MASTER THESIS
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Enhancing Stakeholder Collaboration for Climate Resilience in Willemstad's Inner City

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PREFACE

This thesis marks the final step of my graduation journey and reflects my growing interest in sustainable urban development, community involvement, and climate resilience. The project was carried out as part of the Learning Community Even Groene Vrienden, in collaboration with the University of Curaçao (UoC). It allowed me to explore how institutional dynamics and local collaboration influence climate-adaptive futures, not just in theory, but in the real-life context of Willemstad's Inner City.

I spent three months on Curaçao for fieldwork, which became a formative part of this project. I'm grateful to everyone who supported that period, through support, encouragement, or practical help, and to all those I had the chance to meet, interview, or work alongside. Your openness and insights shaped this project in meaningful ways.

The process was both rewarding and challenging. Moving beyond classrooms and engaging with ambiguity, power dynamics, and informal realities. The project evolved continuously, shaped by conversations, unexpected turns, and critical reflections. It taught me not only about urban systems and design, but also about patience, listening, and the complexity of real-world collaboration.

I would like to thank my graduation supervisors, Shahrokh Nikou and Barbera Keukens for their guidance and critical support throughout the process. I'm also grateful to Pedzi Girigori, Liesbeth Echteld, Ergün Erkoçu and Nienke Eshuis for their involvement in Curaçao and around the project, and to Linette Bossen for her support on the Dutch side. Many thanks as well to the teaching assistants, and to all participants who contributed through interviews, co-creation sessions, and testing moments, your input was essential.

I also thank Hans van Aalst, quartermaster of the Inner City, who acted as the problem owner for this project. The project was developed in collaboration with the Ministry of Economic Development of Curaçao. Their perspectives helped align this work with ongoing developments in the city and offered valuable insights into the realities of urban transition on Curaçao.

To my friends, family, and everyone who stood by me during this journey, thank you.

EXECUTIVE SUMMARY

This graduation project examines how collaboration among stakeholders can be strengthened to support the development of environmentally responsible and climate-resilient interventions in the Inner City of Willemstad, Curaçao. The study addresses ongoing challenges in the area, such as fragmented initiatives, diverging interests, and poor coordination and communication among stakeholder groups.

The research phase combined a context and stakeholder analysis with twenty semi-structured interviews involving representatives from public, private, and civil society sectors. A co-creation session further validated findings and identify shared concerns and goals. Together, these activities revealed both key barriers to collaboration and opportunities, such as increasing stakeholder willingness, underutilised initiatives, and growing recognition of the need for long-term, inclusive coordination.

Building on these insights, two design tools were created:

The Playbook for Stakeholder Engagement: a practical guide that helps project teams start collaboration. It aids in stakeholder mapping, communication, and coordination planning, leading to a strategy for engaging stakeholders.

The Roadmap toward a Living Lab: a strategic framework that envisions how collaboration in Willemstad can develop over time into a place-based ecosystem for learning, experimentation, and joint action.

Both tools were developed iteratively and validated through stakeholder feedback. The responses highlight their relevance, usability, and potential for broader application beyond the immediate context. While systemic challenges such as institutional fragmentation and limited capacity remain, the tools provide a structured entry point for more coherent and inclusive climate action. This project contributes to both theory and practice by translating academic insights into practical tools designed for the Inner City of Curaçao. In doing so, it enhances understanding of how early-stage engagement can be structured to foste stakeholder collaboration in fragmented governance settings like Curaçao.

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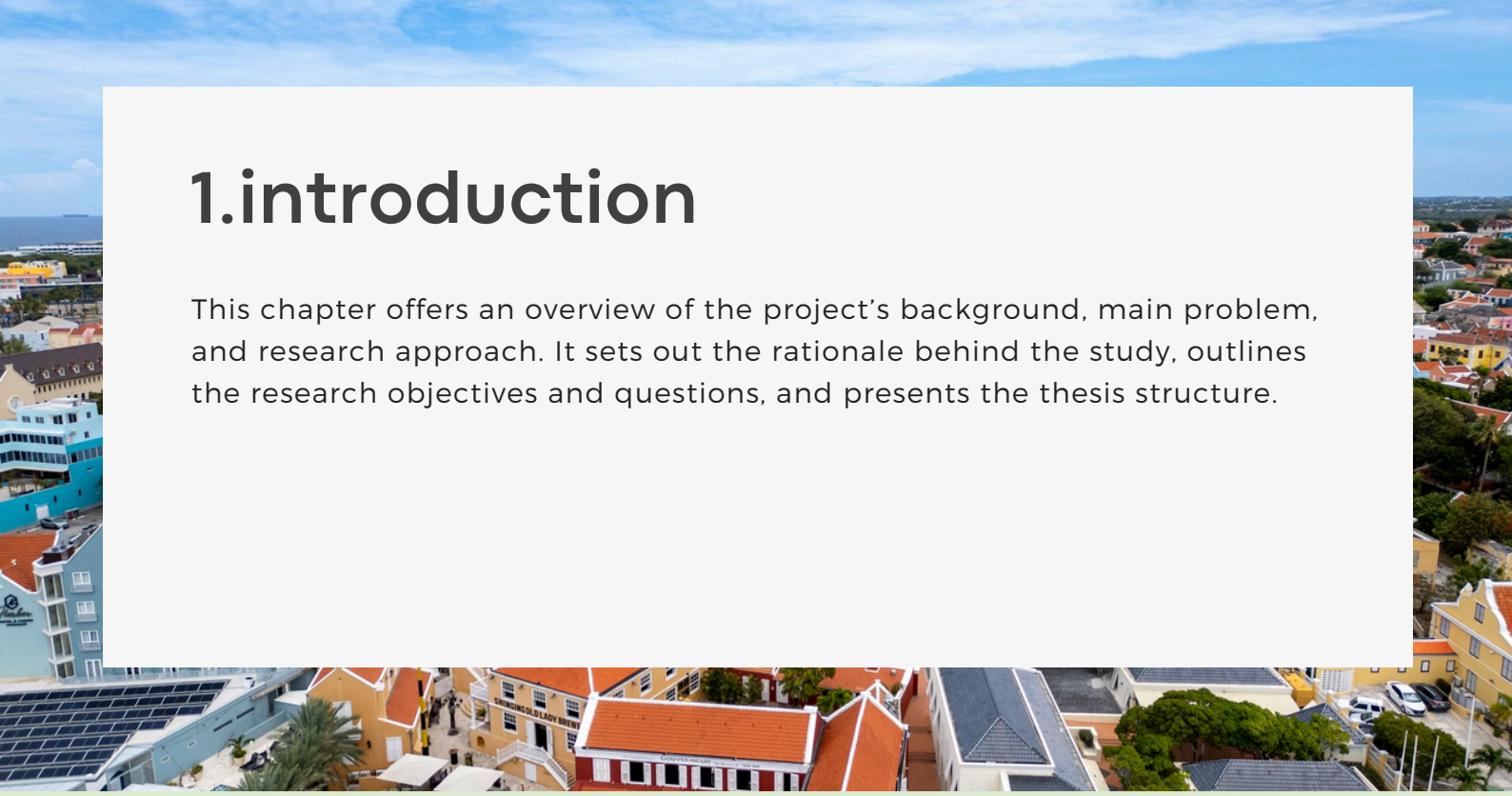
1.introduction

This chapter offers an overview of the project's background, main problem, and research approach. It sets out the rationale behind the study, outlines the research objectives and questions, and presents the thesis structure.



(Visum, n.d.)

1.1 BACKGROUND

Climate change and urban resilience challenges

Climate change is widely recognised as one of the most urgent and complex issues of the 21st century (Feigin et al., 2023). The Intergovernmental Panel on Climate Change (Pörtner et al., 2022) emphasizes the increasing rate of climate impacts, such as more frequent and severe extreme weather events and sea-level rise. Urban areas are especially vulnerable because of their high population density, aging infrastructure, and socioeconomic inequalities (Marschütz et al., 2020). Specifically, urban settlements in coastal zones face growing threats like flooding, erosion, and storm surges, hazards anticipated to worsen with sea levels rising by 0.5–1.0 meters by the end of this century (Galaitsi et al., 2024; Masson-Delmotte et al., 2021). Despite this, urbanisation continues to expand into low-lying coastal areas, raising exposure to climate-related risks (Galaitsi et al., 2024).

Climate Resilience in Small Island Developing States

Small Island Developing States are particularly vulnerable to the impacts of climate change, despite their minimal contribution to global carbon emissions (de Bruijn & Dieperink, 2022). Challenges include rising heat stress, limited green infrastructure, and increased vulnerability in coastal areas (de Bruijn & Dieperink, 2022; Transforming Urban Curacao, 2019). Additional issues involve altered rainfall patterns, coral bleaching, ocean acidification, and extreme weather events (Gheuens et al., 2019; Mortreux & Barnett, 2009). Other common problems in SIDS include land degradation, marine pollution, and biodiversity loss, which are partly driven by urbanization and population growth (Betzold, 2015; Hagedoorn et al., 2019). These risks are worsened by limited resources, institutional capacity, and financial constraints (Gheuens et al., 2019). making integrated and context-specific climate strategies essential.

The Need for Collaborative Climate Adaptation

Climate change is often described in the literature as a wicked problem: it is complex, unpredictable, and cannot be solved with a linear approach (Rittel & Webber, 1973). Such problems require adaptive, iterative responses that include multiple perspectives and develop over time (Van Uffelen et al., 2024). Tackling these challenges demands more than just technical solutions; it calls for strategies that promote collective learning, flexibility, and collaboration (van de Meene et al., 2020).

Governments are essential in planning, legislation, and risk management (Lockwood, 2010; Nunn, 2010), but their efforts alone often fall short without broad stakeholder participation. Increasingly, researchers highlight that effective climate resilience relies on engaging communities, businesses, civil society, and knowledge institutions in meaningful ways (Bryson et al., 2006; Iwama et al., 2021; Reed & Curzon, 2015). Such involvement promotes more context-aware and inclusive strategies.

Stakeholder engagement is especially crucial in risk management and co-developing climate adaptation plans (Sambo et al., 2024). It enhances problem framing, leads to locally relevant solutions, and bolsters decision legitimacy (Fung, 2015)Incorporating knowledge from various perspectives, beyond traditional climate science, is vital. Collaboration encourages sharing insights and learning from each other about climate and local issues (Daniels et al., 2020). When resources are limited, collaboration can mitigate impacts and increase capacity. While collaborative governance varies, most research agrees that collaboration yields benefits difficult to achieve individually (Hawkins & Krause, 2021).

Urban Climate Challenges in Willemstad, Curaçao

The island of Curaçao, like many SIDS, is facing increasing climate-related pressures. The historic inner city of Willemstad, a UNESCO World Heritage site, encounters a range of environmental, social, and infrastructural challenges. These include poor waste management and sewage systems, limited green spaces, rising temperatures, traffic congestion, pollution, and a lack of energy-efficient buildings (Climate Change Committee et al., n.d.). These challenges impact community living conditions (de Bruijn & Dieperink, 2022) and threaten the city's long-term climate resilience and sustainability (Transforming Urban Curaçao, 2019).

Willemstad's governance landscape adds further complexity, as the city is characterized by fragmentation among leaders and society (Goede, 2008). Spatial and policy responsibilities are divided among national ministries, creating coordination challenges and blurred mandates at the local level. Recently, however, the establishment of a werkgroep onder het Landsbesluit, including the appointment of a quartermaster ("Willemstad Krijgt Integrale Aanpak Stadsontwikkeling," 2025), signals a potential shift toward more integrated and locally anchored governance.

Despite public and private investments, the area continues to struggle with depopulation, vacant buildings, and decreasing vibrancy (Goede & Louisa, 2012; Goede, 2018). Although several initiatives in Curaçao aim to address environmental issues (de Bruijn & Dieperink, 2022), comprehensive, integrated solutions that prioritize sustainability and climate resilience are still urgently needed. This creates a pressing need for a strategic approach to unite stakeholders, build on existing initiatives, and promote sustainable practices tailored to Willemstad's unique characteristics.

This project addresses these challenges by exploring how stakeholder collaboration in Willemstad's Inner City can be strengthened to support climate resilience. Based on the research process, early-stage engagement has emerged as a strategic entry point to initiate stakeholder involvement.

1.2 PROBLEM STATEMENT

Before starting the project, the challenge in Willemstad's Inner City was initially seen as a problem of insufficient collaboration among stakeholders involved in sustainability and climate adaptation. This early framing was informed by exploratory desk research and informal conversations with members of the Learning Community and a representative who later became the appointed quartermaster. Initial observations showed fragmented initiatives, unimplemented plans, and a perceived lack of coordination among existing visions, many of which remain on paper. Since climate resilience is a complex issue that requires collective effort, the assumption was that enhancing collaboration could create a greater impact and speed up sustainable urban development. The project aimed to explore the potential for better collaboration and identify where that potential might exist within Willemstad's stakeholder network. This framing laid the groundwork for the research phase, which aimed to examine these dynamics more deeply.

1.3 RESEARCH AIM AND OBJECTIVES

Building on the initial framing of the problem, the project aimed to explore how to strengthen collaboration among stakeholders in Willemstad's Inner City to support sustainable urban development. Beyond identifying the problem, the project focused on understanding the underlying dynamics of stakeholder collaboration and translating these insights into practical tools for collective action.
Project objective

The goal of the project was to develop a tool that enables stakeholders and organizations to collaborate more effectively, ultimately supporting the development of climate-resilient interventions. This objective guided the research phase, which examined existing barriers, tested assumptions, and laid the groundwork for a design-focused approach.

This goal led to the development of the following research questions, which directed both the analytical and design components of the project.

1.4 RESEARCH QUESTIONS

Primary research question:
The project examined the following central question:

How can collaboration among stakeholders be improved to support the development of environmentally responsible and climate-resilient interventions in Willemstad's Inner City?

Sub-questions:
To support this, the following sub-questions were investigated:

- What are the main barriers and opportunities for collaboration among stakeholders in Willemstad's Inner City, and how can these guide the design of an approach for engagement?

- What existing tools, strategies, or frameworks from similar contexts can be adapted to foster shared ownership of sustainable practices and collaboration among key stakeholders in Willemstad's Inner City?

1.5 SCOPE OF THE STUDY

The historic Inner City of Willemstad plays a key role in Curaçao's urban development and cultural identity. Recognised as a UNESCO World Heritage Site since 1997, the area reflects a layered colonial history and the development of a multicultural port city in the Caribbean (de Bruijn & Dieperink, 2022; Goilo, 2024; UNESCO, n.d.).

This study focuses on the Inner City's four historic districts: Punda (17th century), and Otrobanda, Scharloo, and Pietermaai (18th century), each with a unique urban character shaped by centuries of architectural and social development (Transforming Urban Curaçao, 2019). Although these neighborhoods differ in form and identity, they are part of an interconnected urban system influenced by shared environmental, spatial, and governance challenges.

Unlike many other urban areas, Willemstad has no municipal government. Spatial and policy decisions are made at the national level, with key responsibilities divided among different ministries. This fragmented structure presents specific coordination challenges and limits opportunities for integrated, place-based collaboration. Recent developments, such as the installation of a werkgroep onder het Landsbesluit and the appointment of a quartermaster for the Inner City, suggest a possible shift toward more structured and locally focused urban governance.

This study views the Inner City as a socio-spatial ecosystem where environmental, social, and institutional dynamics intersect. While the area's historical and cultural significance provides important context, the research mainly centers on stakeholder collaboration for sustainable development and climate resilience within this unique urban environment.

(Visum, n.d.)

1.6 RELEVANCE OF THE STUDY

1.6.1 SCIENTIFIC RELEVANCE

While the significance of stakeholder collaboration in climate resilience is widely recognized (Reed, 2008; Iwama et al., 2021), much of the academic literature focuses on formal governance structures or the outcomes of participatory processes. Less attention has been given to the practical conditions and barriers that shape collaboration in fragmented and resource-limited settings, particularly in Small Island Developing States (SIDS) (Betzold, 2015; Hagedoorn et al., 2019)

This study addresses that gap by examining collaboration dynamics in Willemstad's Inner City, where national governance structures and limited institutional capacity pose unique challenges. Through qualitative research and contextual analysis, the project provides empirical insights into perceived barriers, relational dynamics, and systemic tensions that influence climate resilience collaboration in this context.
By engaging directly with stakeholders and linking theoretical insights to real-world practices, this research enhances the growing body of work aimed at understanding how collaboration can be developed and maintained in postcolonial urban environments facing climate stress.

1.6.2 SOCIETAL RELEVANCE

Willemstad's Inner City faces socio-spatial challenges alongside environmental pressures, including mass tourism and unsustainable infrastructure (Goilo, n.d.). Over the past fifty years, many residents have moved to suburban areas, leading to less than 2% of Curaçao's population now living in the Inner City (Transforming Urban Curaçao, 2019). Although revival efforts like those in Pietermaai (Goede & Louisa, 2012; Goede, 2018) have been undertaken, the city's overall condition remains poor. Many buildings are vacant and in disrepair, and some areas suffer from inadequate lighting and neglect (Goede, 2018).

This decline worsens due to institutional fragmentation and limited stakeholder collaboration. Main actors, including residents, businesses, community groups, and government agencies, face obstacles such as limited resources, knowledge gaps, and poor coordination (Van Aalst, 2024; De Bruijn & Dieperink, 2022). These challenges hinder the effective implementation of climate-responsive strategies.
By identifying local barriers and exploring ways for more inclusive collaboration, this study provides practical insights for revitalising Willemstad's Inner City. It aims to support ongoing efforts to make the urban environment more livable, climate-resilient, and socially cohesive in the future.

1.7 PROJECT APPROACH

This project followed an adapted version of the Triple Diamond approach, structured around three main phases: research, ideation, and design development. Each phase contributed to gradually narrowing the problem space and expanding the solution space, leading to the creation of two targeted interventions to support climate resilience collaboration in Willemstad's Inner City.

The process unfolded as follows:

RESEARCH PHASE: UNDERSTANDING THE PROBLEM

Literature review
A comprehensive review of existing literature was conducted to analyse barriers to collaboration in climate resilience. Key barriers were synthesized and formed the basis for a thematic framework used in the interviews.

Context analysis
To understand the local dynamics of Willemstad's Inner City, a context analysis was conducted using three complementary tools: PESTEL, SWOT, and stakeholder analysis. These methods together revealed political, socio-economic, environmental, and legal factors shaping the context, as well as internal dynamics and key actors relevant to the issue.

Qualitative interviewing
Semi-structured interviews were conducted with over 20 stakeholders from government, civil society, academia, business, and grassroots initiatives. The interviews aimed to validate the theoretical framework, identify context-specific barriers, and gather ideas for potential interventions.

Problem Reframing and Design Goal
Based on the insights from the context research, interviews, and co-creation, the core problem was reframed: collaboration remains fragmented due to poor communication, limited coordination, and diverging interests. A design goal was articulated to guide the next phase:

To create an engagement catalyst that strengthens communication and alignment among stakeholders in Willemstad's Inner City.

Co-creation (problem space)
The initial co-creation session involved key stakeholders to validate the research findings. This session served two purposes: confirming the relevance of the identified barriers (research) and exploring initial ideas for potential interventions (ideation). It acted as a bridge connecting the research and ideation phases of the project.

IDEATION PHASE: EXPLORING POSSIBLE SOLUTIONS

Co-creation
A second co-creation session was held with a different group of stakeholders to explore potential solution directions based on the reframed problem statement. The session focused on surface ideas rooted in local needs and values and provided a space for collective reflection on strengthening collaboration in the Inner City. These contributions helped expand the solution space and ensured that emerging ideas were grounded in the reality of the involved stakeholders.

Ideation and concept generation
Building on the co-creation insights, ideas were further developed through creative techniques such as brainstorming, word clustering, and sketching. The process was guided by both interview findings and contextual research, as well as a review of existing tools and frameworks from similar settings. This phase resulted in several concept directions, each addressing different aspects of the identified problem and offering ways to improve stakeholder collaboration.

Prioritisation and selection
Concepts were evaluated using the Harris model to compare potential relevance, feasibility, and impact. This process helped identify the two most promising directions for further development in the next phase.

A Playbook to support project initiation and stakeholder engagement

A Roadmap towards a Living Lab structure

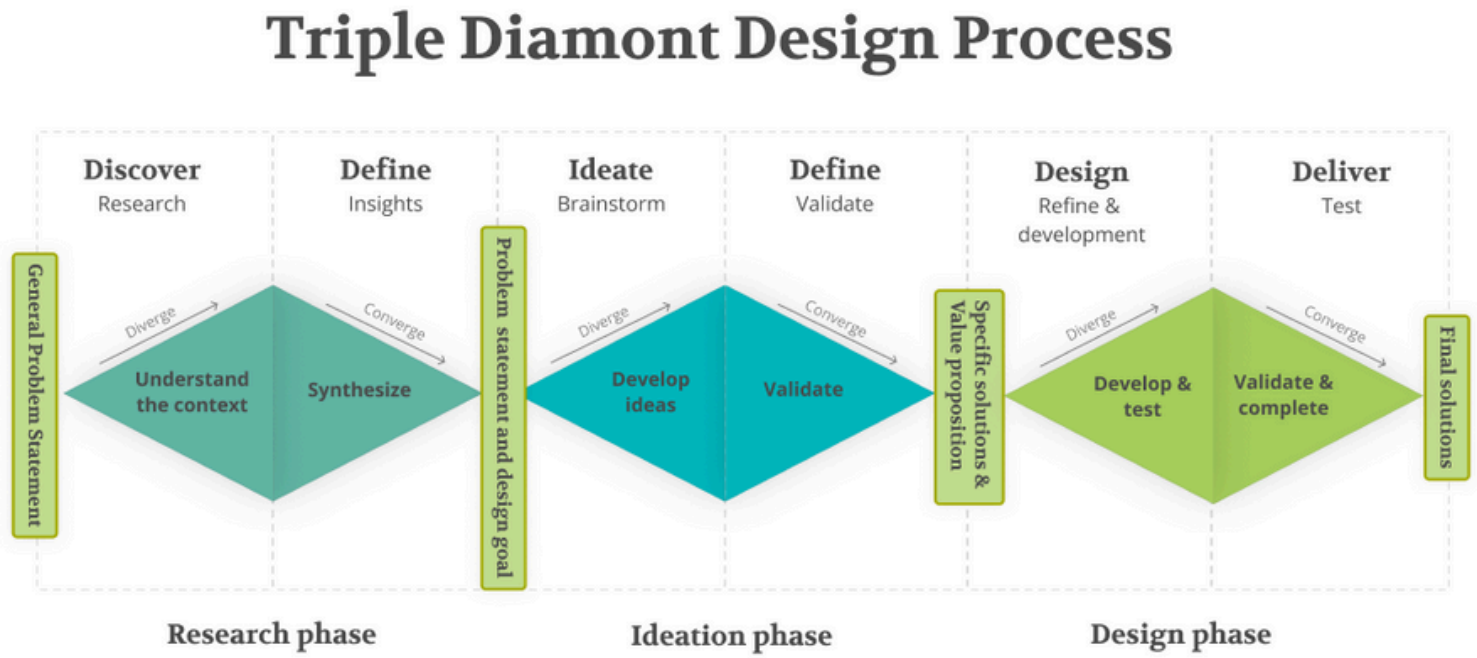
DESIGN PHASE: DEVELOPING AND VALIDATING INTERVENTIONS

Prototyping

Both interventions were created through an iterative process that included feedback from experts and stakeholders. Visual tools, narratives, and workflows were prototyped to guarantee accessibility and fit within the context.

Validation and refinement

The design interventions were validated through targeted feedback from stakeholders and user tests. The process evaluated desirability, feasibility, usability, and relevance to local needs. Insights from this validation guided final adjustments and helped determine how the tools could support future climate resilience efforts in the Inner City.



1.8 STRUCTURE OF THE REPORT

This report is structured as follows:

Chapter 2 – Theoretical Framework
The key academic concepts used to understand stakeholder collaboration and climate resilience.

Chapter 3 – Context Analysis
A detailed analysis of Willemstad's Inner City using PESTEL, SWOT, and stakeholder mapping.

Chapter 4 – Methodology
The qualitative research approach, including interviews, stakeholder selection, and ethical considerations.

Chapter 5 – Research Findings and Problem Synthesis
The interview and co-creation results, identifies major barriers, and redefines the main problem.

Chapter 6 – Design Process
The design phase, including co-creation, ideation, and the development of the Playbook and Roadmap.

Chapter 7 – Conclusion and Reflection
Answering the research question, reflecting on the process, and offering recommendations for future work.

2.Theoretical and Contextual Framework

The literature review aims to establish a foundation for understanding the key concepts, challenges, and opportunities related to stakeholder engagement and collaboration in climate resilience adaptation efforts in urban areas and Small Island Developing States (SIDS). It explores the definition of collaboration and types of collaboration, as well as current barriers and recommended strategies to overcome these barriers.

(Visum, n.d.)

2.1 KEY CONCEPTS

2.1.1 DEFINITION AND VALUE OF COLLABORATION

This section explains what stakeholder engagement and collaboration mean, and emphasizes why collaboration is key in climate resilience efforts.

Climate change introduces unprecedented challenges to cities. Heat waves, floods, and droughts are becoming more common and severe, impacting the livability and safety of urban areas. To effectively tackle these issues, cities need to adapt and boost their resilience. Collaboration is vital because individual stakeholders and organisations cannot accomplish the transition to sustainable and climate-resilient cities alone (van de Meene et al., 2020) as these are complex and multifaceted problems (Lönngren & Van Poeck, 2021). In this process, stakeholder engagement and collaboration are crucial (Robinson, 2020).

Stakeholder engagement is the process in which various stakeholders, such as citizens, companies, governments, and knowledge institutions, are involved in identifying climate risks, developing adaptation strategies, and implementing measures (Iturriza et al., 2020; Jensen & Ong, 2020; Mkonda, 2022; Susskind & Kim, 2022)

Collaboration extends further and involves a joint approach where stakeholders combine their knowledge, expertise, and resources to reach shared goals (Carvalho & Spataru, 2024; Iturriza et al., 2020; Jensen & Ong, 2020). This includes mutual sharing of information, consulting, planning, and delivering public services (van de Meene et al., 2020).

The difference between stakeholder engagement and collaboration depends on the level of involvement and responsibility. Stakeholder engagement can include activities from information campaigns to participating in decision-making. Collaboration involves a deeper level of involvement, where stakeholders share responsibility for the success of adaptation measures (Jensen & Ong, 2020; Mkonda, 2022).

Collaboration provides opportunities to tackle the challenges of climate change, especially since these issues often cross borders and surpass the capabilities of individual cities. By collaborating, cities can develop:

-**Shared ownership:**
Actively engaging stakeholders fosters a sense of shared ownership, which boosts support and participation in adaptation efforts (Iturriza et al., 2020; Jensen & Ong, 2020; Susskind & Kim, 2022).

- **Local knowledge and expertise:**
Stakeholders, especially citizens and local organisations, have valuable knowledge about the local context, vulnerabilities, and potential solutions (Marschütz et al., 2020; Mkonda, 2022; Neset et al., 2021). This knowledge is crucial for creating effective and tailored adaptation strategies (van de Meene et al., 2020).

- **Innovation and creativity:**
By bringing together diverse perspectives and expertise, stakeholder engagement and collaboration can produce more innovative and creative solutions (Carvalho & Spataru, 2024; Jensen & Ong, 2020; Susskind & Kim, 2022; van de Meene et al., 2020).

- **Synergy and efficiency:**
Collaboration allows pooling and optimizing resources and expertise, making adaptation measures more efficient and effective (Clark et al., 2024; Mills et al., 2021).

- **Increased legitimacy and support:**
Involving stakeholders in decision-making increases the legitimacy of adaptation strategies and support for their implementation (Iturriza et al., 2020; Marschütz et al., 2020; van de Meene et al., 2020).

All in all, collaborations boost the likelihood of project success through joint efforts (van de Meene et al., 2020).

2.1.2 FORMS AND LEVELS OF COLLABORATION

The theory of change explains how different types of collaborative efforts aim to create change. Margerum (2008) states that although all groups seek change, their methods vary. Recognizing these different types of collaborative efforts is crucial for improving their effectiveness in tackling complex environmental issues (Margerum, 2008).

Action collaborative

This collaboration emphasizes concrete actions at the local level, creating change by spreading ideas and initiatives through personal networks and the influence of the individuals involved. The strength comes from the participants' networks and their impact on others in the community. The stakeholders themselves are the core drivers of change. The participants, often individual citizens, 2008).

commit to enacting change through tangible actions like monitoring, education, and restoration (Margerum,

Organizational collaborative

The engagement involves adapting policies and programs within organizations. Participants, often from government and non-profit groups, aim to align goals and activities by influencing programs, budgets, and priorities. Strategic and coordinated planning among organizations and stakeholders can improve problem-solving. These collaborative efforts focus on policy interpretation, resource distribution, and integrating activities across organizations. Success relies on organizations' willingness to change their ways and collaborate (Margerum, 2008).

Policy collaborative

This collaboration aims to influence the policies and programs of organizations, especially government agencies, as well as NGOs and local governments. The idea is that negotiated policymaking results in more coordinated policies with wider support, which enhances implementation. By reaching an agreement among policymakers, interest groups, and other stakeholders, they hope to create change on a large scale, something that cannot be achieved through personal networks. Participants include policymakers, interest groups, elected officials, and other influential actors in the policy process (Margerum, 2008).

