

From a lost soul to connecting hero.

A case study of sustainability integration in a Dutch regional water authority.

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Words: 19845



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“Change is the law of life. And those who look only to the past or present are certain to miss the future.”

– J. F. Kennedy (1963)



Preface.

“Change is the law of life. And those who look only to the past or present are certain to miss the future.”

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The world is at a pivotal moment where the necessity for sustainable practices has never been more pressing. Our world is at a crossroads, where the decisions we make today will define the landscape of tomorrow. My academic journey at Utrecht University, culminating with this thesis, has been fueled by a profound desire to be part of this transformative wave. From the beginning of my studies, I was driven by the question: How can I make an impact? This question has been my guiding light, shaping my academic pursuits and research endeavors. This thesis represents the culmination of my efforts to address that question. It is a product of my commitment to understanding and fostering sustainability in a world that so desperately needs it. Through this thesis, I hope to contribute to a future where sustainability is not just an option but the foundation upon which we build our societies.

First and foremost, I would like to express my deepest gratitude to my thesis supervisor, Dr. Brian Dermody, for his guidance, extensive feedback, and the many enlightening conversations we had throughout this research process. I also want to thank Dr. Niko Wojtynia for his constructive feedback on my research proposal, which significantly enhanced the focus and clarity of my study. I am also deeply appreciative of Floor Boerwinkel, my supervisor at Arcadis. Her encouragement and insights provided much-needed motivation and direction. The encouragement and perspectives offered by Sara Vellenga and Henke Pons were also invaluable, enriching the research with their enthusiastic contributions and keen insights. I also want to thank Martine Maan and Doreen Smid for their peer feedback and numerous brainstorming sessions. Finally, I extend my heartfelt appreciation to WSHD for their active participation and support in this study. Their involvement was crucial to the practical application of my research.

Thank you all for your encouragement and dedication.

Sincerely,

Anne Ranselaar



Abstract.

The Dutch regional water authorities (DRWA) experience pressure to increase their sustainable practices due to the changing climate and political pressure. This research focuses on the structural organisational barriers encountered by the Dutch regional water authority Hollandse Delta (WSHD) during the integration of sustainability. It examined the complex network of the WSHD to resolve current misunderstandings and provide recommendations for sustainable management.

The actor-issue network, supplemented by the attributes of organisational change and the power-interest matrix, serves as the theoretical framework. The study is qualitative, aiming to delve deeply into the complexities of the interdependencies of actors and issues within the network of WSHD to identify structural barriers of sustainable integration. A total of 29 semi-structured interviews were conducted to gather detailed insights from individual employees. These interviews identified collaborations between actors, issues experienced by them, and their interrelationships to map out the actor-issue network, provide an overview of the structural barriers, and gain insights into the level of power and interest of stakeholders.

Based on the actor-issue network, three organisational issues that had the highest out-degree and were identified by all departments were chosen for further examination. Subsequently, the governance gaps were identified for these barriers. Internal stakeholder formulated 33 bridging measures for four structural barriers; *different priorities, lack of clear goals, level of specialisation and lack of focus*.

Key recommendations include the establishment of a sustainability advisory group to centralise and streamline sustainability efforts across departments. This group would ensure coherent communication and collaboration. To foster these processes, support from bridging departments and the board of directors is essential. Key stakeholders to foster this process include the bridging departments *Strategy and Policy (SB)*, *Legal and Facility Affairs (JFS)*, and *Outdoor Management and Maintenance (BO)*, which have a pivotal role in the WSHD organisational network. Additionally, the *board of directors* and the *management team* need to support their employees and have a clear sustainable direction.

By integrating the social and organisational components of sustainability within WSHD, an overview of structural barriers, bridging measures, and key stakeholders was created. If the barriers are not addressed, WSHD will not be able to integrate sustainability throughout their organisation. By addressing these barriers, WSHD can develop effective and sustainable practices and achieve its long-term goals.



Executive summary.

Research aim.

In a world where technology and globalisation rapidly evolve, organisations must adapt to survive and thrive. For long-term success and societal well-being, integrating sustainability into core organisational strategies is crucial. The Dutch regional water authorities (DRWA) experience pressure to increase their sustainable practices due to the changing climate and political pressure. Despite organisations often aspiring to sustainable practices, there's often a lack of clear guidelines for effective integration. This research focuses on the structural organisational barriers encountered by the Dutch regional water authority Hollandse Delta (WSHD) during the integration of sustainability. The goal of this research is to explore the complex network of the WSHD to resolve current misunderstandings and provide recommendations for sustainable management. The central research question is: *What structural barriers within WSHD impede sustainability implementation and how can they be overcome?* This is supported by three sub-questions focusing on governance gaps, involved stakeholders, and solutions to overcome structural barriers.

Theory and methodology.

This thesis employs an integrated theoretical framework combining the actor-issue network, with the attributes of organisational change and the power-interest matrix. This integrated approach helps identify governance gaps and develop bridging measures. A total of 29 semi-structured interviews ranging from 30-75 minutes were conducted and subsequently transcribed. These interviews identified collaborations between actors, issues experienced by them, and their interrelationships to map out the actor-issue network, provide an overview of the structural barriers, and gain insights into the level of power and interest of stakeholders. Based on the actor-issue network, three organisational issues that had the highest out-degree and were identified by all departments were chosen for further examination. Subsequently, the governance gaps were identified for the selected issues. Internal stakeholders were invited to participate in a workshop to formulate bridging measures for the identified governance gaps and structural barriers. Groups were formed based on the power-interest matrix.

Results.

WSHD's organisational structure consists of several department groups. Each department group has one department with a higher Betweenness Centrality (BC) than others, indicating a pivotal role in facilitating connections within the organisational network. The departments *Strategy and Policy* (SB), *Legal and Facility Affairs* (JFS), and *Outdoor Management and Maintenance* (BO) have the highest BC and act as important bridge departments that promote collaboration and information flows between different segments of the organisation. However, several governance gaps (so called collaborative misfits) exist within and between the department groups. The board of directors is most frequently mentioned as a stakeholder that has the most power and interest in the organisation. They are viewed as key players with the power and responsibility to make decisions, embrace ideas, and influence the organisation's direction. Yet, they are involved in a collaborative misfits with all departments but the management team and the department SB.

Several governance gaps (so-called integrative misfits) are identified in the issue-issue network. When looking at the issue-issue network, *Different priorities*, *lack of communication*, *lack of focus*, *lack of clear goals*, and *lack of reporting and monitoring* have the highest out-degree respectively. However, *lack of communication* and *lack of focus* were not experienced by all departments. Therefore, the integrative misfits of *different priorities*, *lack of clear goals* and *lack of reporting and monitoring* were examined. Taking these issues as central node, a total of 30 integrative misfits associated with six issues were identified. Internal stakeholders participated in a workshop and formulated 33 bridging measures for



four identified structural barriers; *different priorities, lack of clear goals, level of specialisation and lack of focus.*

Discussion and conclusion.

This thesis has shown that the integration of sustainability within WSHD is hampered by several structural and governance-related barriers. By implementing the bridging measure, structural barriers that impede the integration of sustainability can be addressed. By addressing these barriers, WSHD can develop effective and sustainable practices and achieve its long-term goals. If the barriers are not addressed, WSHD will not be able to integrate sustainability throughout their organisation. Key recommendations include the establishment of a sustainability advisory group to centralise and streamline sustainability efforts across departments. This group would ensure coherent communication and collaboration. To foster these processes, support from bridging departments and the board of directors is essential. Key stakeholders to foster this process include the bridging departments SB, BO, and JFS, which have a pivotal role in the WSHD organisational network. Additionally, the board of directors and MT need to support their employees and have a clear sustainable direction. The implementation of bridging measures is up to WSHD itself, as changing its organisation is its process of transitioning to a desired sustainable future state.



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List of abbreviations.

DRWA-Dutch regional water authority

WSHD- Dutch regional water authority Hollandse Delta

KA - Knowledge and Advice

PU - Projects and Execution

JFS - Legal and Facility Affairs

IA - Information Management and Automation

TVH - Supervision, Licensing, and Enforcement

KC - Customer and Communication

SB - Strategy and Policy

ZO - Purification and Maintenance

PO - Personnel and Organisation

RA - Coordination and Asset Management

BO - Outdoor Management and Maintenance

FIN – Finances

BC – Betweenness centrality



1. Introduction.

In a period of rapid environmental and social change, our ability to change allows humans to grow, learn, and adapt to new challenges. Without change, progress would stand still. Change has become a global challenge for every organisation due to rapidly evolving technology, globalisation, and worldwide modifications that force adaptation (Wang & Kebede, 2020). Simultaneously, climate change, driven by factors such as population growth, global warming, and shifting land use patterns, has set a cascade of environmental and societal change in motion (Simonović, 2020). These environmental challenges force organisations across various sectors to adopt sustainable practices to mitigate their ecological impact. In the context of sustainability, organisational change is particularly pertinent. Due to competitive advantages as well as pressure from the government and clients, sustainability has become increasingly important in many businesses. Organisations that fail to adapt not only jeopardise their competitiveness but also contribute to a global environmental crisis. Many organisation leaders struggle to successfully implement organisational change, which is crucial for an organisation's survival (Holten et al., 2019; Popescu et al., 2012).

However, organisations face many challenges in keeping up with the rapid changes seen in society and the environment. For example, it has been shown that resistance across various levels of the organisational hierarchy is encountered when external changes disrupt the status quo (Orji, 2019; Jones, 2013). Change is associated with adjustments to goals, approaches, organisational structure, determination, and control mechanisms (Kotter, 1995). Organisational change is the process of transitioning from the current state to a desired future state to enhance effectiveness (Jones, 2013). Organisations are complex social systems made up of interconnected units that work together to solve issues and accomplish goals (Orji, 2019; Lozano & Von Haartman, 2017). Organisations change primarily to maintain competitiveness, adapt to market demands, and reduce risks such as potential bankruptcy or failure. This need for change is more critical in today's dynamic environment. However, it is challenging to successfully transform a whole organisation because it requires alignment of goals, structures and processes across the whole organisation (Jones, 2013).

The fast-changing environment of organisations and their surroundings requires organisations to change almost constantly (Kotter, 1995). Consequently, organisations are seen as key actors in promoting sustainability, possessing the resources, technology, and motivation required to create more sustainable societies (Lozano, 2012). Developments in technology, the transition to renewable energy, and climate change all provide challenges that highlight how crucial it is for public sector organisations to address long-term policy issues within their existing processes (Margerum & Robinson, 2015). The integration of sustainability into core organisational strategies is essential for long-term success and societal well-being, with numerous researchers advocating for sustainable business models and strategic frameworks to guide this transition (Broman & Robèrt, 2017; Schaltegger et al., 2015). Contributing to sustainability has become an objective that organisations often embrace, yet limited guidance exists on exactly what to do or how to prioritise multiple issues (Risi & Wickert, 2016).

Literature briefly elaborates on the complexity of societal and environmental challenges within organisations. Numerous change management models have been developed by academics and consulting firms to increase the success rate of change projects. Despite the existence of numerous models, it remains imperative to thoroughly identify these aspects and close the knowledge gaps regarding the successful implementation of organisational change management (Errida & Lotfi, 2021; Jones 2013; Burnes, 2011). Many researchers have examined the reasons why most organisational change fails (Burnes, 2011; Hay et al., 2020; Jones et al., 2021). Studies on organisational change have emphasised the complex relationships between culture, people, processes, information systems, and structures inside an organisation. These studies indicate that changes in one aspect can lead to



significant transformations in others, highlighting their interdependencies (Errida & Lotfi, 2021). Studies highlight the necessity of identifying and overcoming sustainability-related barriers to achieve successful organisational change (Orji, 2019). Identifying organisational change barriers and prioritising initiatives that promote sustainable performance are critical for achieving sustainability. However, it appears that little research has been done on how these structures should be reorganised or adapted.

There is a gap in the literature regarding the integration of sustainability into organisations' complex structures. To bridge the gap, it is essential to delve deeper into the societal and environmental challenges organisations experience. This exploration is crucial to identify the structural barriers for organisations to integrate sustainability into their day-to-day practices and to understand the governance structures of an organisation. Collaborations must be known to gain an understanding of the internal structures, which is essential for addressing issues effectively. Additionally, understanding the interdependencies of issues is crucial for a thorough approach to problem-solving, considering the interconnected nature of issues.

The Netherlands is a particularly compelling case for studying these complexities. The country is particularly vulnerable to the effects of climate change, as nearly one-third of the country—including several of the biggest cities—lies below the mean sea level (Essink et al., 2010; Kamperman & Biesbroek, 2017). Especially the Dutch regional water authorities (DRWA) experience pressure to increase their sustainable practices due to the changing climate and political pressure. They have a direct impact on reducing the environmental effects of water management. DRWAs mainly focus on flood prevention and water management. However, the Paris agreement has highlighted an increased attention to climate mitigation by heightening and sharpening goals (United Nations, 2015). The DRWAs are required to engage in new sustainable practices involving both climate adaptation and climate mitigation. Given their critical role in long-term water management and their role in inter-organisational agreements, DRWAs serve as a suitable empirical setting to study the complexities of integrating sustainability into everyday practices. The DRWAs are large governance organisations whose multi-layered political and administrative structures increase complexity. For example, claims of short-term bias among political organisations have arisen due to the democratic nature, which includes four-year election cycles, and the requirement to address the needs of present constituents (Bühns, 2012). This can hamper the adoption of a longer-term perspective (Boston, 2016). These complexities create inter-related challenges that require a systemic understanding to manage effectively. An increasing necessity of comprehensive action for sustainable development at all levels of governance is becoming apparent given the world's ongoing expansion and fast urbanisation (Hoppe & Coenen, 2011). However, comprehensive planning approaches seem underdeveloped and lacking in addressing the complexities of planning interventions to improve systems for future sustainability challenges.

Arcadis, a Dutch consulting firm based in the Netherlands, executes analyses to report the DRWA's progress regarding climate and sustainability. These reports are mostly based on technological performance. However, Arcadis has identified a gap in their experiences while working with various DRWAs: the organisational culture is often overlooked. Therefore, Arcadis has developed the Sustainability Culture Measurement, which evaluates the DRWA's cultural development. This study has shown that the DRWA Hollandse Delta, also known as WSHD, views sustainability as a vision rather than a well-defined strategy. There is a lack of clear translation of strategic objectives into practical objectives for employees, resulting in barriers towards sustainability integration. Employees are left disconnected and uncertain about their contributions regarding sustainable practices, rendering them as "lost souls". Without clear direction, the efforts of employees to integrate sustainability into their day-to-day work become aimless and purposeless. For WSHD to make a sustainable transition, it is critical to identify and

overcome the structural barriers experienced in the organisation. This thesis identifies these structural barriers and provides actionable solutions for WSHD.

The goal of this research is to explore the multilevel organisational network of the WSHD to resolve current misunderstandings and provide recommendations for sustainable management. Therefore, the actor-issue network is used to analyse and understand the complex interplay between actors, issues, and organisational structures. So far, this framework has not been applied to many case studies. The actor-issue network framework was developed by Bergsten et al. (2019) to understand the governance of social-ecological systems.

The actor-issue network recognises the numerous actors involved in a system and breaks down the complexity of interrelated issues into distinct issues. The broad multi-issue system perspective allows for the identification of structural barriers. It allows for both theory building and testing by examining relationships between employees and the structural barriers they face. Collaborations can be mapped out, key actors identified, and sustainability management issues' interdependencies revealed by applying this network approach to the WSHD. The WSHD can develop holistic strategies that address the underlying causes rather than isolated symptoms. The actor-issue network then becomes a strategic instrument to contribute meaningfully to a sustainability transition.

However, while the actor-issue network does capture the complexities and interdependencies of actors and issues, it does not address organisational change. Therefore, the actor-issue network is complemented with the attributes of organisational change (Armenakis & Bedeian, 1999; Kuijpers et al., 2013; Grandia et al., 2015). This framework facilitates the identification of organisational change barriers that employees encounter when incorporating sustainability into their daily routines. Additionally, the power-interest matrix is used to assess the power and interest of different stakeholders regarding sustainability integration. The matrix provides insights into the organisation's power dynamics, which is critical for determining which stakeholders have an influence. This combination can address existing literature gaps by tackling the lack of knowledge about organisational change in the context of sustainability integration and the limited practical application of the actor-issue network. This research provides insight into the structural barriers of the WSHD and other DRWAs, that hinder sustainability integration. The study's main goal is to navigate the intricate web of organisational difficulties by exploring the structural barriers faced within WSHD. This study's purpose leads to the following research question and sub-questions;

What structural barriers exist within WSHD that impede the implementation of sustainability, and how can these be overcome by internal stakeholders?

- What governance gaps exist within the organisational structure of WSHD regarding sustainability integration?
- How can the WSHD overcome governance gaps to integrate sustainability throughout the organisation?
- What stakeholders play a bridging role in the integration of sustainability in the WSHD?

The actor-issue network was used to formulate an answer to the first sub-question. Solutions to overcome the identified organisational issues – based on the attributes of organisational change – are formulated through a workshop at WSHD, which provides an answer to the second sub-question. The third sub-question is addressed using the power-interest matrix. Background regarding the DRWA, organisational structure, and stakeholders are discussed in Chapter 2. Chapter 3 discusses the theoretical framework, followed by Chapter 4 which elaborates on the method of the study. The results are presented in chapter 5. Finally, chapters 6 and 7 elaborate on the discussion and conclusion.



2. Background.

2.1. The Dutch regional water authorities.

The DRWAs have a fundamental role in Dutch water management in maintaining the water balance. These local authorities, spread across 21 regions, are in charge of water safety, water chains, and water systems. DRWAs are public operational democracies and form the basis of the Dutch “*polder model*”. They are responsible for regulating, managing, and purifying the water in their water management areas (Giesk et al., 2019). Moreover, because DRWAs manage water, they have to deal with social dynamics and organisational and policy issues. They also have to deal with 'hard' facts, such as the introduction of new technologies, climate change and sea level rise (Dicke & Meijerink, 2006). The *Unie van Waterschappen*, the umbrella association for all water boards, emphasises collaboration at both national and international levels. The collaboration includes knowledge sharing and experience exchange to address cross-border water-related challenges. (Unie van Waterschappen, 2023b).

Water boards have their origins in the early medieval period. Initially, only direct stakeholder, such as landowners and farmers, were involved in water management (Raadschelders & Toonen, 1993). Water management duties were separated between rural communities -“*buurschappen*”- throughout the Netherlands. This led to the formation of water boards in the eleventh and twelfth centuries. These water boards are the oldest example of local governance in the Netherlands. Since the late 1990s, water boards have been focusing on influencing water-related spatial decisions made by other governments (Van Den Brink & Restemeyer, 2021).

WSHD operates in South Holland and focuses primarily on flood prevention and maintaining water quality. The WSHD has four core tasks; safe dikes and dunes, sufficient and clean water, cleaning wastewater, roads, and cycle paths (WSHD, 2022). To be able to carry out these tasks, climate change, sustainability, energy transition, and biodiversity are crucial to take into account. This is pursued by closing the cycle of raw materials, water, and energy, saving energy, and strengthening biodiversity (WSHD, 2023). WSHD aims for energy neutrality by 2025 and climate neutrality by 2035. To achieve their objectives, five key points have been identified; sustainable commissioning, circular asset management, recovery of energy and raw materials, transition management, and organisational and behavioural change (Unie van Waterschappen, 2023a). However, balancing these long-term sustainability goals with the immediate demands of today's constituents remains a significant hurdle. This challenge is compounded by the inherent complexity of WSHD's multi-layered governance structure.

