not thought out well; this revisioning resulted in less control over the strategy process. However, the organization attempted to integrate the area teams, encouraging them to work together to make the Streefstructuur more integrated. Respondent 8 stated: *'We like it to be a plan not only of asset management, but also of the department of Governance, and the department of WEG. So it is integrated internally'*. However, he stated that this is difficult, and it resulted in compromising speed regarding the strategy process.

Respondent 9 was afraid of *'tunnel vision'* because there was not much integration, which undermined his trust in and understanding about the Streefstructuur. However, sometimes there was integration during cooperative MT meetings where different departments came together. The management team used the information discussed in these meetings as knowledge sources. But at the end, there was no consensus within the organization regarding short term versus long term strategizing, which compromised the speed and control over the strategy process. Furthermore, respondent 9 felt that a revisioning of organizational policies was needed because he felt that too often decisions were made on the basis of assumptions. He thought this should change, but he acknowledged that revisioning would compromise speed in the process. Additionally, these decisions were taken only by the management, so there was no decentralization which led to undermined trust of respondent 9. He gave several examples of when there was no decentralization and undermined trust regarding the strategy. He said: *'the management team should listen more often to experts within the organization'*.

Respondent 10 felt the pressure of being responsible for the Streefstructuur, also because there was no integration within the organization. He gave an example: *'Here it is like, we do a bit of the preview, then asset management takes over to make it a business case, then a designer will look at it. There are different expertise within different departments, and everyone is looking at each other like: 'who is going to take lead in this?'*. This led to less flexibility in the strategy process.

Respondent 11 stated that only two or three people from Vitens developed the Streefstructuur, as they were in a hurry to realize the Streefstructuur. These two or three people chose not to decentralize to avoid compromising speed in the strategy development process.

Respondent 11 understood this. He stated: *'if you want to go far, go together. But if you want to go fast, go alone'*. Document 2 stated that the Streefstructuur will be developed in a more open process. Furthermore, document 2 verified the feelings of respondent 11, stating that due to the open character of the strategy development, speed will be compromised. *'Designing the new infrastructure will take long (20 years) by identifying all the information needed'* and to revision organizational policies.

That a revisioning compromises speed and control over the strategy process was also stated by respondents 5 and 14. Respondent 5 was responsible for making sure that sustainability was part of the strategy of Vitens, thereby he stated that this maybe will lead to revisioning of organizational procedures and thereby will compromise speed in the further development of strategies of Vitens. Respondent 14 acknowledged that Vitens should also be willing to help external parties with things that they are not good at. But he stated that this *'requires a lot from your organization in terms of organizational development'*, because organizational procedures must be revisioned and this will slow down the strategy development.

Respondent 16 stated that there must be a revisioning of organizational procedures: the long term should be prioritized above the short term. Choices had to be made about projects: will they serve the long or short term? But these choices were not clear, and this undermined the understanding of employees about the strategy of Vitens. Document 2 also indicated that initially, strategy development was too focused on short-term goals, overlooking the long-term vision necessary for effective strategizing.

4.3.3 Answering sub-question 3

A summary of the findings regarding the experienced benefits and challenges of open strategy at the organizational level at Vitens, along with the corresponding respondents who mentioned these benefits and challenges, is presented in table 4.3.

Table 4.3: *Experienced benefits and challenges of open strategy at the organizational level at Vitens*

| Benefits | Challenges |
|---|--|
| Granting access to wider sources of knowledge (3, 5) | Compromising speed, flexibility and control over the strategy development process (3, 5, 8, 9, 10, 11, 14) |
| Granting wider audiences a say in the strategy development process (16) | Undermining competitiveness, trust and understanding (1, 9, 16) |
| Realizing benefits of openness (1, 3, 8, 9, 11, 14) | Feeling burdened with the pressure of strategy (10) |

The findings are helpful in answering sub-question 3: *‘Which benefits and challenges are experienced at the organizational level at Vitens?’*

From the findings, it is concluded that the benefits of open strategy experienced at the organizational level at Vitens are: ‘Granting access to wider sources of knowledge’, ‘granting wider audiences a say in the strategy development process’, and ‘realizing benefits of openness’. The challenges of open strategy experienced at the organizational level at Vitens are: ‘Compromising speed, flexibility and control over the strategy development process’ and ‘undermining competitiveness, trust and understanding’.