POLICY COLLABORATIVE

Influencing the policies and programs of organisations

ORGANISATIONAL COLLABORATIVE

Adapting policies and programs within organisations

ACTION COLLABORATIVE

Creating change through tangible actions and community networks

2.2 BARRIERS TO COLLABORATION: THEORY AND CONTEXT

2.2.1 THEORETICAL BARRIERS

Effective collaboration among stakeholders is crucial for sustainable urban planning and climate adaptation. Collaboration between governments, businesses, NGOs, and citizens can lead to resilient and inclusive solutions. However, in practice, this collaboration is often hindered by various barriers that reduce the effectiveness of policy and implementation. Research shows that obstacles to collaboration exist at multiple levels, including institutional, organizational, social, perceptual, and cognitive areas.

Small Island Developing States and Curaçao

Curaçao is an Associate Member of United Nations Regional Commissions (List Of SIDS, n.d.), meaning they are related to Small Islands Developing States (SIDS) and share characteristics. SIDS are maritime countries that often face similar sustainable development issues, such as small but growing populations, limited resources, isolation, vulnerability to natural disasters, external shocks, over-reliance on international trade, and fragile ecosystems. (Goede et al., 2009) The frequency and severity of disasters are expected to increase due to climate change, and the number of catastrophes in SIDS is rising faster than the global average (Gheuens et al., 2019). Leaving less room for error in adaptation strategies, learning from SIDS can benefit Curaçao.

This chapter identifies and categorises the most important barriers, based on insights from existing literature.

A. KNOWLEDGE AND INFORMATION BARRIERS

Lack of awareness and climate literacy

A lack of awareness about the urgency and local impacts of climate change can lead to passivity and resistance among some stakeholders (Iturriza et al., 2020; Marschütz et al., 2020; Sukmara et al., 2024). This can manifest as doubts about the existence of climate change, a lack of understanding of the risks, or an underestimation of the need for action (Iturriza et al, 2020; Iturriza, 2018). Even urban planning professionals sometimes lack fundamental knowledge about climate change processes and effects (Sukmara et al., 2024). Stakeholders may also lack sufficient knowledge about how a climate adaptation plan can help them achieve their goals (Rudge, 2021).

Undervaluing Different Types of Knowledge

According to Lemos et al. (2012), there is an "underestimation of the value of integrating different knowledge types (scientific, practical, local)" (Daniels et al., 2020). Beyond individuals who are often classified as climate information providers, people who contribute various types of knowledge to the effort are both important and helpful. Because all participants must both offer and receive information on climate or the context, roles in a truly collaborative effort of this kind must be flexible (Daniels et al., 2020).

Limited knowledge infrastructure in SIDS and Curacao

These theoretical insights are reflected in knowledge-related barriers seen in SIDS, especially in Curaçao. Policy makers, businesses, and citizens in SIDS often lack understanding of climate change impacts and available adaptation options. This lack of awareness can result in insufficient support for adaptation policies (Robinson, 2017, 2018). Curaçao faces challenges with skills, data literacy, standardization, and trust in knowledge sharing within (government) institutions, which hinders the implementation of monitors and other circular economy initiatives (Goede, 2018). Only 17% of Curaçaoan students studying abroad return to the island, causing a significant brain drain that worsens the island's institutional and personal limitations by shrinking the local talent pool needed to address these issues (van der Maas, 2008). Additionally, low public perceptions of climate change hazards, often influenced by inadequate or inaccessible information, further limit proactive participation in adaptation measures (Jensen & Ong, 2020). Decision-makers also face a major problem: politicians often lack the necessary knowledge to make informed decisions, relying instead on experts who may be knowledgeable but lack the authority to act (van der Maas, 2008).

B. COMMUNICATION AND PERCEPTION BARRIERS

Insufficient or ineffective communication

Communities are often unprepared to take meaningful action due to a lack of useful information and communication materials on climate threats and mitigation techniques (Jensen & Ong, 2020). It is important to share information in an accessible and understandable way, Averyt et al, xx), and to listen to the concerns and ideas of all stakeholders (Jensen & Ong, 2020; Itturiza et al, 2020). Additionally, stakeholders may struggle to translate scientific information about climate change into concrete local actions (Jensen & Ong, 2020; Marschütz et al., 2020).

Trust and transparency

Lack of trust between stakeholders, especially between citizens and government, can hinder collaboration (Hawkins & Krause, 2021; Jensen & Ong, 2020; Mkonda, 2022). This may result from previous negative experiences, a lack of transparency, or perceptions of unequal power dynamics (Jensen & Ong, 2020; Marschütz et al., 2020). Unclear communication, insufficient transparency, and the use of jargon can cause confusion and mistrust (Sukmara et al., 2024).

Cultural worldviews and perception gaps

Beyond the mechanics of communication, perceptions of climate change can also differ significantly among groups. The public's view of climate change may not align with that of the government responsible for managing its impacts. Factors such as culture, identity, history, worldviews, place attachment, agency, sense of ownership, incentives, practical obstacles, time horizons, and catalysts for action all play a role (Adger et al., 2013; Buys et al., 2012; Marschütz et al., 2020; Moser, 2014; Runhaar et al., 2012). Because of these differences, government actors might find it challenging to engage effectively with citizens (Marschütz et al., 2020).

C INSTITUTIONAL AND STRUCTURAL BARRIERS

Lack of resources and capacity

Limited financial resources, staff shortages, and a lack of technical expertise can hamper the implementation of climate adaptation measures (Averyt et al., 2018; Clark et al., 2024; Iturriza et al., 2020; Mycoo, 2024). Some communities may lack sufficient access to resources and knowledge to respond effectively to climate change (Marschütz et al., 2020). Cities may also lack the necessary structures or mechanisms for effective collaboration (Hawkins et al., 2017). Even those with strong sentiments toward environmental action may find it difficult to get involved due to a lack of time or money (Jensen & Ong, 2020). Additionally, inconsistent data can make planning and decision-making difficult in less developed areas, where data availability and quality are ongoing issues. These resource constraints often hinder the adoption of multidimensional tools or frameworks, which require substantial investments and capacity building to overcome (Carvalho & Spataru, 2023).

Capacity limitations in the SIDS context

Many challenges arise because of the limited resources and capacity of SIDS; they often need external funding, as well as technical and human capacity, to formulate and implement policies (Gheuens et al., 2019). SIDS frequently lack qualified staff to plan, implement, and monitor adaptation measures. This shortage worsens due to limited training opportunities and competition from other sectors (Robinson, 2017). Additionally, SIDS often struggle to access international climate finance. Application procedures are complex and bureaucratic, and the available funds are often not enough to cover the costs of adaptation (Lewis, 2022; Robinson, 2020).

While collaboration between SIDS can assist with capacity building and improving governance, these partnerships often face challenges related to funding, geographic isolation of the islands, and cultural differences among SIDS (Gheuens et al., 2019).

Obstructive or fragmented policy

Outdated legislation, lack of coordination among government agencies, and fragmented approaches can hinder collaboration (Clark et al., 2024; Hawkins & Krause, 2021; Youm & Feiock, 2019). Sometimes, state laws and policies, like climate action plans, can actually discourage collaboration among local governments (Youm & Feiock, 2019). Legislation is often not designed to foster collaboration and does not consider the capacities and needs of individuals (Wamsler, 2016). Additionally, unclear roles and responsibilities can cause confusion and delays (Sukmara et al., 2024). Poor governance, corruption, mismanaged projects, siloed approaches, lack of urgency, inadequate data collection, and overlapping policies and mandates all impede effective climate change responses (Robinson, 2017). Weak communication between stakeholders can lead to misunderstandings, conflicts, and a lack of coordination (Koiwanit & Filimonau, 2023). Robinson (2020) analyzes adaptation measures in national communications from SIDS and finds that monitoring and evaluation receive relatively little attention.

Governance Culture and Institutional Dynamics in Curaçao

Beyond formal policies, governance effectiveness is also influenced by informal structures, cultural norms, and institutional stability. In Curaçao, several socio-institutional characteristics pose additional challenges for collaborative climate action. There is a lack of coordination and communication among different stakeholders, including government agencies, NGOs, and the private sector. This results in fragmented efforts, inefficiency, and sometimes conflicting goals. Top-down decision-making processes further hinder community engagement in Curaçao, where government-led initiatives often lack input from community stakeholders and civil service professionals. According to van der Maas (2008), this approach causes implementation difficulties and reduces strategy commitment.

Additionally, Curaçao's small size and island culture may cause people to fear change and responsibility, making it harder to implement new plans (van der Maas, 2008). The fragmented nature of government and information networks in Curaçao limits transparency and inclusive collaboration. There is often no consensus on the best course of action, leading to disjointed initiatives and a lack of synergy (Goede, 2018). Curaçao's traditional and hierarchical society fosters resistance to change and innovation (Goede, 2018). Political instability and frequent changes can also cause shifting priorities and disrupt continuity in collaborative projects (van der Maas, 2008).

Insufficient coordination and division of roles

An unclear process or goals can cause confusion and disinterest among stakeholders (Rudge, 2021). This hampers coordination among different organizations and levels of government (van de Meene et al., 2020). Fragmented collaboration among stakeholders is a major barrier to climate change adaptation. This fragmentation results from a lack of coordination, dependence on external funding, and unclear roles and responsibilities among various actors involved in climate resilience efforts (Galaitsi et al., 2024; Sukmara et al., 2024). These issues are often worsened by the governance culture and institutional dynamics described above.

D SOCIAL AND POWER DYNAMICS

Power, inequality and exclusion

Within a collaboration, power imbalances among stakeholders can occur, leading to unfair decision-making and the marginalization of certain groups (Singletary et al, X). “Power imbalances and mistrust between stakeholders exacerbate these issues, reducing inclusivity and effectiveness” (Carvalho & Spataru, 2024). Climate adaptation measures may result in unequal distribution of costs and benefits, which can cause conflicts (Carvalho & Spataru, 2024; Marschütz et al., 2020; Susskind & Kim, 2022). It is crucial to ensure that vulnerable groups are not disproportionately impacted by the costs of adaptation and that they share equally in the benefits (Carvalho & Spataru, 2024).

The foundation for collective action becomes weaker when only a few people participate in these projects, as social capital does not grow at the individual and community levels (Mkonda, 2022). Planning processes often leave out marginalized groups, which increases inequality and reduces the inclusivity of adaptation strategies (Jensen & Ong, 2020; Mkonda, 2022).

The colonial history between the Netherlands and Curaçao has also caused power imbalances and distrust. In Curaçao, the colonial legacy has led to ongoing power imbalances and a culture of suspicion, where the interests of more powerful groups are often given priority (Marcha & Verweel, 2003; Goede, 2018).

Agency and participation: the role of self-efficacy

Individuals with low self-efficacy perceptions are less likely to participate in collaborative projects. They do not feel capable enough to contribute, especially when they perceive the government as competent and responsible. (Jensen & Ong, 2020). This phenomenon, called "exemptionalism," can hinder collaboration (Jensen & Ong, 2020). It leads to passivity and dependence: Citizens often rely on the government to take action and show little initiative themselves (Wamsler, 2016). There are also stakeholders who do not recognize the benefits of collaboration, mainly due to the lack of financial incentives (Koiwanit & Filimonau, 2023; Rudge, 2021).

Political barriers

Besides individual-level challenges, broader political and institutional structures can also hinder collaboration. Margerum (2008) highlights that policy and organizational collaborations, which often involve representatives from different organizations, can face the “two-table problem.” This means that these stakeholders must seek consensus both within their own organizations and at the collaborative table. This can lead to delays and conflicts. (Margerum, 2008). Additionally, there is often a lack of political support for citizen collaboration, and traditional planning approaches tend to dominate. (Wamsler, 2016).

Cultural and social norms as a barrier

In Curaçao, institutions often depend on unofficial connections and ineffective public sector processes (van der Maas, 2008). The strong relationship-focused culture in Curaçao, characterized by personal and emotional interactions, can challenge a business-like approach to implementing strategy (van der Maas, 2008). The focus on social relationships can result in a lack of directness and an emphasis on maintaining harmony rather than achieving specific goals (van der Maas, 2008). This issue is worsened by the slow pace of change.

Curaçao has a history of low social cohesion, characterized by distrust among different groups. This distrust can originate from past experiences with mismanagement, corruption, or lack of transparency. Such distrust hampers cooperation among various stakeholders (Goede and Meulens, 2019). “The social and economic structure of Curaçao was formed over time, creating a red [11], complex, low-trust, traditionally segregated, and partially rational western society [9]”. (Goede and Meulens, 2019). Patronage and cronyism often result in the appointment of incompetent managers and professionals to key positions, which undermines the efficiency and effectiveness of collaborative projects (Goede, 2018). The small scale of Curaçao fosters an island mentality characterized by nepotism, patronage, and a limited worldview (Goede, 2018).

E. DIFFERENCES IN PRIORITIES AND VISIONS

Time horizon and sense of urgency

Climate change is an urgent issue that demands swift action. At the same time, it is crucial to take the time to involve stakeholders and build support (Neset et al, 2021). "Stakeholder engagement is challenging due to the time and effort required to navigate dynamic expectations” (Carvalho & Spataru, 2024). An overly tight timeline can result in rushed decisions and limited participation (Neset et al, 2021). Additionally, effective collaboration requires flexibility to adapt to changing circumstances and new insights (Neset et al, 2021).

Conflicting goals and interests

Stakeholders, including local businesses, government agencies, and community organizations, often prioritize short-term economic gains over long-term sustainability (van de Meene et al., 2020). They may also have differing interests, values, and perceptions of climate risks, which complicates collaboration (Averyt et al., 2018; Ilgen et al., 2019). In SIDS contexts, this tension is further worsened by competing development priorities such as poverty reduction, healthcare, and education, which often divert attention and resources away from climate adaptation (Robinson, 2017). These misalignments can create a lack of direction and coordination, making it difficult to set shared goals and develop a collective strategy (Susskind & Kim, 2022).

SYNTHESIS AND REFLECTION

The barriers to effective collaboration discussed in this chapter emphasize the complex, multi-layered nature of climate adaptation governance. From cognitive limitations and communication failures to institutional fragmentation, social inequalities, and diverging priorities, each area shows how collaboration can break down across different levels and actors. These barriers rarely happen on their own: they often strengthen each other, creating systemic issues that block inclusive and effective climate action.

In the context of Small Island Developing States, especially Curaçao, these problems are further worsened by structural vulnerabilities like limited resources, political instability, and historical power imbalances. Understanding these interconnected factors is essential for creating strategies that not only target individual barriers but also address the larger systems they are part of.

2.2.2 FRAMEWORK OF GANESHU ET AL. (2023)

The study by Ganeshu et al. (2023) offers a systematic review of literature that identifies both obstacles and facilitators of stakeholder collaboration in risk-sensitive urban planning. The authors aimed to develop a thorough understanding of the factors that hinder and promote collaboration across various global settings. This study is especially valuable for this project because it is the only source that systematically organizes collaboration barriers into a structured framework.

Four main categories

The study by Ganeshu et al. (2023) identifies 33 barriers to stakeholder collaboration in risk-sensitive urban planning. These barriers are categorized into four main groups: External barriers, Inter-organizational barriers, Intra-organizational barriers, and Personal barriers. The authors detail these 33 barriers, organizing them into four interconnected categories:

- External barriers, such as governance, legislation, and the political context.
- Inter-organizational barriers, including issues related to communication, coordination, and conflicting interests between entities.
- Intra-organizational barriers, which relate to internal structure, culture, and capacity.
- People-Related barriers, encompassing motivation, professionalism, and individual knowledge.

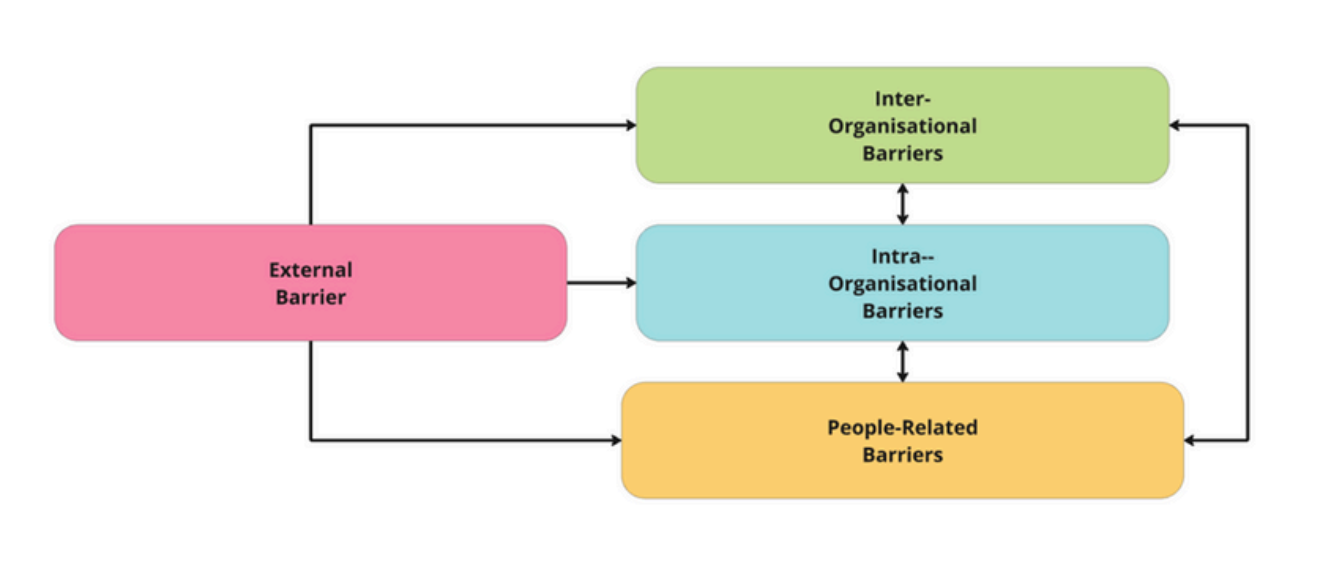


Figure 1

For each barrier, the study also provides corresponding enablers and practical recommendations, summarized in Appendix C.

Reflection on the research of Ganeshu et al. (2023) in the Context of SIDS and Curacao

Although the framework of Ganeshu et al. (2023) provides a helpful classification of barriers, some context-specific challenges in SIDS and Curaçao are underrepresented. First, historical power relations, such as colonial legacies and patronage networks, significantly influence stakeholder dynamics but are not explicitly considered. Second, while the framework acknowledges political barriers, issues like political instability and policy discontinuity, which are crucial in Curaçao, are only implied. Finally, although financial constraints are recognized, the framework focuses on internal budgeting and resource planning, whereas in SIDS and Curaçao, reliance on external funding and complicated international application procedures create major collaboration obstacles. These differences highlight the importance of adapting general frameworks to specific geographic or socio-politica (Marschütz et al., 2020)l contexts. To explore these barriers more concretely, the next section introduces an illustrative framework that emphasizes one key category while remaining aware of how other themes are interconnected.

2.3 MAKING COLLABORATION BARRIERS VISIBLE: AN ILLUSTRATIVE FRAMEWORK

To provide a clear analytical focus for this research's empirical phase, this framework emphasizes the category of inter-organisational barriers, those that arise in the interaction and collaboration between different organizations. This category aligns with the research aim of examining dynamics between stakeholder groups and organisations. However, since other themes are interconnected, it will serve as an umbrella, with the other barriers theme positioned underneath them.

Inter-organisational Barrier Themes

Based on the classification by Ganeshu et al. (2023), the inter-organizational barriers in this study are categorized into four main themes:

Leadership-related barriers
Lack of leadership among stakeholders and disagreements over who should take initiative or assume ownership.

Organisational interest-related barriers
Conflicting sectoral goals and the absence of shared or recognized common interests.

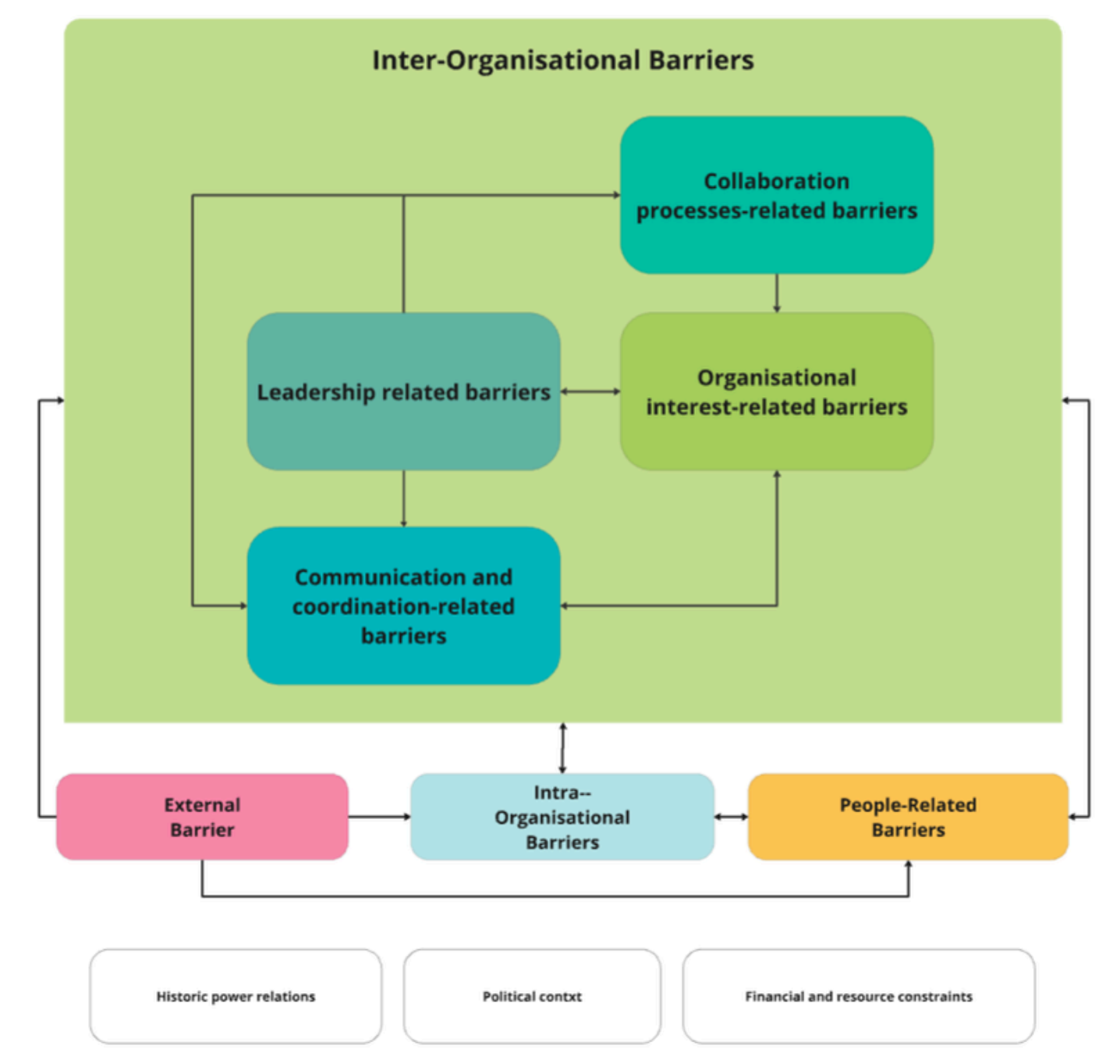
Communication and coordination-related barriers

Breakdowns in communication, insufficient information sharing, and poor coordination among actors.

Collaboration process-related barriers

Challenges caused by inflexible or poorly designed collaboration processes, especially when many actors are involved.

Each theme interacts with other categories of barriers (external, internal, and personal), creating a complex network of influences (see Figure 2). A detailed overview of factors is included in Appendix B.



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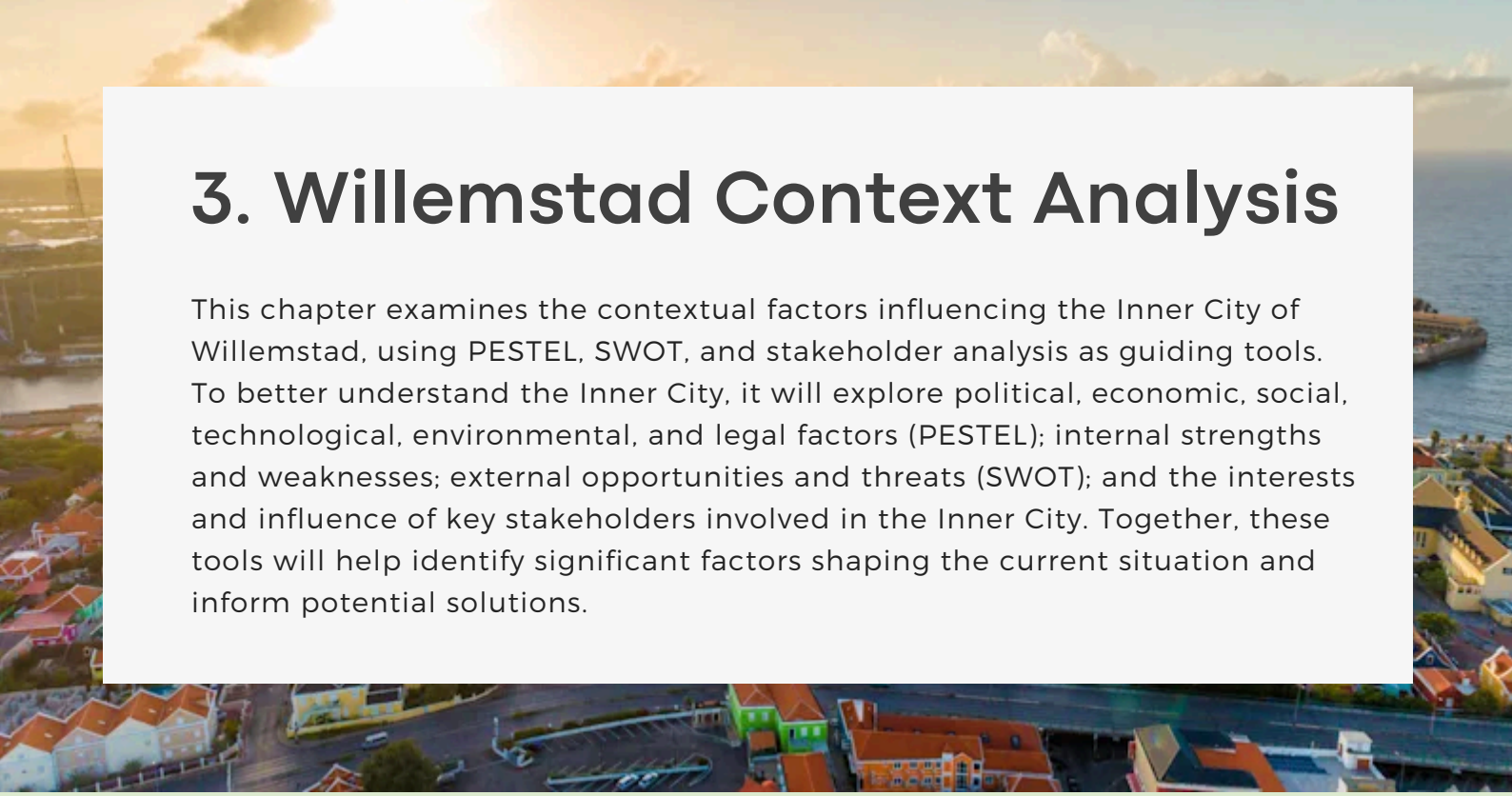


3. Willemstad Context Analysis

This chapter examines the contextual factors influencing the Inner City of Willemstad, using PESTEL, SWOT, and stakeholder analysis as guiding tools. To better understand the Inner City, it will explore political, economic, social, technological, environmental, and legal factors (PESTEL); internal strengths and weaknesses; external opportunities and threats (SWOT); and the interests and influence of key stakeholders involved in the Inner City. Together, these tools will help identify significant factors shaping the current situation and inform potential solutions.

(Willemstad: A Vibrant UNESCO World Heritage Site, n.d.)

3.1 PESTEL ANALYSIS

Curaçao faces a variety of challenges and opportunities across political, economic, social, technological, ecological, and legal areas. The PESTEL framework provides a structured way to examine key external forces shaping the urban and governance landscape of the Inner City. This section highlights the most relevant factors impacting development on the island.

POLITICAL FACTORS

Since Curaçao gained autonomy in 2010, its reliance on the Netherlands remains strong, which affects political decision-making and sometimes causes delays (Goilo, 2022). Political instability and short-term policies hinder long-term development (Van der Maas). Governmental institutions are often influenced by political appointments where loyalty outweighs competence, limiting the effectiveness of policy implementation (Van der Maas, 2008). Climate policy is gradually gaining traction, with initiatives like the Curaçao Climate Change Platform, which consolidates policy plans and knowledge on climate adaptation (Curaçao Climate Change Platform). However, the rollout of sustainability policies still depends on political priorities. The 2025 elections could lead to policy shifts again, creating uncertainty for investors and making policy continuity more difficult (Goilo, 2022).