2.2. Organisation structure.

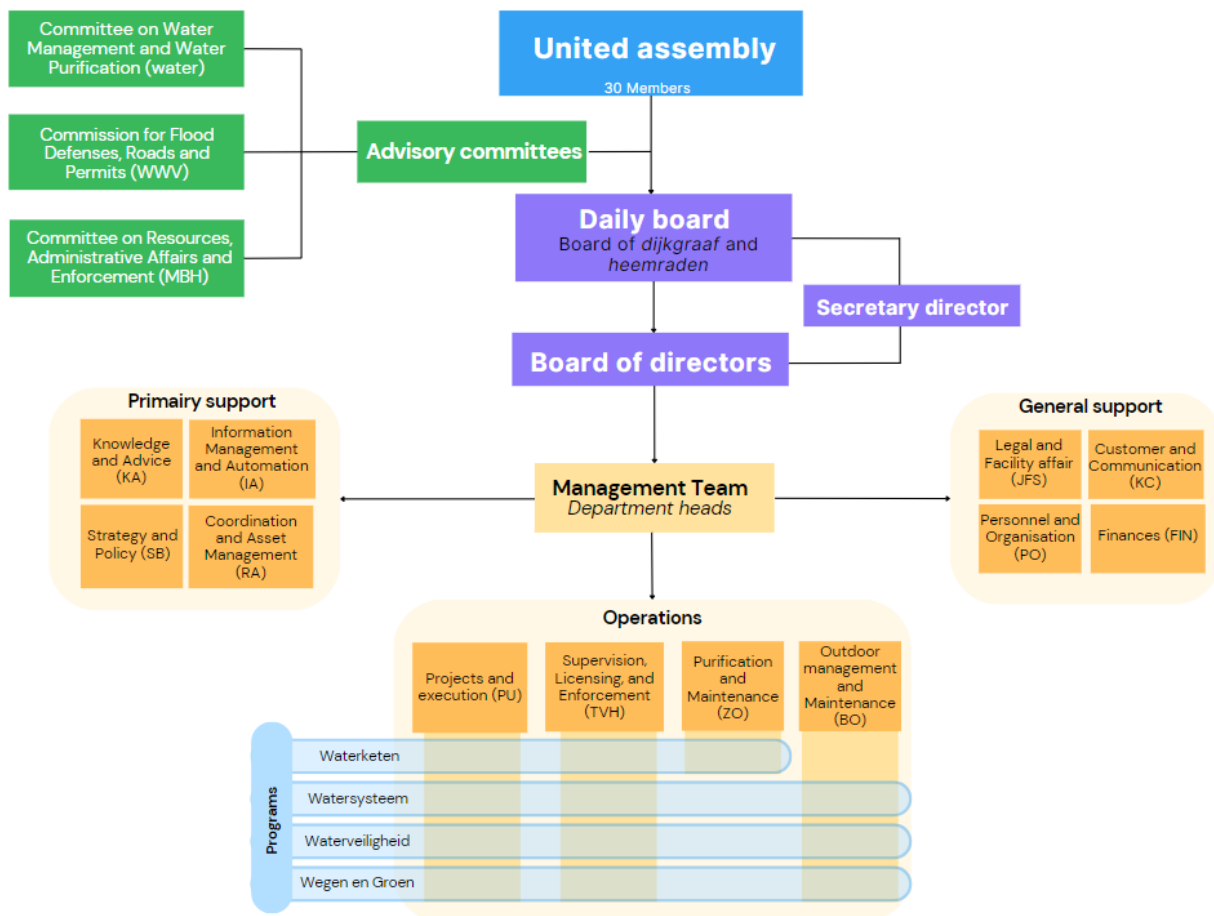


Figure 1: Organisational structure consisting of the several hierarchical layers and departments of WSHD.

The organisation's structure, shown in Figure 1, is designed to achieve specific objectives. Organisational behaviour is governed by the structure of the organisation, which also defines resource and information flows (Pot et al., 2020). It is, therefore, crucial to understand the structure of the organisation. The United Assembly of WSHD forms the highest layer of the organisational chart. It is the overarching governing body responsible for making well-informed decisions across various domains. The United Assembly forms the daily board, known as the *Board of Dijkgraaf & Heemraden*. This body ensures that policies and directives are effectively implemented. Below the daily board stands the board of directors, which consists of appointed directors that oversee specific domains within the organisation. These directors play a strategic role in shaping and implementing policies within their designated areas of expertise, ensuring that the overall objectives of the organisation are met. The WSHD has twelve different departments with their own focus. These departments are integral to the organisation's functioning, specialising in various aspects such as technical operations, ecological preservation, financial management, and more. The management team is composed of department heads. (WSHD, 2023b)

Four of the twelve departments form a department group. The organisation has categorised these departments into three groups based on their functions: primary departments, facilitating departments, and operational departments. Table 1 gives an overview of the communities, all consisting of four departments.



Table 1: Overview of internal department groups based on their day-to-day functions.

Primary Support	Operations	General support
Knowledge and Advice (KA)	Projects and execution (PU)	Legal and Facility affair (JFS)
Information Management and Automation (IA)	Supervision, Licensing, and Enforcement (TVH)	Customer and Communication (KC)
Strategy and Policy (SB)	Purification and Maintenance (ZO)	Personnel and Organisation (PO)
Coordination and Asset Management (RA)	Outdoor management and Maintenance (BO)	Finances (FIN)

3. Theoretical framework.

This research combines the actor-issue network, attributes of organisational change, and power-interest matrix to answer the research question of identifying the structural barriers faced with sustainable integration by the WSHD. The combination of these three theoretical frameworks allows for a comprehensive analysis of the structural barriers within WSHD. The theories are explained consecutively in the following chapter. Figure 2 provides an overview of the research steps.

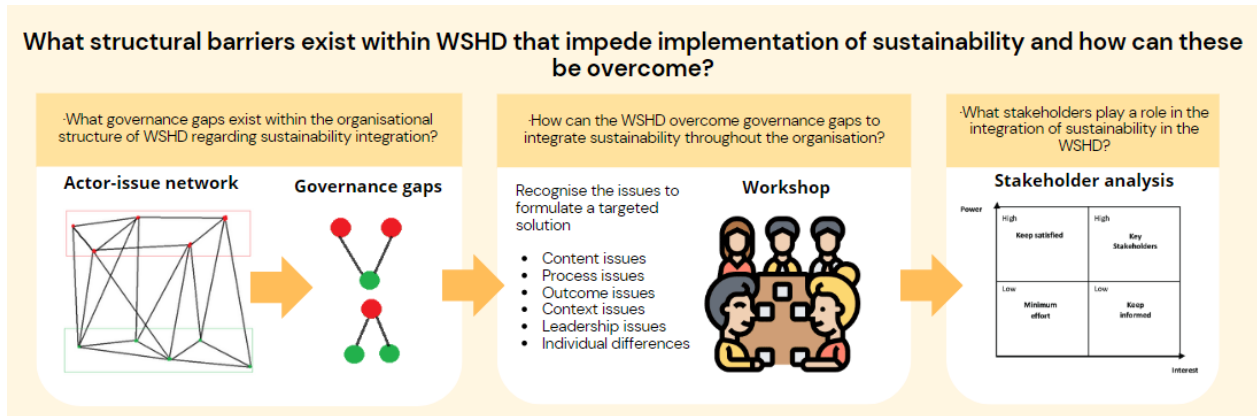


Figure 2: Overview of research steps taken to formulate an answer to the sub-question, which are ultimately combined to formulate an answer to the central research question.

3.1. Actor-issue Network.

WSHD faces difficulties regarding organisational change, which limits the integration of sustainability throughout the organisation. The complexity of navigating their multi-layered governance network is increased as issues are influenced by different stakeholders in the organisation. This complexity can be understood as a set of two network patterns; one consisting of the interdependency of the multiple issues to be tackled and one representing the collaboration of actors experiencing those issues (Bergsten et al., 2019). These networks are interconnected and influence each other, creating this deep level of complexity. To understand this complexity, the interdependencies of issues and the collaborations within the system must be considered in one system (Bodin 2017; Bergsten et al., 2019). By analysing these networks together, the governance gaps present in WSHD can be identified.

Bergsten et al. (2019), developed the actor-issue network by adjusting the network approach of Bodin (2017). Bodin (2017) stated that the ability to address social and environmental issues depends on how problems are connected, actor involvement, their cooperation, and their relationship with the environment. They concentrated on collaborative networks formed by actors and how they could be effective in addressing environmental problems. Exposing these collaborations facilitates the identification of key stakeholders and understanding their influence (Bodin, 2017), which is necessary for effective coordination and communication (Jones, 2008). The actor-issue network of Bergsten et al. (2019), examines how governance gaps emerge at the intersection of two networks—an actor-actor network and a network of interconnected issues—that are usually studied separately. Recognising possible synergies through issue interdependencies can result in more strategic and efficient management. However, a change in one issue can influence other issues, potentially leading to ineffective governance. The actor-issue network visualises how interdependent issues and actor collaborations intersect, providing a nuanced understanding of governance structures. The approach reduces complexity by separating independent issues and acknowledging the many stakeholders involved. It allows for a comprehensive understanding of how decisions and actions in one area may affect others, ensuring a more holistic approach to problem-solving (Bergsten et al., 2019).

Failing to address the intersection between actors and issues increases the possibility of management action resulting in inefficient or unforeseen negative effects. By considering both interrelated networks, WSHD can develop more comprehensive strategies that consider the entire organisational dynamics, resulting in more sustainable and resilient outcomes.

This method acknowledges that governance gaps arise when responsible actors fail to see the connections between various issues and actors. It facilitates the construction of a visual representation by emphasising three important relationships: 1) actor-actor, 2) issue-issue, and 3) actor-issue. Actor-actor relations are collaborations between actors. These relations are pairwise collaborations among actors that work together in their day-to-day practices. An example of such collaboration is the collaboration between two department employees, who coordinate their efforts to achieve organisational goals. Issue-issue relations show the interdependencies of organisational issues relating to sustainable integration. Interdependency between two issues exists when a change in one issue affects another. For example, if there is ambiguity regarding who is responsible for formulating organisational goals, this lack of clarity can lead to the absence of organisational goals. The actor-issue relation indicates which actor is experiencing what issues. Through analysing the network structure, it is possible to identify institutional misfits. (Bergsten et al., 2019)

Situations may be identified in which different actors do not cooperate to address challenges related to organisational change, or situations in which issues are interconnected but are not experienced by a single actor. Both misfits are called governance gaps and require an examination to determine how institutional misfits prevent actors from reaching the desired sustainability goals. Two components of institutional misfit are differentiated: *integrative misfit* and *collaborative misfit*. *Integrative misfit* occurs when issues are interdependent but actors experience and focus on particular issues separately without managing their interdependencies. This is a result of having *integrative misfits* or “*blind spots*” caused by not noticing interdependent issues. *Collaborative misfit* occurs when actors who influence common issues do not collaborate. To bridge these governance gaps and address the misfits that hinder sustainability integration, a transition is necessary. (Bergsten et al., 2019)

However, while the actor-issue network allows for identification of governance gaps through understanding the complexities of actor collaborations and issue dynamics, it lacks insight into issues relating to organisational change and action to address them. Factors beyond institutional misfits, such as power dynamics among actors, influence sustainability outcomes. As a result, the attributes of organisational change are used to identify which organisational issues impede sustainability integration.

3.2. Attributes of organisational change.

According to Lewin (1947), a change occurs in three phases: unfreezing, moving, and freezing. Several change researchers have described methods that practitioners can use in executing organisational changes based on the Lewinian model (Armenakis et al., 1999; Kotter, 1995). Nonetheless, the effectiveness of organisational change is not always ensured by the aforementioned models. Organisational results frequently fall short of stated objectives. Underestimating the significance of the unique, cognitive-affective character of organisational change is a major reason why many changes fail. Armenakis and Bedeian (1999) analysed organisational change studies from the 1990s and found four elements that are shared by all change initiatives: *content issues*, *contextual issues*, *process issues*, and *outcome issues*. The attributes of organisation change can identify specific issues related to organisational change.

Although organisational change is often about change in structures, hierarchy, reward systems, and technology, it is mediated through individual change (Schein, 1980). Change agents must also be aware of a variety of factors specific to the changing organisation. Therefore, Kuipers et al. (2013), added a fifth

attribute of organisational change: leadership style. In addition, a complete model of change should not only address macro-level forces, such as content, process, and contextual factors, but also micro-level factors, such as individual differences (Walker et al., 2007). Grandia et al. (2015), have therefore introduced the individual-level factor of individual differences which, when positively present, increases the commitment to change of an individual. The attribute conceptualises the relationship between the attributes of change and commitment to change while maintaining an employee-centric point of view. The attributes highlight issues organisations experience while integrating organisational change. They can help identify specific characteristics related to change processes and implementation in the organisation. The actor-issue network can identify barriers and use this knowledge to formulate specific bridging measures to overcome them. These scholars' additions have resulted in the attributes of organisational change, which will be discussed briefly in the coming paragraphs. An overview of the attributes, issue examples, and possible literature-based solutions can be found in Appendix 2.

3.2.1 Content issues.

Content issues are the factors that shape an organisation's general character, mission, and direction over time by influencing its long-term interaction with its surroundings (Armenakis & Bedeian, 1999; Grandia et al., 2015). This encompasses the changes that are being implemented and are specific to an organisation (Walker et al., 2007). A crucial aspect involves the fit between the organisation's strategic vision and the implemented change (Parish et al., 2008). This alignment positively correlates with employees' commitment to the change. Self et al. (2007), expanded the concept by adding further characteristics that define an organisation's character, mission, and direction. They include elements such as strategic orientation, organisation structure, and organisation-environment fit.

3.2.2. Context issues.

Contextual issues refer to pre-existing forces in an organisation's external or internal environment that influence change management's response to changes. Organisations have little control over external forces which include technical advances in the market, legislation and deregulation by the government, and competitive pressures. Professionalism levels, managerial attitudes toward change, tension, momentum, and inertia, technical knowledge resources, and slack resources are examples of internal forces that can be influenced by an organisation. (Armenakis & Bedeian, 1999; Grandia et al., 2015; Self et al., 2007; Walker et al., 2007)

3.2.3. Process issues.

Process issues relate to the actions taken by change agents during the introduction and implementation of changes. In contrast to content issues, which centres on the details of the change itself, process issues deal with the "how" of implementing the change. This includes the approaches, strategies, and tactics employed by change agents to navigate organisational change (Armenakis & Bedeian, 1999; Grandia et al., 2015; Self et al., 2007; Walker et al., 2007). An example is open and honest communication that influences the attitudes, beliefs, intentions, and behaviours of employees during change implementation (Walker et al., 2007).

3.2.4. Outcome issues.

Outcome issues are the results of an organisational change. These outcomes can be both intended and unintended, as well as positive or negative. It is necessary to distinguish between outputs and outcomes. While outcomes are the more comprehensive and frequently harder to evaluate effects of changes, outputs are the explicit decisions or structural changes brought by reform (Armenakis & Bedeian, 1999). It's critical to comprehend employee reactions when changes are implemented because they can have unanticipated effects including stress, cynicism, denial, and decreased organisational commitment.

3.2.5. Leadership issues.

Leadership is defined as the influential role guiding organisational change. It is frequently investigated by both public and private organisations (Armenakis & Bedeian, 1999). Private organisations have placed transformational leadership as a key focus, emphasising leaders who effectively communicate a vision while inspiring, fostering trust, admiration, loyalty, and respect all positively influencing employees' commitment to change (Kuiper et al., 2013). In the public sector, leadership is frequently shown from a "heroic," vertical viewpoint that emphasises a hierarchical leadership style, usually represented by the agency head (Kuiper et al., 2013). A leadership issue could be a mismatch or inconsistency between the leadership style adopted and the nature of the change. If the leadership style does not suit the specific requirements of the change, it may result in resistance, a lack of employee buy-in, or inefficiencies in the implementation process.

3.2.6. Individual differences.

Individual differences are the distinct perceptions and personality traits that each member of an organisation possesses. An individual's commitment to organisational changes is greatly influenced by their values and attitudes (Grandia et al., 2015). Individuals' perspectives can vary widely based on these personal characteristics. These differences can significantly impact organisational change (Walker et al., 2007). While one individual may emphasise stability and see change as unpleasant, another may favour progress and see it as an exciting opportunity. These individual differences highlight the broad range of perspectives within the organisation. Understanding whether there are diverse perspectives and priorities present in the organisation is essential for effectively managing change.

3.3. Stakeholder power-interest matrix.

The actor-issue network and the attributes of organisational change fall short of providing a comprehensive view of the hierarchical relations among different stakeholders. An organisation consists of multiple hierarchical levels, each having a certain influence. The multi-actor nature of organisational change makes it fundamentally important to understand the involved actors and the evolving power dynamics between them. As a result, it is critical to identify the stakeholders who contribute to the integration of sustainability into WSHD.

Power is the ability of an individual to influence others into a certain action (Kotter, 1985), manifesting a stakeholders' capacity to shape organisational shifts by influencing others (Johnson et al., 2009). To address this gap, this study is complemented with the power-interest matrix (Mendelow, 1981; Olander & Landin, 2005), shown in Figure 3. This framework facilitates a deeper comprehension of relationships by placing stakeholders based on their power and interest levels to drive and support organisational change (Johnson et al., 2009). Insights into these power dynamics are pivotal for obtaining a clearer perspective on how stakeholders exert influence over the organisation. Simultaneously, stakeholders' interest indicates the extent to which they support or oppose specific initiatives of organisational change based on how important the issues are to them (De George, 2010).

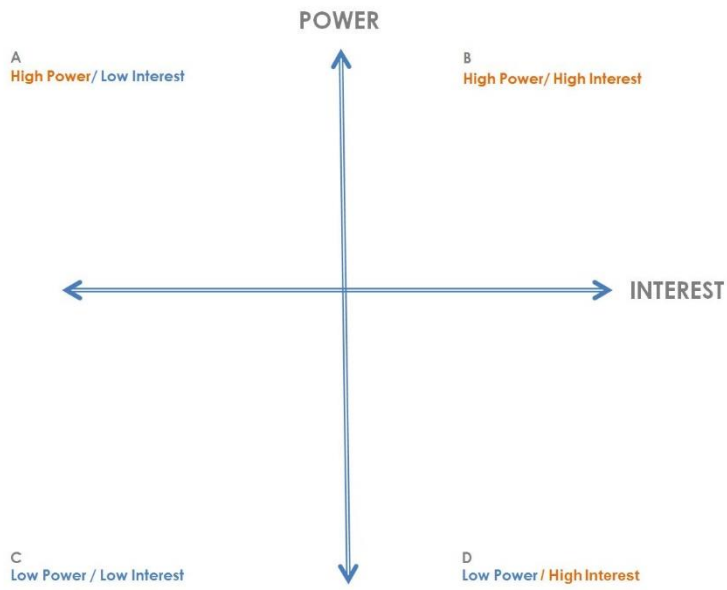


Figure 3: Stakeholder Power-Interest Matrix (URBACT, n.d.).