Chapter 5. Conclusion and discussion

The results in chapter 4 addressed the three sub-questions. This chapter concludes by answering the main research question. Following this, the discussion section offers insights into contradictory empirical findings. It then elaborates on the theoretical contribution of this master thesis, practical implications and recommendations, limitations of this master thesis, and implications for future research.

5.1 Conclusion

In chapter 1, the main research question was defined as: *‘What are the experienced benefits and challenges of open strategy at the individual, group, and organizational level at Vitens?’*.

To answer the research question, three sub-questions were formulated in chapter 1, and answered in chapter 4. The answer to the main research question is the aggregation of the answers to the three sub-questions, which can be seen in table 5.1 This table presents the experienced benefits and challenges of open strategy at the individual, group, and organizational level at Vitens, thereby providing the answer to the main research question.

Table 5.1: Experienced benefits and challenges of open strategy at the individual, group, and organizational level at Vitens

| Level | Benefits | Challenges |
|----------------|--|---|
| Individual | Granting access to diverse knowledge sources | Compromising speed, flexibility and control over the strategy development process |
| | Creating commitment by inviting contributions | Undermining commitment due to unmet expectations about impact of contributions Undermining competitiveness, trust and understanding |
| Group | Granting access to wider sources of knowledge | |
| | Granting wider audiences a say in the strategy development process | Compromising speed, flexibility and control over the strategy development process |
| Organizational | Granting access to wider sources of knowledge | |
| | Granting wider audiences a say in the strategy development process | Compromising speed, flexibility and control over the strategy development process Undermining competitiveness, trust and understanding |
| | Realizing benefits of openness | Feeling burdened with the pressure of strategy |

5.2 Discussion

This section first addresses contradictory findings in this master thesis. After that, subsections go into detail about the theoretical contribution of this master thesis, practical

contributions and recommendations, limitations of this master thesis, and implications for future research.

5.2.1 Contradictory findings

Regarding the strategy process of developing the Streefstructuur, there are differing opinions about the level of inclusion. While some respondents stated that multiple stakeholders were involved in the strategy development process, others provided contradictory views. For instance, respondents 1, 8, and 9 indicated that the development of the Streefstructuur was mostly top-down, with limited employee inclusion.

The contradictory findings of respondents 1, 8, and 9 could perhaps be explained by the departments they belong to. Respondent 9 is part of the Governance department, while respondents 1 and 8 are part of the Regional Environmental Managers department. Further examination of findings from other respondents that are apart of the Regional Environmental Managers department reveal that respondent 2 also expressed frustration with the top-down development of the Streefstructuur. Moreover, respondent 10 did not comment on the top-down or bottom-up structure but noted the lack of integration in the development process. Respondent 5 is the only respondent who is part of the Regional Environmental Managers department who did not express frustration regarding the development of the Streefstructuur. This could possibly be explained by his initiative in gathering insights from various departments.

Additionally, looking at other respondents who are members of the Governance department, respondent 11 also stated that only a few people developed the Streefstructuur. Therefore, the contradictory experiences of respondents 1, 8, and 9, among others, might be attributed to their respective departments. It is possible that members of the Regional Environmental Managers department and the Governance department felt less included in the development of the Streefstructuur.

5.2.2 Theoretical contribution

This master thesis contributes to the theory on open strategy by providing nuanced insights into the benefits and challenges experienced at different organizational levels within the Dutch water infrastructure sector. Existing literature on open strategy, such as Hautz et al. (2017), has identified general benefits and challenges but has not which of these benefits and challenges are experienced at individual, group, and organizational levels. This master thesis extends the literature of open strategy by detailing these experiences, providing a more comprehensive view of open strategy practices. Furthermore, it provides initial insights into

the experiences of open strategy in the infrastructure sector, which was previously unexplored.