Politcal instability

Sustainable policies depends on political priorities

ECONOMIC FACTORS

Curaçao's economy is vulnerable due to its heavy reliance on tourism and limited diversification (Goilo, n.d.). The closure of the Shell refinery in 1985 had a lasting impact, resulting in job losses and economic decline (Goede & Meulens, 2022). While tourism presents opportunities, it also raises concerns about sustainability, such as hotel construction in nature reserves (Aggett & Van De Leur, 2020). Additionally, the informal economy presents challenges because it complicates supervision and tax collection (Goilo, n.d.). High unemployment, especially among young people, remains a pressing issue (Goilo, n.d.). The vacancy rate and population decline in the inner city contribute to economic stagnation, particularly in commercial areas like Punda (Transforming Urban Curacao, 2019)

Reliance on tourism

Informal economy

vacancy & population decline

SOCIAL FACTORS

Curaçao has low social cohesion and income inequality, partly due to historical disparities and distrust between groups (Goede, 2018). The brain drain leads highly educated professionals to leave for abroad, which hampers the island's development (Goede, 2018). Migration also contributes: the Venezuelan crisis has brought thousands of refugees to Curaçao, increasing pressure on social services (Aggett & Van De Leur, 2020). In some neighborhoods, such as Otrobanda, 43% of the population lives below the poverty line, and income inequality is high (CBS, 2011). The combination of poverty, urbanization, and limited investments in social cohesion blocks sustainable development.

Low social cohesion

Income inequality

TECHNOLOGICAL FACTORS

Despite advancements in ICT infrastructure, Curaçao still lags in data literacy and access to reliable information (Goilo, 2022). Information remains fragmented and only limitedly available to policymakers and citizens. Additionally, there is a heavy reliance on external expertise for technological solutions, which hampers the island's autonomy (Goede, 2018).

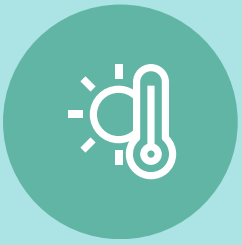
Limited resources

Reliance on external expertise

ECOLOGICAL FACTORS

Climate change represents an increasing threat to Curaçao, bringing risks such as rising sea levels and extreme weather events (Goilo, 2024). Additionally, the energy supply continues to rely heavily on fossil fuels, which hampers efforts to achieve sustainability (Adshead et al., 2019). Key environmental challenges identified in policy documents and local initiatives (e.g., “Curacao Routekaart Klimaatstrategie Curaçao,” “Transforming Urban Curacao,” and “SDG Roadmap for Curacao”) include:

- Heat stress and the urban heat island effect
- Limited green infrastructure
- Poor stormwater management, causing localized flooding during heavy rains
- Traffic pollution impacting air quality
- A shortage of energy-efficient buildings, increasing carbon emissions and operational costs
- Inadequate waste management and sewage systems, with a landfill nearing full capacity (Adshead et al., 2019).



Heat

Limited green

Stormwater & flood

Traffic polution

Waste

LEGAL FACTORS

Curaçao has complicated and sometimes slow legislation, which can impede investments and urban development (Goilo, 2022). Compliance with climate and sustainability rules remains limited due to inadequate laws and weak enforcement (Goede et al., 2009).

Key legal challenges include:

- Bureaucratic and inefficient procedures that slow down sustainable projects (Goilo, 2022).
- Insufficient legal frameworks for climate adaptation, meaning sustainability is not systematically integrated into spatial planning (Goilo, 2022).
- International obligations, such as the Cartagena and CITES treaties, which must be incorporated into national legislation (de Bruijn & Dieperink, 2022).
- The city center contains 760 protected monuments, but preservation and renovation are hindered by legal and financial obstacles (Transforming Urban Curacao, 2019).

These interconnected factors emphasize the complex governance, social, and environmental dynamics that need to be considered when planning sustainable interventions in the Inner City.

3.2 SWOT ANALYSIS

This section highlights key dynamics, both enabling and constraining, that affect sustainable and climate-resilient development in Willemstad's Inner City, building on insights from the PESTEL analysis. It examines both supporting and limiting factors to provide a comprehensive understanding of the potential and challenges facing Willemstad's Inner City in achieving sustainable and climate-resilient development.

STRENGTHS

Cultural heritage

The inner city of Willemstad has significant intrinsic qualities that are important for sustainable redevelopment. First, the area's cultural and historical value is high: the center is recognized as a UNESCO World Heritage Site and includes the neighborhoods of Punda, Otrobanda, Pietermaai, and Scharloo, with over 760 protected monuments (Transforming Urban Curacao, 2019). This monumental value helps define the city's identity and evokes nostalgic feelings among many residents (UNDP, 2018).

Institutional developments

Additionally, there is a development of institutional capacity. In early 2025, the ministries of Economic Development (MEO) and Traffic, Transport, and Spatial Planning (VVRP) formalized their collaboration by establishing the Werkgroep Ontwikkeling Binnenstad (WOB). This working group aims to create a cohesive vision for Willemstad's inner city, integrating public-private partnerships to enhance urban development (NU.cw, 2024). Furthermore, the appointment of Hans van Aalst as the quartermaster for the entire inner city underscores the commitment to coordinated development (Eindredactie, 2024). This signifies a renewed focus on interdepartmental cooperation and direction (Roadmap Climate Strategy, 2022). Moreover, active sustainability initiatives are underway. The Curaçao Climate Change Platform (CCCP), established by the Ministry of VVRP and the Meteorological Service, facilitates collaboration among ministries, civil society organizations, and knowledge institutions (Climate Strategy Roadmap, 2022).

Local initiatives and networks

Grassroots initiatives like Club 17, Green Phenix, Sustainabul, and The Recycle Pirate support local sustainability efforts, especially in waste management and the SDGs. The Learning Community is a platform from the University of Curaçao, TU Delft, and The Hague University of Applied Sciences where students collaborate on climate challenges. There have also been several annual conferences of Invest in Willemstad and the Curaçao Climate Change platform. Invest in Willemstad focuses on developments within Willemstad (Program 2025 – Invest in Willemstad, n.d.), and the Curaçao Climate Change platform addresses the urgent challenges of climate change (Curaçao Climate Change Platform, n.d.). During the Curaçao Climate Change Platform conference, KlimaKorsou was officially launched; it is a platform that highlights the effects of climate change on Curaçao. It features a climate impact atlas with interactive maps, showing, for example, areas vulnerable to flooding (Over Ons - Klimaateffectatlas Curaçao, n.d.)

WEAKNESS

Physical condition and policy instability

The physical condition of the inner city presents additional challenges. Vacancy, maintenance backlog, and traffic dominance undermine livability and hinder sustainable mobility (Transforming Urban Curacao, 2019). The heritage status and associated regulations can sometimes impose practical restrictions on building height, materials, and infrastructure, making large-scale or major projects more difficult (Speckens, 2024). This can hamper the realization of a climate-resistant city. Political instability, fragmentation of powers, and lack of continuity weaken the effectiveness of urban policy (Goede, 2018; Goilo, 2022). Although good policy plans exist, they are often not systematically implemented or evaluated (Van der Maas, 2008).

Low social cohesion and lack of resources

On a social level, there is low social cohesion, historical inequality, and limited citizen participation in urban decision-making (UNDP, 2018). There is inadequate institutional support for citizen involvement, despite growing interest. Meanwhile, a structural 'brain drain' hinders the development of local leadership and expertise (Goede, 2018). The lack of internal technical skills within government services, particularly in climate adaptation and environmental management (UNDP, 2018), causes a heavy dependence on external consultants. This impedes sustainable knowledge development and institutional capacity building.

OPPORTUNITIES

International/Financial Opportunities

At the same time, global developments are creating new and significant opportunities for the city center. The growing international emphasis on sustainable development and climate adaptation provides access to SDG partnerships, innovative financing sources like Green Finance, and knowledge sharing with multilateral organizations (UNDP, 2018). Curaçao's special relationship with the Netherlands offers chances to access European funds and participate in EU-wide cooperation agreements (Status Caribisch gebied - Europese Commissie, n.d.).

Technological innovation

Technological advancements are increasingly enabling the deployment of solar, wind, and ocean energy solutions. This provides a key opportunity for decentralized, climate-resilient infrastructure in the inner city. Curaçao's natural location and climate create a strong business case for renewable energy (Climate Strategy Roadmap, 2022). The expanding digital infrastructure also offers opportunities to enhance data-driven decision-making and citizen participation.

Cultural-tourist potential

Economically, cultural tourism and the creative economy provide alternatives to mainstream mass tourism. Investing in heritage, arts, and crafts sectors can generate jobs and revitalize the city center as an economic hub (Aggett & Van De Leur, 2020; Transforming Urban Curacao, 2019).

THREATS

climate threats

The primary threat to the city center is its vulnerability to climate change. Large areas of Willemstad are situated in low-lying coastal zones that are susceptible to sea level rise, storm surges, and heat stress (UNOPS, 2021). An analysis of national infrastructure revealed that 27 critical facilities, including hospitals and utilities, face a very high risk from sea level rise (UNOPS, 2021).

External shocks

Furthermore, Curaçao remains highly dependent on tourism and international trade, which means external shocks, such as pandemics or economic crises, directly affect the city center (Aggett & Van De Leur, 2020). The informal economy also leads to incomplete data and limited policy guidance (Goilo, 2022).

External malls

HA

The city center's competitive position is worsening due to the rise of new malls and online sales channels. Simultaneously, high renovation costs and complicated regulations hinder the repurposing of monuments (Transforming Urban Curacao, 2019). A lack of operational coordination among government agencies continues to block the implementation of integrated climate policies, ultimately limiting long-term resilience efforts (UNDP, 2018).

Taken together, these strengths, weaknesses, opportunities, and threats highlight the complex but actionable landscape for creating a more resilient and inclusive future for Willemstad’s Inner City.

3.3 STAKEHOLDER MAPPING

Stakeholder mapping is performed to identify and categorize the key actors involved in or affected by developments in the Inner City of Willemstad and to clarify their roles. A Power/Interest Matrix (Mendelow, 1991) was used to classify stakeholders based on their influence on urban development and their level of interest in climate resilience and sustainable transformation in the Inner City. The mapping was informed by a combination of organizational information, the researcher's contextual understanding, field observations, and discussions with a local expert involved in the Learning Community.

Based on this matrix, stakeholders were positioned across four quadrants. While some groups, such as tourists or individual building owners, showed limited influence or engagement, others stood out as central to this study due to their dual role as both influential and interested actors. Residents, for example, demonstrated high interest but limited institutional power.

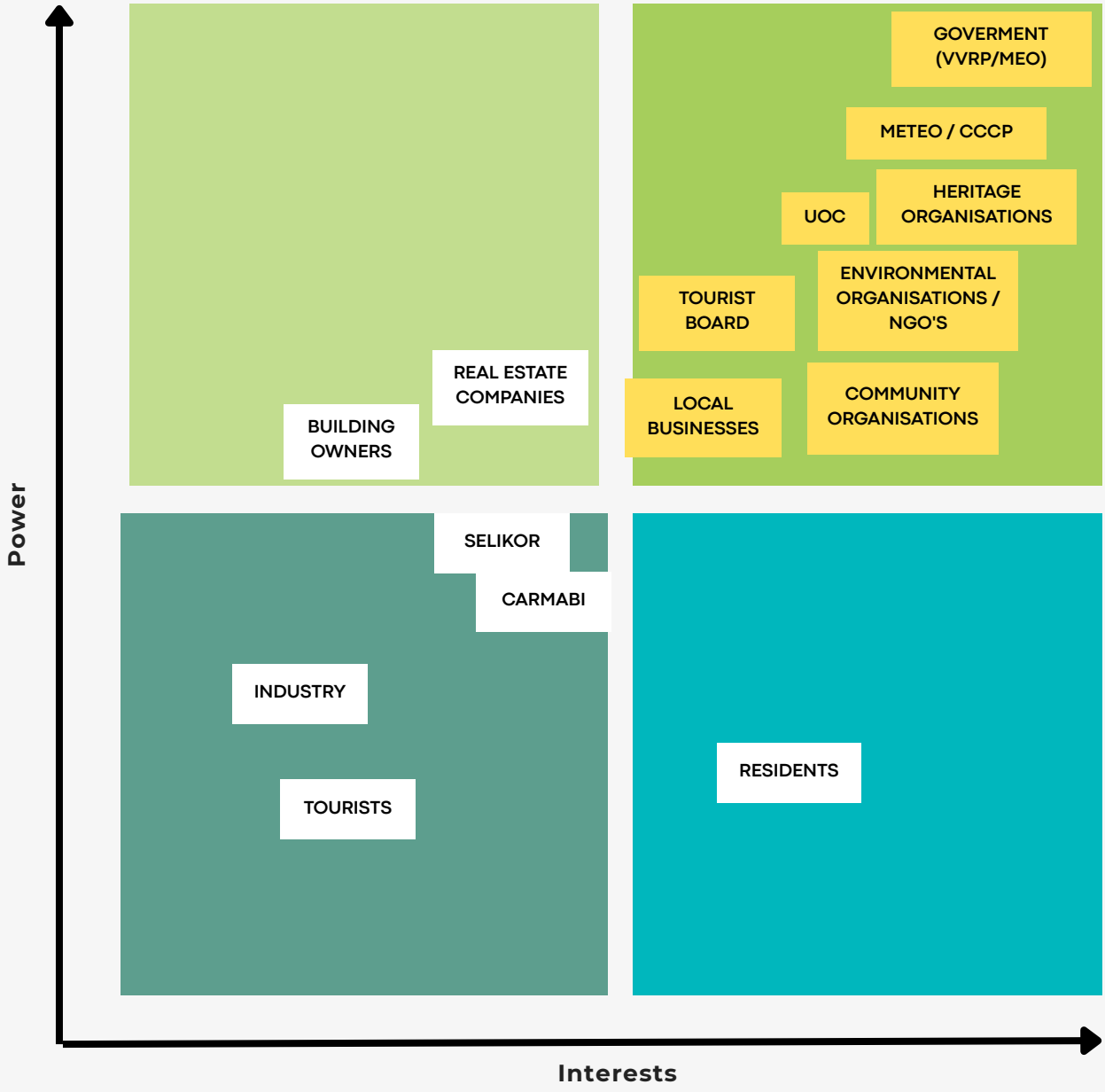


Figure 3: Stakeholder map

The following stakeholder groups appeared in the high power/high interest quadrant and are therefore considered key to this research:

- Government authorities (e.g., Ministry of Spatial Planning (VVRP), Ministry of Economic Development (MEO))
- Meteorological Department and the Curaçao Climate Change Platform (under METEO)
- Community and neighborhood organizations
- Environmental NGOs and grassroots sustainability initiatives
- Heritage preservation organizations
- Academic institutions

These groups play an important role in shaping urban development and show interest in sustainability, collaboration, and revitalizing the Inner City. For these reasons, they have been chosen as the main focus for further study in this project.

One of the main features of stakeholder relations in Willemstad is the lack of a municipal governance structure. Unlike many cities, Willemstad has no local government or city council. As a result, spatial planning and infrastructure are managed at the national level, mainly through the Ministry of Spatial Planning (VVRP). The Ministry of Economic Development (MEO) also plays a significant role, especially in the economic development of the Inner City.

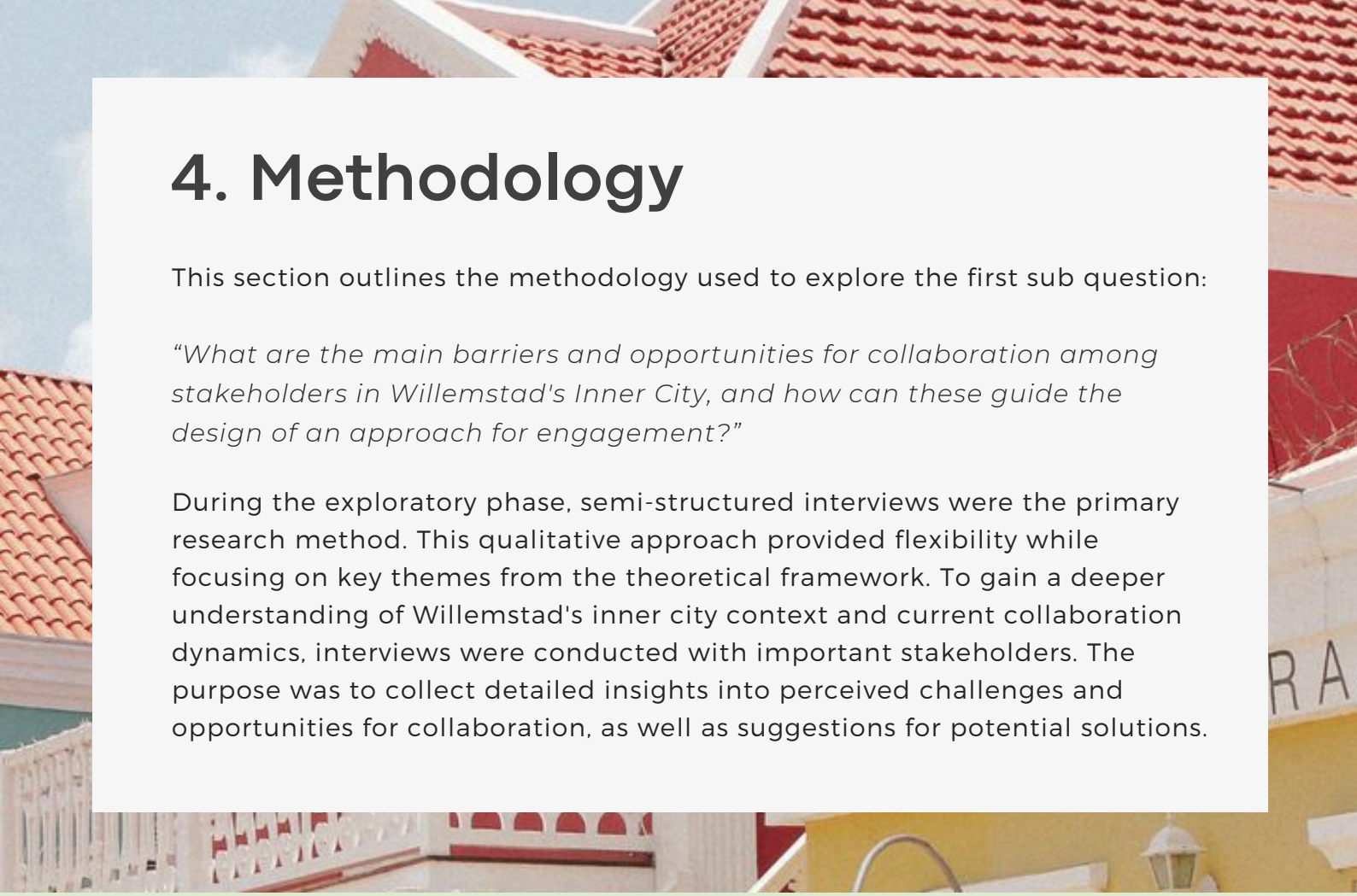
This arrangement introduces unique coordination challenges. Tasks that would normally be handled by a municipality now need to be managed by national actors or temporary structures, such as the appointed quartermaster and the working group under the Landsbesluit. The lack of a municipality also creates uncertainty about roles and expectations. As a result, community organizations, private actors, and other non-governmental stakeholders often take the initiative to meet local needs. This governance environment complicates coordinated action but also emphasizes the importance and urgency of building collaborative capacity among stakeholders.

3.4 CONCLUSION CONTEXT ANALYSIS

The context analysis shows that Willemstad faces a mix of socio-economic, environmental, and governance-related challenges that complicate sustainable and climate-resilient urban development. While the area has great potential through its UNESCO World Heritage status, cultural identity, partnerships, and emerging sustainability initiatives, it also faces ongoing issues such as administrative fragmentation, social inequality, and rising climate vulnerability.

The PESTEL analysis points out problems like limited law enforcement, bureaucratic inefficiencies, a fragile economy, and the increasing impact of climate change. The SWOT analysis reflects this dynamic: there is clear potential for sustainable and inclusive growth, but progress is hampered by weak institutional collaboration, gaps in technical capacity, and physical degradation of the Inner City. The stakeholder mapping identified key groups including government authorities, civil society organizations, academic institutions, and local businesses. These actors are influential and engaged in the future of the Inner City, offering a foundation for collaboration. Their roles, perspectives, and collaborative potential will shape the next phases of this research, which aim to identify barriers and opportunities for stakeholder collaboration toward a climate-resilient inner city.

This context emphasizes the urgency and complexity of working together on climate resilience. The rest of this research will focus on identifying barriers, strengthening collaboration, and exploring opportunities for joint action.



4. Methodology

This section outlines the methodology used to explore the first sub question:

“What are the main barriers and opportunities for collaboration among stakeholders in Willemstad's Inner City, and how can these guide the design of an approach for engagement?”

During the exploratory phase, semi-structured interviews were the primary research method. This qualitative approach provided flexibility while focusing on key themes from the theoretical framework. To gain a deeper understanding of Willemstad's inner city context and current collaboration dynamics, interviews were conducted with important stakeholders. The purpose was to collect detailed insights into perceived challenges and opportunities for collaboration, as well as suggestions for potential solutions.

(Reporter, 2025)

4.1 INTERVIEW GUIDE

The interview guide was developed based on the framework by Ganeshu et al. (2023), focusing on four main themes: leadership, organizational interests, collaboration processes, and communication and coordination. These categories directed both the interview design and the subsequent analysis.
Each interview was semi-structured and lasted about 60 minutes. Interviews were conducted in person at the participant’s workplace whenever possible; otherwise, Microsoft Teams was used. For each of the four themes, participants were asked about the current situation, barriers, opportunities, and factors for success. Follow-up questions and prompts were used to encourage detailed responses.

The full interview guide can be found in Appendix D.

4.2 STAKEHOLDER GROUP

The interview participants were selected based on their relevance to the Power/Interest Matrix. They represent a diverse range of stakeholder types involved in or affected by developments in Willemstad's Inner City. These stakeholders are either directly active in the area or represent organizations and interests that influence its future. Some stakeholders had overlapping roles, such as serving as both organizational representatives and local residents or community members. In some cases, participants had lived or worked in the same neighborhood for many years, allowing them to share insights based on long-term, place-based experience and to speak informally on behalf of their community or area.

Participants represent the following stakeholder categories:

Government authorities (4):

- Ministry of Traffic, Transport and Urban Planning (VVRP)
- Ministry of Economic Development (MEO)
- Ministry of Governance, Planning and Public Service (BPD)
- Meteorological Department (METEO)

Community and neighborhood organizations (4):

- Downtown Management Organization (DMO)
- Association of Merchants of Otrobanda (SKO)
- Kaya Kaya festival
- The quartermaster of the Inner City

Academic institutions (4):

- University of Curaçao (UoC) (3)
- Delft University of Technology (TU Delft)

Heritage preservation organizations (2):

- National Archaeological-Anthropological Memory Management (NAAM)
- Stichting Monumentenzorg Curaçao

Environmental organizations and initiatives (5):

- Amigu di Tera
- Fondashon Rif
- The Recycle Pirate/Club 17
- Green Phenix
- Sustainabul

Local business and tourism sector (2):

- Algemeen Pensioenfonds Curaçao (APC)
- The Curaçao Tourist Board (CTB)

4.3 DATA COLLECTION AND ANALYSIS

Interviews were conducted either face-to-face or online through Microsoft Teams. Face-to-face interviews were recorded with a mobile phone and transcribed using Microsoft Word's dictation feature. Interviews via Microsoft Teams were recorded and automatically transcribed by the software. The main goal of the interviews was to identify key barriers and collect stakeholder perspectives to gain a better understanding of the context. A deductive coding approach was used, allowing for the categorization of barriers and the collection of relevant quotes and insights related to themes from the theoretical framework.

The analytical process included the following steps:

- Familiarizing with the data by reviewing transcripts.
- Applying a predefined coding framework based on themes from the theoretical framework.
- Segmenting and labeling relevant parts of the text.
- Reviewing and organizing coded segments and identifying any missing patterns or overlooked insights.

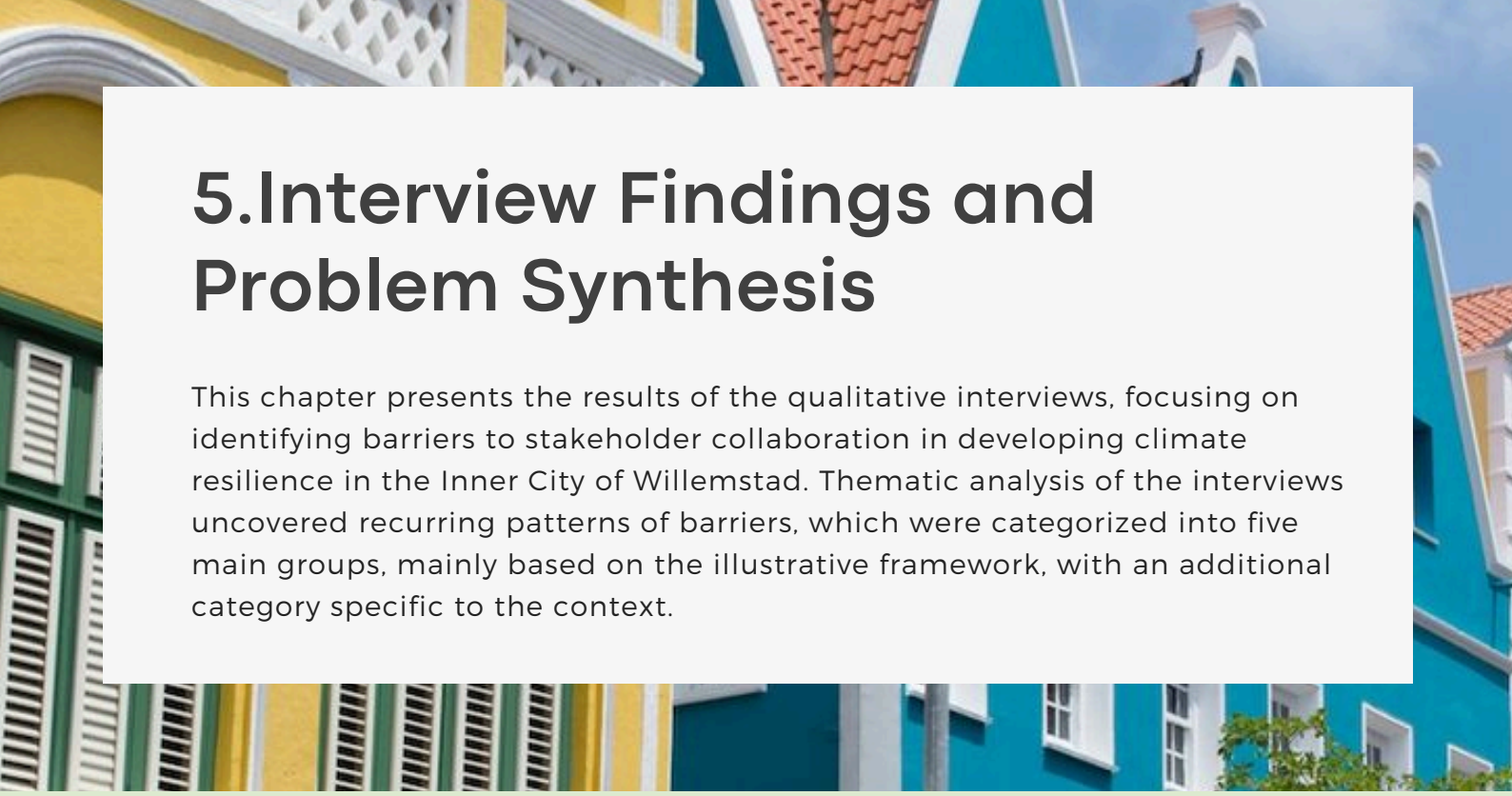
The coding and analysis were performed using ATLAS.ti, a program for qualitative data analysis (ATLAS.ti Scientific Software Development GmbH, 2025).

4.4 VALIDITY, RELIABILITY, AND LIMITATIONS

While the interviews provided valuable, in-depth insights into local collaboration dynamics, there are limitations to consider. The number of participants was necessarily limited and cannot fully represent all stakeholder perspectives. Additionally, some participants held overlapping roles (e.g., both community member and professional), which may have blurred distinctions between stakeholder categories. The findings reflect perceived experiences rather than objective measurements. This subjectivity is a strength in terms of depth and contextual richness but limits generalisability. These limitations were addressed by validating emerging themes in the first co-creation sessions.

4.6 ETHICAL CONSIDERATIONS

Participants were informed about the research objectives and given a consent form before each interview. Participation was voluntary, and all responses remained confidential. Quotes used in the reporting were anonymized. No sensitive personal data was collected, and the research adhered to TU Delft's ethical guidelines. The consent form can be found in Appendix E.



5.Interview Findings and Problem Synthesis

This chapter presents the results of the qualitative interviews, focusing on identifying barriers to stakeholder collaboration in developing climate resilience in the Inner City of Willemstad. Thematic analysis of the interviews uncovered recurring patterns of barriers, which were categorized into five main groups, mainly based on the illustrative framework, with an additional category specific to the context.

(Jansen, 2024)

5.1 THEMATIC FINDINGS FROM INTERVIEWS

5.1.1 LEADERSHIP

Many participants (P) pointed out that fragmentation causes unclear leadership. Different individuals and institutions may serve as leaders within specific areas, but no single entity is taking overall responsibility for the Inner City. ***"There is fragmented leadership"*** (P4). Leadership on the island was described as dispersed: ***"For climate adaptation, you have a leader, for mitigation another, and then in other climate-related areas again different ones"*** (P4). This fragmentation often results in inaction.

Participants also expressed uncertainty about who should lead: **"There is always a discussion about whether the public or private sector should take initiative"** (P7). ***“The tendency in this society is always to say that it has to come from the government, while I think we should not wait for the government to come up with things.”*** (P21). Some individuals in formal leadership roles are unaware of their expected responsibilities: ***"There are people who should be taking on a leadership role based on their position, but they don't realize it"*** (P4).