4. Method.

4.1. Research design.

This research is a case study of one specific DRWA, WSHD. The study is qualitative, aiming to delve deeply into the complexities of the interdependencies of actors and issues within the WSHD network. In order to understand the governance gaps and analyse the actor-issue network, detailed insights about the issues and actors within the organisation need to be collected. To achieve this, a range of in-depth interviews were carried out with individual employees to gather insights about their perceptions and experiences regarding organisational change issues that result in structural barriers. The interviews identified collaborations between actors within WSHD, which issues are experienced by those actors, and how issues are related to each other. This approach allowed the identification of the underlying causes and connections that have an impact on the organisation, providing the knowledge required to answer the research question. The interviews formed the input for the actor-issue network. After the actor-issue network had been analysed for governance gaps, a workshop was organised with the internal stakeholders to focus on overcoming the identified governance gaps and structural barriers.

4.2. Data collection.

A total of 29 interviews were conducted, each ranging in duration from 30 to 75 minutes. The interviews were semi-structured to ensure free answer space for the respondents, increasing the possibility that hidden issues will come to light (Clark et al., 2021). By completing all interviews under the same circumstances and according to the same interview schedule, as shown in appendix 3, the research's internal validity is guaranteed (Clark et al., 2021). The interview guide's questions are based on organisational change attributes. These attributes serve as a lens to identify specific issues related to barriers impeding sustainability initiatives. Based on those issues, several interview questions were formulated for each issue. The list of issues and formulated questions can be found in Appendix 4. At the beginning of every interview, participants were asked for their consent to record the interview. The interviews were transcribed and subsequently coded with the use of NVivo through open coding, followed by axial coding, and finally, selective coding (Clark et al., 2021). The coding process is described in Section 4.2.

All interviews were conducted online to enhance time efficiency and flexibility, thereby increasing the response rate. Individuals were selected based on their relevance to the research question, referred to as purposive sampling. To achieve this, employees were asked to participate in the research if they had previously engaged with sustainability within the organisation. Additionally, the respondents represented a diverse range of departments and functions. This diversity was crucial to capturing a broad research population and providing a comprehensive understanding of the structural barriers within the organisation. Initial contact was made with the sustainability program manager at WSHD. This employee facilitated the scheduling of interviews by reaching out to various employees. To further enhance the sampling strategy, snowball sampling was used. Participants were asked to suggest other potential interviewees, ensuring that the research encompassed a wide range of perspectives. This approach can identify additional relevant actors within the WSHD network (Clark et al., 2021). However, interviews were already scheduled with many of the recommended actors, demonstrating the thoroughness of the initial purposive sampling plan. Appendix 5 contains an anonymised overview of each respondent, their department, function, and interview date.

4.2. Data Analysis.

The interview transcripts were coded in NVivo through open coding, followed by axial coding, and finally, selective coding. First, codes were created in the transcribed interviews by highlighting the most essential elements. This allows for an initially broad identification of concepts. Axial coding allows these concepts to be grouped based on similarities. For example, a category highlights a specific issue in the

network. Finally, through selective coding, the groups resulting from axial coding were named, allowing a focus on core categories to identify related codes. The identification of core categories allowed for a direct connection to the research question, allowing to effectively address each sub-question. These code groups also formed the basis for the development of the actor-issue network. For example, groups were identified for each of the experienced organisational issues or a specific collaboration. How these codes were analysed to develop the actor-issue network is discussed in the following paragraph.

4.2.1. Developing the actor-actor network.

The first step to developing the actor-issue network is creating the actor network. This network consists of the collaboration of internal stakeholders. To develop the network, every respondent was asked to identify and elaborate on their collaborations in the interviews. The organisational structure, elaborated in 2.2, was used to identify potential collaboration between departments and internal groups with the respondents. Respondents were asked about these potential collaborations with other departments and rated them using a Likert scale with values from 5 to 0 respectively: *daily* (5), *weekly* (4), *monthly* (3), *quarterly* (2), *annually* (1), or *never* (0). An Excel table was created to organise the data for all 29 respondents.

Individuals within a department may have varying collaborations with other departments. Therefore, an average collaboration score for each department was calculated. For instance, if three respondents from the department BO collaborated with the department PO, and one of these respondents rated the collaboration frequency as a five (indicating daily collaboration), another with a four (indicating weekly), and the last respondent rated it as a zero (indicating no collaboration), the average collaboration score for BO's interaction with PO would be calculated as follows:

$$\frac{5 + 4 + 0}{3} = 3$$

Thus, the average score for BO's collaboration with PO would be 3. An Excel table was made to show the connections between departments within the organisation. To simplify the actor-actor network, only collaborations that frequently reoccurred were included. Therefore, only collaborations that received an average rating of 3 (monthly) or higher were considered.

The excel table was uploaded to Ucinet, a software for analysing social network data (Ucinet, n.d.), and subsequently plotted using Netdraw. The node centrality of each department was then calculated using Ucinet. Node centrality indicates the influence or significance of an actor within the overall network. Betweenness centrality (BC), reflects the extent to which a node serves as a bridge for the shortest route between other nodes. It reflects a node's role in facilitating connections between other nodes, which allows for identifying the bridging actors. A higher BC signifies greater importance for that node within the network. A node's reach or activity is deemed less valuable for the purpose of this research, because the focus is on the Identification of key stakeholders and understanding their influence. Consequently, the BC for each actor was calculated to identify the bridging actors in the network. (Barabási, 2013; Newman, 2005)

4.2.2. Developing the issue-issue network.

The second step was developing the issue network. Participants were asked to identify and elaborate on the organisational issues they had experienced with sustainability integration to uncover potential interdependencies. They were also asked about any additional issues they deemed relevant. All respondents indicated that all their issues were discussed within the framework of organisational change attributes and had no further additions. Following the completion of the final interview, the interviews were analysed to identify the interdependencies between issues. This resulted in a table where each

connection between issues was marked with a 1 if a connection existed and with a 0 if no connection was present. Consequently, the table was uploaded to Ucinet and plotted in NetDraw.

The issue-issue network is a directed network, meaning that the connections between issues have a specific direction. For example, a negative reaction from employees is often influenced by resistance to change. In this case, resistance to change has a direct impact on employees' negative reactions, but negative reactions in turn do not necessarily cause resistance to change. Due to this directed influence, a difference can be made between the in-degree and out-degree of an issue. Ucinet was used to calculate the out- and in-degrees of each node. The in-degree signifies the number of incoming connections, reflecting the impact of other issues. The out-degree represents the number of outgoing connections, indicating the influence on other issues (Barabási, 2013). A higher out-degree indicates a greater level of influence within the network, suggesting these nodes play a more pivotal role (Barabási, 2013). Therefore, the out-degree was used to decide which issues would be focused on to identify governance gaps. Due to time constraints, the three organisational issues that had the highest out-degree and were identified by all departments were chosen for further examination. By selecting only issues identified by all departments, the most critical issues were focused on.

4.2.3. Developing the actor-issue network.

Finally, the actor and issue networks were merged into the actor-issue network. During the interviews, respondents were asked which organisational issues they had experienced in the context of sustainable integration. If a respondent had experienced one of the organisational issues, the connection was marked with a 1; if not, it was marked with a 0. In several departments, multiple respondents were present, each experiencing different issues in their day-to-day work. To determine the frequency of each issue's occurrence within a department, the responses were added up and divided by the total number of respondents in that department. Issues reported by 50% or more of a department's respondents were included in the actor-issue network.

Finally, a multilayer matrix was created that combined the actor and issue networks with links between actors and issues where an actor had reported experiencing an issue. This matrix was then uploaded to Ucinet and subsequently plotted using Netdraw.

4.3. Identifying the governance gaps.

4.3.1. Collaborative misfits.

Due to time constraints, three organisational issues identified by all departments were chosen for further examination. Thus, the collaborative misfits of the whole actor-actor network were examined. The organisational structure, as explained in Chapter 2, determines several department groups within the organisation. Each group represents a cohesive unit within the organisation, characterised by a higher likelihood of interaction among its members compared to those outside their group. Each department group harbours one department with a higher Betweenness Centrality (BC) than others, indicating a bridging role in facilitating connections between their respective department group and others within the organisational network (Barabási, 2013). These departments act as bridges, fostering collaboration and information flow between different segments of the organisation, thus promoting cohesion and efficiency across the entire network. Subsequently, the collaborative misfits for each bridging department and each department group were analysed. Collaborative misfits were identified by looking at missing collaborations between actors in a network for each bridging department.

4.3.2 Integrative misfits.

The integrative misfits of three issues with the highest outdegree that are recognised by all departments were examined. To map the integrative misfits, each issue was separately taken as a central node. First, any issues without mutual influence on the central node were removed. Subsequently, the central node

itself was removed from the network. Finally, the connections between different departments and different issues were also removed. When examining integrative misfits, only the relation between the focal node and individual issues is significant. The final network of each central node resulted in a visual overview in which several integrative misfits were identified.

4.4. Developing bridging measures.

After the actor-issue network had been developed, a workshop was organised with the internal stakeholders to focus on overcoming the identified governance gaps and structural barriers. The workshop also contributed to the collaborative efforts for sustainable integration within the WSHD. Workshops were typically used to gather data on the opinions of stakeholders as a whole and the significance of those opinions (Gill et al., 2008). Due to the variety of stakeholders, knowledge of the internal workings of WSHD, and knowledge about the governance gaps, targeted solutions could be found. At the beginning of the workshop, the outcomes of the actor-issue network were shared to provide each participant with a comprehensive understanding of the current system, including an overview of perceived barriers to sustainability integration. The workshop consisted of two rounds, with each round focusing on two issues. Participants were assigned a sticker indicating their group for both breakout sessions with a number and a letter, referring to their groups for the two rounds. Two issues were selected based on the number of mentions, and two other issues were based on involvement in integrative misfits. Parts of the workshop were recorded and consequently transcribed; therefore, participants were asked for their consent. The researcher facilitated the debates without participating.

4.4.1 Participant groups.

Participants were divided into pre-made groups of 3-5 employees to brainstorm solutions for the identified issues. Pre-made groups ensured diverse perspectives were integrated and challenged participants to think outside the box. To ensure a safe environment during the workshop, it was important to be aware of possible power dynamics between the participants. Therefore, groups were formed using the power-interest matrix to ensure diverse representation and collaborative problem-solving. The power-interest matrix identifies key stakeholders and groups who have the greatest ability to influence and implement significant organisational changes. It was created by analysing and representing the various internal stakeholders' interests and power regarding the integration of sustainability. This involved asking every respondent in the interviews to identify the stakeholders or groups with the most interest in integrating sustainability into the organisation and who had the power to do so. The majority opinion was followed to create the matrix. Understanding the power and interests of those stakeholders is crucial for effective implementation.

The groups in the first round highlighted similarities and focused on collaboration misfits that occur within the department groups. By placing department groups together, the power dynamics are balanced. For example, grouping the MT and board of directors together ensures that every participant in a discussion has an equal voice. In the second round, the different perspectives of the departments are emphasised through mixing the departments. The workshop fosters collaboration among individuals from different departments by facilitating cross-functional understanding and innovation. This variety of perspectives inspires original ideas and a greater understanding of the contributions made by all sections of the organisation.

4.4.2. Brainstorming bridging measures.

Each group was invited to brainstorm solutions for one of the four identified problems per round. Half of the groups focused on one problem, while the other half focused on another. Sub-issues derived from the code groups were listed on a slide for reference and guidance. The duration of each round was 30 minutes, during which the participants spent the final 10 minutes writing and placing ideas on post-its on a provided matrix, as illustrated in Figure 4.

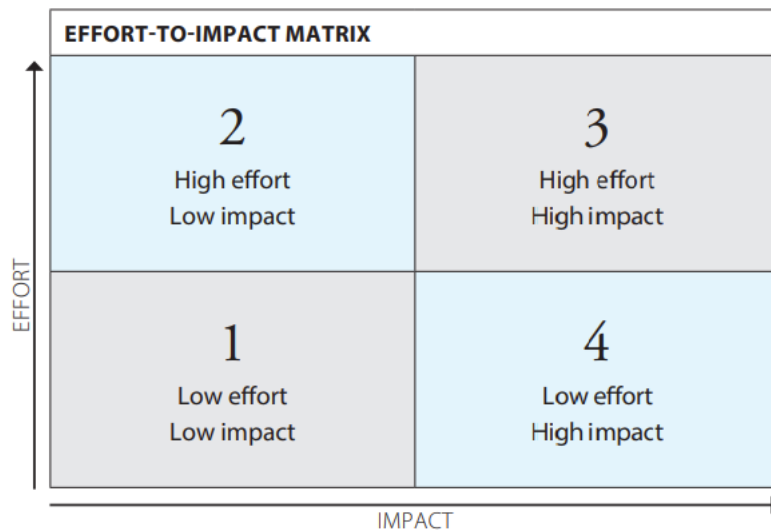


Figure 4: The effort-to-impact matrix to assess the impact and effort of proposed solutions relative to each other (Helmke 2022).

The matrix is a useful tool for prioritising efforts and making strategic decisions about what actions to take and when. The tool enables the user to plot possible courses of action and determine the relative effort and impact of each (Helmke, 2022). After each round, each group was asked to briefly present their matrix and ideas. These pitches were recorded for transcription. Following the first round, a short break was provided before proceeding to another brainstorming round in different groups focusing on a different problem.

The several resulting solutions were combined with interview data to specify the proposed solutions. Subsequently, the categories of the matrix were used to form a step-by-step implementation plan for the organisation. The low-effort, low-impact solutions can be implemented first. These quick-win solutions are relatively easy to implement and can deliver tangible results quickly. Quick success builds momentum and creates support for further initiatives. This momentum can then be used to plan high-effort, high-impact solutions. Because these solutions require more planning, it is important to develop a plan to implement them as soon as possible. By carefully planning them and integrating them into a strategic action plan, they can be implemented effectively. Finally, solutions can be implemented with high impact and low effort. These solutions have a high impact and are relatively easy to implement. It is important not to waste precious resources on initiatives that add little value to the goal. Therefore, solutions that have little impact and require a lot of effort should not be implemented.

4.6. Research quality indicators.

Clark et al. (2021) stated three main concepts to consider when pursuing good research quality; reliability, replicability, and validity. As previously mentioned, the interviews are conducted by the same interviewer in the same settings, ensuring the validity of the data and research. The possibility of interviewer bias is decreased by employing a schematic guideline. Replicability involves the possibility for another researcher to replicate the study, which is preserved by the detailed description of the methodology (Clark et al., 2021). Internal validity between the employed theories and the interview data is ensured by properly preparing the semi-structured interviews. Triangulation was pursued whenever possible by merging information from workshops, interviews, and literature. External validity is the extent to which the results are generalisable (Clark et al., 2021). The research examines the case of one specific DRWA and, therefore, cannot be generalised. Nevertheless, the study can be replicated for other DRWAs.

5. Results.

5.1. Actor-actor network.

Internal stakeholders were asked to identify and elaborate on their internal collaborations. This resulted in an overview of all the collaborations and connections between the different departments. The distribution of respondents for each department is shown in Table 2.

Table 2: Distribution of the number of respondents for each interviewed department.

Department	Abbreviation	Number of respondents
Board of directors	-	2
Legal and Facility	JFS	3
Knowledge and Advice	KA	1
Management team	MT	6 (IA, JFS, ZO, PU, RA & KA, SB)
Personnel and Organisation	PO	2
Projects and Execution	PU	1
Coordination and Asset Management	RA	6
Strategy and Policy	SB	1
Purification and Maintenance	ZO	4
Outdoor management and Maintenance	BO	3
Supervision, Licensing, and Enforcement	TVH	0
Customer and Communication	KC	0
Finances	FIN	0
Information Management and Automation	IA	0

Consequently, this data was used to create the actor-actor network. Figure 5 shows the actor-actor network and depicts the departments as nodes, connected by linkages that represent their collaborations. The size of each node corresponds to its betweenness centrality value. An overview of the BC values is given in Appendix 6.

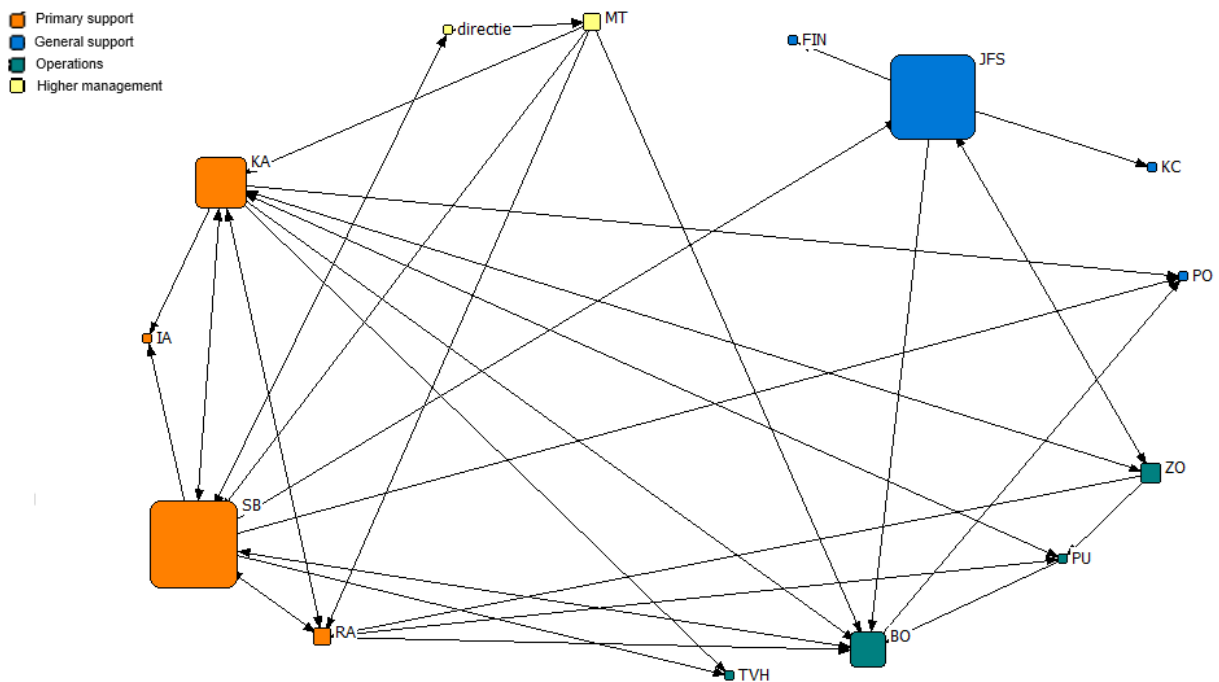


Figure 5: Actor-actor network demonstrating WSHD's internal collaboration. The node size shows the betweenness centrality of each actor. The colours correspond to the department group it belongs to: orange for Primary support, blue for General support, teal for Operations, and yellow for Higher management.

Departments with a high BC act as bridges between departments. SB has the highest BC and is part of the primary department group. JFS has the second-highest BC and is part of the supporting department group. The department with the highest BC among the operational departments is BO. These departments foster collaboration and information flows, promoting overall network cohesion and efficiency. Therefore, the collaboration misfits of SB, JFS, and BO were examined and discussed in 5.3.1.

5.2 Issue-issue network.

Based on the attributes of organisational change, a list of twenty issues associated with organisational change was formulated. During the interviews, respondents were asked to add other issues. However, no additions were made, thus the list was seen as complete. Appendix 4 shows an overview and explanation of the twenty issues. Respondents were asked about their experiences with these problems and to elaborate on those experiences. Due to the semi-structured nature of the interviews, it was possible to examine the underlying causes of the experienced issues and find connections between them. The interviews revealed several interdependencies between issues resulting in a directed issue-issue network, as shown in Figure 6. Three issues were not connected with any issues and are therefore viewed as isolated. The size of the nodes corresponds with the outdegree of each issue. A table of the out- and in-degrees of each node can be found in Appendix 7.