Additionally, the empirical data of this master thesis is open to interpretations that go beyond answering the research question. For instance, the benefits and challenges identified seem to align with strategic concepts such as managerial trust (Mantere, 2008), coordination and interaction between group members (Paroutis & Pettigrew, 2007), and organizational integration (Mantere, 2005). These comparisons highlight the possible interconnectedness of strategic levels and underscore the importance of a holistic approach to strategy development. For instance, this master thesis shows that the benefits of granting access to wider knowledge sources and stakeholder inclusion, emphasized by Hautz et al. (2017), were experienced when there was managerial support and specific task assignments at the individual level (Bhatt, 2002). This reinforces the idea that individual-level engagement is helpful for the overall success of open strategy initiatives.

Group-level benefits, such as making use of wider sources of knowledge and granting wider audiences a say in the strategy development process, seem to align with Astley & Fombrun (1983) and Hawley (1985) on enhanced knowledge sharing through complementary teams and collective strategies. Yet, the challenge of compromised speed and control, particularly when including broader audiences such as in diverse teams, reflects a challenge of open strategy (Ashmos et al., 2002; Collier et al., 2004; Stieger et al., 2012; Gegenhuber & Dobusch 2017; Hautz et al., 2017).

At the organizational level, the necessity for integration and shared understanding, as highlighted by Mantere (2005) and Michael (1973), seem to be supported by some of the findings from this master thesis, showing that integration across departments helps in developing a unified strategic vision. This aligns with Hautz et al.'s (2017) emphasis on the benefits of inclusiveness and transparency, suggesting that these principles are vital for organizational cohesion and long-term strategic success.

5.2.3 Practical implications and recommendations

Based on the results and analysis of the results as provided in chapter 4, this master thesis offers valuable insights and practical implications for Vitens.

First of all, it provides insights which benefits and challenges of open strategy have been experienced during open strategy processes. With this understanding, Vitens can take actions to capitalize on the benefits and address the challenges of open strategy processes.

Furthermore, the results of this master thesis provide some initial insights into the

relation between benefits and challenges of open strategy and strategic concepts of strategizing processes at the individual, group, and organizational level. For example, Vitens could enhance managerial support. Recognizing the importance of individual-level engagement, Vitens could ensure that managers actively support their teams by assigning specific tasks related to strategic initiatives. This approach can possibly help employees feel valued and motivated to contribute, thereby enhancing their commitment and innovation.

At the group level, Vitens could possibly improve the quality of strategic decisions by fostering a culture of knowledge sharing. This could be achieved by creating complementary teams. Regular workshops and strategy meetings can be organized to promote interaction and coordination among team members.

To realize the benefits of open strategy at the organizational level, Vitens could prioritize inclusiveness and transparency. This involves clearly communicating strategic goals and processes to all employees and stakeholders. Developing platforms for regular feedback and open discussions can help in maintaining transparency and fostering a sense of shared understanding and commitment.

Furthermore, emphasizing integration across different departments seems relevant. Vitens could establish integrative structures that facilitate collaboration among departments, ensuring that strategies are aligned and cohesive. This can be done through joint strategic planning sessions and integrated project teams that work together on key initiatives like the Streefstructuur.

Additionally, granting wider audiences a say in strategy development could be beneficial for revising organizational procedures and policies. Vitens could actively involve employees and external stakeholders in this process to ensure that the revised procedures are comprehensive and effective.

Last, to mitigate the challenges related to compromised speed and flexibility, Vitens could implement more agile strategic planning processes. This includes setting clear timelines, maintaining a balance between inclusiveness and decision-making efficiency, and regularly reviewing and adjusting strategies as needed.