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A lack of vision is closely connected to the leadership problem. ***"I still miss a clear vision of where we want to go with the Inner City, with the UNESCO status, and how we want to approach that for the future"*** (P2). Another participant added: ***"There are enough plans, but the vision is missing"*** (P2). Several participants pointed out that a compelling vision is crucial to get others on board: ***"You need to help people see and understand the vision to support and realize it"*** (P4).

Another participant recognizes leadership but feels there is a lack of overarching leadership. ***"Everyone who works in sustainability on the island is basically a leader, but I still miss a certain, really strong leader who keeps everything together"*** (P11).

5.1.2 ORGANISATIONAL INTERESTS

Conflicting organizational interests stand out as a major obstacle. Stakeholders often work alone, focusing on their own priorities rather than collective goals. ***"Everyone has their own agenda"*** (P2), and ***"we're too busy with our own concerns to make time for collaboration"*** (P3). This results in siloed efforts and poor coordination.

Participants also described power imbalances, with some actors dominating processes. ***"Often it's the one who shouts the loudest or has the most money who gets their way"*** (P2). Initiatives in particular are fragmented: ***"People start their own projects and become protective of them. They see it as their baby and are reluctant to collaborate"*** (P6).

Several participants noted that although plans or visions exist, they are often not acted upon because of fragmented interests and lack of shared ownership: 'That report is completed, but not implemented' (P4); ***"It stays tied to the interest of one group, the diversity of the city doesn't come through"*** (P7). ***"That vision, it's not really picked up. Not embraced"*** (P3).

Economic interests often override sustainability goals, and short-term thinking undermines long-term resilience: ***"Hotels are being built as if the city won't be underwater in 10–15 years. They're cashing in early and moving on. There's no thinking about the future"*** (P7). Funding was also mentioned as part of this dynamic: ***"Organizations are hesitant to apply for funding together because they want to maintain control over how the funding is used"*** (P6). This protective stance reflects broader patterns of mistrust and competition for limited resources.

5.1.3 COLLABORATION PROCESSES

The collaboration process was often described as inconsistent and reliant on individuals rather than institutions. ***"Projects depend too much on individuals; if that person isn't there, it falls apart"*** (P7). In the public sector, collaboration is limited: ***"Even within ministries, collaboration is absent, let alone between ministries and external actors"*** (P1). Efforts to work together frequently fall short due to poor follow-through, lack of commitment, or scheduling conflicts. ***"People don't show up for meetings, and things get delayed"*** (P4). The lack of institutionalized collaboration mechanisms was seen as a reason for missing collaboration processes: ***"We don't really have a polder model here. Everyone is doing their own thing"*** (P2).

5.1.4 COMMUNICATION AND COORDINATION

Communication and coordination were often identified as top concerns. ***"Better communication always comes up in the top three"*** (P4). Stakeholders voiced frustration over the lack of clear, consistent, and transparent communication. ***"We launch a project without a communication strategy. That needs to change"*** (P4).

Participants observed that visions and plans are not clearly communicated or easy to access: ***"Where can I find the ministry's vision? Where is it shared?"*** (P9). A lack of transparency about who is responsible for what leads to confusion and inefficiencies: ***"There's no centralized platform. We miss out on opportunities to align"*** (P1).

There is also a tendency to withhold information: ***"People keep things to themselves. Knowledge is power"*** (P20). This hoarding of information is linked to institutional culture and mistrust.

5.1.5 CULTURAL AND RELATIONAL DYNAMICS

Besides the four main themes, interviews uncovered deeper personal, cultural, and contextual barriers that subtly affect collaboration. These included mistrust, overlapping personal and professional roles, and the lasting impacts of Curaçao's colonial history.
The island's small size creates dense interpersonal networks, which can both promote and challenge cooperation. ***"You're always cautious because you never know how someone is connected. It makes people guarded"*** (P6). It is also described as lacking psychological safety: ***"If you say something, it might be used against you later"*** (P6).

Hierarchical traditions and cultural norms also influence behavior. ***"We don't have a culture of assertiveness, it's something that has been passed down. That makes strong leadership difficult"*** (P4). Historical legacies were mentioned as shaping current dynamics: ***"During slavery, people were forbidden to communicate or partner. That mindset still lingers in some form"*** (P21).

Participants expressed that collaboration often depends on individuals, not systems. ***"If that one person doesn't take the lead, nothing happens"*** (P7). Without embedded structures or champions, promising ideas often remain isolated.

5.1.6 POSITIVE SIGNALS AND OPPORTUNITIES

Despite many barriers, participants also shared examples of emerging positive dynamics and potential enablers. Several interviewees noted increased openness to collaboration compared to the past: ***"I feel like there is more collaboration than ever before"*** (P11). Networking events and informal spaces for exchange were seen as valuable: ***"These events are important to stimulate and sustain collaboration"*** (P6).

Participants also highlighted the potential of learning platforms and student engagement: ***"A learning community could work really well in Curaçao because people enjoy working together socially"*** (P6). The presence of motivated individuals, or 'champions', was considered essential: ***"When success stories emerge, others follow. It creates momentum"*** (P7).

Some participants recommended creating a neutral platform or facilitator: ***"A neutral facilitator who understands all priorities could align efforts and build trust"*** (P6). They also mentioned academic institutions like the University of Curaçao as neutral stakeholders. Others emphasized the importance of inclusive dialogue and clear communication strategies to enhance mutual understanding and collaborative action.

5.2 SYNTHESIS AND INTERPRETATION

Throughout the interviews, the main barriers to collaboration were diverging interests, poor communication, and coordination, which affected stakeholder dynamics and hindered action. These issues stemmed from fragmentation caused by weak institutions, reliance on individuals, and cultural dynamics like mistrust and historical sensitivities in Curaçao's small society. While some barriers align with Ganeshu et al. (2023), additional context-specific factors are evident.

The analysis shows Willemstad's Inner City faces socio-economic, environmental, and institutional challenges, with fragmented efforts and limited governance. Structural weaknesses, low social cohesion, and relational issues like trust and participation complicate collaboration. Success requires addressing both formal and relational elements. Participants emphasized the value of champions, dialogue, networks, and the role of academic institutions in facilitating trust and coordination.

Among all identified barriers, two stood out across nearly all interviews as especially obstructive: (1) diverging interests, which hinder alignment and shared ownership, and (2) poor communication and coordination, which block transparency, trust, and collaboration. These two barriers were not only frequently mentioned but also seen as closely connected and fundamental, shaping many of the other challenges seen in the stakeholder landscape.

Therefore, poor communication and coordination and diverging interests are key to the revised problem definition and help shape the design goal in the next section.

5.3 PROBLEM REFRAMING AND DESIGN GOAL

The findings from the context analysis, interviews, and co-creation session all highlight a key issue: the absence of structured engagement mechanisms weakens collaborative efforts for climate resilience in Willemstad's Inner City.

Rephrased problem statement:

Efforts to improve climate resilience in Willemstad's Inner City remain fragmented due to the absence of structured collaboration. Both the interviews and the co-creation session show that **poor communication, limited coordination, and diverging interests are major barriers to collaboration.** Without a clear structure for engagement, collaboration stays isolated and depends on individual efforts, which limits its long-term impact and potential for growth.

Design goal:

To address this gap, the design goal is to **develop an engagement catalyst: a tool or approach that enhances communication and coordination among stakeholders and promotes the alignment of interests**. The catalyst should support inclusive participation, foster mutual understanding, and lay the foundation for lasting collaboration on climate resilience in Willemstad's Inner City.

This goal is guided by research showing that engagement is a key first step toward collaboration. While full collaboration involves shared responsibilities, decision-making, and resources, engagement focuses on starting relationships, building trust, and developing shared perspectives (Daniels et al., 2020)(van de Meene et al., 2020; Robinson, 2020). Currently, such engagement is underdeveloped in the Willemstad context. The engagement catalyst is designed to speed up this phase and act as a step toward more in-depth collaboration.

6. Design process and Intervention Development

This chapter explains the process behind two interventions: the Playbook for project initiation and stakeholder engagement and the Roadmap toward a Living Lab. Both were created to address structural barriers to collaboration in Willemstad's inner city. The phase began with validating the problem framing through co-creation, followed by ideation, concept development, and validation. Each part is developed iteratively with input from stakeholders and experts.

6.2 CO-CREATION SESSION I – VALIDATING THE PROBLEM SPACE

6.2.1 PURPOSE AND PARTICIPANTS

This co-creation session aimed to validate the problem space identified through interviews and explore early ideas for intervention. The session invited a select group of stakeholders involved in or impacted by sustainability efforts in the Inner City of Willemstad. Participants included representatives from government agencies (VVRP, MEO, METEO), community organizations (DMO, Groen Otrobanda), and the quartermaster. Their inclusion was based on their high interest and influence in the topic.

6.2.2 SESSION DESIGN AND METHOD

The session was held in person at the atelier of the Learning Community at the University of Curaçao. The starting point for discussion was a problem statement provided by the quartermaster: "How can we best address the lack of a coordinated approach to sustainability and climate resilience in the centre of Willemstad?"

The method used was the 'Ladder of Abstraction' (Heijne & van der Meer, 2019) which helped participants reflect on both underlying motivations and specific actions. The session moved from problem framing to values discussion and concluded with a brief brainstorming activity. The full session structure, materials, and facilitation guide are included in Appendix F.

Pictures of the co-creation session

6.2.3 KEY INSIGHTS

Several themes emerged during the session that confirmed earlier interview findings and added new insights. Participants reiterated key barriers to collaboration such as the lack of a shared vision, poor communication, and limited resources, including time, funding, and regulatory clarity. The concept of 'draagvlak' (broad-based support) was highlighted as a crucial yet missing element.

When discussing the future of the Inner City, participants emphasized the importance of liveability, cultural preservation, and social inclusion. Participants noted that achieving this vision requires "doing something together," establishing clarity, and finding balance between various development priorities. Further insights of the session can be found in Appendix G.

6.2.4 IMPLICATIONS FOR DESIGN

The co-creation session verified the problem framing and provided early guidance for the design phase. It became evident that a successful intervention would need to support not only structure and coordination but also build trust, increase visibility, and promote inclusive engagement. Ideas such as informal gatherings, stakeholder mapping, and communication tools directly shaped the development of the Playbook and Roadmap in the next phase.

6.3 DESIGN RECOMMENDATIONS

Based on the interview findings and the first co-creation session, the following design recommendations are suggested to guide the development of the engagement catalyst. While the specific form and main stakeholder group will be further explored during the ideation phase, these principles reflect common needs and contextual insights.

Foster shared vision-building

Create space for stakeholders to align on long-term goals for climate resilience in the Inner City. This addresses the recurring need for draagvlak (broad-based support) and a shared sense of direction identified through both interviews and the co-creation session.

Increase the visibility and connectivity of initiatives

Increase visibility of current projects, efforts, and key individuals to minimize fragmentation, promote alignment, and showcase local champions. This fosters continuity, cuts down on duplication, and encourages knowledge sharing among actors.

Design mechanisms that connect

Design for regular, accessible interactions such as informal meetups, roundtables, or networking events that foster trust and relationships over time. This addresses the need for spaces that lower barriers to collaboration and encourage spontaneous exchanges.

Respond to the context of Curaçao

Acknowledge local cultural and relational dynamics when designing engagement strategies. Be aware of sensitivities related to hierarchy, trust, and historical legacies, and adjust interaction formats as needed.

Enable a neutral or connective role

Include a neutral facilitator or connection mechanism to bridge interests and maintain continuity beyond individual actors. Academic institutions or learning platforms can play a key role in supporting these efforts over time.

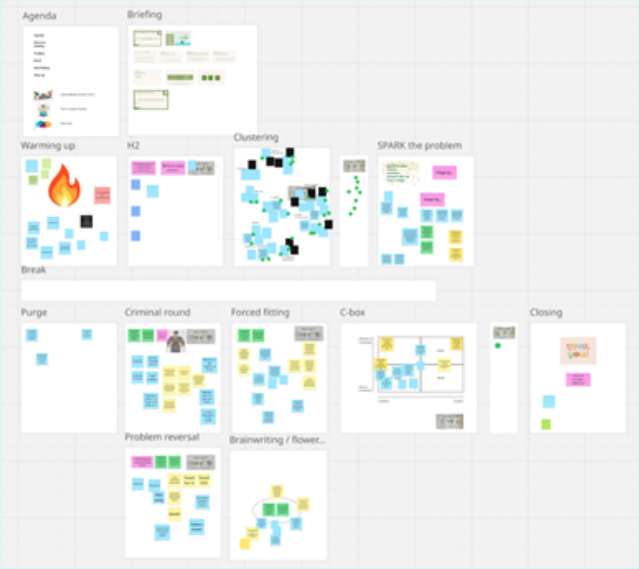
6.4 CO-CREATION SESSION II – IDEATION AND SOLUTION SPACE

6.4.1 INTRODUCTION AND RATIONALE

To kick off the ideation phase, a second co-creation session was held with selected stakeholders from the Inner City of Willemstad. While the first session focused on validating the problem space, this session aimed to open the solution space and explore potential directions for design. It helped gather initial insights into what types of interventions might be relevant and desirable from the stakeholder perspective, and to identify needs and values that could guide concept development.

6.4.2 SESSION SETUP AND METHOD

Participants included a representative from the real estate department of Algemeen Pensioenfonds Curaçao (APC), The Recycle Pirate, and several students from the Learning Community. The session was conducted online using Microsoft Teams, with Miro as a collaborative platform. After a brief project overview and review of the research phase, participants engaged in a structured creative problem-solving process based on techniques from Heijne & van der Meer (2019).



Online co-creation session

Steps included rephrasing the central problem, clustering emerging themes, and generating early solution ideas. A complete session outline is included in Appendix F..

6.4.3 KEY INSIGHTS

The session identified several clustered themes: safety and inclusivity, continuity, efficiency, inspiration, visibility, and community involvement. These themes reflect a shared desire for spaces that promote openness, connection, and shared experiences. The group rephrased the problem as: 'How can we create a space to come together, to meet, connect, and inspire?'
Ideas included repurposing underused spaces into shared hubs, supporting local initiatives, and designing environments that blend cultural richness with sustainability. Participants envisioned multidimensional, inclusive spaces where encounters and collaboration can develop.

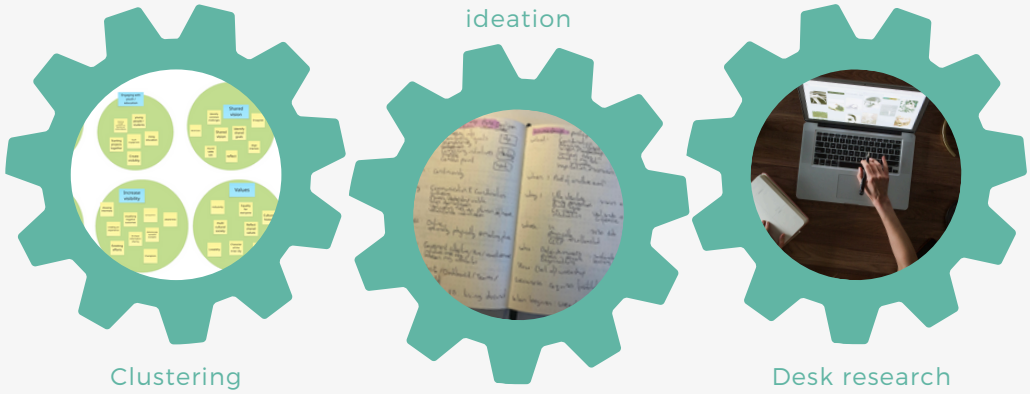
6.4.4 DESIGN IMPLICATIONS

Insights from this session helped identify core design requirements. Participants highlighted connection, visibility, continuity, and inclusivity. As a result, the intervention should: facilitate informal stakeholder interactions, improve visibility of ongoing efforts, embody values of openness and shared ownership, and promote long-term engagement.

6.5 CONCEPT DEVELOPMENT AND SELECTION

6.5.1 CONCEPT EXPLORATION AND CLUSTERING

Building on the co-creation sessions, interview findings, and context analysis, key themes and user needs were combined into a visual cluster to inspire ideation. This cluster acted as a springboard for identifying relevant design directions.



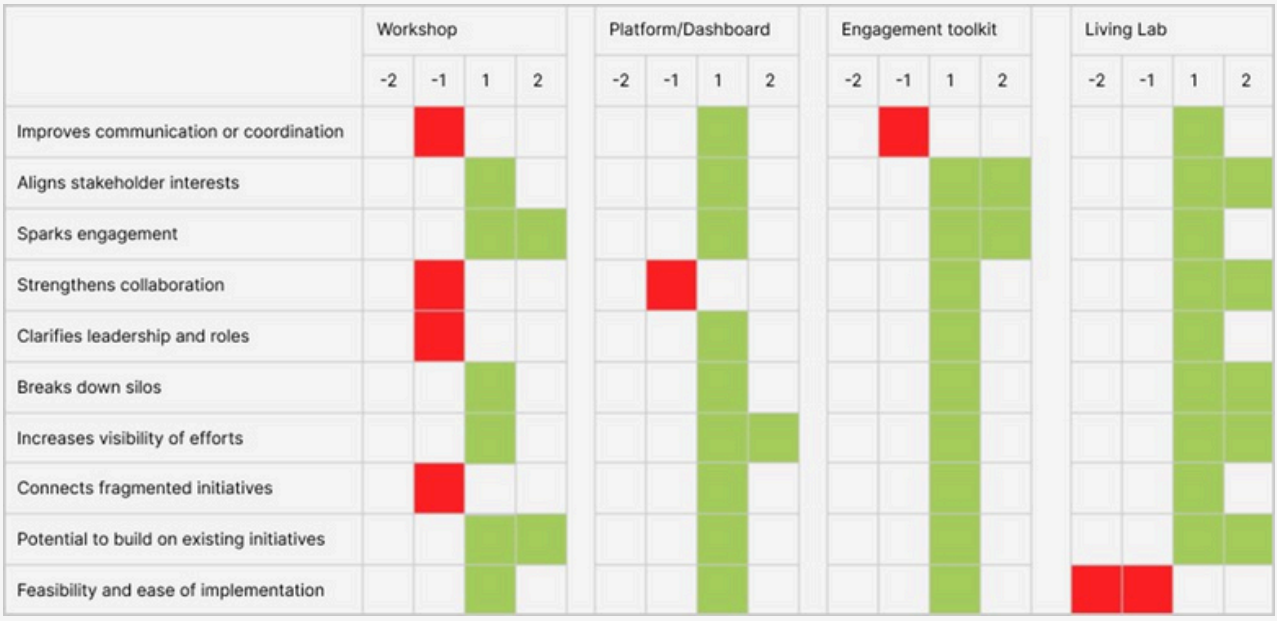
At the same time, brief desk research was conducted to examine formats and mechanisms from similar urban resilience and stakeholder engagement tools. Four initial concept directions emerged, each based on key project insights:

- **Workshop series** – to align stakeholder interests and co-create visions.
- **Digital platform/dashboard** – to enhance coordination and increase visibility of initiatives.
- **Engagement toolkit** – to organize and start collaboration among stakeholders.
- **Living Lab** – to pilot, connect, and amplify initiatives through an applied collaboration model.

A draft of each concept, using the 5W+H and UALO frameworks, is available in Appendix H.

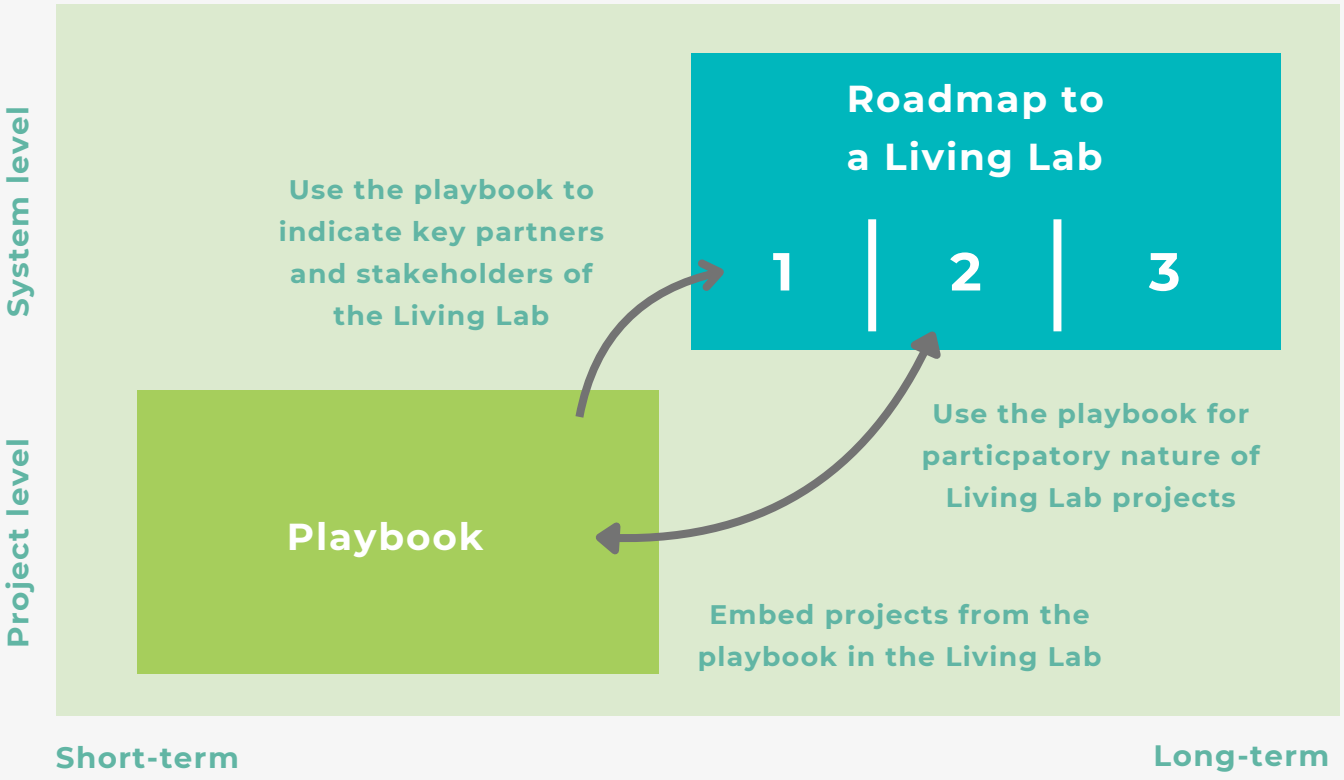
6.5.2 CONCEPT EVALUATION

To evaluate and compare the four concept directions, a Harris Model was used. This decision-making tool helps visualise relevance and prioritize options based on multiple predefined criteria (which can be found in Appendix I). Each concept was assessed against key factors derived from the research and co-creation phases, enabling a structured comparison (see next phase). The Engagement Toolkit and Living Lab received the highest scores in most areas, especially for their ability to promote collaboration and create long-term value. As a result, these two concepts were selected for further development during the design phase. After selecting the concepts, the engagement toolkit has evolved into a playbook for engagement.



Synthesis: Short-term action, long-term vision

The Playbook and the Roadmap together provide a dual approach to enhancing collaboration in Willemstad's Inner City. The Playbook supports short-term action by helping stakeholders start inclusive projects in a structured way. The Roadmap offers long-term guidance, outlining how these efforts can develop into a more continuous and systemic form of collaboration, such as a Living Lab. The Playbook kickstarts initiatives, while the Roadmap links them to broader future visions. Visualizing how the tools might relate can be seen in the sketches on the next page.



6.5.3.2 VALUE PROPOSITION CANVAS

A Value Proposition Canvas was used to explain how the Playbook and Roadmap each address the needs, responsibilities, and challenges of their respective user groups. The following summary shows how each design output adds value for both direct users and broader stakeholder groups.

Playbook – supporting project initiators
The Playbook is primarily designed for project initiators, such as students, civil society actors, or engaged residents, who want to start (small-scale_ climate resilience projects. These users often struggle to turn ideas into action due to limited resources, fragmented networks, and little experience with stakeholder engagement. The Playbook addresses these challenges by providing structured guidance to define project scopes, identify relevant stakeholders, and develop a collaborative process early on.

A common challenge for many initiators is the limited follow-through of existing plans or the gap between initial ideas and actual implementation. The Playbook helps lower this risk by promoting alignment from the beginning, making roles, motivations, and dependencies clear. For students unfamiliar with the Curaçaoan context, the Playbook can serve as an easy entry point, offering project prompts, stakeholder mapping support, and simple steps toward collaboration. Within the Learning Community, the Playbook could help institutionalize knowledge and provide continuity across student cohorts.

Roadmap – enabling systemic coordination
Where the Playbook supports local action, the Roadmap targets system-level actors, such as government departments, academic institutions, and strategic intermediaries, who are responsible for shaping long-term collaboration infrastructure. These users often struggle with fragmented governance, short-term thinking, and the lack of a shared vision for how project-based engagement can evolve into sustainable change.

The Roadmap addresses these needs by offering a strategic plan for developing a place-based Living Lab over time. It helps users reflect on cooperation conditions, define development stages, and identify key points for institutional learning and alignment. For policymakers or coordinating bodies, it supplies tools to make co-creation and participation more structurally embedded. It also enables the Learning Community to imagine how their work can contribute to a larger ecosystem, beyond student projects.

Element	Playbook	Roadmap towards a living lab
Target group	Project initiators	Institutional actors
User jobs	• Initiate local climate projects • Engage stakeholders • structure early collaboration	• Develop long-term strategy • Align institutions • Create continuity beyond individual projects
Pains	• Not knowing where to start • Lack of engagement • Fragmented networks • Short-term project logic	• Fragmentation • policy discontinuity • Lack of shared vision or institutional memory • Isolated projects
Gains	• Clarity • Early buy-in • More continuity in efforts	• Strategic alignment • Capacity for scale • Time-based structure for gradual growth
Products & Services	Playbook: step-by-step guide for stakeholder engagement and project scoping	Roadmap: timeline-based tool for designing and guiding Living Lab development
Pain Relievers	• Provides a concrete starting point • Breaks down stakeholder networks • Suggests tools and formats for outreach	• Helps map phases of collaboration, gives a communication and coordination structure • Makes roles and dependencies visible • Supports governance reflection • Helps to align interests
Gain Creators	• Helps users map stakeholders, clarify roles • Awareness of different interests • Structure collaboration early, making a communication and coordination plan	• Connects project efforts to systemic change • Enables institutions to plan collaboratively • Supports alignment without rigid prescription,

Broader beneficiaries

While the primary users of the tools are project initiators and coordination-level stakeholders, broader beneficiaries include local NGOs, community representatives, entrepreneurs, educators, and residents. These groups stand to gain from more transparent, inclusive, and well-coordinated pathways to participate in sustainable urban development. By enabling structured stakeholder engagement at multiple levels, the tools promote more equitable ownership of Willemstad's climate-resilient future.

6.6 DESIGN ITERATIONS

Building on the insights gathered during the research phase, the design phase aims to create an intervention that overcomes the main barriers to stakeholder collaboration in Willemstad's Inner City. The focus is on developing an engagement catalyst that encourages communication, enhances coordination, and aligns diverging interests among stakeholders. The goal of this phase is to turn research findings into practical design strategies. It aims to develop a useful tool that supports structured collaboration in future sustainability efforts. This chapter details the development process, including refining design requirements, generating concepts, and conducting iterative testing and expert discussions.

Design Requirements
Based on interviews, co-creation sessions, and contextual analysis, the following functional requirements guided the development of the interventions:

- Support the structured initiation of collaborative efforts
- Enable recurring, inclusive interactions among diverse stakeholders
- Facilitate role clarity, shared ownership, and momentum
- Improve visibility of existing initiatives, champions, and entry points
- Be adaptable, accessible, and suited to the context of Curaçao
- Reflect shared values such as transparency, inclusivity, and co-creation
- Provide opportunities for collaboration with knowledge partners

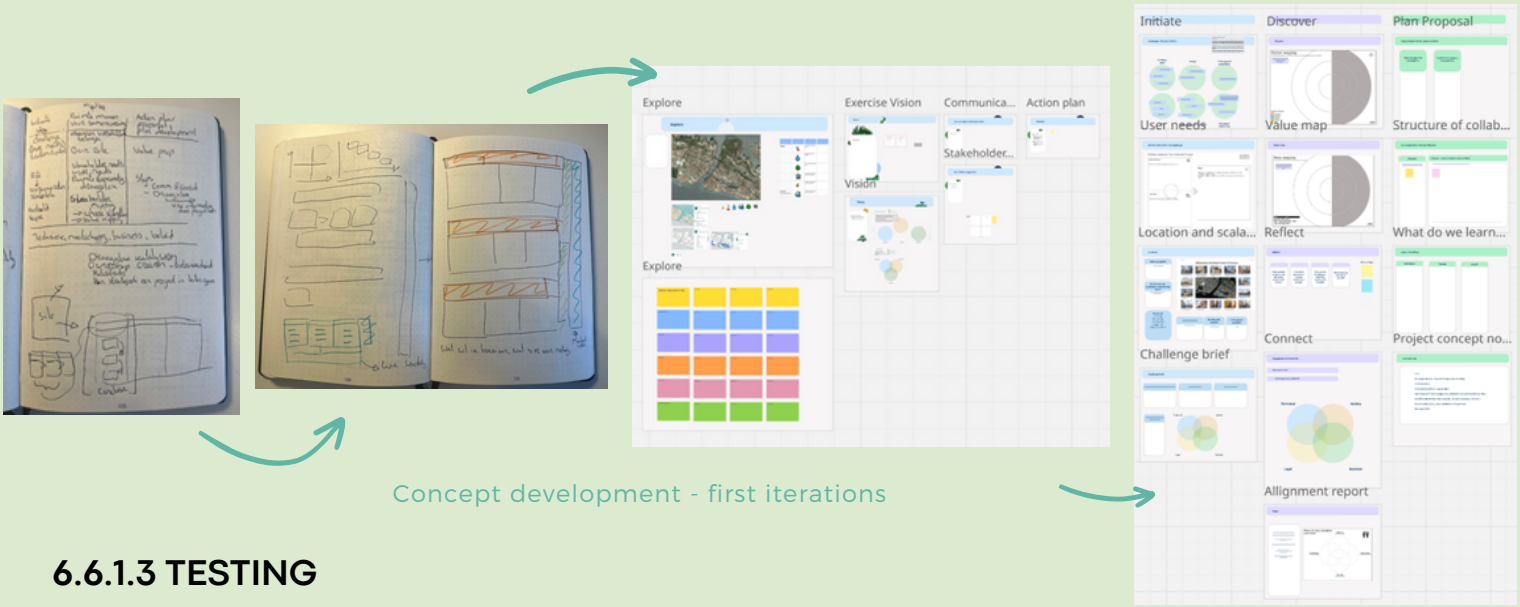
The interventions developed in this chapter, the Playbook and the Roadmap, directly address the design requirements listed above. Each tool serves a different user group: the Working Group appointed under the Landsbesluit, and the Learning Community as a driver for urban experimentation. Their roles and challenges shaped the structure and focus of the tools (see Section 6.5.3.2).