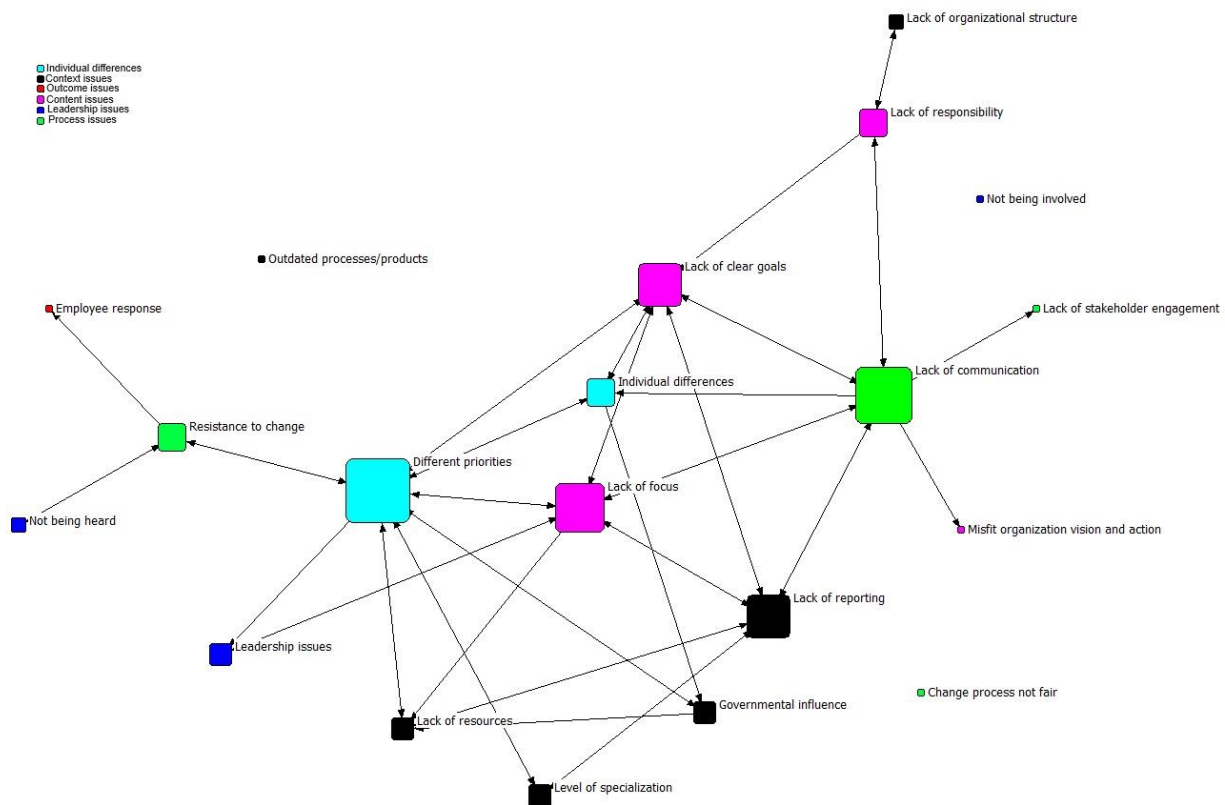


Figure 6: Organisational change issue network of WSHD relating to sustainability integration. The node size represents the out-degree of each issue. The arrows indicate the direction of the influence that one issue has on another. The issues are colour coded based on their attribute of organisational change: yellow for Individual differences, light blue for Context issues, magenta for Outcome issues, red for Content issues, blue for Leadership issues, and green for Process issues."

Due to time constraints, three issues that were identified by all departments and had the highest out-degree were chosen for examination. *Different priorities* (individual differences), *lack of communication* (process issues), *lack of focus* (content issues), *lack of clear goals* (content issues) and *lack of reporting* (context issues) have the highest out-degree, respectively. *Lack of communication* and *lack of focus* were

not experienced by all departments. Therefore, the integrative misfits of *different priorities, lack of clear goals and lack of reporting and monitoring* were examined and discussed in section 5.3.2.

5.3 The actor-issue network and identification governance gaps.

Respondents were asked which organisational issues they have experienced in their organisation while trying to integrate sustainability into their day-to-day work. These steps, along with sections 5.1 and 5.2, created the actor-issue network illustrated in Figure 7. Two issues were not experienced by any of the departments and were not involved in an issue interdependency. Therefore, these nodes are visualised isolated in the network.

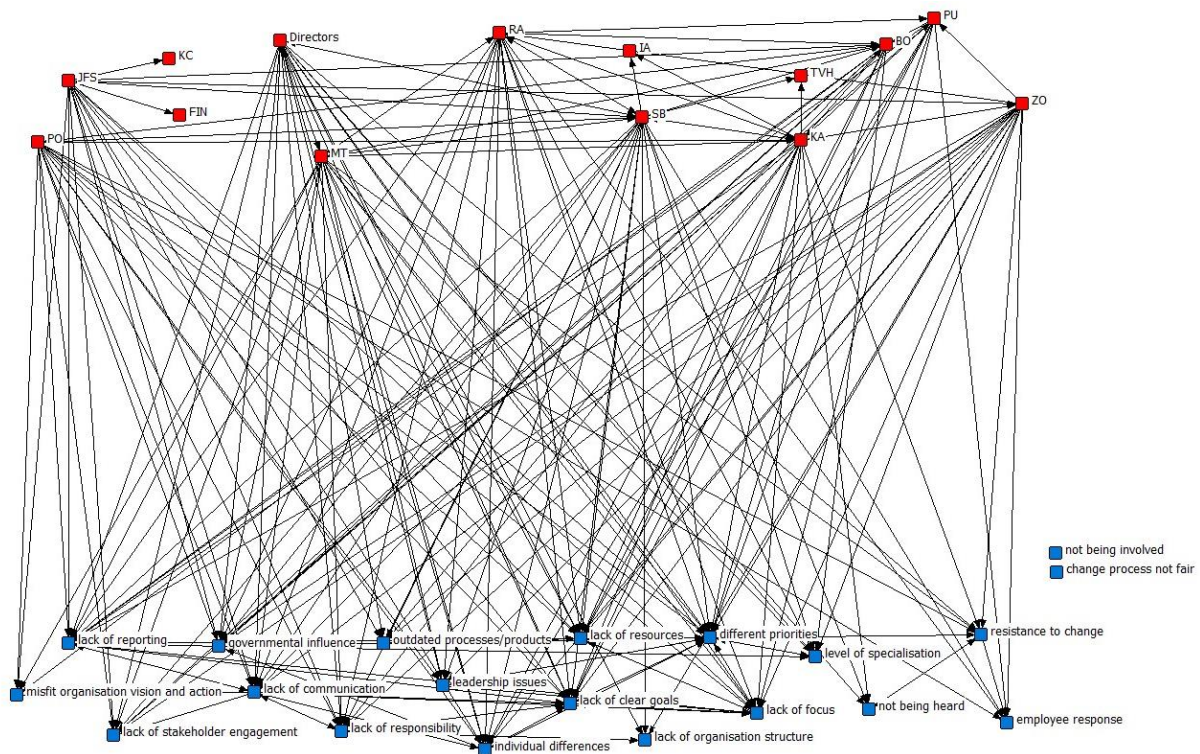


Figure 7: The actor-issue network of WSHD showing the internal collaborations, issue interdependencies, and connections between the departments (red) and issues (blue).

5.3.1 Collaborative misfits.

The departments SB, JFS and BO have the highest BC of their department groups. In several department groups, collaborative misfits are apparent. Within the primary departments, IA and RA experience a collaborative misfit with each other. SB—the primary department with the highest BC—has connections with all high BC departments across other department groups. Within the facilitating department community, PO experiences collaborative misfits with all departments in their department group. However, PO is connected with the other bridging departments of the organisation. JFS, which has the highest BC, is linked to BO and SB. JFS has no linkage with the MT, resulting in the facilitating department group being disconnected from the MT. In the operational department, BO is involved in a collaborative misfit with ZO. The operational departments are connected through BO to the other department groups through SB and JFS. However, TVH encounters misfits with all departments within the same department group.

5.3.2. Integrative misfits.

The integrative misfits of *different priorities, lack of clear goals and lack of reporting* were examined. These three issues are collectively associated with a total of 30 integrative misfits, indicating that 30

blind spots have been identified in relation to the three central issues. Table 3 shows a brief overview of the issues associated with integrative misfits and the number of misfits.

Table 3: Amount of integrative misfits for issues associated with one of the three central nodes: different priorities, lack of clear goals, and lack of reporting.

	Different priorities	Lack of clear goals	Lack of reporting	Total misfits
Level of specialisation	4		4	8
Lack of focus	2	2	2	6
Resistance to change	5			5
Leadership issues	4			4
Lack of communication		2	2	4
Individual differences	1	1		2
Lack of resources			1	1

Different priorities.

Different priorities was taken as central node to explore integrative misfits. The steps described in 4.3.2. were used to simplify the actor-issue network. Sixteen integrative misfits are identified involving seven departments; the network is shown in figure 8. The integrative misfits relate to the issue of *different priorities* and another issue. BO, JFS, PU, RA, and SB are involved in an integrative misfit relating to *resistance to change*. This means they perceive *different priorities* as problematic, but not *resistance to change*. Hence, *resistance to change* can be considered a blind spot. Additionally, the *level of specialisation* creates an integrative misfit involving JFS, KA, PO, and PU. *Leadership issues* is also involved in an integrative misfit for four departments: BO, JFS, KA, and PU. BO is involved in the most integrative misfits, specifically with four issues. Other misfits are experienced by two or fewer departments.

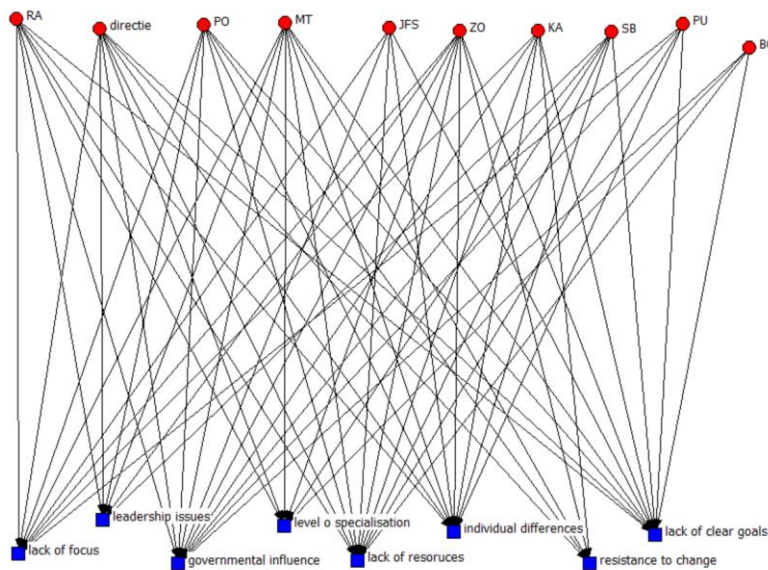


Figure 8: Integrative misfits with different priorities as central node.

Lack of clear goals.

When a *lack of clear goals* is considered as the central node for exploring integrative misfits, five misfits emerge involving four different departments: BO, KA, PU, and SB. Figure 9 shows the resulting network following the same steps as previously described. BO is involved in the majority of misfits, specifically with *individual differences* and a *lack of communication*. KA and PU are associated with a misfit involving a *lack of communication*, while SB is associated with a blind spot involving a *lack of focus*.

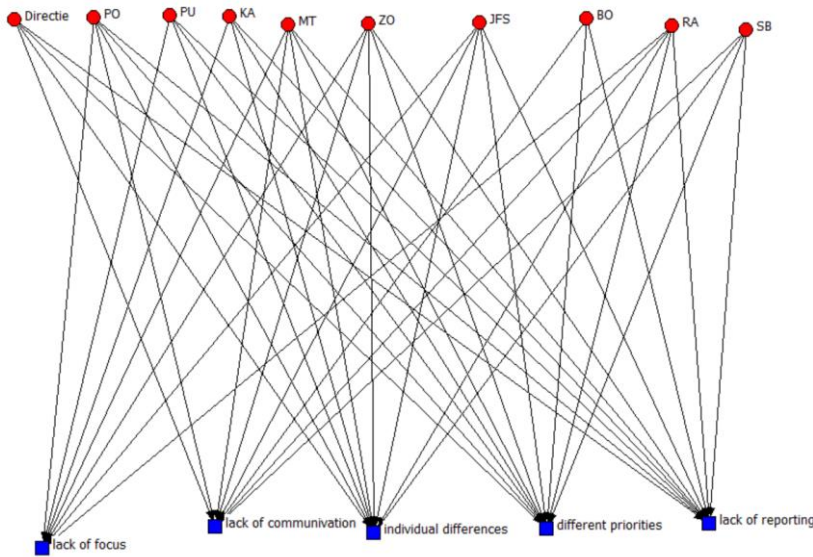


Figure 9: Integrative misfits with Lack of clear goals as central node.

Lack of reporting.

Taking the *lack of reporting* as central node, nine integrative misfits are associated with six departments: BO, JFS, KA, PO, PU, and SB. The network is shown in figure 10. *Level of specialisation* is associated in an integrative misfit and can be considered a blind spot for JFS, KA, PO, and PU. KA and PU are also experiencing a misfit with a *lack of communication*. SB is involved in an integrative misfit with a *lack of focus* and *lack of resources*. BO is also involved in an integrative misfit with a *lack of focus*.

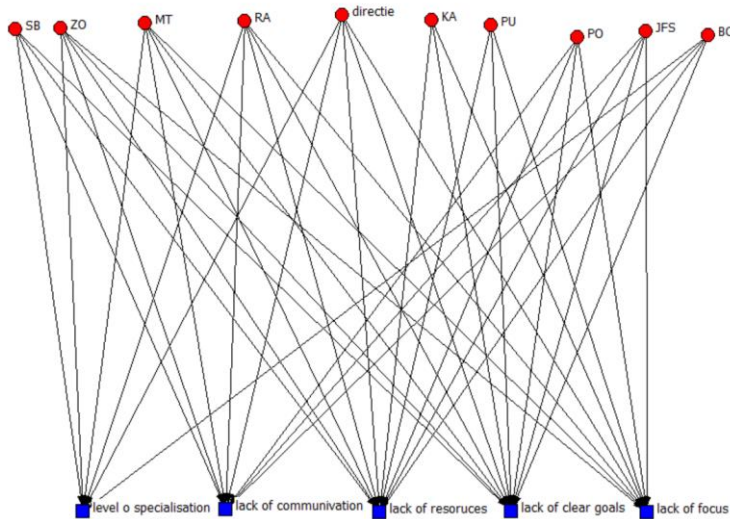


Figure 10: Integrative misfits with Lack of reporting as the central node.

5.4. Attributes of organisational change experiences.

During the interviews, respondents were asked if they experienced issues related to the attributes of organisational change. For each issue, the coding process revealed several sub-issues. The following paragraph elaborates on each issue and its identified sub-issues. Appendix 8 provides an overview of the issues, as well as their sub-issues.

5.4.1. Content issues.

Lack of clear goals.

The *lack of clear goals* is acknowledged by 27 out of 29 respondents and all ten departments. Respondents perceived that the formulated sustainability goals are too abstract. The absence of intermediate steps hinders the translation of these goals to the operational level. Additionally, it is unclear who within the organisation is responsible for formulating these goals.

"The lack of clarity about the goals makes it difficult for everyone who carries responsibility to move in the same direction. Without a clear framework, it is challenging for my advisors to know what kind of advice to give. They can advise according to their own insight on what they think might be the sustainable option, but it is hardly measurable." – KA employee

The primary goals are set in a top-down manner and are perceived as high-over. Not all respondents are familiar with the organisation's goals and ambitions, nor is it clear how these goals will be realised.

"The rest of the department is outside and they basically just have a task, which is to ensure we comply with legal requirements. But those managerial goals, I think that a lot of people are not aware of them." – ZO employee.

Lack of focus.

A lack of focus is perceived by 21 out of 29 respondents as an issue regarding the integration of sustainability within the organisation. This problem is recognised by eight out of ten departments. The organisation suffers from a general lack of focus, attempting to address multiple issues simultaneously without effectively completing any of them.

"Yes, that's just a bit how the water boards have been working for a long time, you know. We start on everything and finish nothing." – RA employee

Furthermore, there is an insufficient focus on sustainability. Primary tasks are prioritised, and sustainability is perceived as an additional and challenging task. Additionally, the organisation exhibits a short-term focus with a strong desire to achieve rapid results. This short-term focus leads to a preference for projects that are easier to accomplish but have a lower overall impact.

"I don't know if I can prove it entirely, but my perception is that we more often focus on the smaller ambitions because it's easier than on that more challenging sustainability which involves so many aspects." – RA employee

Lack of responsibility.

Seven out of ten departments identify a lack of responsibility as an issue while integrating sustainability. This is confirmed by 19 out of 29 respondents. Within the organisation, it is unclear to employees who holds the responsibility for stimulating and promoting sustainability. However, 21 out of 29 respondents



recognise that this responsibility should not lie with a single individual or department but rather with everyone.

"It is a task we all share." – BO employee

Respondents acknowledge that sustainable tasks are often delegated to others; they perceive it as someone else's responsibility. Since sustainability is an issue that concerns the entire organisation and must be embedded throughout, it cannot be effectively implemented by a few individuals. These individuals can be seen as 'lost souls' within the network, lacking the power to make a significant impact.

"Usually with the question of: 'Who is responsible and how am I responsible? We keep expecting something from someone else.'" – Board of directors

Misfit organisations vision and action.

Ten out of 29 respondents and six out of ten departments acknowledge a misalignment between the organisation's vision and its mission. It is recognised that there is a certain degree of freedom to interpret the vision, leading to actions that do not always align with it. However, this is not perceived as a major issue.

"No, I don't think the visions go in opposite directions. I do think that the organisation's vision sometimes goes straight ahead, while the strategic vision sometimes takes a sharp right turn, yes." – ZO employee

The organisation's vision is unclear or even unknown to several respondents. This lack of awareness leads to confusion and inconsistent actions within the organisation.

"I don't know what the strategic vision is." – JFS employee

The interpretation of the organisation's vision varies greatly between departments and individuals, resulting in divergent approaches and priorities. This leads to discrepancies in executing sustainable initiatives, which reduces the overall effectiveness of the sustainability strategy.

5.4.2 Context issues.

Lack of reporting.

24 out of 29 respondents, as well as all ten departments, acknowledge that a lack of resources poses a significant challenge to the integration of sustainability within the organisation. The current system only reports data once a year, leading to delays and inefficiencies in addressing issues promptly.

"At WSHD, we currently report only once a year. We start working on it now, and it gets published at the end of the year, so we are always a year behind the facts." – SB employee

The current system does not clearly define what needs to be reported or monitored, leading to gaps in data collection. Half of the employees lack clarity on reporting procedures, responsibilities, and required content.