Besides providing insights into the experienced benefits and challenges of its open strategy process, this master thesis presents Vitens with promising results that warrant further investigation. It is recommended that Vitens' management explore these initial insights to better understand the precise relationships between strategic concepts at the individual, group, and organizational levels, and the benefits and challenges of open strategy.

5.2.4 Limitations

This master thesis has several limitations that should be acknowledged to provide a balanced view of the research findings and offer directions for future research.

First, the framework of open strategy utilized in this master thesis, based on Hautz et al. (2017), focuses on specific dimensions of transparency and inclusiveness. While this framework is well-established, it does not encompass all aspects of open strategy, particularly in diverse organizational context. Furthermore, the focus of this master thesis at the individual, group, and organizational levels provided valuable insights into which benefits and challenges of open strategy were experienced across different levels of the organization. However, this tripartite division may overlook other relevant levels of analysis, such as broader institutional environments.

Second, the reliance on qualitative data from interviews and documents in this master thesis means that some nuances and complexities of open strategy practices might have been overlooked. The primary focus was on examining the experienced benefits and challenges of open strategy at different organizational levels. However, the data also provided insights into possible causal relationships between strategic concepts across these levels and the benefits and challenges of open strategy. These causal relationships were not sufficiently addressed to provide hard conclusions, as the main research question was descriptive in nature. By the time these causal relationships emerged during the analysis, it was too late to change the main research question. Additionally, testing these causal relationships would likely require a quantitative approach, which was not feasible due to time constraints.

Third, the deductive approach adopted in this master thesis, using existing theoretical frameworks to guide data analysis, constrained the exploration of unexpected findings or novel insights that fall outside the predetermined categories.

Fourth, limitations of this master thesis are also related to the sample size and the use of interview data. The sample size of 16 interviews, while sufficient for qualitative analysis, may not capture the full diversity of experiences within Vitens. Potential biases in responses is another limitation, as participants' experiences are influenced by their roles and experiences. Furthermore, the respondents were primarily internal stakeholders, which may have introduced a bias towards the organization's practices and outcomes. Thereby, the interviews used in this master thesis were conducted as part of another research project. This secondary use of data could have limited the depth of understanding and contextual insights that might be gained from conducting the interviews firsthand.

Fifth, the focus on a single organization limits the generalizability of the findings. The specific context and practices of Vitens may not be fully representative of other organizations in the Dutch water infrastructure sector or beyond.

The last limitations are related to the use of documents. The reliance on internal documents provided by Vitens may have limitations in terms of objectivity and comprehensiveness. These documents may not fully reflect external perspectives or critical evaluations of the organization's strategy processes. Furthermore, this master thesis relied on a limited number of policy documents from Vitens to supplement the interview data. The restricted access to documents may have introduced biases, as the selected documents might not fully represent the strategic processes and activities within the organization.

5.2.5 Implications for future research

A first implication for future research is related to the focus of this master thesis at the individual, group, and organizational level. This focus might overlook other relevant levels of analysis, such as broader institutional environments. Future research could consider these broader levels of analysis to offer a more holistic view of strategic openness.

Second, this master thesis identified potential causal relationships between strategic concepts at different organizational levels and the benefits and challenges of open strategy. Future research could employ quantitative methods to test these relationships systematically. Surveys and statistical analyses could provide robust evidence on how specific strategic practices at different organizational levels influence the experiences of benefits and challenges of open strategy.

Third, future studies could build on the findings of this master thesis by conducting additional interviews with employees of Vitens to provide a more comprehensive view of the experiences within Vitens. Additionally, external stakeholders could also be asked about how they experienced the development and disclosure, limiting biases of internal employees in the results.

Last, future research could explore open strategy practices across different organizations in the Dutch water infrastructure sectors. This would help in generalizing the findings of this master thesis to the broader context of the Dutch water infrastructure sector.

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Appendix A: Quotation manager



Quotation
Manager.xlsx