This chapter highlights two design outcomes: the Playbook, centered on early project-level engagement, and the Roadmap, designed for systemic, long-term collaboration through a Living Lab approach. The subsequent sections outline the development, testing, and refinement of both tools in more detail.

6.6.1 PLAYBOOK

6.6.1.2 INITIAL PURPOSE AND SKETCHING

The initial goal of the Playbook was to help users reflect on stakeholder roles, align interests, and start more structured, inclusive collaboration. Through early brainstorming and sketching, four conceptual modules were identified: (1) exploring vision and roles, (2) co-developing project ideas, (3) identifying stakeholders, and (4) connecting to broader strategies. However, during iteration, it became clear that the modules worked best as a sequential process rather than standalone elements, shifting the design from a modular toolkit to a linear, action-oriented Playbook.



Concept development - first iterations

6.6.1.3 TESTING

To test the initial version of the Playbook, hand-drawn sketches were converted into interactive canvases on the Miro platform. This enabled remote testing with students from the Learning Community. The goal was to assess the tool's structure, clarity, and usefulness, particularly whether the proposed steps helped users think through collaboration dynamics early in a project. It turned out that the students of Learning Community wanted to see it be more action-focused. Creating a vision was not as interesting to them. Additionally, they wanted to see the actions be a bit more concrete. Overall, however, the tool was perceived as positive.

In a later version, I met with them again to see if they understood the different assignments, what they had to do, and if they missed anything or had suggestions. To save time, this was done verbally. It provided an idea of whether some steps needed to be made simpler or clearer. This led to making the step of assigning role division optional, as it seemed not always necessary at the pre-stage of the project.

6.6.1.4 INSIGHTS FROM EXPERT CONVERSATIONS

Interviews with experts contributed to the development of the playbook. Insights from these conversations are listed below:

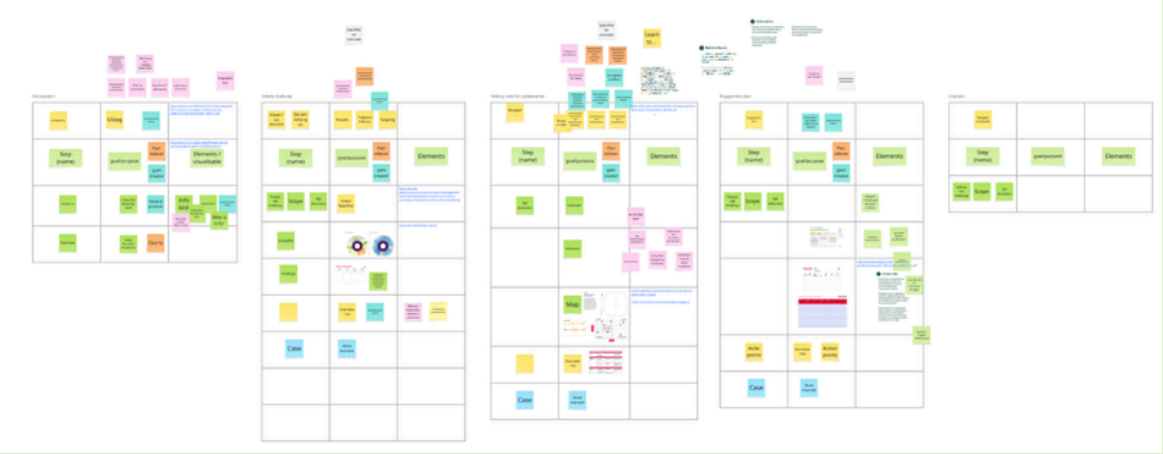
- **Drs. Pleun Hermsen (director of the Reflective Engineer Programme, TU Delft)** highlighted the importance of creating reflective space. She pointed out that in fragmented, value-diverse settings, full alignment should not be expected from the beginning. This led to adding steps that promote awareness and include multiple perspectives instead of forcing consensus.

- **An Urban Innovation expert from AMS Institute** highlighted tools used within Living Lab development that shaped the Playbook's linear flow and emphasized inclusive planning. Combining this with TU Delft insights led to a clearer structure for the early project phases.

- **An expert from the Green Village (a fieldlab at TU Delft)** contributed the 'quadruple pillars' framework technology, society, policy, business, which was used in stakeholder mapping prompts.

- **A discussion with a representative from MEO (Ministry of Economic Development)** highlighted the risk of duplicated efforts and poor communication between ministries. This resulted in steps encouraging users to identify existing initiatives and clarify overlaps early.

- **A program manager from the Ministry of Housing and Spatial Planning** identified living environment qualities as a means to connect climate issues and the living environment to various interests and stakeholders.



Clustering insights from interviews, desk research, brainstorming and testing helped explore how each step could interconnect and support a step-by-step playbook flow.

6.6.1.5 GUIDING PRINCIPLES

The final design of the Playbook reflects five guiding principles:

Actionable Entry Points
Strategic goals from documents like the SDG 2030 Roadmap and the Curaçao Climate Strategy are translated into specific, project-level ideas.

Inclusive Stakeholder Engagement
Instead of requiring shared vision upfront, the Playbook encourages early, meaningful involvement of diverse stakeholders.

Communication and Coordination
Initiators are guided to identify key actors, expectations, and communication pathways through a planning step.

Accessibility
The tool is designed for both digital and physical use. The document can be printed but also uploaded to an online platform like Miro, making it suitable for hybrid teams (e.g., Curaçao–Netherlands student groups).

Scalability and Continuity
Emphasizing scalable project formats prepares users for broader institutional adoption, aligning with future Living Lab ambitions.

6.6.2 ROADMAP

6.6.2.1 PURPOSE AND ROLE

The roadmap outlines a long-term strategic vision for embedding collaborative efforts among stakeholders in Willemstad's Inner City. While the Playbook provides tactical guidance for starting individual projects, the roadmap supplements this by establishing a broader framework that links these initiatives over time.

The roadmap provides both a strategic vision and tactical guidance for moving from scattered collaboration to a more integrated Living Lab model. It details milestones, phase objectives, and necessary supporting actions.
By positioning a Living Lab as a future goal, the roadmap clarifies the necessary preconditions that must be established over time and shows how this approach can lay the groundwork for change.

6.6.2.2 EXPERT INSIGHTS

The development of the Roadmap was based on expert interviews and existing Living Lab models from organizations like AMS Institute, Green Village, and the Utrecht Living Lab supported by Rijkswaterstaat. These discussions helped clarify both conceptual frameworks and practical success factors.

- **Interview with innovation expert from AMS Institute**: pointed out that a Living Lab is typically situated in real-world environments, driven by co-creation, and aimed at solving social challenges with diverse stakeholders, aligning with the Rathenau Institute's description. The variety of Living Lab formats and publicly available tools influenced the development and sequence of the Roadmap.

- **Interview expert of the Green Village** emphasized the need to balance four key infrastructural pillars: technology (for experimentation), society (for participation), policy (for legal framework), and business (for financial models). They also recommended designing projects with scalability in mind, from implementation to broader systemic impact.

- **Lessons from the Utrecht Living Lab** included using legal tools to define experimentation zones, the importance of regular evaluation cycles, and the role of government support in fostering flexibility and long-term sustainability.

- A **program manager from the Ministry of Housing and Spatial Planning** highlighted the iterative processes involved in developing Living Labs. They also stressed the importance of legislation, management, and financial expertise in the initial phase. In the third phase, it is essential to expand the business model to include international collaborations or opportunities.

6.6.2.3 ROADMAPPING METHOD

The roadmap was developed using the method created by Lianne Simonse (Simonse, 2024). Using the lab exercise that supports the method: Mapping trends, values, and opportunity vision. Time pacing strategy includes marking key moments and creating horizons. Technology involves breaking down key components of a living lab. Focus on value creation, visualization, and roadmap development.

This was an iterative process based on previous steps, involving examining documents from other Living Labs such as the “Living Lab handbook” from UnaLAB (Habibipour et al., n.d.) and “Urban Living Lab – a Living Lab way of working” from the AMS Institute (Steen & van Bueren, n.d.), desktop research, and input from experts.

Time pacing

Technology and activity scouting

visualisation

Main steps

6.6.2.4 RESULTING FRAMEWORK

The Roadmap highlights several key components for developing a Living Lab in Willemstad’s Inner City over time:

- **Pilot Phase** – Initial test projects help identify common challenges, generate momentum, and build trust.
- **Connector Role** – Stakeholder alignment is promoted through a ‘quadruple helix’ model that links academia, government, citizens, and industry.
- **Institutional Anchoring** – Long-term success relies on integrating the initiative into supportive policies, regulations, and governance structures.
- **Scaling and Embedding** – Successive levels of collaboration and shared learning help develop a sustainable, networked ecosystem over time.

Core enablers such as governance, financing, stakeholder roles, and digital infrastructure (ICT) are drawn from the UnaLab framework and related Living Lab models. Each phase of the Roadmap aims to enhance capacity, visibility, and shared ownership, establishing the groundwork for a resilient collaborative system.

6.7 VALIDATION AND REFINEMENTS

This chapter details the validation process of the proposed design interventions: the Playbook for Project Initiation and the Roadmap toward a Living Lab. The goal is to evaluate their relevance, feasibility, and usability within the context of stakeholder collaboration and climate resilience in Willemstad's Inner City.

The validation centered on collecting specific feedback from relevant stakeholders to test assumptions, enhance usability, and refine the design. The aim was to assess whether the tools are seen as valuable, clear, and relevant within the intended context, and to spot any chances for improvement before wider implementation.

6.7.1 METHODS AND PARTICIPANTS

To evaluate the relevance, usability, and applicability of the proposed tools, the Playbook for Project Initiation and the Roadmap towards a Living Lab, several targeted validation sessions were conducted. These sessions aimed to assess the tools' desirability (whether stakeholders find them valuable and appealing), feasibility (whether they can be realistically used as intended), and viability (whether they align with the institutional and cultural context of Willemstad, Curaçao).

The validation process involved a mix of observations, guided feedback sessions, and semi-structured conversations with various user groups, including students, local experts, and institutional stakeholders. Below, the methods used for each tool are described in detail.

6.7.1.1 PLAYBOOK - VALIDATION

a. Learning Community Student Workshop

This session involved students from the Learning Community who are preparing for practice-oriented projects in Willemstad. The goal was to evaluate the usability, navigation, and perceived value of the Playbook.

Goal: Assess feasibility and desirability
Participants: 3 students in the preparation stage of their fieldwork
Setup: Students worked through Phase 2 of the Playbook, either individually or in groups, reading instructions aloud and discussing them. The introduction was read together, and questions were encouraged throughout. Observations were noted using a predefined template (see Appendix K). Relevance, and problem-solving ability were discussed after.

Focus areas:
- Ease of navigation
- Clarity of language
- Level of interaction and collaboration

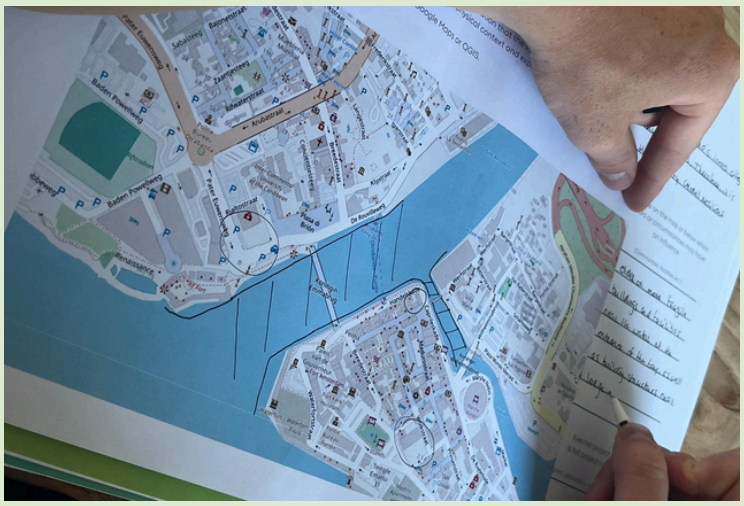
Follow-up: Students engaged in a brief group reflection and completed a feedback form. Survey questions evaluated the Playbook's perceived usability, relevance, and problem-solving ability concerning previously identified barriers (Appendix L).

a.

a.

b. Individual Dry Run
This session involved one participant independently going through the entire Playbook, based on a hypothetical climate-resilient project in Willemstad.

Goal: Assess feasibility and user experience across all phases
Set-up: The participant completed the whole Playbook autonomously, with the option to ask clarification questions. Observations were noted on flow, clarity, and sticking points.
Follow-up: A short feedback interview focused on the tool's clarity, coherence, and practical applicability.



b.

c. Online Stakeholder Review
This session was conducted with a stakeholder based in Curaçao who is familiar with the context and has expertise in climate adaptation and mitigation processes.

Set-up: A short walkthrough of three selected sections of the Playbook was presented online. The stakeholder was invited to reflect on local relevance, realism, and usability.
Method: Semi-structured interview (guiding questions in Appendix K)

6.7.1.2 ROADMAP – VALIDATION

To assess the strategic relevance, appeal, and practical feasibility of the roadmap as a visioning and coordination tool, several validation discussions were conducted with stakeholders from various areas.

a. Local Stakeholder Meeting
An online session was conducted with an expert in climate strategies based in Curaçao to verify the roadmap's alignment with local governance, climate planning, and implementation strategies.

Goal: Assess viability, desirability, and initial feasibility.
Set-up: One-on-one discussion centred on a visual walkthrough of the roadmap. The conversation emphasized its relevance, clarity, and feasibility for long-term implementation.

b. Learning Community Meeting
A one-on-one meeting was held with the Learning Community coordinator, who is actively involved in shaping student projects and building local partnerships on Curaçao.

Goal: Assess the desirability, feasibility, and viability of the roadmap.
Set-up: The roadmap was shown visually, followed by a guided discussion on its clarity, relevance, and potential for integration into existing structures.
Focus areas:

- Clarity and appeal of the roadmap as a communication and coordination tool.
- Feasibility of use in fieldwork settings and student-led projects.
- Viability in terms of alignment with local institutions, collaboration practices, and real-world application.

c. Strategic Stakeholder Conversation
An conversation with the Rector Magnificus of the University of Curaçao was held to explore alignment with the institution's vision.

Goal: Assess the feasibility and appeal of the roadmap concept as a guiding tool for long-term collaboration and innovation.
Set-up: The discussion centered on how the roadmap aligns with the university's ambition, and the opportunities it provides for educational innovation and knowledge exchange.
Focus areas:

- Strategic fit with academic programs and Living Lab approaches
- Potential contributions to local capacity building and international collaboration
- Desirability of anchoring such frameworks into the university's broader engagement agenda

6.7.2 KEY FEEDBACK

This section summarizes the practical user feedback collected during the validation of the Playbook and the Roadmap. It emphasizes usability and user experience, including clarity, navigation, interaction, and perceived usefulness. These insights directly contributed to enhancements in the final design. Reflections on desirability, viability, and feasibility are further discussed in Chapter 7.

Feedback playbook - Practical use and usability

Navigation and ease of use:
Participants valued the clear introductions and step-by-step layout. However, some instructions felt vague or repetitive. The design of certain sections, especially tables, was seen as too cramped for easy use. It was suggested that the Playbook could be produced in a larger physical size, like a flip-over version, to better facilitate group collaboration.

In Phase 2, the flow between tasks could be enhanced for better clarity and accessibility. In Phase 3, users voiced the need for more concrete examples, especially regarding the selection of communication methods. Suggestions included providing advantages and disadvantages of each tool and offering tips on how to use them in different situations.

Language and understanding:
Overall, the language was viewed as accessible and the purpose of the Playbook was clear. However, some sections could benefit from additional clarification. In the climate themes overview, the distinction between causes and effects (e.g., heavy rainfall vs. erosion) was sometimes unclear, making it more difficult for first-time users to navigate.
In Step 2A, the columns and axes could be more clearly defined. Several terms, such as “formal/informal” stakeholder roles, were not immediately clear and would benefit from brief explanations or examples in context.

Interaction and collaboration:
The students working in pairs reported engaging discussions and found the Playbook useful for exploring ideas together. As one student noted:
“The Playbook worked well for co-thinking and discussion.”

In contrast, a student working alone shared:
“I would have appreciated having more of a sparring partner when using the Playbook. It feels more interesting to do in collaboration than just on your own.”

Points to improve

- Make the outcome of each step clearer and more visible.
- Minimize repetition and improve the flow between tasks.
- Explain what each phase adds to the overall process.
- Adjust the title to better communicate its purpose and make it more engaging.

Feedback roadmap

Design and structure

Participants suggested modifying the timeline to make the roadmap more flexible for projects starting in different years. The strategic part of the roadmap could be presented in a more bullet-pointed format, making it easier to read quickly or possibly transformed into a checklist.

Content

One participant suggested adding more concrete examples of the kinds of projects the roadmap could support. A helpful distinction was made between three types of adaptation strategies:

- Reactive adaptation – short-term responses focused on risk control and emergency measures.
- Incremental or adaptive change – gradual adjustments over time to enhance climate resilience.
- Transformative adaptation – systemic shifts that involve rethinking development, infrastructure, and societal practices.

This framing can help users better understand the scope and goals of potential Living Lab interventions and provides a conceptual perspective to place their initiatives along a continuum of change. Also giving mechanisms to support activities, or the boundary conditions for each phase could help guiding the development

Perceived value and clarity

The roadmap was generally well-received. Participants appreciated its clear overview of what is needed to implement a Living Lab. However, they noted that the benefits of the Living Lab approach could be communicated more effectively.

As one participant described it: *"You've made it very clear what needs to happen to realize a Living Lab. What I'm missing is: why should I want this? What's the case for choosing this option? And where has this worked well before?"*

This insight indicates that the appeal and transferability of the roadmap could be increased by making its rationale more explicit or promoting it more, such as by including success stories or references to similar initiatives elsewhere. This approach could help position the roadmap as a compelling tool not only for Willemstad but also for other cities or islands exploring climate resilience strategies.

6.8 FINAL DESIGN OUTCOMES

This chapter presents the final design outputs developed through an iterative, participatory process: the Playbook for Project Initiation and the Strategic Roadmap for Living Lab Development. Together, they address the complex challenges of climate resilience and stakeholder collaboration in Willemstad's Inner City.

Both tools were refined based on user feedback and serve complementary purposes:

- The Playbook helps project initiators navigate local dynamics, involve relevant stakeholders, and prepare concrete climate-related initiatives.
- The Roadmap provides a high-level vision for shaping a city-wide Living Lab; a collaborative structure that addresses not only climate risks but also efforts' fragmentation, interest misalignments, and coordination and communication gaps among actors.

While the Playbook is focused on the project level, the Roadmap targets the system level, guiding long-term action across multiple sectors.

6.8.1 PLAYBOOK - FINAL DESIGN

The Playbook for Stakeholder Engagement in Climate Projects is a planning tool that supports the initial phases of project development in Willemstad's Inner City. It offers structure and guidance for users to reflect on the local context, explore relevant challenges, identify potential collaborators, and start planning how to engage stakeholders effectively. The tool is designed to inspire users, help them understand the local context of Curaçao, and guide more intentional project design.

Developed in response to known barriers in the local setting, such as unclear roles, fragmented initiatives, and limited coordination, the Playbook encourages users to slow down, look ahead, and create space for inclusive, well-aligned collaboration before projects officially begin. It is suitable for students, professionals, and interdisciplinary working groups, and can be used independently or in co-creative sessions. The tool is available in both online and printable formats, allowing flexible use in remote or physical settings.

The Playbook is organized into three design phases that guide users in defining a project challenge, mapping out the stakeholder landscape, and planning effective engagement. An impression of the playbook is shown on the next page.

PLAYBOOK VOOR EEN STRATEGIE VOOR STAKEHOLDERBETROKKENHEID BIJ KLIMAATPROJECTEN

EEN PRAKTISCHE GIDS VOOR PROJECTINITIATIEFNEMERS OM STAKEHOLDERDYNAMIEK IN WILLEMSTAD, CURAÇAO, TE BEGRIJPEN EN SAMENWERKING OP GANG TE BRENGEN

WAAROM DIT HANDBOEK?

De binnenstad van Willemstad is een unieke, maar complexe omgeving. Het gebied kent een rijke geschiedenis, diverse stakeholders, en urgente uitdagingen op het gebied van klimaatbestendigheid, leefbaarheid en sociale rechtvaardigheid.

Door de verscheidenheid aan belangen, beperkte middelen en een context waarin vertrouwen niet vanzelfsprekend is, blijven veel initiatieven steken in plannen en intenties. Dit mislukt het essentieel om aan het begin van elk project bewust ruimte te maken voor samenwerking. Niet alleen om helderheid te creëren over het 'wat' en 'waar', maar vooral over het 'met wie', 'waarom' en 'hoe'.

Dit Playbook biedt handvatten om juist in de eerste fase nóg meer tijd te geven en de samenwerking zorgvuldig op te bouwen, met oog voor de lokale realiteit van Curaçao.

RICHTING UITZETTEN

NAVIGEER HET STAKEHOLDER LANSCHAP VAN WILLEMSTAD

"PREPARING THE GROUND" VOOR SAMENWERKING

VOOR WIE?

Dit handboek is ontwikkeld om initiatiefnemers van klimaatprojecten te helpen de complexiteit van de binnenstad van Willemstad (Otrobanda, Punda, Scharloo en Pietermaai) te navigeren, en om al vanaf het begin van een project een solide en inclusieve basis te leggen.

Het is bedoeld voor iedereen die werkt aan klimaatadaptatie of duurzaamheid in Willemstad, en daarbij te maken krijgt met diverse belangen, verschillende verantwoordelijkheden en samenwerking over sectoren heen.

Denk aan:

- Projectleiders of beleidsmakers binnen overheidsorganisaties, maatschappelijke instellingen of samenwerkingsverbanden
- Studenten en onderzoekers die betrokken zijn bij praktijkgerichte projecten rondom klimaat en leefomgeving
- Initiatiefnemers en betrokkenen van lokale duurzaamheidsinitiatieven die willen bijdragen aan een klimaatbestendige binnenstad

WAT KUN JE ERMEE?

Het 'Playbook voor Stakeholderbetrokkenheid bij Klimaatadaptatie' helpt je bij het verkennen van klimaatuitdagingen en de context, het scherpstellen van je projectdoopcht, het betrekken van relevante stakeholders, en het uitwerken van een strategie voor communicatie en samenwerking. Het biedt een praktisch, overdraagbaar en reflectief instrument dat kan worden ingezet door beleidsmakers, projectleiders, academische actoren of lokale initiatiefnemers.

HOE GEBRUIK JE DIT HANDBOEK?

Dit playbook is bedoeld als een praktische gids die je stap voor stap helpt bij het opstarten van klimaatgerelateerde projecten in Willemstad. Het bestaat uit drie opeenvolgende fases die je onderdoorloopt bij het scherpstellen van je project, het verkennen van het stakeholderlandschap en het opstellen van een communicatie- en samenwerkingsstrategie.

Hoewel het playbook als geheel is ontworpen om een volledig proces te begeleiden, van idee tot projectvoorstel, kun je de fases ook afzonderlijk gebruiken, afhankelijk van je situatie en doel.

- Gebruik Fase 1 om (samen met stakeholders nieuwe) klimaatopgaven te verkennen of bestaande projectideeën verder uit te bouwen.
- Gebruik Fase 2 wanneer je bestaande projecten wilt versterken door het netwerk in kaart te brengen of betrokkenheid te verbreden (bijvoorbeeld via een snowball-aanpak).
- Gebruik Fase 3 als je al een duidelijk projectidee hebt en weet wie belangrijke stakeholders zijn, maar je nog weinig aan een concreet engagement- of communicatieplan.
- Volgen, leren en bijstellen Samenwerken aan klimaatprojecten vraagt om continu leren en bijsturen. Door op gestelde momenten te evalueren en signaal pas wederzijds vertrouwen, ontdek je wat wel en niet werkt, en leg je de basis voor een lerende samenwerking.

Je kunt het playbook dus zowel inzetten bij het opstarten van een nieuwe project, als bij reflectie- of strategiemomenten binnen lopende initiatieven. De verschillende stappen kunnen individueel of in groep worden doorlopen, bijvoorbeeld met collega's, opdrachtgevers, of in samenwerking met studenten of maatschappelijke partners. Kies wat past bij jouw vraagstuk en context, het playbook is modulair en flexibel inzetbaar.

Je kunt het boek tijdens gebruiken of uploaden naar een online platform zoals Miro.

Fase 1
PROJECT IN KAART BRENGEN
Ondersteunt klimaatuitdagingen en de lokale context

Uitkomst: project idee en "Challenge brief"

Fase 2
STAKEHOLDERLANDSCHAP VERKENNEN
Navigeer door de complexe netwerkomgeving van Willemstad en leg de basis voor een inclusieve en werkbare samenwerking

Uitkomst: Stakeholder overzicht

Fase 3
ENGAGEMENTSTRATEGIE OPSTELLEN
Stel een strategie op voor participatie, communicatie en samenwerking

Uitkomst: Plan om stakeholders te betrekken

VOLGEN, LEREN EN BIJSTELLEN

FASE 1

PROJECT IN KAART BRENGEN

In deze fase verken je de thematische en geografische focus van je project. Je onderzoekt klimaatuitdagingen en lokale context, om je opdracht te verduidelijken en scherper te formuleren. Deze fase helpt initiatiefnemers om hun projectidee helder, overdraagbaar en uitvoerbaar te maken, afgestemd op de specifieke uitdagingen van Willemstad.

Wanneer gebruik je deze fase?
Bij de start van een (nieuw) klimaatgerelateerd project, of wanneer je een bestaand idee scherper wilt formuleren.

Met wie kun je dit doen?
Individueel of samen met collega's, beleidsmakers of andere betrokkenen. Gesprekken met bewoners, experts of opdrachtgevers kunnen extra inzicht geven.

Wat heb je nodig?
Een laptop of tablet voor digitale kaarten en documenten. Een print van de stadskaart, het eiland of print je eigen kaart. Pennen, sticky notes en markeerstiften kunnen ook handig zijn voor groepsdiscussies. Eventueel een flip over om overzichten in het groot uit te werken. Tip: print alleen stappen die veel ruimte innemen in het groot uit om papier te besparen.

TIJD: CIRCA 0,5-2 UUR

STAPPEN

1. KLIMAATTHEMA'S VERKENNEN
2. LOKALE SITUATIE VERKENNEN
3. IDEE OF PROJECTGEBIED AANDUIDEN
4. FORMULEER EEN 'CHALLENGE BRIEF'

STAP 1: KLIMAATTHEMA'S VERKENNEN

Hulp bronnen:
Klimaatatlas
Klimaatatlas Curaçao
Buurtprofielen
Punda en Pietermaai
Otrobanda
Scharloo
Visie documenten
Transforming Urban Curaçao
BIOS 2030 Curaçao
Nature policy plan Curaçao 2024-2030
Curaçao climate change platform

Zeespiegelstijging en overstromen	Energie en duurzame energie	Hitte-eiland	Grondwaterstijging beperken	Biodiversiteit behouden en versterken	Schone lucht stellen en bodem
Asset-beschermin	Slecht geïsoleerde gebouwen	Extreme temperaturen	Meeting human / green	Mangrove park beschermen	Afvalproblemen en afvalstorting
Zware neerslag en waterbarrière	Duurzame energie opwekken	Gebrek aan schaduw	"pocket park"	Koraal beschermen	Gebrek aan uitval schaden
Overstroming gevoelige gebieden	Duurzame gebouwen	Gebrek aan koeling	Stadsdak natuur		
Riolering	Duurzame bouwmaterialen	Bebouwing	Groene infrastructuur		
Storm en cyclonen	Netto-nul energiebalans	Verkeer en (openbaar) vervoer			
Erosie	Elektrische voertuigen	Gebrekkige multifunctioneel			
	Warmtschade aan huizen	Brand preventie			
		Stijgende zee temperatuur			

STAP 2: LOCATIES VERKENNEN

Hulp bronnen:
Klimaatatlas (klimaatatlas) Openbaarheid
Google maps
Visie documenten
Transforming Urban Curaçao
BIOS 2030 Curaçao
Nature policy plan Curaçao 2024-2030
Curaçao Risk Assessment Curaçao
Ports Authority

Buurtprofielen:
Punda en Pietermaai
Otrobanda
Scharloo

Willemstad, the historic heart of Curaçao

Resultaten van de besprekking van kwetsbare hotspots door de Curaçao Ports Authority

Transforming Urban Curaçao

Klimaatatlas Klimaatkaart

STAP 3: IDEE EN PROJECTGEBIED AANDUIDEN

Project idee / problem/ thema

Geef op de kaart of hier onder aan, welke horizon of (multi)stakeholders invloed kunnen hebben

Klopt het project gebied is het project schaalbaar?