"It is not yet clear what needs to be done, so proper reporting and monitoring cannot really take place." – ZO employee

Moreover, the data collected is often not actionable or motivating, as it consists mainly of cold statistics. The monitoring process is perceived as excessive and often redundant, leading to an overload of information that is not always useful.



"That's all well and good, but it ends up being just cold figures, which don't help much. It's not stimulating." – BO employee

Overall, there is consensus that collaboration and resource allocation across the organisation are essential to improving the sustainability strategy. There is a need for a more systematic approach to reporting and monitoring.

"It's really a collaboration throughout the organisation. You need people in the process and those who can support and facilitate it, so it's an important issue." -MT employee

Lack of resources.

Lack of resources is recognised by 24 out of 29 respondents and by all ten departments as an issue regarding the integration of sustainability. The lack of personnel capacity is repeatedly emphasised, with employees indicating that they have too few people to carry out all tasks. The high pace of work and daily duties leaves little room for new initiatives, such as sustainability projects or other innovations. Consequently, developments are pushed to the background, causing the organisation to lag behind in areas where extra effort is needed.

"It mainly revolves around entanglement and doing too much, resulting in increased workload. So, there is simply not enough time to give this topic the attention it needs. Even for those who consider it important, they often don't get around to it." - PO employee

Although financial resources are not mentioned as often as capacity and time, various quotes also indicate challenges in this area. Making choices between different projects and initiatives is hindered by budgetary constraints, potentially preventing some sustainability objectives from being fully realised. This can lead to compromises in execution and falling short of ambitious goals.

"The bureaucratic process moves slowly, and this slows down the process of sustainability integration. There is often too little time to go through the necessary formalities and approvals, resulting in sustainability projects taking months to even years to be implemented." – SB employee

Governmental influences.

22 of the 29 respondents, as well as all departments, recognise governmental influences as an issue in sustainability integration. Several respondents indicated that they have very little contact with the political layer and lack guidance.

There is now a sort of intermediary in between. An extra link that makes it harder for me in my work to know: if I look at my system and I want to make these kinds of improvement proposals, how does that land with the board? – RA employee

However, several respondents do acknowledge that the government could have a greater positive influence by prioritising sustainability. For instance, the government could allocate more resources to sustainability initiatives.

I wish politics would become more involved, but sustainability. Because money is made available for sustainability, but as employees we are actually left in the middle, because we really don't know how much money we are allowed to spend on sustainability.- ZO employee

Respondents note that the political layer of the organisation has various divergent interests, which makes the decision-making process very time-consuming. Additionally, it is observed that short-term projects are chosen more often, while sustainability requires more future-focused attention.

The awareness is there, but because politics are so short-cycled, people still just want to achieve a good result now, not too high taxes, and occasionally a nice showpiece here and there. So yes, politics greatly



influence financing, of course. – SB employee

Level of specialisation.

15 out of 29 respondents and 6 out of 10 departments acknowledged a lack of sustainability specialisation within the organisation. However, several respondents indicated that this doesn't necessarily pose an issue. WSHD is in contact with a variety of consulting firms that provide assistance when specific expertise is required.

Well, I don't really think so. I think we know what we need to achieve and how. We might lack the knowledge of how to achieve everything, but we don't need to have all that knowledge ourselves, in my opinion. That's what the market is for. That's what firms like Arcadis are for, to help us. So that knowledge is available, and it can be outsourced. So, you know, it's a choice. I think we can get that knowledge when needed.- Board of directors

Respondents also mentioned that while more knowledge is needed, there is no time allocated for learning and education. Respondents expect that central departments like KA or the sustainability program team within the SB department should hold the necessary knowledge. Not everyone needs to have the same knowledge, as specialisation within the organisation can lead to a broad collective understanding. However, the available knowledge must be accessible and retained within the organisation. Generally, the organisation acknowledges that it has some knowledge in-house, but storing and managing that knowledge is a problem.

That varies quite a bit, but the knowledge isn't structural and not in every area of sustainability, which means I and sometimes others have to rely on Wikipedia information, so to speak. So we try to figure it out ourselves or through subcontractors, who ultimately do the work. But then there's the question of whether the subcontractor's information is reliable. Sometimes we have the knowledge in-house, but then there are personnel changes, and that knowledge disappears. And we're bad at storing knowledge.

– JFS employee

Lack of organisational structure.

A lack of organisational structure is considered an issue by six of the 29 respondents and three of the ten departments. The current structure, particularly the departmental island mentality, frequently obstructs the integration of sustainability, and major structural changes are necessary to address this.

"We have a bit of a problem with the way we're organised. We have a matrix organisation. This means we have a line organisation that facilitates and manages people, and over that, you have your content direction. This creates a lot of meetings, which doesn't always help."- RA employee

Sustainability should be integrated at all levels of the organisation and be part of the daily workflow. According to respondents, the focus should be on improving existing processes and adopting a top-down approach where leadership provides clear guidelines and ensures that all levels of the organisation are involved in sustainable initiatives.

Outdated processes.

Outdated processes were considered an issue by 13 of the 29 respondents and five of the ten departments. While there is a growing interest in sustainability, some processes and installations remain



unchanged, complicating integration. The description and management of processes are considered limited and outdated, highlighting the necessity for renewal and improved process management. Further complicating change are habits and routines among employees, making new processes difficult to implement.

"It's encouraging to see sustainability increasingly integrated into our activities, but there are installations that are over 30 years old and still operate in the same way." - ZO employee

Priorities seem to shift, sometimes leaving innovation behind other urgent matters. The pace of change is high, causing recently acquired equipment to quickly become outdated.

"Yes, indeed. But that also has to do with the speed at which things change. By the time you purchase a new climate control system, there's already a new model on the market." – JFS employee

5.4.3. Process issues.

Lack of communication.

22 of the 29 respondents and eight of the ten departments recognise that the communication process within the organisation is lacking. There are numerous “islands” within the organisation where communication is either absent or ineffective. This lack of interaction between different parts of the organisation hampers overall efficiency and cohesiveness.

Islands. And we still haven't managed to make that orange bar (the bar referring to the MT). That bar should be a sort of bridge between those islands. – PO employee

Departments often feel that communication flows in only one direction, from top to bottom. This hierarchical approach results in messages getting distorted or lost as they pass through multiple layers of management, from the executive board to department heads to team leaders.

But the directory board goes from department heads to team leaders, so if you extend that narrative, people are in a certain line. You start with a story and go along that line, but by the end of the story, it's really different, or you've lost half of your information. – PO employee

These issues are influenced by the way communication is handled. Messages and information are frequently disseminated through intranet, the internal online network. However, many employees are unsure where to find this information on intranet, and certain departments, particularly those with staff who work primarily in the field, do not check intranet regularly. Furthermore, intranet is primarily a one-way communication tool. This method does not encourage interaction or feedback from employees, leading to disengagement.

Yes, there is some communication, but then it's more global. Often, for us, it's a message on intranet. But not everyone in the operational departments frequently sits behind a PC, so to speak. So, we have to think about the way we communicate. It needs to be adjusted. – ZO employee

Resistance.

Five out of the ten departments, with 11 out of 29 respondents, indicate some resistance to change. Several respondents noted that change is always challenging within the organisation but may not necessarily be a hindering factor.

"Yes, this is just very variable. It's yes for one person, no for the other, me. Yes, I wouldn't want to see a negative in it. I think everyone wants to. Or most people will. With 600 people, there are always some who really don't want to, but generally, everyone will want to. It's just that some see more opportunities and others see more obstacles." – KA employee



However, there is a difference between older and younger employees in this matter. The presence of young employees who come from intrinsic values, such as sustainability, is noticeable. It is also acknowledged that change is happening, with more and more employees seeing sustainability as important, leading to organisational change.

"Yes, you can just see that it's also something for younger people, or at least for people who have worked at the water board for a shorter time." – BO employee

Lack of stakeholder engagement.

Eight out of the ten departments, along with 17 out of the 29 respondents, have indicated experiencing a lack of stakeholder engagement. Involving all stakeholders in decision-making processes proves to be a challenge.

"This doesn't just happen for sustainability, it happens in all processes." – BO employee

While everyone desires involvement, sometimes the right people are not invited. This can lead to feelings of exclusion and resistance among employees. Particularly within the field service, there is less observed engagement.

"The field service is involved a bit less often." – SB employee

Organising effective stakeholder engagement is not well-established, and a systematic approach is often lacking. Although some employees feel they are adequately approached, there remains uncertainty about exactly who is and should be at the table.

Unfair change process.

Three out of the ten departments and eight respondents out of 29 perceive the change process as unfair. While many within the organisation view the change process as fair, some aspects are considered unfair.

"One person benefits because it falls within their scope, while another gains no advantage at all." - PO employee

The allocation of resources is not evenly distributed among departments within the organisation, making it harder for some departments to integrate sustainability. The lack of equitable distribution of resources and workload impacts the implementation of sustainability initiatives across different departments.

"There are departments like SB where sustainability is much more rooted, and more time can be spent on it." – ZO employee

5.4.4. Outcome issues.

Employee response.

Five out of the ten departments and eight out of the 29 respondents acknowledge an issue with employee response. When negative advice to increase sustainability efforts is not followed, it becomes demotivating.

"When negative advice comes to increase sustainability efforts and is not honoured, it becomes demotivating." – MT

Sustainability is sometimes overlooked in the rush to achieve quick results, which can lead to stress when initiatives are hindered. There is an interplay between stress and enthusiasm regarding changes; some employees become stressed, while others become excited about positive developments and sustainability.



"Changes often bring stress, but there are also always people who become excited about change and positive developments. So yes, that also applies to sustainability." - MT

5.4.5. Leadership issues.

Leadership Issues.

Leadership issues have been recognised by 6 out of 10 departments and 12 out of 29 respondents. One prominent theme is the lack of clear leadership and direction. Several managers and team leaders are primarily focused on immediate operational tasks; they lack focus on sustainability.

"I think we are showing a lack of leadership in the field of sustainability, perhaps even broader than that, namely also in terms of change capability." - MT

This causes them to be absent or unable to answer sustainability questions or projects. However, some leaders have stronger ambitions regarding sustainability. There is inconsistency between leaders and their engagement with sustainability. Additionally, communication and collaboration were identified as critical factors in increasing unity.

"Yes, what I do find, is that there are a lot of managers, team leaders, but that there is too little unity." – RA employee

Not being heard.

Not being heard was recognised as an issue by three of the ten departments and also by three of the 29 respondents. Respondents acknowledge that ideas and suggestions are listened to within the organisation. However, it is noted that these ideas are not always implemented due to an excess of suggestions.

Not being involved.

Not being involved was recognised as an issue by one respondent of the 29. It was not considered an issue by any department. Within the organisation, there is some scope for individual initiative and contributions to change.

5.4.6 Individual differences.

Different priorities.

Different priorities are recognised as an issue for sustainable integration by 27 out of 29 respondents and ten out of ten departments, making it the most recognised issue among all 20 issues. The lack of time and resources proves to be a constant obstacle, with daily tasks taking precedence and sustainability initiatives being squeezed. If it takes more time, sustainability is pushed aside.

"We have to move forward, and sometimes the importance of sustainability is not acknowledged when it requires extra time and effort to address it properly, regardless of financial aspects." – JFS employee

This discrepancy in priorities is also reflected in the lack of clear communication and guidelines from management regarding the role and urgency of sustainability. The lack of clear guidelines and frameworks for sustainability complicates the process of prioritisation and action.

" But yes, even our daily management, the board, doesn't steer there sufficiently and also doesn't prioritise sufficiently. One of the board members is also very capable of adding something daily that is quite important, but he doesn't provide the resources and also doesn't say what I shouldn't do. Yes, that just keeps the workload very high." – PO employee



Individual differences.

Individual differences are recognised as a problem by 25 out of 29 respondents and nine out of ten departments. There are different perceptions and priorities regarding sustainability within different departments and levels of the organisation. Some departments appear to attach more importance to sustainability than others. There is also a difference in focus within the organisation, with some departments placing more emphasis on sustainability than others. These differences lead to friction and disagreement over the implementation of sustainability measures.

Because one wants such a path to sustainability as A+ and the other says C is also sufficient – JFS employee.

A lack of clarity in goals and definitions regarding sustainability within the organisation is also recognised as a cause of individual differences. Due to a lack of clarity, there is room for employees to have divergent interpretations of the goals, resulting in individual differences.

If you, as an organisation, have this clear, then it is clear to everyone, and you can work with it. In my opinion, this is not yet clear enough, which is why everyone thinks about sustainability in their own way.
– RA employee.

5.5 Power-interest matrix.

To understand the power and interest of stakeholders, respondents were asked who or which group had the most interest in integrating sustainability into the organisation and who had the power to do so. The resulting matrix based on the interviews is shown in Figure 11.

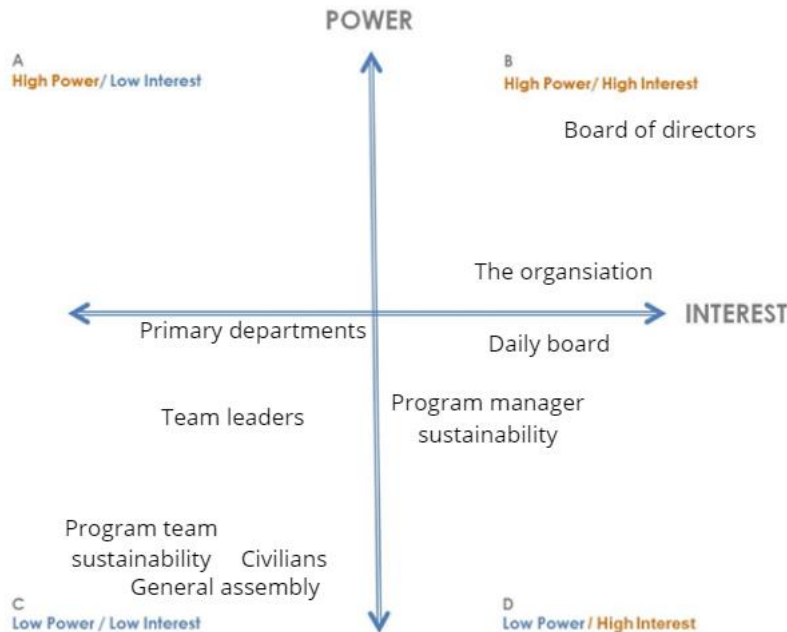


Figure 11: Power-interest matrix showing stakeholders' power and interest in sustainability integration, as stated by respondents.

The board of directors is most frequently mentioned as a stakeholder that has the most power and interest in the organisation. They are regarded as the ones who are responsible and oversee the transformation to a more sustainable organisation. They are also viewed as key players with the power and responsibility to make decisions, embrace ideas, and influence the organisation's direction.

"I think whoever chooses that it should happen also has the greatest interest." – RA employee

The organisation itself, specifically the employees, is also viewed as a powerful and high-interest stakeholder. Employees perceive sustainability as a crucial factor in fulfilling WSHD's social task. Consequently, they are motivated by the mission to make a difference in society.

Yes, we all have an interest in it. We're all excited to do it, especially in the longer term. -JFS employee

Especially primary departments were mentioned multiple times to highlight their power. Upon examining the actor-actor network, it is evident that primary departments hold the highest BC, thereby underscoring their significant role within the network. Program managers are referred to as high-interest stakeholders for their role in leading sustainability initiatives and achieving goals. Specific individuals are often cited as having a lot of power and influence within the organisation, especially regarding sustainability initiatives.

However, several respondents highlighted that sustainability and decision-making should be a joint effort. This emphasises how critical participation and teamwork are to achieving sustainability goals, as well as the importance of diversity in workshop groups.

External influences, such as civilians and the general assembly, are mentioned, emphasising the importance of complying with external regulations and standards in promoting sustainability. It is

recognised that ultimately, the citizen, as a stakeholder, may suffer most from a lack of sustainability. This underlines the importance of sustainability from the perspective of the public interest.

“My focus is really on the citizen, because ultimately it is they who decide where we should go, just like we as an organisation. I think politics is as simple as that. Yes, if we are not able to achieve that, the citizen will also suffer, it's that simple.” -RA employee

5.6. Bridging measures.

Two of these are determined by the number of integrative misfits as discussed in Section 5.3.2, and the other two are selected based on the number of mentions. *Different priorities, lack of clear goals, and lack of reporting and monitoring* were examined for misfits. *Level of specialisation* and *lack of focus* were associated with most misfits with these three issues. *Lack of reporting* has a lower degree than different priorities and a lack of clear goals, so it was not chosen as an issue for the workshop. In the workshop, four groups each created two matrices for two of the four issues resulting in eight matrices. These matrices are shown in Appendix 9. This chapter elaborates on the workshop solutions and is supplemented with interview data. A total of 33 bridging measures were formulated to overcome the structural barriers; *different priorities, lack of clear goals, level of specialisation, and lack of focus*. An overview of the proposed bridging measures can be found in Appendix 10.

5.6.1. Level of specialisation.

The *level of specialisation* is categorised into three subproblems; insufficient internal knowledge of sustainability, not being able to find the available knowledge, and a lack of capacity to obtain new knowledge. Table 4 shows an overview of the proposed solutions and their level of effort and impact as categorised by employees during the workshop.

Table 4: Overview of solutions and their level of effort and impact that were devised during the workshop for Level of specialisation, and associated subproblems.

Solution	Effort	Impact
Knowledge inventory	Low/high	High
Working together for new initiatives	Low	High
Guaranteeing knowledge in the organisation	Low	High
Creating time/space to develop knowledge	High	High
Developing specific knowledge focused on impact	High	High

In the workshop, WSHD acknowledged that knowledge is present within the organisation. However, the primary issue is the inability to identify who possesses that knowledge. One proposed solution with high impact is a knowledge inventory to find available knowledge in the organisation.

To facilitate the identification of individuals with specific expertise, knowledge needs to be inventoried. However, a problem is that people often do not independently list their knowledge and skills. Therefore, someone must actively ask them what their skills are. The workshop debated whether to adopt a quick, low-effort approach or a more intensive, high-effort approach, such as conducting interviews. Additionally, there was a discussion about who should be responsible for collecting this knowledge inventory. A consensus emerged that the responsibility should lie with the divisions since every department has several divisions with their own expertise. Department heads should have a supervisory role to ensure that the inventory process is effectively implemented. Some divisions have already adopted this approach and can serve as examples.

In the conducted interviews, respondents also mentioned the solution of a central knowledge inventory. A central knowledge base can ensure employees have access to best practices and newly developed solutions. Sharing specific examples and best practices within the organisation can contribute to broader

acceptance and implementation of sustainable solutions. In addition, a central knowledge base can contribute to improving communication.

"I think that, if you really want to make it alive, you should have some kind of knowledge base of results and not just reporting and monitoring to directors and management, because that is less interesting to the employee who has to implement it." -RA employee

Moreover, this approach contributes to the preservation of knowledge within the organisation. Knowledge is often concentrated among specific employees, and when they leave the organisation, valuable knowledge is lost. To prevent this, it must be clear who has specific knowledge, and this knowledge must be actively shared so that it can be transferred effectively.

Another solution to increase the level of specialisation is to develop new initiatives in collaboration with relevant departments. This would avoid doing work twice and allow for efficient use of scarce resources. This promotes a more efficient process and maximizes the impact of the efforts, resulting in a high-impact solution.

Creating time and space to acquire knowledge was one of the sub-issues that was discussed during the workshop. However, employees were conflicted between priorities and staff expansion as solution. Both depend on the approach of the board of directors and affect the availability of time to acquire knowledge. The board of directors sets priorities and decides whether new people can join. To effectively create time and space to obtain knowledge, efforts must focus on reallocating hours for employees or staff expansion.

The employees in the workshop emphasised that knowledge must be developed in the areas with the most effect to have the highest impact. Information about assets and impact categories, such as CO2 and circularity, must be digitally accessible to see where the greatest impact can be made. This allows efficient resource use and stimulates targeted knowledge development. However, making assets and impact categories digitally accessible will require a high effort and collaboration between the IA and RA departments.

5.6.2. Lack of clear goals.

A *lack of clear goals* is a widely recognised problem among respondents in the implementation of sustainability. Several sub-issues are identified. Employees perceive the organisational goals as abstract and are missing a translation to specific programs and departments; they require intermediate goals. It is also recognised that it is not clear who is responsible for formulating these intermediate goals. There is also a concern about whether the goals are realistic and feasible. Table 5 provides an overview of the solutions proposed in the workshop for the lack of clear goals, as well as their effort and impact levels according to employees.

Table 5: Overview of solutions and their level of effort and impact that were devised during the workshop for Lack of clear goals and associated subproblems.

Solution	Effort	Impact
Concrete examples of sustainability goals.	Low	Low
Increase awareness about sustainability.	Low	High
Determining criteria for sustainable purchasing.	Low	High
Create progress reports for goals.	High	Low
Integrating sustainability into risk management.	High	High
Formulating intermediate goals.	High	High
Carrying out a baseline measurement.	High	High
MKI calculations for project impact.	High	High
Advisory group for sustainability knowledge.	High	High

Actualisation during long projects.	Low	High
Review and adapt current processes.	High	High

Providing concrete examples of goals is a low-effort solution to make abstract concepts, such as sustainability, more tangible. By citing specific examples, employees will better understand what sustainability means and how they can apply it to their day-to-day practices. Additionally, several employees highlighted the importance of awareness regarding sustainability. Increasing awareness within the organisation can increase the recognition of sustainability goals as important. Sustainability should no longer be an option but a fundamental necessity.

Making progress reports is another proposed solution, which would be the responsibility of KA. This allows the board of directors to steer and adjust the goals to work in a targeted manner. This way, goals can be set and adjusted more realistically. This solution was classified as low impact and high effort because it requires significant time to be implemented, but immediate benefits may not be visible.

To achieve the sustainability goals, it is crucial to consider the associated risks of sustainability. WSHD has multiple long-term projects, and if the highest possible sustainability scenario is the goal, financial requirements change. By including sustainability in risk management, financial aid can be released when it proves necessary to achieve the goals. However, at the start of a project, sustainability must also be included in the credit application. The risk management funds should only be used for unexpected changes. This solution is rated as high effort and high impact because it requires major adjustments to financial planning and risk management procedures.

The lack of intermediate goals was another sub-issue. Intermediate goals allow the board of directors to make adjustments and focus specifically on these objectives. However, it is currently unclear who is responsible for translating the main goals into concrete intermediate goals and subsequently translating them to the different programs. After a discussion in the workshop, the following consensus was reached: SB formulates the goals, but there is a lack of clear prioritisation to determine what is and is not feasible. Therefore, the board of directors must formulate clear priorities for the organisation. Furthermore, interview respondents mentioned that formulating goals in a SMART way and linking them to performance requirements can increase clarity and contribute to reporting and monitoring. Establishing clear performance requirements clarifies what needs to be monitored.

“That starts with defining the goals clear and SMART, followed by performance requirements that we link to our assets. We provide these performance requirements to the operations team, who will carry out the activities. In the end, and it’s a very blue answer I’m giving now, but ultimately everything we do as a water board comes down to the performance requirements we set for our assets. In essence, it always comes back to that.” – MT

The RA department then creates a framework for implementing the formulated goals. However, the workshop participant mentioned that RA lacks involvement in setting the goals, which makes it difficult to operationalise them. As a solution, it is proposed that SB and RA work closely together to make this translation. Both departments must enter into more intensive discussions with each other to determine the right direction. In addition, input is needed from various departments to strengthen the translation into concrete actions so that the program can be specific. It is important that RA take control and ensure that this process is monitored. A think tank or steering group, in which RA is the driving force, can provide valuable input for formulating goals. This can also be supported by input of the knowledge inventory, which can be used to acquire knowledge regarding specific topics. The importance of the integral formulation of goals and requirements was also highlighted in the interview. Employees from different levels within the organisation must be able to contribute to the formulation. This reduces the collaboration gap between strategic and operational levels. Involving departments early in the process ensures better coordination and alignment of the change in practice with employees' needs.

"I think the specialist departments and end users really need to be involved at a much earlier stage; like, guys this is just a first rough draft of an idea. What do you think?" – JFS employee

Another proposed solution is to establish purchasing criteria that incorporate sustainability from the beginning. This ensures that purchasing decisions are in line with long-term sustainability objectives. It also encourages the selection of suppliers and products that meet sustainability standards.

Organisational goals must be formulated in collaboration with executive departments and tested for feasibility. For example, energy and sustainability goals must be practically feasible. This requires close cooperation between SB and PU to set realistic goals with measurable and achievable steps to achieve them. In the interviews, several respondents mentioned the option to improve communication and collaboration between departments through organisation-wide meetings and workshops. Through these sessions, employees can share ideas and knowledge. This manner of communication can increase the number of employees reached.

"It would be more productive to explain this in a half-hour team meeting than to organise a day where everyone can come." – MT

Employees expressed their need in the workshop for a benchmark measurement to get a clear picture of the current situation. It was deemed SB's responsibility to carry out this measurement. However, several employees mentioned having the baseline measurement performed by an external party. Based on this benchmark measurement, it is possible to identify which areas require attention and where adjustments need to be made to achieve the current goals. This contributes to solving the issue of having unrealistic goals.

In addition to having benchmark measurements and intermediate goals, employees in the workshop stated that it is necessary to determine the effect for each activity on the goals in advance. Before starting an activity or project, its impact must be calculated using MKI calculations. Subsequently, it can be assessed in terms of how it contributes to the goals and how much. This can show what actions are effective and efficient. The department that leads the activity or project must do the MKI calculation, but it can also be done by the contractors. MKIs increase the likelihood of examining the realistic impact of goals. Calculating MKIs for a project must become a permanent part of the program cycle. By recording the MKI of each project, a file is built up that can contribute to simplified customization.

The workshop also suggested forming a team to regularly assess project progress and offer guidance to ensure effective management. This team would consist of employees who are aware of the current state of affairs in the market, so that the project remains actual and relevant. This must not be an individual person but rather a pool of people with different skills and from different departments. This group would regularly evaluate progress and make adjustments if necessary. They must also be able to assess how projects can be made sustainable, both for existing and future projects. The goal of the group is to be an advisory group that can help achieve a project's objectives. Additionally, this group can use the knowledge inventory to seek assistance on specific substantive topics.

Some projects have a long duration, and by then, the environment or market may have changed significantly. The long-term nature of the projects requires an adaptive approach. As a solution, the participants in the workshop proposed a re-actualisation at each phase within an active project. It must be assessed whether the set goals are still relevant and feasible in the current context. This process ensures that there is an ongoing, up-to-date assessment and that the project remains on track. People perceive the solution as high impact and low effort due to its recurring reviews and modifications, as opposed to extensive changes.

Finally, the workshop highlighted that it is important to not only focus on new initiatives but also to review current processes and align reports with sustainability goals. By looking at how existing processes can be adapted and improved, sustainability can be better integrated into the organisation. The proposed advisory group can support the re-evaluation of existing processes.

5.6.3. Different priorities.

The issue of *different priorities* is recognised by many respondents. Several sub-issues were identified based on the interviews. Firstly, sustainability is not regarded as important, and core tasks are prioritised. In addition, employees perceive differences in priority between colleagues, resulting in discussions. Lastly, it is not clear what the priority is for the higher management. Table 6 provides an overview of the solutions proposed in the workshop, as well as their effort and impact levels according to employees.

Table 6: Overview of solutions and their level of effort and impact that were devised during the workshop for Lack of clear goals and associated subproblems.

Solution	Effort	Impact
Continuously pursuing and updating projects	Low	High
Integrating sustainability into agreements	Low	High
Make sustainability a permanent agenda item	Low	High
Emphasising urgency and awareness of sustainability	High	High
Organising a competition for innovative ideas	High	High
Implementing administrative fact sheets for priorities	High	High
Increasing awareness and insight through training and education	High	High

One of the proposed solutions to reduce the difference in priorities is to integrate sustainability into framework agreements for purchasing and tendering. Different departments must collaborate and apply sustainability measures to the systems. It is also important to include in the framework contracts that priorities and ambitions can change and must therefore be adjusted in the contracts. This allows for continuously pursuing and updating tenders and projects to respond to the constantly changing environment. Another low-effort, high-impact solution is to make sustainability a standing agenda item at all meetings and gatherings, emphasising its importance and priority. This contributes to awareness and shows that sustainability is a priority within the organisation.

Employees emphasised the importance of the MT and the board of directors' attitudes. The board of directors and MT play an important role in emphasising the importance of sustainability and creating awareness within the organisation. A positive attitude towards sustainability, such as “we either act sustainably or we don't,” can help promote sustainability awareness and emphasise its priority.

Another option is to organise an employee competition in which employees are encouraged to propose innovative ideas for sustainability. These concepts should be associated with certain goals, such as achieving a certain percentage of savings. By linking rewards to these initiatives, employees are encouraged to prioritise sustainability.

To address the difference in priorities, it is important to make choices when the board of directors is faced with decisions with certain trade-offs. Administrative fact sheets can help keep priorities aligned. The board of directors should prepare these fact sheets based on what is important to the organisation. This effectively communicates the highest priority choices and their corresponding reasons, facilitating effective decision-making and maintaining focus.

Especially in operational departments, sustainability is not considered a day-to-day task. The departments must be helped to incorporate sustainability into their systems, and awareness must be

raised. Training and education on sustainability can contribute to this. Operational departments are very results-oriented, so providing insight into their impact on sustainability can help motivate change.

5.6.4. Lack of focus.

The issue of *lack of focus* was identified due to its involvement in integrative misfits, making it a blind spot. Three sub-issues were identified in the coding process. First, a general lack of focus is present, with multiple projects leading to fragmented focus. Second, there is a limited focus on sustainability, with other things taking precedence. Lastly, the organisation tends to focus more on short-term than long-term objectives. Tabel 7 shows an overview of the solutions proposed in the workshop, as well as their effort and impact levels, according to employees.

Table 7: Overview of solutions and their level of effort and impact that were devised during the workshop for Lack of focus and associated subproblems.

Solutions	Effort	Impact
Share examples	Low	Low
Make concrete agreements with team leader and evaluation	Low	Low
Don't accept apologies	Low	Low
Create a simple check list with generally accepted standards/actions	Low	High
Sustainability tips on intranet with a weekly summary	Low	High
Sustainability "red button"	Low	High
Visit the departments to collect and deliver information	High	High
Sustainability ambassadors	High	High
Integrating sustainability into e-learning	High	High
Long-term vision and strategy for sustainability	High	High

One of the workshop solutions in the low impact and low effort category to reduce the lack of focus is to share examples. By showing how specific challenges have been successfully tackled, colleagues get a better picture of sustainability, and it is easier to focus on it because it becomes manageable. This solution has also been proposed for the other issues. Another solution proposed in the workshop with low impact and low effort is to make concrete goals with your team leader as an employee. Together with the team leader, drawing up clear, achievable goals ensures a targeted approach to tasks and responsibilities, which maintains a focused overall focus. Not accepting apologies from everyone, also known as *"excuus truus"*, has also been suggested as a low impact low effort solution. Within the current culture of WSHD, employees often use an excuse not to include sustainability in their day-to-day activities, for example. No longer accepting this, mutually promotes a sense of responsibility and encourages team members to proactively look for solutions instead of hiding behind excuses.

A low-effort and high-impact solution that was proposed is for higher management to create a check list with generally accepted standards and actions that can be completed during a tender or project. A checklist like this ensures a standardized approach, reducing the time and effort spent constantly rethinking processes for new projects. This reduces distractions and allows everyone to focus better on their specific tasks. In addition, the check list can be complemented with the knowledge inventory proposed in section 5.6.1. The check list can also be supplemented nationally by looking at how other DRWAs have tackled certain projects. The *Unie van Waterschappen* could play a role by creating a database with information about all DRWAs.

Another way to create focus is to regularly publish small sustainability tips on the intranet. By highlighting how small changes, such as sending a link instead of an attachment in an email, can yield significant energy savings, employees are made aware of their impact. This encourages them to adjust their behaviour and contributes to a more sustainable working environment. The board of directors plays an important role in this process by emphasising that small changes can have a major impact. By

also including these tips in e-learning and onboarding programs, it is ensured that everyone within the organisation is familiar with the sustainability initiatives. However, sharing information via intranet can be ineffective. The workshop and interviews revealed that excessive posting on intranet often results in information loss. In addition, not all departments look at the intranet. A weekly summary can contribute to this. However, it is up to the employees themselves to use these sustainable tips.

It was noted in the workshop and in the interviews that not all departments receive information about sustainability. The proposed solution was to have sustainability advisors visit the departments to collect and deliver information. Especially operational departments This allows a targeted focus on sustainability. In the workshop, employees emphasised that sustainability is not a separate goal but is always present. Proposed solutions are mainly trying to contribute to awareness and have a more continuous focus on sustainability. This was also emphasised in the interviews.

" You actually need to have a number of people in every department who are driving sustainability and who are busy, so to speak." – RA employee

Sustainability should not be treated as a separate project but as a core part of all activities and processes. A proposed solution was appointing sustainability ambassadors within each department to ensure that sustainability becomes an integral part of daily activities. These sustainability ambassadors could form the advisory group proposed in section 5.7.2.

Another solution with a high impact but low effort is the introduction of a "sustainability red button." This figurative button can be used when someone sees an unsustainable action taking place. By pressing a figurative button, employees can more easily address each other about unsustainable actions. This promotes small behavioural changes that can have a big impact in the long term.

Another solution to create focus is to incorporate sustainability into e-learning. This e-learning is provided during the onboarding of new employees, but it is also available to current employees. By including sustainability in the e-learning, it ensures that sustainability is an important focus of the organisation. The e-learning should also provide information on how sustainability can be integrated into projects in order to make it practical. WSHD is currently working on this development but has not yet incorporated practical examples into e-learning. In addition, it is pointed out that e-learning requires input from all perspectives. Therefore, the e-learning developers should visit the various departments to obtain information and process it in the e-learning.

Finally, one of the identified sub-issues was the organisation's tendency to undertake too many initiatives simultaneously. The workshop emphasised that a long-term vision and strategy for sustainability provide clear goals and direction, so employees know what they are working towards. This reduces distractions and ensures focused efforts. By having a concrete plan, teams stay focused on their contributions to the organisation's sustainable goals, increasing overall efficiency.

6. Discussion.

The goal of this thesis was to identify the structural barriers that impede WSHD from integrating sustainability practices into their day-to-day work. By using the actor-network theory, this research illuminates the intricate interplay between various actors and the complex social issues they face, thereby shedding light on the interdependencies that often complicate these processes. The combination of organisational change attributes and actor-network networks creates a novel approach that bridges the gap between theoretical constructs and practical applications. This approach allowed for the identification of structural barriers within the organisation, contributing to the literature on organisational transformation, specifically in the field of sustainability. By acknowledging the intersection between actors and issues, management actions have a higher chance of being effective. A more comprehensive strategy that produces more resilient and sustainable outcomes can be developed by considering both the actor-actor and the issue-issue network. The insights of this thesis contribute to the literature on sustainability in organisations by highlighting the need for clear strategic direction, improved collaboration, and a gradual approach to change. The importance of aligning organisational structures and processes with sustainability objectives is emphasised, as advocated by Schaltegger et al. (2015). By addressing these structural barriers and utilising the bridging measure, WSHD can increase its efforts for a sustainable future.

The first sub-question of this research was: *What governance gaps, caused by collaborative and integrative misfits, exist in the network of WSHD regarding sustainability integration?*

Several collaborative misfits are identified in WSHD's actor-actor network. Each department group has one department with a higher BC than others, indicating a pivotal role in facilitating connections within the organisational network. The departments SB, JFS, and BO have the highest BC and act as important bridge departments that promote collaboration and information flows between different segments of the organisation. The bridging departments are connected with each other. However, JFS has no connection with the MT, resulting in the isolation of this facilitating department from upper management.

The integrative misfits are identified in the issue-issue network. When looking at the issue-issue network, a higher out-degree indicates a greater level of influence within the network, suggesting these nodes play a more pivotal role. *Different priorities, lack of communication, lack of focus, lack of clear goals, and lack of reporting and monitoring* have the highest out-degree respectively. However, in contrast to the other nodes, *lack of communication* and *lack of focus* were not experienced by all departments. Therefore, the integrative misfits of *different priorities, lack of clear goals* and *lack of reporting and monitoring* were examined. Taking these issues as central node, a total of 30 integrative misfits associated with six issues were identified. *Different priorities* was involved in the most integrative misfits: sixteen. The *level of specialisation* and *lack of focus* were involved in eight and six integrative misfits respectively.

After the identification of governance gaps, two steps are identified by Bergsten et al. (2019); assessing the effect of low fit and integrating bridging measures. However, guidance to fulfil these steps is not provided. Therefore, this study formulates a methodology to do so. This led to the formulation of the second sub-question: *How can the WSHD overcome governance gaps to integrate sustainability throughout the organisation?*

First, a list of organisational change issues was formulated based on the attributes of organisational change. In the interviews, respondents were asked to elaborate on their experiences regarding those organisational change issues. The interviews were analysed to identify the interdependencies between issues. Subsequently, governance gaps associated with these issues were identified. This resulted in the



selection of four issues with a high influence on the organisation: *different priorities, lack of clear goals, level of specialisation and lack of focus*. These issues were discussed in an interactive workshop in which internal stakeholders discussed potential solutions. Implementing the workshop's solutions can overcome governance gaps and integrate sustainability into the organisation. The effort and impact of possible solutions were examined so a strategic step-by-step plan could be formulated. The four quadrants of the effort-impact matrix can each be characterized by when the action should be performed. Following this structured approach, the WSHD can take a targeted and effective approach to bridging governance gaps and integrating sustainability within the organisation. This process ensures that available resources are used effectively to achieve maximum impact and promote sustainable improvements. This research's emphasis on a phased approach provides a replicable model for other organisations, promoting broader adoption of sustainable practices and long-term environmental improvements.

There are several hierarchical levels in an organisation, and each one has a certain influence. Therefore, the third sub-question was formulated: *What stakeholders play a bridging role in the integration of sustainability in the WSHD?*

The actor-actor network has demonstrated that various stakeholders play an important role in integrating sustainability into WSHD. The departments SB, JFS, and BO have been identified as bridging departments that maintain important connections within the organisation. However, management appears to have a remarkably low BC, indicating a limited role in the daily interactions within the network. Nevertheless, the power-interest analysis shows that management and directors are frequently mentioned as crucial actors in promoting sustainability initiatives. Their leadership is critical for formulating vision and policies, as well as shaping organisational culture and practices to integrate sustainability. In addition, only SB and the MT appear to have a direct connection with the management, according to the actor-actor analysis. This may indicate a disconnect between management and other departments, which can hinder the effectiveness of sustainability initiatives. In the workshop and their interviews, employees emphasised the need for a clear vision and direction formulated by the board of directors and MT. Employees feel a lack of clear direction and support from upper management, which complicates the implementation of sustainable practices. This emphasises the importance of a coherent and well-communicated strategy from the top of the organisation. The bridging departments, such as SB, JFS, and BO, can be utilised to strengthen communication and collaboration between senior management and the rest of the organisation, enabling effective integration of sustainability within the WSHD.