STAP 4: FORMULEER EEN 'CHALLENGE BRIEF'

Klimaatthema	Projectgebied	Onderzoeksvraag	Aanbevelingen of samenhangen
Formuleer het idee of de uitdaging	Formuleer de locatie en context	Formuleer de vraag of ambitie	

FASE 2

STAKEHOLDERLANDSCHAP VERKENNEN

Willemstad kent een complexe netwerkomgeving van formele en informele actoren. Deze fase helpt je om belangen, relaties en posities van stakeholders systematisch te verkennen. Zo leg je de basis voor inclusieve en werkbare samenwerking.

Wanneer gebruik je deze fase?
Als je helder wilt krijgen wie je moet betrekken, welke belangen er spelen, en hoe de samenwerking zich kan ontwikkelen.

Met wie kun je dit doen?
Het projectteam, maar ook met externe stakeholders om perspectieven op te halen. Ideaal voor een interactieve sessie met mensen uit verschillende domeinen.

Wat heb je nodig?
Overzicht van het projectgebied en thema's, eerdere plannen of initiatieven, en eventueel toegang tot lokale netwerken. Pennen, markers, stickynotes voor fysiek gebruik. Print stappen groter uit indien nodig, of gebruik eventueel een flip over om overzichten in het groot uit te werken. Tip: print alleen stappen die veel ruimte innemen in het groot uit om papier te besparen.

TIJD: CIRCA 3-4 UUR

STAPPEN

1. SAMENWERKING - KLIMAATADAPATIE EN DE CONTEXT VAN CURAÇAO
2. STAKEHOLDERS IDENTIFICEREN
   4 - LEERFOMGEVINGSKWALITEITEN EN STAKEHOLDER LIJST MAKEN
   8 - VOORBEELDLIJST
3. BELANGEN EN RELATIES VERKENNEN
4. ANALYSEER EN CATEGORISEER
5. STAKEHOLDEROVERZICHT MAKEN

STAP 1: SAMENWERKING - KLIMAATACTIE EN DE CONTEXT VAN CURAÇAO

Reflectievragen

Aanbevelingen / reflecties

STAP 2: STAKEHOLDERS IDENTIFICEREN - LEEFOMGEVINGSKWALITEITEN

Milieu en gezondheid

Actieve en mobiliteit

Sociaal en economie

Governance

STAP 2: STAKEHOLDERS IDENTIFICEREN - VOORBEELDLIJST

Government and policymakers

Climate and sustainability

Academic science and education

Industry / private

Heritage

STAP 3: BELANGEN EN RELATIES VERKENNEN

1. Breng het netwerk in kaart
2. Belangen en waarden
3. Relaties en spanningen (optioneel)

Beïnvloeders

Beslissers

Meedenkers

Uitvoerders

Gebruikers

STAP 4: ANALYSEER EN CATEGORISEER

1. Waarop een beïnvloed kan bepalen
2. Rollen en verantwoordelijkheden bepalen

Hoofdrolspelers
Meewerkers
Meedenkers
Meepraters

STAP 5: STAKEHOLDEROVERZICHT MAKEN

Stakeholder	Relevante persoon	Prioriteit hoog – middel – laag	Rol (R/A/P/I/D) vanuit jouw project	Relevante belangen / waarden	Mogelijke risico's

---

FASE 3

STRATEGIE VOOR ENGAGEMENT BEPALEN

Nu je weet wie je stakeholders zijn en wat ze willen, bepaal je hoe je ze betrekt. In deze fase stel je een strategie op voor participatie, communicatie en samenwerking, afgestemd op beschikbare middelen, lokale tijdslijnen en rollen.

Wanneer gebruik je deze fase?
Wanneer het projectidee en het stakeholderslandschap duidelijk zijn, en je toe bent aan het plannen van samenwerking, communicatie en betrokkenheid.

Met wie kun je dit doen?
Samen met het kernteam of ostrdinatoren van het project. Ook waardevol om met communicatieprofessionals of participatie-experts te doen.

Wat heb je nodig?
Notities uit eerdere fases, een tijdlijn van het project, voorbeelden van middelen (bijv. kanalen, formaten), en ruimte om te brainstormen. Pennen, markers, stickynotes voor fysiek gebruik. Print stappen groter uit indien nodig, of gebruik eventueel een flip over om overzichten in het groot uit te werken. Tip: print alleen stappen die veel ruimte innemen in het groot uit om papier te besparen.

TIJD: CIRCA 2-3 UUR

STAPPEN

1. COMMUNICATIEDOELEN FORMULEREN
2. KANALEN EN MIDDELEN KIEZEN + TIJDLIJN BEPALEN
3. ENGAGEMENTSTRATEGIE UITWERKEN
4. REFLECTIE EN ACTIEPUNTEN (OPTIONEEL)

STAP 1: COMMUNICATIEDOELEN FORMULEREN

Inspireren

Droogstok creëren

Kennis opnemen

Verantwoordelijkheden verdelen

Vertrouwen creëren

STAP 2: KANALEN EN MIDDELEN KIEZEN + TIJDLIJN BEPALEN

Voorbeelden Kanalen + middelen / activiteiten

In persoon (formele en informele rooties)

Bellen

Whatsapp

Nieuwsbrief / e-mail

Bestaande overlegvormen

Social media

Enquete

Focus groep

Verguldering

Workshop

Adviescommissies

Partnership

Ambassadeur

World cafe

Verslagen

STAP 3: ENGAGEMENTSTRATEGIE UITWERKEN

Wanneer (Fase / activiteit)	Stakeholder	RACI rol	Doelen in communicatie / kwalit doelstelling	Kanaal en middelen	Opmerking

---

STAP 4: ACTIEPUNTEN

RACI

RESPONSIBLE
Degene die de taak uitvoert of ervoor zorgt dat het werk gedaan wordt. Degene die de actie ondernemt

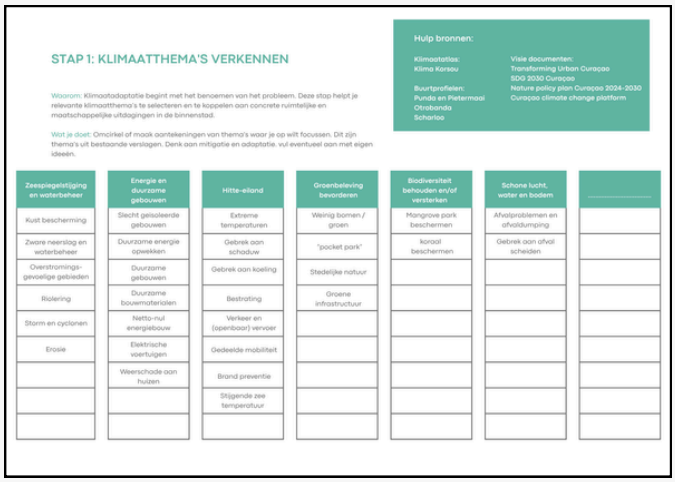
ACCOUNTABLE
Degene die eindverantwoordelijk is. Deze persoon moet zorgen dat het werk op tijd en correct geleverd. Er is altijd maar één A per taak.

CONSULTED
Personen die je moet raadplegen (experts of belanghebbenden). Zij geven input of advies.

INFORMED
Personen die je op de hoogte houdt. Ze worden niet actief betrokken, maar moeten wel weten wat er gebeurt.

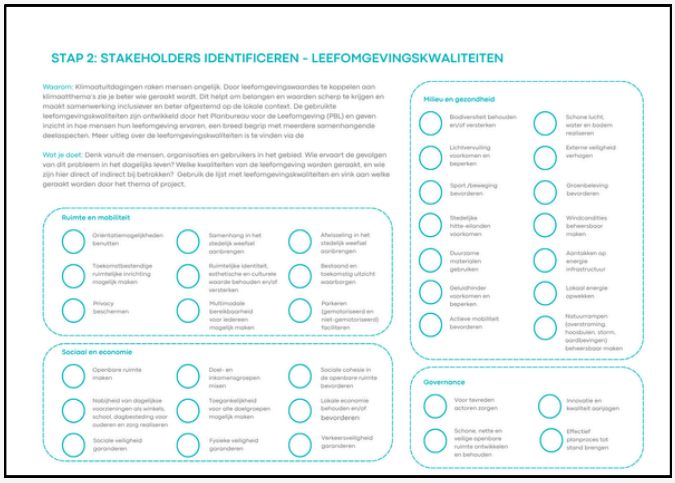
Phase 1: Project in kaart brengen (Define the Project)

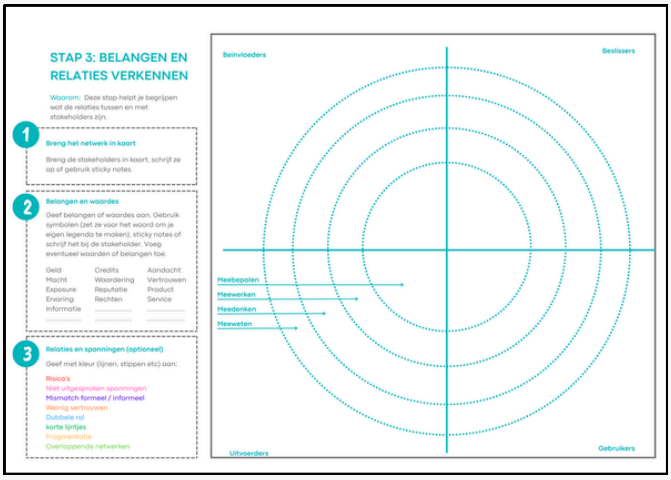
In this initial phase, users explore a climate-related issue they want to address, guided by broader visions like the SDG 2030 Agenda and Transforming Urban Curaçao. They reflect on the local context and consider how the issue manifests in specific areas or neighborhoods. This phase also encourages users to think about scale: where the idea could start and whether it might expand. It concludes with formulating a clear project challenge brief that defines the main focus of the initiative.



Phase 2: Stakeholderlandschap verkennen (Understand the Stakeholder Landscape)

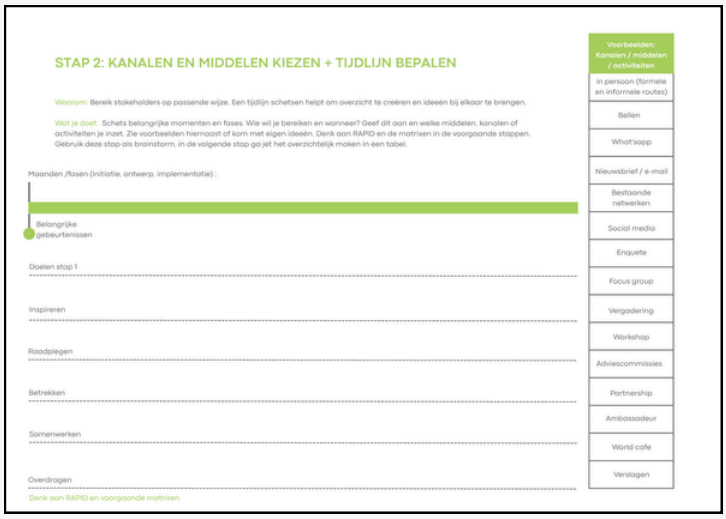
This phase helps users identify relevant stakeholders and reflect on their roles, interests, and values. It provides tools to consider both formal and informal actors and to explore sensitivities or power imbalances that might influence collaboration. Users are encouraged to step back and ask: Who might we be overlooking? Who is affected? Who has influence? Instead of creating a fixed map, this phase supports developing a deeper understanding of the social landscape around the project idea.





Phase 3: Engagementstrategie opstellen (Strategy plan for engagement)

In the final stage, users start developing a strategy for engaging stakeholders. They consider the mutual benefits of collaboration, what stakeholders could contribute, what they might want to learn or gain, and how to support their involvement over time. This creates a preliminary engagement plan, including communication channels, levels of participation, and key moments for interaction or feedback. The approach is intentionally adaptable, aligning with Living Lab principles of iterative growth and shared learning.



Follow, learn and adjust

At the end of the Playbook, users are prompted to decide how they will assess their stakeholder engagement throughout the project. This fosters an ongoing process of evaluation and adjustment as roles, relationships, and priorities change.

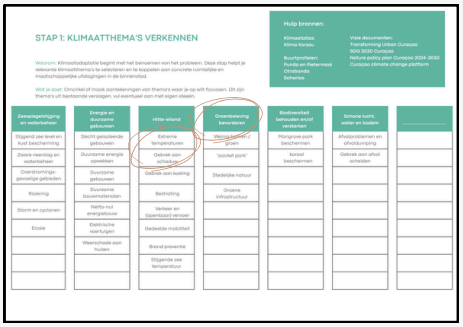
Extra resources are provided at the end of the playbook to support the user, such as links to documents or larger templates.

6.8.1 PLAYBOOK - EXAMPLE CASE

To make the Playbook tangible, a fictional application has been developed around Wilhelminaplein. This central spot in Punda is known for its historical significance, but also for its lack of shade and high sensitivity to heat stress. The square offers minimal cooling and is rarely used as a living space during hot days.

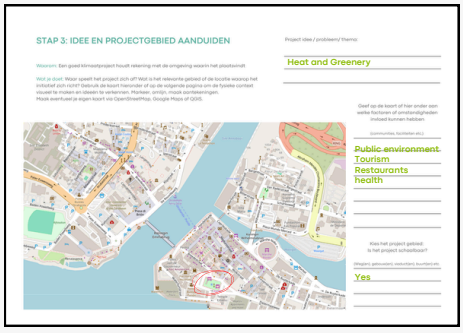
A small group of initiators, including local entrepreneurs, an NGO, and students, decides to collaborate on designing a more climate-resilient and livable square. They use the Playbook to guide this process in a structured and inclusive way.

A few steps per phase are illustrated to show how the playbook could be used.



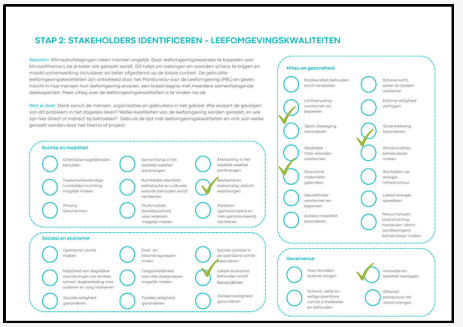
Phase 1 – Mapping the project:

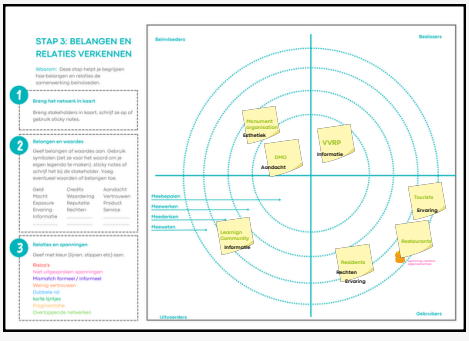
The team recognizes heat stress and the lack of greenery as key issues. These are connected to larger goals such as encouraging local residents, social interaction, and creating a more attractive cityscape. The project area is geographically defined as Wilhelminaplein and its immediate surroundings.

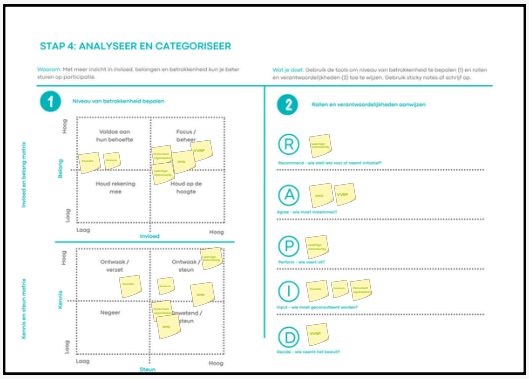


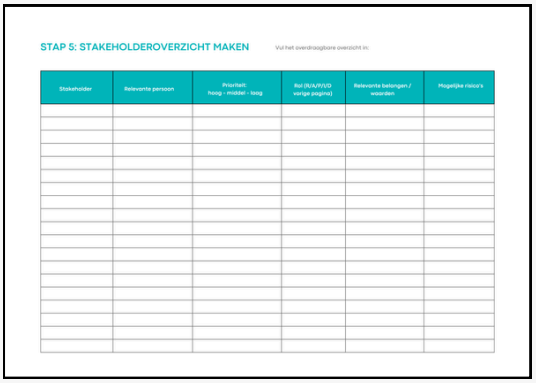
Phase 2 – Exploring the stakeholder landscape:

Relevant stakeholders are listed, including entrepreneurs around the square, local residents, the Monument Care Foundation (because of heritage status), and the Ministry of VVRP. The qualities of the living environment offer insights into interests like residential quality, mobility, and aesthetic heritage. Both formal and informal roles are examined, along with mutual relationships, potential tensions, and dependencies. The result is a summary of stakeholders and their possible roles in the project.





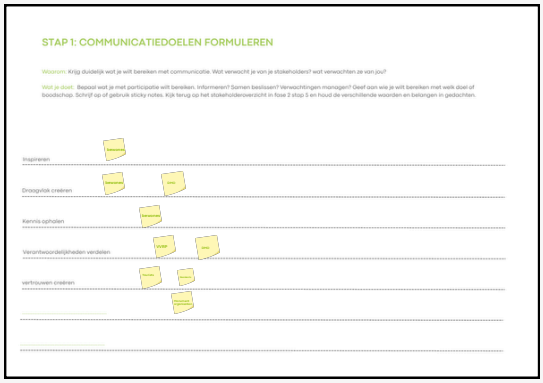


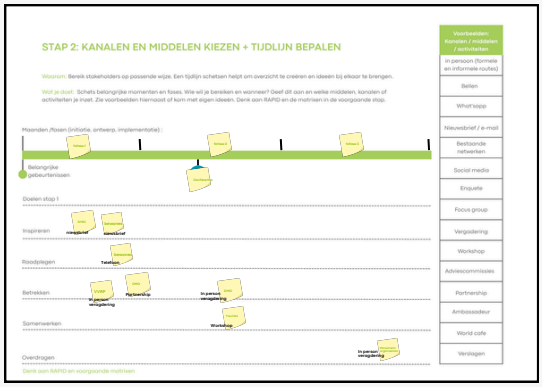


Phase 3 – Drawing up an engagement strategy:

Based on the stakeholder overview, it is decided which forms of involvement are desirable. A project timeline is created, including a communication and coordination plan. In discussions, the team selects accessible working methods, such as an open design session on the square itself, a social media poll for ideas, and a feedback session during a neighborhood gathering. This approach ensures that insights are shared, expectations are managed, and support is built for future steps. Together, these activities comprise the engagement strategy, which initiators can use to promote early alignment and shared ownership.

This fictional application demonstrates how the Playbook helps initiators turn an urgent climate issue, heat stress in the inner city, into a specific, supported project idea. The process encourages awareness, connection, and shared ownership from the very first project phase.





6.8.2 ROADMAP - FINAL DESIGN

The Strategic and Tactical Roadmap create an integrated framework that supports the development of a Living Lab for climate resilience in Willemstad's Inner City. They collectively address ongoing challenges such as fragmented collaboration, limited coordination, misaligned interests, and the need for long-term climate planning in a complex urban setting.

Strategic roadmap – high level direction
The purpose of the Strategic Roadmap is to act as a guiding tool for developing a Living Lab in Willemstad's Inner City. It provides a high-level vision and direction by outlining key phases of development, aligning stakeholders, and identifying what is needed at various stages to progress from idea to implemented practice.
The roadmap is based on the idea that, as climate threats grow, Willemstad must develop into a more collaborative, inclusive, and climate-resilient city. A Living Lab approach provides a structured yet flexible framework to support real-world testing, coordinate interests across different sectors, and build lasting partnerships. In this way, it turns fragmentation into shared progress, boosting trust, ownership, and communal resilience.

The roadmap is organized into three timeframes, each with its own focus, stakeholders, and expected results. These phases follow a pattern of gradual learning and growth, with feedback loops to adjust along the way.

The first phase, Horizon 1: Preparing the Ground – Seeding the Future

This phase concentrates on laying the groundwork for collaboration. This involves identifying and connecting stakeholders across the quadruple helix (communities, government, academia, private sector), co-developing a shared vision, and performing environmental and social assessments. During this phase, initial partnerships are established, communication channels are set up, and basic governance structures are implemented. The estimated duration of this phase is six to eight months, and it mainly involves public agencies, universities, community organizations, and private sector entities.

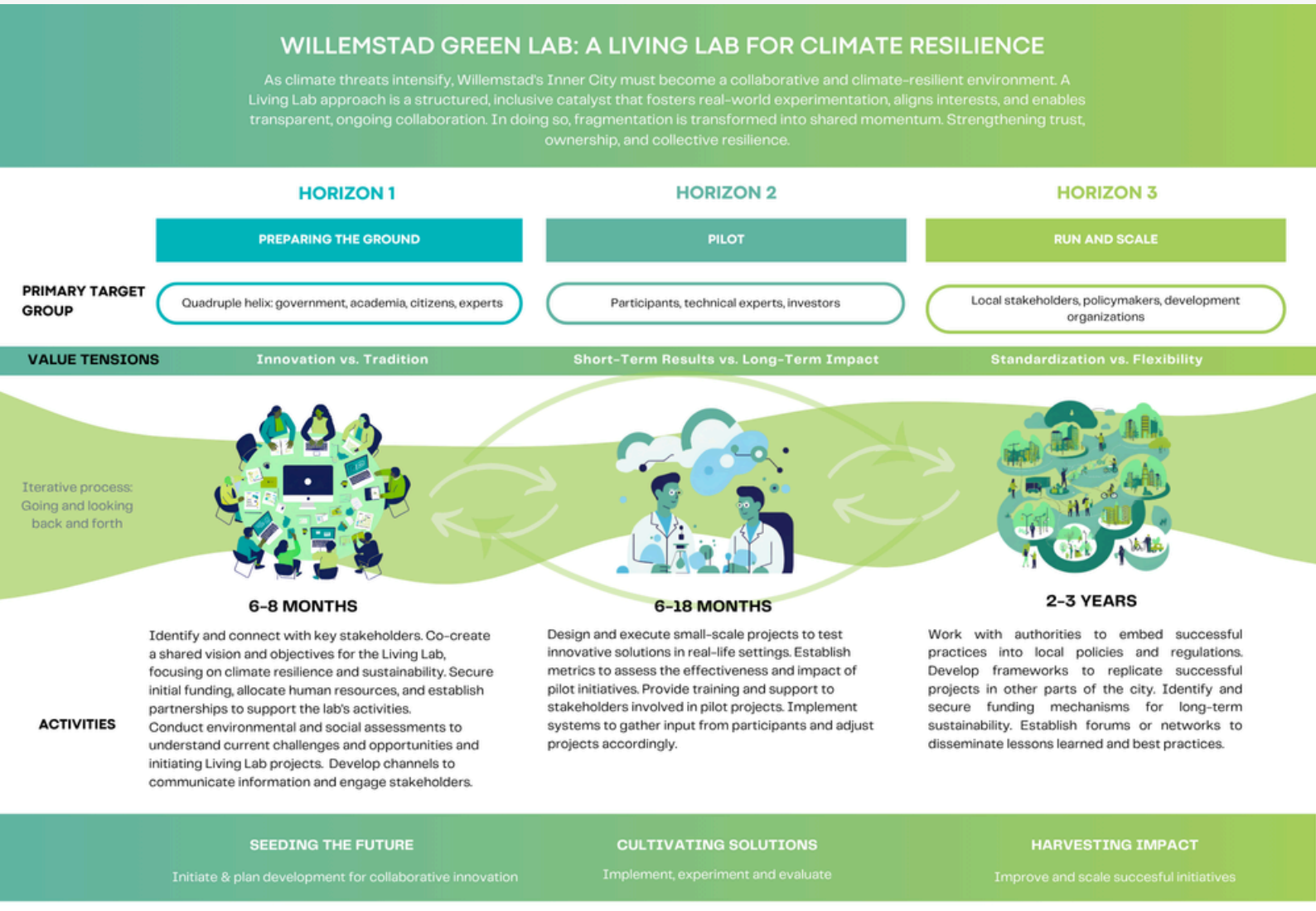
The second phase, Horizon 2: Pilot – Cultivating Solutions

This phase focuses on testing Living Lab principles in real-world settings. Pilot projects are created and launched to explore innovative climate resilience solutions, supported by clear evaluation criteria and monitoring systems. Stakeholders are actively involved through training and ongoing learning processes, enabling continuous improvement of interventions. This phase usually lasts from six to eighteen months and includes project teams, technical experts, consultants, and funders.

In the third phase, Horizon 3: Run and Scale – Harvesting Impact

Focus shifts to making successful practices a routine and enlarging them. This includes turning lessons learned into official policies and rules, creating models for others to follow, and securing long-term funding sources. Platforms are set up to support ongoing learning and collaboration across sectors. This phase is expected to last two to three years and involves actors like policymakers, development groups, and NGOs.

Across all three horizons, the roadmap promotes reflection and adaptation. It recognizes key tensions, such as balancing short-term results with long-term transformation, or maintaining flexibility while developing shared standards, which must be managed through participatory governance and ongoing feedback.



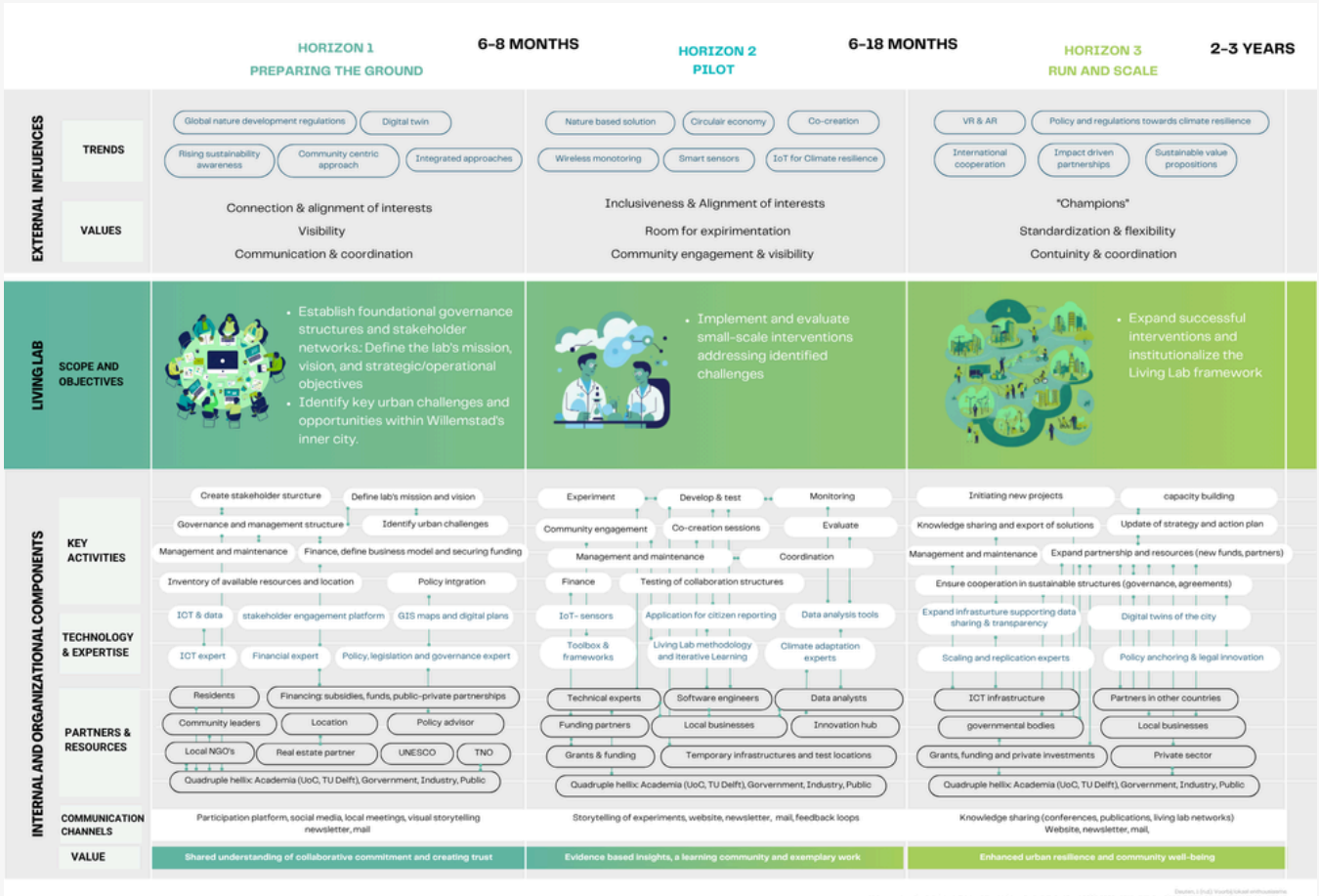
Tactical Roadmap – Turning Vision into Action

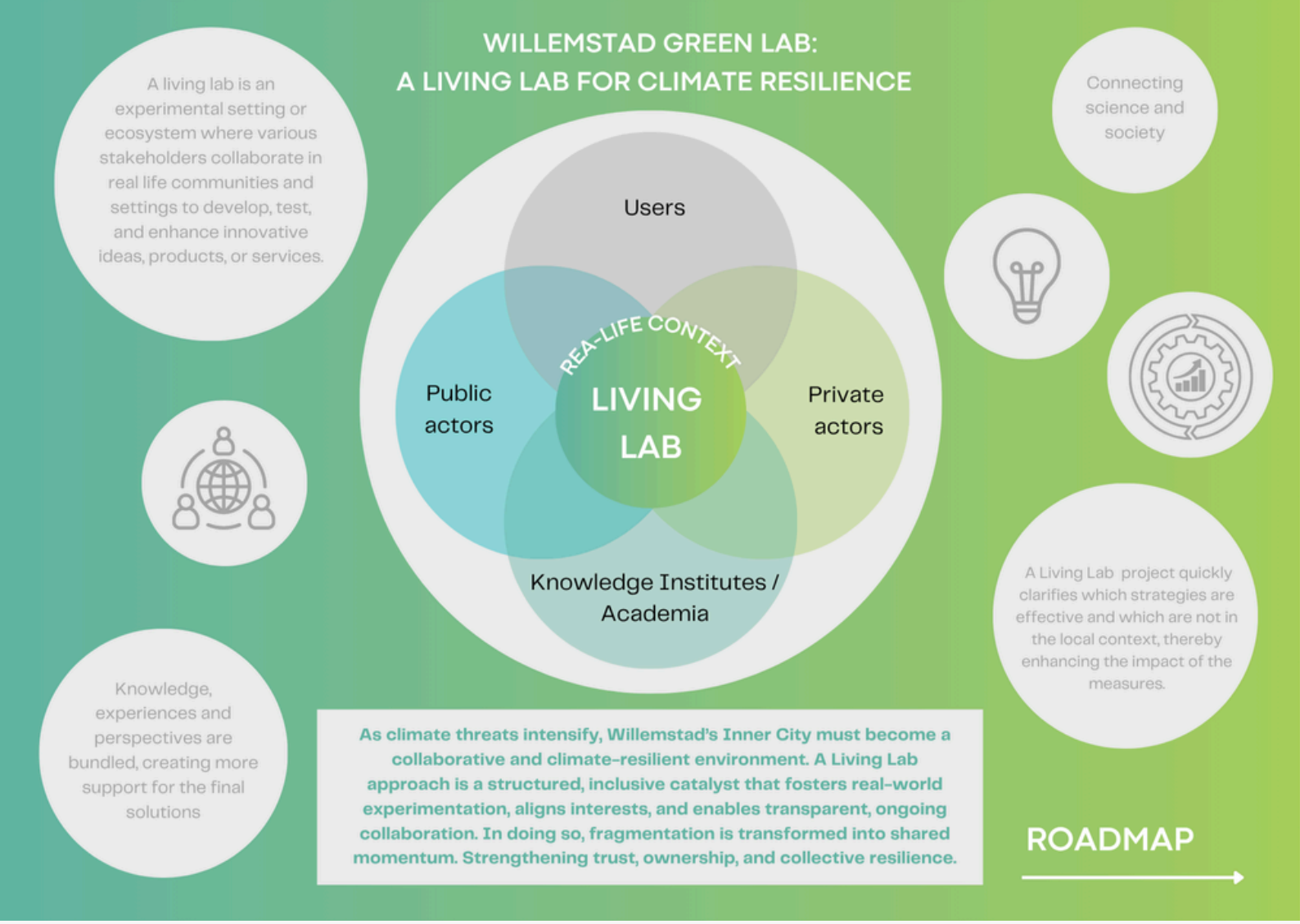
To implement the strategic vision, the Tactical Roadmap details specific steps and necessary conditions at each phase. It complements the strategic roadmap by connecting long-term objectives to immediate actions, providing users with a clearer view of the way to progress.

Each phase of the tactical roadmap considers relevant external influences, such as shifts in climate governance, global sustainability trends, and changing societal values around inclusion, participation, and transparency. In each horizon, the roadmap sets clear objectives aligned with the evolving needs of the city and its communities.

It further details key actions such as stakeholder mapping, pilot implementation, and evaluation processes, as well as the technologies and tools that can support these steps, ranging from participatory platforms and data-sharing infrastructure to digital twins and spatial mapping tools. Additionally, it outlines essential organizational components, including governance models, funding strategies, capacity-building needs, and communication methods.

Rather than serving as a fixed plan, the Tactical Roadmap is designed as a flexible coordination framework. It helps align stakeholders, support ongoing learning, and adapt to changing conditions while keeping direction and momentum. It is especially helpful in practical planning settings, workshops, or stakeholder dialogues, where specific decisions need to be made about how to move forward.





A front cover for the roadmap document has been created to introduce the concept of Living Labs, and explaining its benefits.

6.8.3 SYNTHESIS AND INTERCONNECTION

Together, the Playbook and the Roadmap create a complementary strategic approach: the Playbook facilitates immediate, project-level collaboration. At the same time, the Roadmap offers a long-term vision for institutionalizing these efforts across the city.

While the Playbook helps users decide what to do now by launching project ideas, defining roles, and encouraging early alignment, the Roadmap focuses on thinking about future directions, connecting these initiatives into a larger system of innovation, learning, and governance.

This dual approach addresses one of the main issues facing Willemstad's inner city: fragmentation, diverging interests, and a lack of communication and coordination. By linking short-term project actions to long-term strategic pathways, the two tools aim to promote shared ownership, better coordination, and more sustainable collaboration in response to climate challenges.

7. Discussion, Conclusion & Reflection

This chapter reflects on the outcomes of the project and discusses its broader implications. It revisits the research aim and design goal in light of the findings and explores how the developed tools address the barriers identified earlier. The chapter also reflects on the value and limitations of the design approach, considers the potential for application beyond the case of Willemstad, and outlines opportunities for further development and learning. Finally, it offers a personal reflection on the process and key lessons learned.

7.1 ANSWERING THE RESEARCH QUESTION

The central question guiding this project was:

How can collaboration among stakeholders be enhanced to support the development of environmentally responsible and climate-resilient interventions in Willemstad's Inner City?

To address this question, the project was structured in two phases: a research phase and a design phase.

During the research phase, a context and stakeholder analysis, followed by qualitative interviews and a co-creation session, showed that collaborative efforts in Willemstad's Inner City are hindered by fragmentation caused by diverging interests, unclear leadership roles, and limited communication and coordination. While barriers such as diverging interests, siloed work, and weak coordination structures were common themes, the interviews and co-creation session also identified several opportunities. Stakeholders expressed a strong willingness to collaborate, especially if supported by a clear structure and neutral facilitation. Participants also voiced a desire for greater visibility and connection across efforts, providing guidance for designing targeted engagement tools.

These findings responded directly to the first sub-question:

What are the main barriers and opportunities for collaboration among stakeholders in Willemstad's Inner City, and how can these guide the design of an approach for engagement?

The analysis revealed that current efforts often work in silos. A lack of alignment, limited mutual understanding, and uncoordinated actions were identified as major barriers. Importantly, no shared framework for initiating or maintaining collaboration seemed to exist. This insight guided the design phase, leading to the development of two complementary interventions.

The first is the Playbook for stakeholder engagement in climate resilience projects. This practical tool helps project initiators by guiding them through key steps: exploring the climate challenge, identifying relevant stakeholders, and developing a communication and coordination strategy. It aims to promote inclusive and organized engagement early in project development.

The second is the Roadmap toward a Living Lab, a strategic guide that explains how stakeholders can work together for long-term, place-based collaboration. It presents a phased vision for building a Living Lab ecosystem, promoting ongoing learning, trust, and shared ownership.

Together, these interventions aim to foste more inclusive, organized, and ongoing collaboration. This also addresses the second sub-question:

What existing tools, strategies, or frameworks from similar contexts can be adapted to foster shared ownership of sustainable practices and collaboration among key stakeholders in Willemstad's Inner City?

The concept development was guided by examples like Living Labs, participatory design methods, and mapping tools. These frameworks were adapted to the Curaçaoan context and connected to both immediate collaborative efforts and long-term systemic change. The resulting interventions embody a dual approach: facilitating short-term engagement while working toward a long-term transformation path.

The findings indicate that collaboration among stakeholders in Willemstad’s Inner City can be improved by combining structured engagement tools with a shared long-term vision. The Playbook and Roadmap specifically address key barriers identified in the research phase, such as fragmentation, diverging interests, and weak communication and coordination. By helping establish clearer roles, more transparent communication and coordination, and inclusive engagement structures, these tools provide a pathway toward more sustainable and climate-resilient interventions.

7.2 CONTRIBUTION

Both the Playbook and the Roadmap depend on the illustrative framework adapted from Ganeshu et al., which categorizes inter-organizational barriers into leadership, interests, collaboration processes, and communication and coordination. This framework proved helpful in organizing interviews and pinpointing recurring issues in Willemstad.

However, during the analysis, it became clear that these dynamics could not be fully understood in isolation. The context of Curaçao revealed deeper institutional legacies, informal relationships, and historical fragmentation that extend across organizations. This led to a reframing: instead of viewing the Inner City as a collection of separate actors, it might be more effective to see it as a shared, interconnected system. This perspective influenced the development of both tools and could help future researchers apply the illustrative framework in a way that captures systemic, rather than isolated, barriers to collaboration.

In summary, this study advances existing research on stakeholder collaboration for climate resilience in three key ways: (1) by highlighting early-stage engagement as a distinct design challenge within fragmented governance systems (Bryson et al., 2006)(2) by adapting Living Lab principles to the postcolonial, small island context of Willemstad; and (3) by translating principles of stakeholder participation and collaborative governance into practical tools for engagement and capacity-building. These contributions are reflected in the two main design outputs: the Playbook and the Roadmap.

7.2.1 THE PLAYBOOK - CONTRIBUTION

THEORETICAL CONTRIBUTION

The Playbook addresses key barriers identified during the research phase, particularly diverging stakeholder interests and poor communication and coordination. These issues consistently prevent early collaboration in Willemstad's Inner City. Although literature on collaborative governance (Wamsler, 2016) and participatory design (Sambo et al., 2024) emphasizes the importance of inclusive processes, it rarely explains how to start such engagement in fragmented and resource-limited settings like Curaçao.

This Playbook contributes to theory in several ways:

It operationalizes early-stage collaboration as a distinct phase, requiring specific design tools and facilitation techniques (Bryson et al., 2015).
It adapts principles from stakeholder engagement and transdisciplinary design to postcolonial, small island contexts where institutional roles are blurred and power structures informal (Reed, 2008; Daniel et al., 2020).

It offers a practical response to systemic barriers such as limited coordination and trust, enabling stepwise alignment of stakeholder interests (Hawkins & Krause, 2021).

Instead of providing a one-size-fits-all template, the Playbook is specific to the location and tailored to the sociopolitical and cultural complexities of Willemstad. Its contextual basis may provide transferable insights for similar SIDS or postcolonial urban areas dealing with fragmented governance and climate-related vulnerabilities.

PRACTICAL APPLICABILITY

Desirability

Stakeholders generally responded positively to the Playbook's usefulness, both within and outside the Willemstad context. One participant noted: *"It's not just for Willemstad [...] you could also apply this to bigger or other projects across Curaçao."* This emphasizes the perceived relevance of the Playbook beyond the immediate situation and its potential for wider use.

Several students expressed a desire to continue using the Playbook after the session and mentioned they would recommend it to others working on similar projects in Curaçao. One participant even took photos of the Playbook pages, showing its immediate value.

A participant experienced in climate-related projects noted that the Playbook would be especially helpful for professionals without a background in communication: *"My role is mostly in the technical content of the field, but you can really see that this [communication] is a make-or-break for your project. So this is very helpful."* This highlights the tool's value across various user profiles and disciplines.

These responses reflect the Playbook's overall appeal: it is viewed as relevant, flexible, and supportive across various project types and professional settings.

Feasibility

The Playbook was generally seen as accessible and flexible in how it could be used. One participant mentioned, *"It's helpful that you can start at different phases, it makes it accessible for different types of projects,"* highlighting the tool's versatility. Others pointed out how the tool helped them structure their thinking and planning. Comments included: *"It did make me think a bit more about what directions I think are interesting for my project,"* and *"It helped me organize my thoughts."*

The Playbook also helped participants identify stakeholders and develop communication strategies. One participant reflected: *"It was a great moment for me to reflect on which stakeholders I would need to reach out to and what role they could play in my project,"* while another said, *"I had a better idea of what stakeholders to include in my project."* These responses indicate that the tool provides clear, actionable steps even for early-stage or inexperienced users.

Although initial feedback on usability was positive, some suggestions for improvement were made, such as minor layout adjustments or formatting changes. These have been incorporated into the updated version of the tool. However, further user testing would still be helpful to better confirm its usability with different stakeholder groups and project stages.

Viability
Besides its low-cost and flexible design, the Playbook directly addresses key systemic barriers identified during the research phase, such as conflicting stakeholder interests and the absence of coordinated communication. By providing structured guidance on stakeholder mapping, understanding different values and interests, and communication planning, the tool helps foster early alignment, which has often been missing in local initiatives.

The Playbook was also seen as helpful in promoting more inclusive thinking. One participant noted that the process made them realize *"we should also have a look at general civilians for our project instead of the financially important stakeholders."* This indicates that the tool can inspire broader, more equitable engagement, which is essential for long-term collaborative success.

Stakeholders showed interest in integrating the Playbook into existing structures like the Learning Community and publishing it on the KlimaKòrsou platform. These plans emphasize the tool's potential for institutional adoption and broader distribution within climate initiatives in Curaçao.

7.2.1 THE ROADMAP – CONTRIBUTION
THEORETICAL CONTRIBUTION

The Roadmap was created to provide a long-term, system-wide view on enhancing stakeholder collaboration. It draws on Living Lab literature and sustainability transition theory, especially the concept of iterative, adaptive change through real-world experimentation (Steen & van Bueren, 2017; Voytenko et al., 2016). The Roadmap presents a phased approach designed to support gradual alignment, build capacity, and promote collaborative learning among various actors.

Instead of directly modeling Curaçao's institutional structures, the Roadmap was developed in response to key barriers identified in the research, such as limited coordination, diverging interests, and lack of continuity. It addresses these issues by proposing a flexible, step-by-step framework that can adapt to local conditions.

While developed to address challenges specific to Willemstad, the Roadmap outlines principles that could be applied to other small island or postcolonial urban contexts facing similar coordination and governance issues. It expands existing theory by showing how collaborative innovation models can work in less structured and postcolonial settings.

PRACTICAL APPLICABILITY

Desirability
The need for more systemic and long-term collaboration was a recurring theme during the research phase. The Roadmap addresses this by providing a staged and structured approach to building such collaboration over time. In a meeting with a coordinator from the Learning, interest was shown in the Roadmap, as its Living Lab approach seemed to resonate with their goal of fostering collaboration.

Feasibility
Designed as a flexible and non-prescriptive tool, the Roadmap allows stakeholders to start small actions that can gradually develop into wider collaboration. As one participant noted: *"What you need to do to make it happen, that's what you've clearly laid out in the Roadmap."* Its phased approach supports implementation even with limited institutional capacity, such as in the Curaçaoan context, and enables adaptation across different project types

Viability
While formal adoption remains a long-term consideration, the Roadmap has been well received and was recommended for further discussion and potential inclusion for the Learning community. It could also be added to the KlimaKòrsou platforms. Its modular structure suggests it may be adaptable to other SIDS, postcolonial, or urban contexts facing similar governance challenges.
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7.3 LIMITATIONS

While the Playbook and Roadmap were created to encourage stakeholder collaboration in climate resilience efforts, several limitations should be recognized.

First, the long-term success of both tools relies on their adoption by relevant actors and ongoing institutional support. Without continued coordination or clear ownership, their impact might be restricted to short-term or one-time use.

Second, although the tools provide structured guidance and practical entry points, they do not directly tackle deeper systemic challenges such as limited financial resources, regulatory fragmentation, or insufficient long-term governance capacity. These obstacles were often mentioned in interviews and the literature. While they do not prevent the use of the tools themselves, they may limit the collaborative and systemic outcomes the tools aim to support, especially in the case of the Roadmap.

Finally, although both tools were assessed through interviews and co-creation sessions, they have not yet been implemented or tested in real-world projects over time. This restricts the ability to evaluate their actual impact, adaptability among various stakeholder groups, or sustainability under changing political or institutional conditions.

7.4 FUTURE WORK

Future research and development could explore several ways to build on this project. First, pilot tests of both tools in current or new urban sustainability projects would offer useful insights into their real-world performance and flexibility. Long-term studies could observe how the tools assist collaboration over time, especially in managing the shift from short-term involvement to lasting institutional use.

Second, further development of the Roadmap could focus on integrating policy scenarios, funding mechanisms, or organizational roles more explicitly, enabling it to serve as a planning and advocacy tool in addition to a framework. Research could also examine how the Roadmap might be linked to formal decision-making processes in Curaçao or similar SIDS (Small Island Developing States) contexts. Further research can be done into the boundary conditions and the financial cost structure.

Third, there is potential for improving the Playbook's accessibility by testing its use with non-expert groups, such as youth, civil society organizations, or community leaders, to see how it performs outside of professional or academic settings. Future versions could also benefit from translations to English or Papiamentu to expand its reach and ease of use.

Finally, future research could explore how such tools influence not only collaboration but also trust-building, shared ownership, and long-term adaptive capacity, elements essential for resilience in complex, dynamic urban environments.

7.4.1 SUGGESTED FOCUS GROUP APPROACH

Focus Group for a Climate Resilience Inner City
A multi-stakeholder focus group is proposed to improve the climate resilience of the Inner City of Willemstad in an inclusive and participatory way. This group will act as a platform for dialogue, coordination, and co-creation among policymakers, community members, experts, and other relevant stakeholders.

For an effective approach to climate resilience in Willemstad, involving a wide range of stakeholders is essential, including government, industry, civil society organizations, and local residents. Collaboration is key to gaining support for sustainable and resilient solutions and ensuring that climate adaptation and mitigation strategies are both locally relevant and broadly accepted.

It is recommended that the group composition follow the Quadruple Helix model, which promotes collaboration across four important sectors of society:

1. Government
2. Academia
3. Industry
4. Civil Society / Community

This model encourages a diverse, interdisciplinary exchange of knowledge, resources, and perspectives, fostering innovation and shared ownership. It promotes a more comprehensive approach to tackling complex urban issues such as climate adaptation and mitigation, ensuring all relevant voices are heard and that solutions are inclusive and effective.

Given Willemstad's status as a UNESCO World Heritage Site and the interconnected nature of its urban, ecological, and socio-cultural aspects, it is also highly recommended to involve stakeholders focused on sustainability and heritage conservation. These cross-cutting themes are crucial for addressing environmental challenges and for respecting and enhancing the city's unique cultural identity and heritage.

The focus group is envisioned as a compact, agile body of ideally 6 to 8 core members who will maintain regular connections with a broader network of stakeholders. This flexible structure will ensure the group remains responsive and inclusive, promoting effective engagement across all sectors.
The (non-exhaustive) list in Appendix J provides examples of relevant stakeholders. It is important to recognize that some organizations may operate across multiple sectors. Additionally, some stakeholders might be smaller in scale. Engaging with them in discussions about their potential contributions to the focus group and asking them to recommend other stakeholders who could enhance the group's diversity and expertise will be beneficial. The list also serves as a reference for who the focus group can stay in contact with.

Following the quadruple helix model, suggested participants could include:

- A representative from the University of Curaçao to discuss the role of knowledge institutions and their involvement in student-led initiatives.
- Someone from VVRP, MEO or METEO to represent policy coordination and long-term urban plans.
- A member of CHATA or CTB, as a voice for the tourism and business sectors, which are key in shaping spatial and economic development.
- A representative from the Monumentenplatform, considering the importance of heritage in Inner City planning and the sensitivities around historic identity.
- One or more members from the island's climate or sustainability networks, depending on availability. The Curaçao Climate Change Platform could act as a coordinating stakeholder.
- One community-based representative, such as from Fundashon Rif or another local group involved in neighborhood development and climate resilience.
- And a representative from the industry or applied research sector, such as TNO or APC, to reflect on broader innovation potential.

This composition fosters dialogue across institutional, local, and sectoral boundaries by integrating lived experience, governance, business, and design perspectives in a manageable, multi-voiced setting.

7.5 PERSONAL REFLECTION

This project offered a unique opportunity to explore a complex, socially embedded topic, climate resilience in an urban Caribbean setting, through both research and design. Working in the field enhanced my understanding of the systemic nature of sustainability challenges and the realities of fragmented stakeholder environments. I experienced firsthand the barriers identified in the study, such as diverging interests, limited coordination, and communication gaps. These dynamics were not only theoretical but tangible in my own experience of navigating the stakeholder landscape.

What struck me most was how deeply some barriers are rooted, linked to Curaçao's colonial past, current institutional dependencies, and unequal power relations in decision-making. I realized that collaboration often relies on personal leadership, informal networks, and access to knowledge, which reinforces inequalities in whose voices are heard and whose interests influence the agenda.

This raised a personal question: what can I contribute as a designer beyond traditional research? I found value in approaching the challenge with empathy, seeking the question behind the question, reframing assumptions, and identifying opportunities for connection. Co-creation became a meaningful tool to explore shared values, foster dialogue, and generate ideas rooted in the local context. Through this, I improved my facilitation skills and enhanced my ability to guide conversations, connect perspectives, and include diverse voices in the process.

The iterative nature of the design process, which involves moving between idea generation, critical reflection, and synthesis, required an adaptable mindset. I stayed open to new insights and let them guide the direction of the project. Throughout, I drew energy from conversations with experts, community members, and institutional actors. These interactions not only enhanced my understanding but also motivated and refocused me at various points in the process.

This project strengthened my belief that design is more than just creating products or services. Designers can play a vital role in shaping systems, connecting disciplines, and fostering inclusive change. By working in a transdisciplinary and action-focused way, I developed skills in systems thinking, stakeholder engagement, and adaptive design. Most importantly, I gained a deeper appreciation for the importance of designing not for but with, especially in contexts marked by complexity, inequality, and transformation.

8. REFERENCES

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9. APPENDICES

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D: INTERVIEW GUIDE
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M. FOCUS GROUP LIST

APPENDIX A: PROJECT BRIEF

DESIGN FOR our future

TU Delft

Personal Project Brief – IDE Master Graduation Project

Name student Ayu Ritzema **Student number** 5,874,483

PROJECT TITLE, INTRODUCTION, PROBLEM DEFINITION and ASSIGNMENT

Complete all fields, keep information clear, specific and concise

Project title Stakeholder engagement for a sustainable Willemstad

Please state the title of your graduation project (above). Keep the title compact and simple. Do not use abbreviations. The remainder of this document allows you to define and clarify your graduation project.

Introduction

Describe the context of your project here; What is the domain in which your project takes place? Who are the main stakeholders and what interests are at stake? Describe the opportunities (and limitations) in this domain to better serve the stakeholder interests. (max 250 words)

Curaçao's urban landscape has long been shaped by the historic Inner-City of Willemstad, a UNESCO World Heritage Site since 1997. Over the last five decades, many residents have relocated to suburban areas, leaving less than 2% of Curaçao's population living in the Inner-City today (Transforming Urban Curaçao, 2019). Despite significant governmental and private investments in monument restoration and public space improvements, the Inner-City has experienced a marked decline in recent decades. Vacant spaces, obstructed alleys, and a lack of human activity have become more prevalent, diminishing its vibrancy and liveability sustainability (Transforming Urban Curaçao, 2019).

Beyond socio-economic challenges, the Inner-City also faces pressing environmental issues, including rising heat stress, inefficient resource use, limited green infrastructure, and heightened vulnerability to climate change, particularly in its coastal zones. These challenges threaten the city's long-term climate resilience and sustainability (Transforming Urban Curaçao, 2019).

While several initiatives aim to address these environmental issues, there remains a significant need for comprehensive, integrated solutions that prioritize both sustainability and climate resilience. Key stakeholders, such as residents, local businesses, government authorities, and community organizations, face barriers, including limited resources, knowledge, and coordination, which hinder their ability to adopt and implement climate-responsive practices (Van Aalst, 2024).

By addressing these gaps, there is an opportunity to develop stakeholder-driven, holistic strategies that revitalize the Inner-City of Willemstad. These efforts can balance heritage preservation with sustainable urban development, fostering a liveable and resilient environment for future generations.

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9.APPENDICES

APPENDIX A: PROJECT BRIEF

introduction (continued): space for images

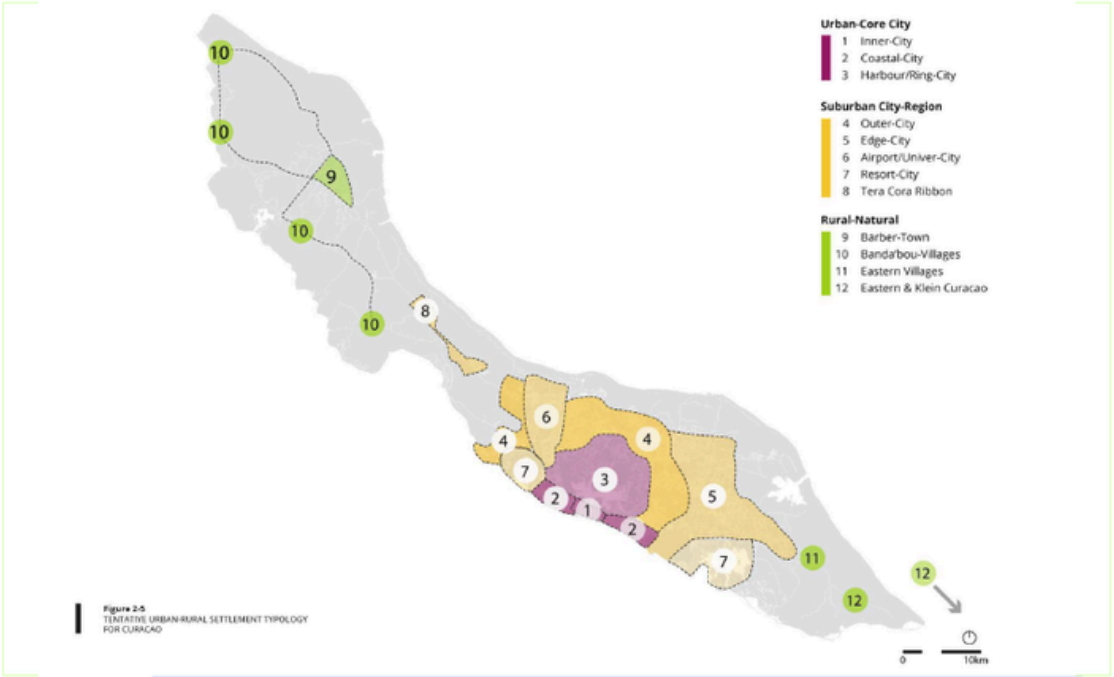


image / figure 1 Indication of the Inner-City of Willemstad (Transforming Urban Curaçao, 2019).

image / figure 2

9.APPENDICES

APPENDIX A: PROJECT BRIEF

Problem Definition

What problem do you want to solve in the context described in the introduction, and within the available time frame of 100 working days? (= Master Graduation Project of 30 EC). What opportunities do you see to create added value for the described stakeholders? Substantiate your choice.
(max 200 words)

The Inner-City of Willemstad (Punda, Otrobanda, Scharloo, and Pietermaai) faces significant challenges in achieving environmental responsibility and climate resilience. Environmental issues and limited collaboration among stakeholders hinder the area's liveability and attractiveness. While various visions and sustainability plans exist, their implementation is hindered by a lack of structured collaboration, stakeholder engagement, and actionable frameworks. There is a pressing need for a strategic approach to bring stakeholders together, build on existing initiatives, and foster sustainable practices tailored to Willemstad's unique characteristics.

Primary research question: How to enhance collaboration among stakeholders and encourage the adoption of environmentally responsible and climate-resilient practices in the Inner-City of Willemstad?

Sub questions:
- What are the key barriers and opportunities for collaboration among stakeholders in Willemstad's Inner-City, and how can these inform the design of an approach for engagement?
- What existing tools, strategies, or frameworks from similar contexts can be adapted to promote shared ownership of sustainable practices and collaboration among key stakeholders in Willemstad?

Assignment

This is the most important part of the project brief because it will give a clear direction of what you are heading for. Formulate an assignment to yourself regarding what you expect to deliver as result at the end of your project. (1 sentence) As you graduate as an industrial design engineer, your assignment will start with a verb (Design/Investigate/Validate/Create), and you may use the green text format:

Design an approach to engage and connect key stakeholders in Willemstad's Inner City, fostering collaboration and shared ownership to promote environmentally responsible and climate-resilient practices.

Then explain your project approach to carrying out your graduation project and what research and design methods you plan to use to generate your design solution (max 150 words)

- Phase 1: Rapid orientation and data collection (days 1–12) - Output: overview of challenges, opportunities, and relevant tools to determine the appropriate approach (e.g., toolkit, platform, or other strategy). Methods: semi-structured interviews, stakeholder dialogues, stakeholder mapping, PESTEL analysis, SWOT analysis, market analysis.
- Phase 2: Stakeholder engagement and concept development (days 13–28) - Output: Initial concepts and design drafts. Methods: Co-design sessions, brainstorming, journey mapping, early concept drafting.
- Phase 3: Prototyping and testing (days 29–45) - Output: Refined strategy components based on feedback. Methods: Prototyping, stakeholder testing, iterative refinement.
- Phase 4: Refinement and implementation roadmap (Days 46–80, in the Netherlands)- Output: Completed design and actionable roadmap. Methods: Remote stakeholder feedback, design finalization, roadmap development.
- Phase 5: Finalization of deliverables (Days 81–100, in the Netherlands) - Output: Final project documentation and design. Methods: Documentation, deliverable preparation, stakeholder handover.