Finally, the research question of this study was: *What structural barriers exist within WSHD that impede the implementation of sustainability, and how can these be overcome by internal stakeholders?*

All attributes of organisational change were acknowledged by employees, with context issues, content issues, and individual differences being the most frequently recognised. Thus, the results of this study have shown that several structural barriers can be identified within WSHD and are mainly caused by a lack of clear strategies and practical objectives for employees. This is consistent with previous studies by Orji (2019) and Lozano & Von Haartman (2017) regarding the challenges of organisational change in complex social systems.

Existing literature often emphasises resistance as a significant barrier to organisational change (Jones, 2013), particularly in the context of sustainability integration (Orji, 2019). However, within WSHD, issues regarding resistance to change and employee response are less prominent. This is a result of WSHD's incremental approach towards sustainability integration. At WSHD, sustainability initiatives are implemented gradually and in specific areas across the organisation, rather than making radical changes all at once. Bührs (2012) highlights the short-term focus of political organisations, resulting in a

preference for gradual change. This approach minimises disruptions and allows employees to adapt more comfortably. However, while incremental changes are less disruptive, Bührs (2012) and Orji (2019) suggest they may not be sufficient for achieving long-term sustainability objectives. Achieving a balance between incremental and radical change is necessary, supported by clear communication, strong leadership, and a culture that values innovation and adaptation (Jones et al., 2021).

Another key finding is the strong need for better collaboration and communication between different departments within the organisation, a finding consistent with Margerum and Robinson (2015). This is crucial for effectively addressing sustainability issues. The necessity for better communication to overcome change barriers is widely supported. Burnes (2011) and Jones et al. (2021) suggest that fostering a culture of open dialogue and mutual understanding is critical for successful organisational transformation. Thakhathi et al (2019) also highlight the need for organisations to align an organisation's culture with their objectives.

The methodology of this study combined a broad systemic perspective to identify interdependent challenges, creating a unique perspective on organisational change. According to previous studies, research has primarily focused on barriers or stakeholder analysis. For example, Vargas et al. (2019) focused on stakeholder analysis using social network methodologies. While stakeholder analysis provides insights into the roles and relationships of various actors, it may overlook the underlying structural issues. Jaramillo et al. (2018) identified 175 barriers to sustainable development in SMEs across various sectors but did not provide ways to overcome them or incorporate a stakeholder analysis. In contrast, this research identifies and addresses these structural barriers, providing a more comprehensive understanding of the internal challenges faced by organisations like WSHD. Beusch et al. (2022) advocate for a systems approach, examining control at different organisational levels and promoting open conversations about sustainability. This study builds on this by conducting workshops to formulate bridging measures, providing practical frameworks for dialogue and collaboration within WSHD. These workshops enabled a deeper understanding of interdependencies and generated actionable insights for overcoming barriers.

In conclusion, this thesis emphasises the critical need for enhanced collaboration, clear strategies, and balanced change approaches to integrate sustainability within WSHD. This research advances the understanding of organisational change by integrating a systemic approach with useful, implementable frameworks. It also offers a pathway forward for tackling the many problems associated with sustainable integration.

6.1. Limitations.

Within this research, several limitations can be noted. First of all, the conducted interviews identified collaborations between actors within WSHD, which issues are experienced by those actors, and how those issues are related to each other. The nature of the interviews allowed for the identification of the underlying causes and connections that have an impact on the organisation. However, while the interviews conducted provided valuable insights, time restrictions may have limited the depth of the interviews since each respondent only had one hour available. Longer interviews would have allowed for a more detailed exploration of respondents' experiences, perceptions, and challenges related to collaboration and sustainability integration. This could have provided richer data and a more nuanced understanding of the issues at hand. Additionally, several respondents mentioned having difficulties with measuring their collaboration, leading to potential inaccuracies or incomplete representations of collaborative efforts within the organisation. Estimations were made in certain cases, which could have introduced biases or inaccuracies in the data.

Another limitation pertains to the potentially subjective coding process used to categorise interview data. Despite efforts to remain objective, categorisation decisions were based on researcher judgment, introducing potential bias. Instances of overlapping situations where data points fit into multiple categories further complicate consistency and reliability.

While the study included respondents from various departments, not all departments were represented. Consequently, certain collaborations and issues experienced by these departments may have been missed or underrepresented in the research. This restricts the findings' comprehensiveness and could tilt the results towards departments with greater representation, potentially missing insights from other groups in the organisation. Several departments were also absent from the workshop. This could have limited the breadth of perspectives and insights gathered during the collaborative problem-solving process. The TVH, FIN, KC, and KA departments were not represented, potentially leading to gaps in the proposed solutions and implementation plans. This lack of participation may have impacted the effectiveness and inclusivity of the workshop outcomes.

Reflecting on this research's methodology, the actor-issue network, the attributes of organisational change, and the power-interest matrix were integrated. This combination created a comprehensive approach to identifying structural barriers within the organisation. The integration of the actor-issue network with the attributes of organisational change proved to be effective to formulate bridging measures for sustainable integration. This dual approach allowed us to map out how various actors and issues are interconnected within the organisation. By doing so, structural barriers were uncovered that might not be apparent through other methods. Additionally, this method's versatility suggests it could be effectively applied in a broader context, beyond the specific focus of this study.

The power-interest matrix was primarily utilised to form workshop groups, which facilitated structured discussions and collaborative problem-solving. However, the matrix could have been employed more strategically. If it had been used as a second analytical layer within the actor-issue network, specifically focusing on the different departments, it would have provided deeper insights into the power dynamics and interests of specific departments. This would have enriched the understanding of the organisational landscape by revealing how power and interest intersect across specific departments.

Moreover, the scope of the power-interest matrix in this research was quite broad. Respondents were not limited to selecting from a predefined set of actors or groups, which resulted in a wide range of responses. While this broad scope provided a diverse set of perspectives, it also meant that the matrix could have been more targeted. A more focused application might have yielded more precise insights into specific power and interest relationships within the organisation.

6.2. Recommendations for future research.

To better understand organisational change in the context of sustainability integration, future research should focus on several areas. First, the research can be extended to include multiple DRWAs to provide a broader perspective. Additionally, comparative studies across different DRWAs would allow for the identification of common challenges and the sharing of best practices, thereby increasing the generalisability and relevance of the findings. Conducting longitudinal studies could provide valuable insight into the long-term effectiveness of the implemented strategies. This could also help to identify in which state of change resistance emerges and how it could be managed.

Furthermore, respondents repeatedly mentioned sustainability awareness as a critical component of individual differences. Further research should examine the effects of differences and similarities in sustainability awareness on an organisation and its integration of sustainability. This could lead to more focused initiatives and approaches intended to increase organisational sustainability integration.

Moreover, further research can focus on how departments can work more effectively together. This study highlighted the need for WSHD to increase collaboration. By finding successful ways of working together and understanding what makes them successful, targeted solutions and mechanisms can be designed to improve collaboration and efficiency within the organisation.

Another important component of WSHD is formulating intermediate goals. Future research should examine how organisations could effectively formulate sustainability goals that ensure continuous progress towards their end objectives. Understanding the process of setting achievable and realistic goals allows progress to be monitored and provides valuable insight into the development of organisational systems.

6.3. Recommendation for WSHD.

Based on the results of this thesis, several recommendations can be made for WSHD. The effort-impact matrix was used to formulate a step-by-step strategic plan to ensure that resources are used efficiently to achieve maximum impact. This structured approach allows WSHD to work purposefully and effectively to bridge governance gaps and promote sustainable improvements.

The first step is to integrate low-effort and low-impact solutions. Achieving these successes quickly builds momentum that can help create support and buy-in for other higher-effort, higher-impact initiatives. Examples of these types of solutions are sharing examples of goals and best practices, not accepting any excuses, and making concrete agreements between team leaders and employees. The second step for WSHD is to focus on long-term solutions that require greater effort but also have a greater impact. These solutions require more planning and resources, but by carefully planning and integrating them into a strategic action plan, they can be implemented effectively.

Several solutions rely on employees who are structurally available to manage specific mechanisms. Therefore, a necessary step is to develop a strong structure in which sustainable solutions can be developed and applied. There are currently a few employees within WSHD who focus on sustainability, but it is often not clear who these people are or what their tasks entail. Implementing a sustainability advisory group is one structural solution. This team would be responsible for collecting and disseminating knowledge about sustainability within the organisation. For example, the group can bring the knowledge list to the attention of employees by visiting every department and introducing the sustainability advisory group and their plans. The group would have the opportunity to search for sustainability opportunities throughout the whole organisation.

Each department would have an employee who is part of this group and spends a part of their time on sustainability opportunities in their department. These ambassadors act as connectors who promote collaboration and communication between different departments. The team allows for centralising efforts and enables a coherent approach. Another benefit of an integral team is the input they can give RA to formulate intermediate goals. This provides a broader view of sustainability within the organisation. However, RA and SB need to plan additional meetings to collaborate on formulating the intermediate goals. This can be supported by establishing benchmarks for each goal, which can be done by an external firm. Once the organisation has built momentum and developed a structure, the sustainability team can formulate a plan to integrate the solutions into the organisation. It is important to take advantage of solutions that have a high impact but require relatively little effort. These solutions can often be implemented quickly and deliver significant benefits

In summary, this research has shown that the integration of sustainability within WSHD is hampered by several structural and governance-related barriers. By identifying and addressing these barriers, WSHD can develop more effective and sustainable practices that contribute to their long-term goals of energy and climate neutrality.

7. Conclusion.

The research question for this thesis was: *What structural barriers exist within WSHD that impede the implementation of sustainability, and how can these be overcome?* To formulate an answer to this question, an actor-issue analysis was conducted, complemented with the attributes of organisational change to identify structural barriers. The research was supplemented with a workshop to formulate bridging measures to overcome the identified barriers.

The results of this study have shown that several structural barriers can be identified within WSHD and are caused mainly by a lack of clear strategies and practical objectives for employees. The organisational issues *Different priorities, lack of communication, lack of focus, lack of clear goals, and lack of reporting and monitoring* had the highest out-degrees, respectively. However, *Lack of communication* and *lack of focus* were not experienced by all departments. Therefore, the integrative misfits of *different priorities, lack of clear goals* and *lack of reporting* were examined. The most integrative misfits were associated with the *level of specialisation* and *lack of focus*. In the workshop, 33 bridging measures were formulated to overcome four structural barriers; *different priorities, lack of clear goals, level of specialisation, and lack of focus*.

Based on the results of this thesis, several recommendations can be made for WSHD. Firstly, the effort-impact matrix must be used to formulate a step-by-step strategic plan to ensure that resources are used efficiently to achieve maximum impact. This structured approach allows WSHD to work purposefully and effectively to bridge governance gaps and promote sustainable integration. Secondly, to fully integrate sustainability and achieve the set goals, larger organisational changes are required, which may lead to more resistance. Addressing this requires clear communication, management involvement, and fostering a culture that values innovation and change. To promote sustainability in the organisation, a strong structure in which sustainable solutions can be developed and applied is required. Establishing a system such as a sustainability advisory team to collect and disseminate information about sustainability can positively affect WSHD's actions. Key stakeholders to foster this process include the bridging departments SB, BO, and JFS, which have a pivotal role in the WSHD organisational network. Additionally, the board of directors and MT need to support their employees and have a clear sustainable direction.

In summary, this research has shown that the integration of sustainability within WSHD is impeded by several structural organisational change barriers. By integrating the social and organisational components of sustainability within WSHD, an overview of structural barriers, bridging measures, and key stakeholders was created. If the barriers are not addressed, WSHD will not be able to integrate sustainability throughout their organisation. By addressing these barriers, WSHD can develop effective and sustainable practices and achieve its long-term goals. This thesis provides a roadmap of bridging measures, empowering WSHD to navigate through the complexities of organisational change. The implementation of those measures is up to WSHD itself, as changing its organisation is its process of transitioning to a desired sustainable future state.



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Appendix 1: Departments and internal overview.

Table 8: Overview of the internal stakeholders of WSHD, their function, and their importance to sustainability integration.

Stakeholder	Function within the organisation	Importance sustainable integration
Communication employees	Team responsible for internal and external communication.	Important for effectively communicating sustainability initiatives to stakeholders, increasing awareness and involvement
Daily board	Decision-making body with ultimate responsibility for policy and strategy.	crucial for establishing measurable sustainability goals and developing policies that promote sustainable integration at the organisational level
Department employees	Operational employees in various departments with specific responsibilities.	Implementation of sustainability initiatives at operational level. It must be integrated towards them. Contribute directly to sustainability initiatives at operational level, making them the backbone of sustainable water management.
Department leaders	Leader of a specific department with operational responsibilities.	Essential for implementing sustainability policy within the department, so that sustainability is concretely anchored.
Board of directors	The secretary-director forms the board of directors team together with the directors. They set out the main points and emphasise what is important.	Provides leadership and support for sustainability goals, setting the course for sustainable integration across the organisation.
Civilians	The community in which the organisation operates, including residents and stakeholders.	Involve stakeholders and take into account local sustainability needs.
Management team	The leadership team that makes decisions at the strategic level. Manage employees (department heads and team leaders). Consist of all department leaders	Important to lead employees, ensure that they enjoy their work and achieve the objectives. Crucial for integrating sustainability into the corporate culture and steering employees towards sustainable goals.
Sustainability taskforce	Small group of employees working on sustainability formed by employees of the management team.	Essential in promoting sustainability practices and ensuring coherent sustainability efforts
Outdoor management and Maintenance (BO)	Management and maintenance, mowing dikes, dredging ditches, catching muskrats, extermination. Realizing the annual program plan.	Implementation of practical sustainability initiatives in nature management.
Sustainability program team	Small group of employees working on sustainability in the organisation. Part of department strategy and policy (SB)	Essential in promoting sustainability practices and ensuring coherent sustainability efforts
Legal and Facility (JFS)	Legal and facility management responsibilities.	Ensuring compliance with sustainability regulations and facilitating sustainability initiatives through proper facility management.
Knowledge and Advice (KA)	Advisory body for specific substantive knowledge about the primary tasks of the water authority.	Providing expert advice to ensure sustainability is integrated into primary water authority tasks.
Personnel and Organisation (PO)	Personnel management and organisational development.	Integrating sustainability into HR practices and organisational culture. They play a key role in fostering a workplace environment and on-boarding that values and practices sustainability.
Projects and Execution (PU)	Practical realisation of the annual program plan.	Implementing sustainability initiatives through project management and execution.
Coordination and Asset Management (RA)	Carries out the planning and realisation of the annual program plan per directive from the executive team. RA aligns strategies and connected objectives with SB. For each program, RA develops an asset management plan with underlying multi-year investment plans, maintenance plans, and an operations plan. Forms the basis for PU, ZO, BP.	Ensuring coordinated and strategic implementation of sustainability goals across programs.
Strategy and Policy (SB)	Strategy and policy formulation of the goals set out by the board of directors.	SB helps align the company's sustainability initiatives with its long-term vision and goals.



Purification and Maintenance (ZO)	Realising the goals set for water purification.	Developing and overseeing the implementation of sustainability strategies and policies. They ensure that the organisation's long-term plans align with sustainability principles and objectives.
Supervision, Licensing, and Enforcement (TVH)	Oversight, licensing, and enforcement responsibilities.	Ensuring sustainability regulations are followed through proper supervision, licensing, and enforcement. Their role is critical in maintaining compliance and upholding standards.
Finances (FIN)	Financial management and budgeting.	Allocating resources for sustainability initiatives and ensuring financial planning supports sustainability goals. Their financial oversight ensures that sustainability projects are adequately funded and financially viable.
Information Management and Automation (IA)	Information management and automation processes.	Using data and automation to support and enhance sustainability efforts through efficient information management. Their work helps streamline operations and improve the efficiency and effectiveness of sustainability initiatives.

Appendix 2: Attributes of organisational change.

Table 9: The attributes of organisational change, including their definition, issue examples, and solution examples.

Concept issue	Definition issue	Issue examples	Solution example	
Content issues	Factors specific to the change being implemented, underlying the organisation's long-term relationship with its environment and defining its overall character, mission, and direction. includes elements such as strategic orientation, organisation structure, and organisation-environment fit.	Fit between Change and Organisation: The change does not aligns with the organisation's strategic vision, reducing employee commitment (Parish, et al., 2008).	Clearly communicating how the proposed change supports and aligns with the organisation's long-term goals and vision for the future.	
			Conducting employee workshops to demonstrate how the proposed change is congruent with the organisation's mission and contributes to its broader objectives.	
Process issues	Interventions and processes taken during the introduction and implementation of proposed change.	Communication about the change: Transparent and effective communication strategies to convey the reasons for change, expected outcomes, and addressing concerns .	Hosting sessions or using internal communication platforms to share detailed information about the upcoming changes and addressing employee questions.	
			Perceived fairness (procedural justice): Ensuring the change process is perceived as fair, just, and unbiased, which positively influences employee attitudes and commitment to change.	Implementing a clear and unbiased process for selecting employees for new roles during a restructuring, providing explanations for decisions made.
			Participation and involvement: Ensuring employees actively contribute to the change process, seeking their input, and involving them in decision-making.	Conducting regular team meetings to discuss and gather feedback on the upcoming changes in the organisation.
			Resistance to change: Identifying practical strategies to address employee resistance, such as involving employees in the change planning and decision-making.	Establishing a cross-functional change team with representation from various departments to collaboratively identify potential challenges and devise solutions to address resistance.
			Factors defining success or failure: Practical considerations like resource allocation, stakeholder engagement, and clear goal definition.	Allocating sufficient resources, both human and financial, for training programs during a technological change, ensuring employees are adequately equipped to adapt to the new systems.
Outcome issues	Responses after an organisational change.	Employee response; The emotion employees feel as a result of the change. These can be both negative or positive.	Stress, cynicism, reduced organisational commitment	
Context Issues	Pre-existing forces in the external or internal environment of an organisation that influence change management.	(External) Technological Advances: Fast technical development may render products or processes outdated, forcing businesses to embrace new technology in order to stay competitive.	Form a specific Technology Adoption Task Force inside the company.	
			(External) Governmental aspects: Political influences on decisions might result in funding, priorities, or strategic directions for water management projects to change or remain ambiguous.	Link initiatives with governmental agendas by means of a strategic alliance. Plans should be modified in response to political developments, influencers should be consulted, and funds should be kept flexible.
			(Internal) Levels of specialisation: if the task is extremely unique to the technologies that are already in use, or if the workforce is highly specialised.	Retraining or recruiting new employees.



		(Internal) Organisational Slack: If an organisation has low levels of slack (excess resources, both human and financial), it may find it difficult to successfully execute changes. Insufficient resources can impede the assimilation of novel technology or procedures, posing challenges in terms of training expenditures and mitigating possible disturbances.	Finding ways to build in the required slack or making the most of already-existing resources can help to ensure a more seamless transition through strategic management and resource optimization.
Leadership Issues	Key driver of organisational change implementation. Involves individuals, particularly direct supervisors, who influence and guide the change process.	A style of leadership that imposes stringent control may work against the desired spirit of empowerment when implementing employee empowerment programs or initiatives meant to generate a sense of ownership and autonomy.	Managers ought to adopt a more participatory strategy, including staff members in decision-making and aggressively soliciting their opinions. In keeping with the objectives of empowerment programs, this change fosters ownership, increases autonomy, and encourages teamwork.
Individual differences	Individuals characteristics that could influence organisational attitudes and behaviours.	If there is a sizable segment of the workforce has a low tolerance for ambiguity, resistance or discomfort may surface in reaction to the uncertainty frequently associated with changes in water management practices or policies.	Transparency and clarity in communication can be improved by leaders. Employees who receive focused training on handling uncertainty are better able to cope with change and respond to it more adaptably.

Appendix 3: Interview guide.

Table 10: Interview guide for the interviews with internal stakeholders of WSHD.

	Question	Explanation
Introduction	Can you please introduce yourself and your role within the WSHD?	
	How is sustainability incorporated in your role	
	Do you believe the overview of the organisation is complete, and if not, what elements are missing? (<i>showing the organogram</i>)	
Organisation structure	Where do you place yourself in the organisation ?	To check if the organogram is complete
	How does the current organisational structure either facilitate or hinder sustainability efforts?	To understand the interviewee's position within the organisation's structure concerning sustainability integration.
	Do you think this list of stakeholders is comprehensive, or are there additional stakeholders working on or valuing sustainable integration?	To uncover whether the existing structure supports or poses challenges to the incorporation of sustainability within the organisation.
Stakeholders and collaboration	How do these stakeholders influence sustainability for the organisation?	To check the perceived inclusiveness of stakeholders involved in sustainability initiatives.
	With whom do you collaborate, and how frequently? (<i>Please choose one of the following options: a. Very often (e.g., (almost) daily) b. Often (e.g., weekly) c. Regularly (e.g., monthly) d. Sometimes (e.g., a few times a year) e. Never (e.g., (almost) never)</i>)	To uncover the dynamics and influence that different stakeholders exert in shaping and driving sustainability practices within the organisation.
	How is sustainability incorporated into these collaborations?	To identify key collaboration patterns related to sustainability.
	Who, in your view, holds significant power and interest in the context of sustainability within the WSHD?	To reveal how sustainability is woven into day-to-day collaborations and whether it is a central consideration in decision-making processes.
Stakeholders and their power and interest	<i>Can you provide examples of instances where stakeholders' power and interest impacted sustainability initiatives positively or negatively?</i>	Understanding power dynamics
	In your experience, what challenges or barriers have you observed in integrating sustainability within the WSHD?	To create a deeper understanding of power dynamics and understanding the practical implications
Issues sustainable integration	<i>A list of potential issues and their definition based on the attributes of organisational change was shown, see appendix 4. For each issue, questions were asked. These questions can also be found in appendix 4</i>	To gather firsthand insights into obstacles and barriers that may impede the successful implementation of sustainability initiatives.
	Could you indicate which issues occur the most and which the least?	To identify the barriers experienced considering sustainability integration
	Do you have anything else you want to add?	This question helps in discerning the relative impact and prevalence of different issues
Finalising:	Can I reach out to you to join a workshop for this project as well?	
	Is there anyone else you believe I should speak with?	

Appendix 4: Organisational issues overview.

Table 11: Interview guide for the interviews with internal stakeholders of WSHD.

Attribute	Issue	Explanation	Question
Process issue	Change process is not fair	The process towards the change is not unbiased	Do you experience that the processes regarding change within the organisation are not fair?
Individual differences	Different priorities	Sustainability is not seen as most important	Do you not see sustainability as the highest priority within the organisation?
Outcome issue	Employee response	Responses to sustainable changes, such as stress or enthusiasm.	Have you experienced stress or enthusiasm in response to sustainable changes?
Context issue	Governmental influence	Political decisions influence funding, priorities, or strategic directions.	Do you notice that political decisive influence on financing, systematic or strategic directions with regard to sustainability?
Individual differences	Individual differences	Widely differing ideas among employees/departments about sustainability integration	Do you experience major differences in design regarding sustainability integration between department employees?
Content issues	Lack of clear goals	Undefined or unclear objectives	Is it unclear to you what the objectives are with regard to sustainability?
Process issue	Lack of communication	Communication about a certain change regarding sustainability is missing or not clear	Have you noticed that there is no or unclear communication about a certain sustainable change?
Content issue	Lack of focus	The organisation does not focus on one target but on everything at once	Do you feel that the organisation does not focus on one specific goal, but focuses on everything?
Context issue	Lack of organisation structure	There is no/limited structural processes to incorporate sustainability	Do you notice that there are no limited structural processes for incorporating sustainability into the organisation? How do you imagine it
Context issue	Lack of reporting/monitoring	It is not clear what has been done and what should be done	Do you have difficulty determining what is being done in the field of sustainability and what still needs to be done?
Context issue	Lack of resources	Inadequate resources, both human and financial such as time/money.	Are you experiencing a shortage of resources, both in terms of personnel and finances, such as time or money?
Content issue	Lack of responsibility	It is not clear who in the organisation has a responsibility regarding sustainability	Do you have difficulty with who within the organisation is responsible for sustainability?
Process issue	Lack of stakeholder engagement	Ineffective involvement of relevant stakeholders in the change process.	Do you notice that relevant people are not effectively involved in sustainable changes?
Leadership issue	Leadership issues	The manager/team leader has a negative influence on sustainability integration due to various reasons such as lack of motivation	Have you noticed that the team leader manager has a negative influence on sustainability integration, for example due to lack of motivation or presence?
Context issue	Low level of specialisation	Limited knowledge or specialisation considering sustainability	Do you think there is limited knowledge or specialisation in the field of sustainability?
Content issue	Misfit organisations vision and action	The change doesn't align with the organisation's strategic vision	Do you feel that the change is not abrupt with the strategic vision of the organisation?
Leadership issue	Not being heard	Employees that bring ideas, are not heard	Do you feel that your ideas regarding sustainability are not being heard?
Leadership issue	Not being involved	Employees can not actively contribute to the change process/ no place for input	Do you feel that as an employee you cannot actively contribute to sustainable changes or that there is no room for your input?
Context issue	Outdated processes/products	Processes or products have become obsolete and need updating	Do you notice that certain processes or products are outdated and need to be updated?
Process issue	Resistance to change	Employees or the organisation itself do not want to make effort to integrate sustainability	Do you experience resistance within the organisation, where employees of the organisation do not want to make an effort to bring about sustainability?

Appendix 5: Overview interview respondents.

Table 12: Overview of the research respondents, including their function and department, sorted by interview date.

	Function	Department	Interview date
1	Maintenance engineer	RA	29-1-2024
2	Manager Organisation development	PO	29-1-2024
3	Process director	ZO	30-1-2024
4	Coordinator	ZO	31-1-2024
5	Director	Board of directors	31-1-2024
6	Team leader	KA	31-1-2024
7	Process engineer	RA	2-2-2024
8	Contract manager	PU	2-2-2024
9	Policy adviser	BO	2-2-2024
10	Team leader	BO	2-2-2024
11	Head of department JFS	MT	5-2-2024
12	Innovation adviser	SB	5-2-2024
13	Team leader	ZO	5-2-2024
14	Internal client	RA	6-2-2024
15	Contract manager	ZO	6-2-2024
16	Building manager	JFS	6-2-2024
17	Head of department ZO	ZO	7-2-2024
18	Head of department IA	IA	7-2-2024
19	Head of department PU	PU	7-2-2024
20	Head of Department RA and KA	MT	7-2-2024
21	Secretary Director	Board of directors	8-2-2024
22	Coordinator	JFS	8-2-2024
23	Systems engineer	RA	8-2-2024
24	Senior HR	PO	8-2-2024
25	Asset manager	RA	9-2-2024
26	Internal client	RA	9-2-2024
27	Team leader	JFS	9-2-2024
28	Head of department SB	SB	20-2-2024
29	Project Manager	BO	4-3-2024



Appendix 6: betweenness centrality

Table 13: Overview betweenness centrality of each department.

Department	BC
BO	8.667
SB	24.767
JFS	23.783
KA	13.15
ZO	3.5
RA	2.483
MT	2.4
PU	0.25
Board of directors	0
FIN	0
IA	0
KC	0
PO	0
TVH	0

Appendix 7: Organisational Issues Out-degree and In-degree

Table 14: Overview of the out-degree and in-degree of the organisational issues experienced in WSHD.

	Out-degree	In-degree	Degree
Different priorities	8	8	16
Lack of communication	7	4	11
Lack of focus	6	5	11
Lack of clear goals	5	6	11
Lack of reporting	5	5	10
Individual differences	3	3	6
Lack of responsibility	3	2	5
Resistance to change	3	2	5
Governmental influence	2	2	4
Lack of resources	2	4	6
Leadership issues	2	2	4
Level of specialisation	2	2	4
Lack of organisational structure	1	1	2
Not being heard	1	1	2
Change process not fair	0	0	0
Employee response	0	1	1
Lack of stakeholder engagement	0	1	1
Misfit organisation vision and action	0	1	1
Not being involved	0	0	0
Outdated processes/products	0	0	0

Appendix 8: Overview issues and sub-issues

Table 15: All organisational issues that were based on the attributes of organisational change. The sub-issues of each issue are based on coding groups resulting from interviews with internal stakeholders of WSHD.

Attribute	Issue	Sub-issue
Content	Lack of clear goals	Goals are too abstract.
		Unclear who is responsible.
		Concern feasibility.
	Lack of focus	General lack of focus.
		Insufficient focus on sustainability.
		Short-term focus.
	Lack of responsibility	Unclear responsibilities.
		Responsibility lies with everyone.
		Sustainable tasks are delegated.
	Misfit between vision and action	Freedom in interpretation of vision.
		Vision is unknown or unclear.
	Context	Lack of reporting
Undefined reporting requirements.		
Lack of resources		Insufficient personnel capacity.
		Time constraints due to high workload.
		Budgetary constraints.
Governmental influences		Limited contact with political layer.
		Divergent political interests.
		Preference for short-term projects.
Level of specialisation		Insufficient internal knowledge on sustainability.
		Not able to find knowledge in the organisation
		Lack of room to obtain new knowledge
Lack of organisational structure		Island mentality among departments.
	Hierarchical top-down structural.	
Outdated processes	Slow adaptation to new processes and technologies.	
	Innovation hindered by shifting priorities.	
Process	Lack of communication	Amount of communication
		Way of communication
		Content of communication
	Resistance	Variable willingness to change.
		Difference in acceptance between older and younger employees.
	Lack of stakeholder engagement	Inadequate involvement of stakeholders in decision-making.
		Feelings of exclusion among employees.
	Change process is unfair	Unequal resource distribution across departments.
Inconsistent support for sustainability initiatives.		
Perception of unfair benefits in the change process.		
Outcome	Employee response	Demotivation from ignored sustainability advice.
		Stress vs. enthusiasm about sustainability changes.
Leadership	Leadership issues	Lack of clear leadership and direction.
		Inconsistency in leaders' engagement with sustainability.
	Not being heard	Not being heard
		Being heard
	Not being involved	Not being involved
		Being involved
Individual differences	Different priorities	Daily tasks take precedence over sustainability.
		Personal priorities are different.
		Lack of clear guidelines and frameworks from management.
	Individual differences	Varied importance placed on sustainability across departments.
		Friction and disagreement over sustainability implementation.
		Divergent departmental focuses on sustainability.

Appendix 9: workshop matrix

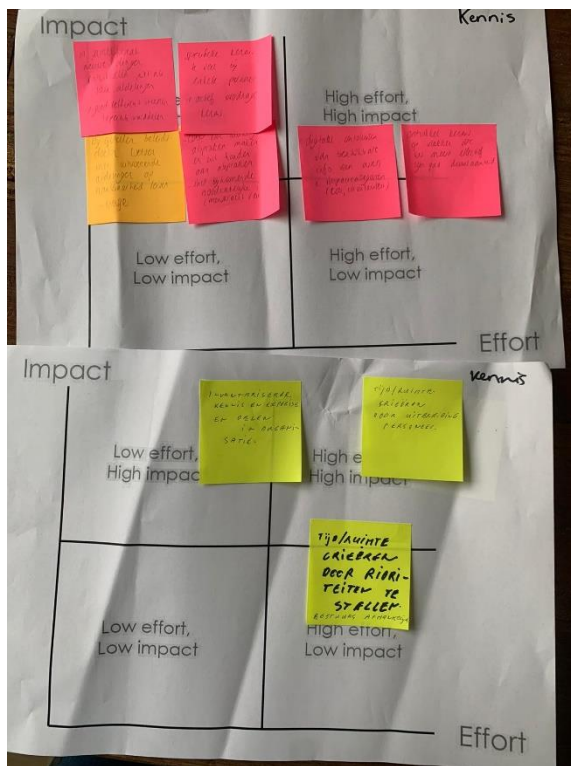


Figure 12: Resulting Effort-Impact matrix for the organisational issue level of specialisation based on a workshop with internal stakeholder of WSHD.

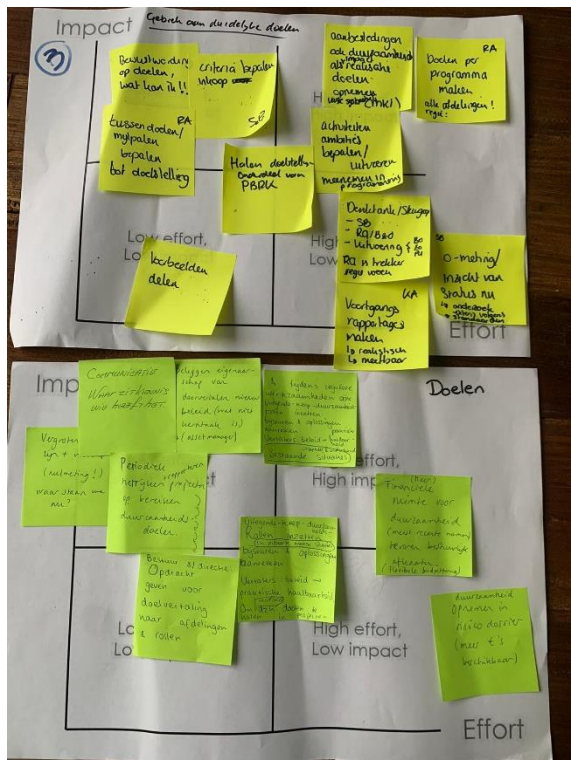


Figure 13: Resulting Effort-Impact matrix for the organisational issue lack of clear goals based on a workshop with internal stakeholder of WSHD.

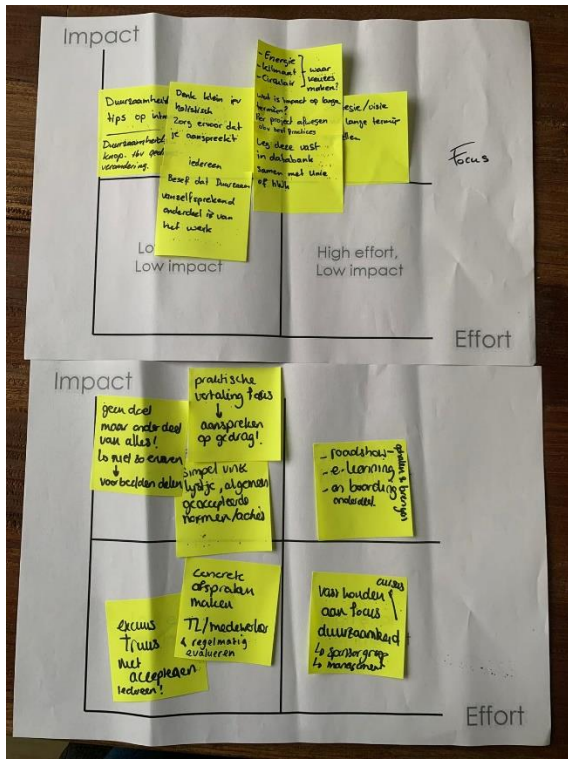


Figure 14: Resulting Effort-Impact matrix for the organisational issue lack of focus based on a workshop with internal stakeholder of WSHD.

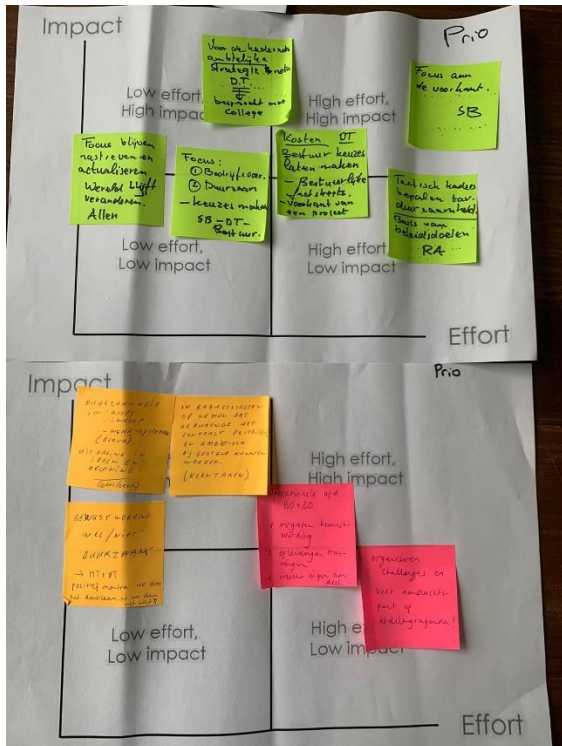


Figure 15: Resulting Effort-Impact matrix for the organisational issue different priorities based on a workshop with internal stakeholder of WSHD.

Appendix 10: Proposed bridging measures.

Table 16: Bridging measure formulated in a workshop for four organisational issues with internal stakeholder of WSHD.

Solution	Effort	Impact
Level of specialisation		
Knowledge inventory	Low/high	High
Working together for new initiatives	Low	High
Guaranteeing knowledge in the organisation	Low	High
Creating time/space to develop knowledge	High	High
Developing specific knowledge focused on impact	High	High
Lack of clear goals		
Concrete examples of sustainability goals.	Low	Low
Increase awareness about sustainability.	Low	High
Determining criteria for sustainable purchasing.	Low	High
Create progress reports for goals.	High	Low
Integrating sustainability into risk management.	High	High
Formulating intermediate goals.	High	High
Carrying out a baseline measurement	High	High
MKI calculations for project impact.	High	High
Advisory group for sustainability knowledge.	High	High
Actualisation during long projects.	Low	High
Review and adapt current processes.	High	High
Different priorities		
continuously pursuing and updating projects	Low	High
Integrating sustainability into agreements.	Low	High
Emphasising urgency and awareness of sustainability	High	High
Organising a competition for innovative ideas	High	High
Make sustainability a permanent agenda item	High	High
Implementing administrative fact sheets for priorities	High	High
Increasing awareness and insight through training and education	High	High
Lack of focus		
Share examples	Low	Low
Make concrete agreements with team leader and evaluation	Low	Low
Don't accept apologies	Low	Low
Create a simple check list with generally accepted standards/actions	Low	High
Sustainability tips on intranet with weekly summary	Low	High
Sustainability "red button"	Low	High
Visit the departments to collect and deliver information	High	High
Sustainability ambassadors	High	High
Integrating sustainability into e-learning	High	High
Long-term vision and strategy for sustainability	High	High