9.APPENDICES

APPENDIX A: PROJECT BRIEF

Project planning and key moments

To make visible how you plan to spend your time, you must make a planning for the full project. You are advised to use a Gantt chart format to show the different phases of your project, deliverables you have in mind, meetings and in-between deadlines. Keep in mind that all activities should fit within the given run time of 100 working days. Your planning should include a ***kick-off meeting, mid-term evaluation meeting, green light meeting and graduation ceremony****. Please indicate periods of part-time activities and/or periods of not spending time on your graduation project, if any (for instance because of holidays or parallel course activities).*

Make sure to attach the full plan to this project brief.
The four key moment dates must be filled in below

Kick off meeting	11 dec 2024
Mid-term evaluation	19 feb 2025
Green light meeting	24 apr 2025
Graduation ceremony	23 mei 2025

In exceptional cases (part of) the Graduation Project may need to be scheduled part-time. Indicate here if such applies to your project

Part of project scheduled part-time	
For how many project weeks	
Number of project days per week	

Comments:

Motivation and personal ambitions

Explain why you wish to start this project, what competencies you want to prove or develop (e.g. competencies acquired in your MSc programme, electives, extra-curricular activities or other).

Optionally, describe whether you have some personal learning ambitions which you explicitly want to address in this project, on top of the learning objectives of the Graduation Project itself. You might think of e.g. acquiring in depth knowledge on a specific subject, broadening your competencies or experimenting with a specific tool or methodology. Personal learning ambitions are limited to a maximum number of five.
(200 words max)

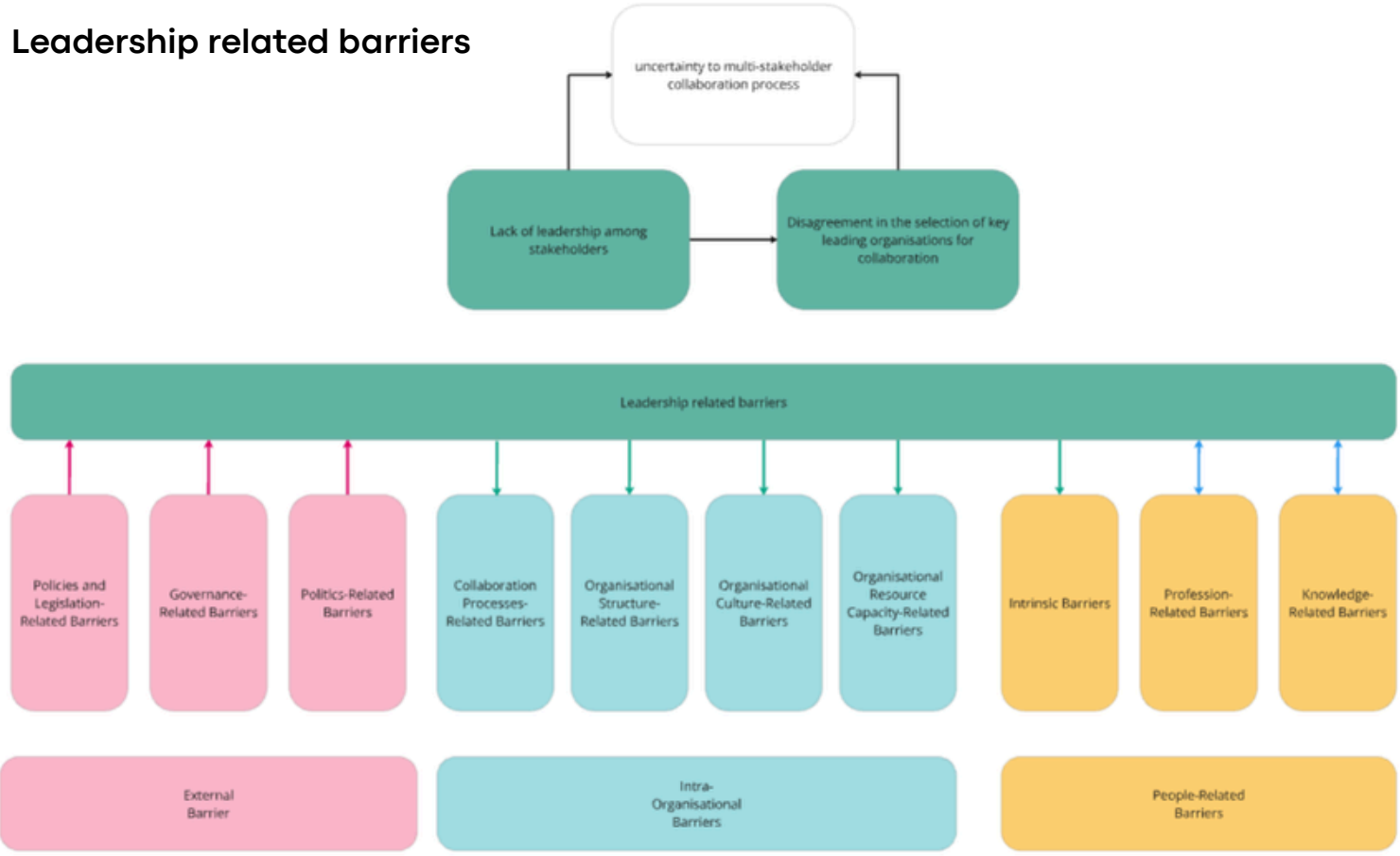
I have initiated this project because I want to make an impact by contributing to sustainability goals in a meaningful way. I believe that by adressing environmental challenges in a context-sensitive manner, I can help to create solutions that are both practical and impactful. Understanding the cultural context of Willemstad, including the norms and values of its stakeholders is essential for this project. This not only benefits the outcome but also helps me grow as someone who can work flexibly and effictively with people from different cultural backgrounds.

I aim to develop my project managment skills by creating a solid plan and adapting when challenges arise. Working with multiple stakeholders is a key aspect of this project and I want to improve my ability to conduct interviews, facilitate co-creation sessions and foster collaboration. I also want to strengthen my research skills, such as conducting fieldwork, mapping context and making observations.

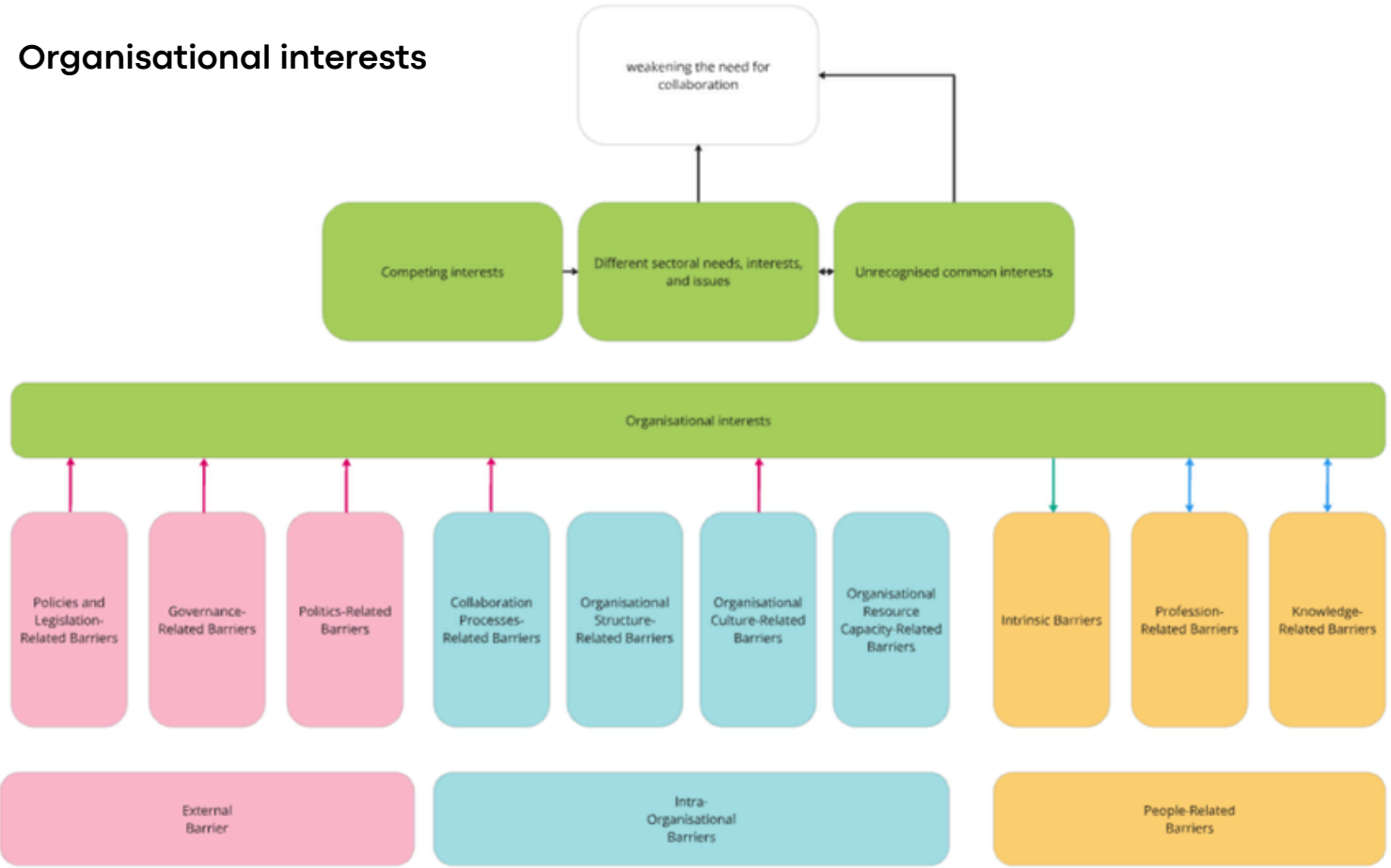
An important part of this project is translating vision into action. I hope to learn how to implement practical solutions that are feasible and impactful. On a strategic level, I hope to drive meaningful change by aligning the outcomes with sustainable practices that foster positive environmental impact, resilience, and community engagement in the Inner-City of Willemstad.

APPENDIX B: ILLUSTRATED FRAMEWORK

Leadership related barriers

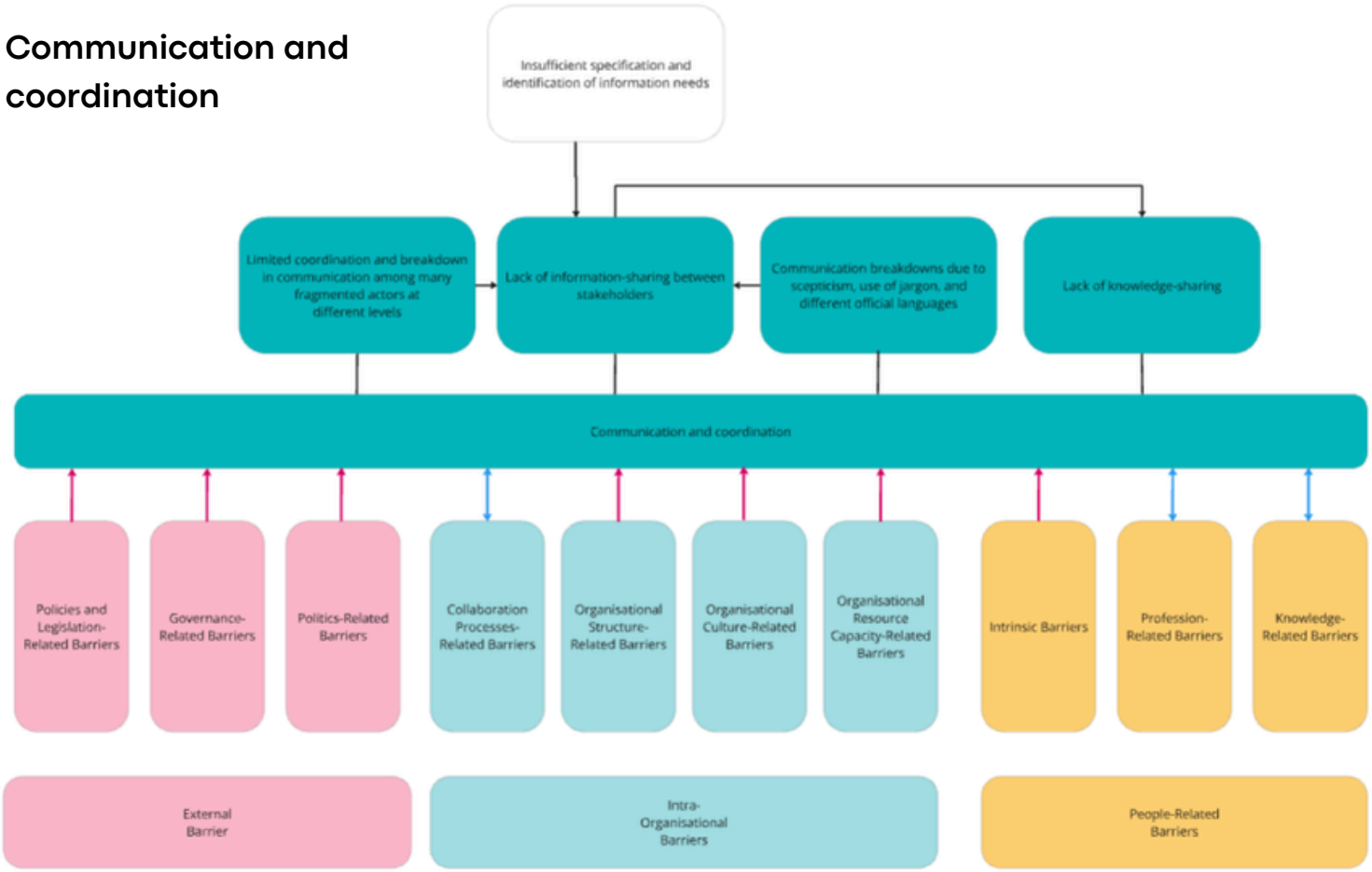


Organisational interests

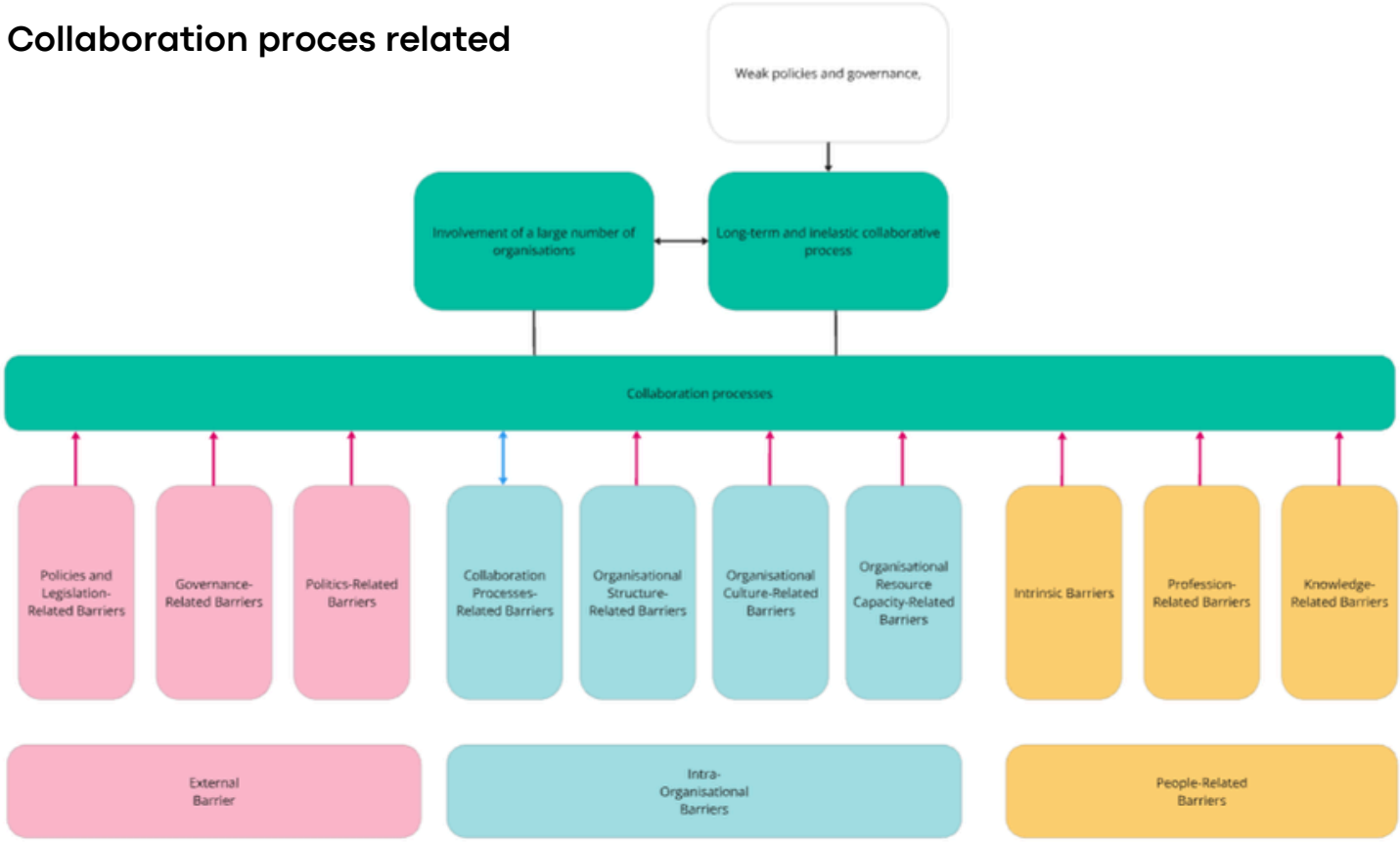


APPENDIX B: ILLUSTRATED FRAMEWORK

Communication and coordination



Collaboration proces related



APPENDIX C: ENABLERS AND RECOMMENDATIONS

Enablers to overcome dependence barriers
Ganeshu et al. (2023)

Table 7. Enablers to overcome dependence barriers.

Barriers' Theme	Enablers
Leadership	Establish a dedicated coordination organisation
	Engage neutral partners to facilitate multi-stakeholder collaboration processes
Organisational interest	Establish synergies by creating a joint vision among organisations
	Harmonise and strengthen policies and laws that support collaboration
Communication and coordination	Establish formal agreements for information-sharing
	Improve understanding of the information needs and requirements among organisations
	Establish regular and transparent information flows and communication among organisations
Collaboration process	Nurture trust-based relationships
	Select appropriate stakeholders and maintain continuous engagement
	Anticipate and manage conflicts
Organisational structure	Re-organise or set up new structures with clear rules and responsibilities for promoting collaborative working
Organisational culture	Establish collaborative practices as regular routines
	Encourage top management to influence the change in culture
	Incorporate responsibilities for collaborative tasks along with their official job description

APPENDIX D: INTERVIEW GUIDE

Semigestructureerd Interview

Dit interview maakt deel uit van een onderzoeksproject gericht op het verbeteren van samenwerking tussen stakeholders in de binnenstad van Willemstad om duurzame en klimaatbestendige initiatieven te ondersteunen. De focus ligt op het begrijpen van hoe organisaties en stakeholders beleid op elkaar afstemmen, middelen delen en activiteiten integreren om gezamenlijke doelen te bereiken.

Door middel van dit gesprek hopen we belangrijke barrières en succesfactoren te identificeren die samenwerking beïnvloeden. Uw inzichten zullen bijdragen aan de ontwikkeling van een praktische toolbox die stakeholders ondersteunt bij het verbeteren van samenwerking en het integreren van duurzaamheid in hun activiteiten.

Uw antwoorden blijven vertrouwelijk en worden uitsluitend voor onderzoeksdoeleinden gebruikt. We waarderen uw tijd en waardevolle input.

Laten we beginnen met een bespreking van uw rol en ervaringen in Willemstad.

1. Algemene vragen
- Kunt u uw rol in Willemstad beschrijven?
- Hoe verhouden duurzaamheid en klimaatverandering zich tot uw werk? Bent u betrokken geweest bij samenwerkingen op dit gebied?

Met betrekking tot duurzaamheid en klimaatverandering:

2. Leiderschap
- Welke rol speelt leiderschap in samenwerkingen tussen organisaties (stakeholders)?
- Hoe beïnvloedt leiderschap de samenwerking tussen organisaties (stakeholders) in Willemstad?

<u>Barrières:</u>
- Kunt u een voorbeeld geven van een situatie waarin leiderschap een uitdaging vormde binnen een samenwerking?
- Zijn er uitdagingen of discussies geweest over welke organisatie leiding moet nemen bij duurzaamheidsvraagstukken?

<u>Mogelijke oplossingen:</u>
- Welke strategieën of structuren kunnen helpen om leiderschap beter op elkaar af te stemmen in samenwerkingen?

3. Organisatiebelangen
- Hoe beïnvloeden verschillen in organisatieprioriteiten de samenwerking?

<u>Barrières:</u>
- Zijn er gevallen geweest waarin tegenstrijdige belangen samenwerking bemoeilijkten? Hoe werd hiermee omgegaan?

<u>Mogelijke oplossingen:</u>
- Welke methoden heeft u gezien (of zou u voorstellen) om verschillende organisatiebelangen beter op elkaar af te stemmen?

APPENDIX D: INTERVIEW GUIDE

4. Samenwerkingsproces

- Wat zijn de meest voorkomende uitdagingen waarmee organisaties in Willemstad worden geconfronteerd bij samenwerking aan duurzaamheidsprojecten?

Barrières:

- Wat zijn op dit moment de grootste uitdagingen bij het structureren en managen van samenwerkingsprocessen in Willemstad?

Mogelijke oplossingen:

- Welke procesverbeteringen zouden langdurige samenwerking makkelijker maken?

5. Communicatie en coördinatie

- Hoe wordt informatie gedeeld tussen organisaties (stakeholders), en waar ontstaan communicatieproblemen?

Barrières:

- Wat zijn de belangrijkste communicatie-uitdagingen waarmee organisaties in Willemstad worden geconfronteerd bij samenwerking?

Mogelijke oplossingen:

- Welke communicatiemiddelen of coördinatiemechanismen hebben in eerdere samenwerkingen geholpen?
- Heeft u suggesties voor verbetering?

6. Huidige en toekomstige verbeteringen

Prioriteiten:

- Welke drie factoren hebben de grootste invloed op samenwerking tussen organisaties in Curaçao?
- Kunt u uitleggen waarom deze factoren het meest significant zijn? Kunt u een voorbeeld geven?

Toekomstige verbeteringen:

- Als u één verandering zou kunnen doorvoeren om samenwerking tussen organisaties te verbeteren, welke zou dat zijn en waarom?
- Welke ondersteuning of middelen hebben organisaties nodig om effectiever samen te werken?
- Zijn er "best practices" of lessen uit andere projecten die hier toegepast kunnen worden?

APPENDIX D: INTERVIEW GUIDE

Semi-structured Interview (English)

This interview is part of a research project aimed at enhancing collaboration between stakeholders in Willemstad's inner city to support sustainable and climate-resilient initiatives. The focus is on understanding how organisations and stakeholders align policies, share resources, and integrate activities to achieve shared goals.

Through this conversation, we hope to identify key barriers and enablers that influence collaboration. Your insights will help shape a practical toolbox designed to support stakeholders in improving collaboration and integrating sustainability into their activities.

Your responses will remain confidential and will be used solely for research purposes. We appreciate your time and valuable input.

Let's begin by discussing your role and experiences in Willemstad.

1.General questions

- Can you describe your role in Willemstad?
- How does sustainability or climate change relate to your work? Have you been involved in any related collaborations?

Regarding sustainability and climate change:

2. Leadership
- What role does leadership play in collaborations between organisations (stakeholders?
- How does leadership influence collaboration between organisations (stakeholders) in Willemstad?

Barriers:
- Can you share an example of a situation where leadership was a challenge in collaboration?
- Have there been challenges or discussions about which organisation should lead (in sustainability issues)?

Enablers:
What strategies or structures could improve leadership alignment in collaborations?

3. Organisational interest
- How do differences in organisational priorities impact collaboration?

Barriers:
- Have there been cases where conflicting interests made collaboration difficult? How was this managed?

Enablers:
- What methods have you seen (or would you suggest) to align different organisational interests?

4. Collaboration process
- What are the most common challenges organisations face when working together in Willemstad (on sustainability projects)?

APPENDIX D: INTERVIEW GUIDE

Barriers:

- What are the key current challenges in structuring and managing collaboration processes in Willemstad?

Enablers:

- What process improvements would make long-term collaboration easier?

5. Communication & coordination

- How is information shared between organisations (stakeholders), and where do communication gaps arise?

Barriers:

- What are the main communication challenges organisations at Willemstad face when working together?

Enablers:

- What communication tools or coordination mechanisms have helped in past collaborations?
- Any suggestions?

6. Current & future improvements

Prioritization:

- Which three factors have the greatest influence on collaborations between organisations in Curaçao?
- Can you explain why these factors are the most significant? Any Example?

Future improvements:

- If you could implement one change to improve collaboration between organisations, what would it be and why?
- What support or resources do organisations need to collaborate more effectively?
- Are there best practices or lessons from other projects that could be applied?

APPENDIX E: CONSENT FORM

Informed Consent form

You are being invited to participate in a research study titled Stakeholder engagement for a sustainable Willemstad. This research is conducted Ayu Ritzema at the Delft University of Technology.

The purpose of this research is to understand the context of the Inner-City collaboration of Willemstad and current practices and needs. It will take approximately *45-60* minutes to complete. The data will be used to enhance collaboration among stakeholders in the Inner-City. We will be asking you to share your experiences and ideas.

Your answers in this research will remain completely confidential. We will minimize any risks by transcribing the interview and making it completely anonymous. Data will be safely stored in the university's database and only authorised people will have access to data.

Your participation in this research is entirely voluntary, and you can withdraw at any time. You are free to skip any questions.

Contact details Ayu Ritzema: a.d.ritzema@student.tudelft.nl

PLEASE TICK THE APPROPRIATE BOXES	Yes	No
A: GENERAL AGREEMENT – RESEARCH GOALS, PARTICPANT TASKS AND VOLUNTARY PARTICIPATION		
1. I have read and understood the study information dated ....-.... -.... or it has been read to me. I have been able to ask questions about the study and my questions have been answered to my satisfaction.	☐	☐
2. I consent voluntarily to be a participant in this study and understand that I can refuse to answer questions and I can withdraw from the study at any time, without having to give a reason.	☐	☐
3. I understand that taking part in the study involves: - audio-recorded interview, which will be transcribed as text - written notes of observations	☐	☐
B: POTENTIAL RISKS OF PARTICIPATING (INCLUDING DATA PROTECTION)		
4. I understand that taking part in the study also involves collecting specific personally identifiable information (PII) [name] and associated personally identifiable research data (PIRD) [pictures, video, audio recording] with the potential risk of my identity being revealed (reputation).	☐	☐
5. I understand that the following steps will be taken to minimise the threat of a data breach, and protect my identity in the event of such a breach - Transcription of interviews and(pseudo-) anonymisation - Secure data storage and limited access - Blurring of photo's	☐	☐
6. I understand that personal information collected about me that can identify me, such as *my name or contact details* will not be shared beyond the study team.	☐	☐
7. I understand that the (identifiable) personal data I provide will be destroyed after 10 years.	☐	☐
C: RESEARCH PUBLICATION, DISSEMINATION AND APPLICATION		

APPENDIX E: CONSENT FORM

PLEASE TICK THE APPROPRIATE BOXES	Yes	No
8. I understand that after the research study the de-identified information I provide will be used for a master thesis report. This also include any planned application (such as decision-making, policy- service- or product development.	☐	☐
9. I agree that my responses, views or other input can be quoted anonymously in research outputs.	☐	☐
10. I agree that my real name can be used for quotes in research outputs.	☐	☐
D: (LONGTERM) DATA STORAGE, ACCESS AND REUSE		
11. I give permission for the de-identified data that I provide to be archived in TU Delft repository so it can be used for future research and learning.	☐	☐
12. I understand that access to this repository is open.	☐	☐

Signatures

_____ _____ _____
Name of participant [printed] Signature Date

I, as researcher, have accurately read out the information sheet to the potential participant and, to the best of my ability, ensured that the participant understands to what they are freely consenting.

_____ _____ _____
Researcher name [printed] Signature Date

Study contact details for further information:
Ayu Ritzema, [redacted]

APPENDIX F: CO-CREATION SESSION PLANS

Co-creatie sessies

Problem as given: Hoe kunnen we het gebrek aan een gecoördineerde aanpak van duurzaamheid en klimaatbestendigheid in het centrum van Willemstad het beste aanpakken?

Focus eerste sessie is op problem finding, tweede sessie op idea finding. Break kan evt eerder. Elke stap (Diverging, Reverging en Converging) heeft eigen brainstorm regels, hier goed op letten.

Sessie 1:

Time	What	Aim	Material	Notes
15:00 (10 min)	Welcome & Introduction Agenda Code of Conduct		Poster: agenda en code of conduct	4.3.1
15:15 (5 min)	Briefing		PAG on poster	4.3.2
15:20 (5 min)	Warming up oefening			
15:25 (5 min)	Purge		Post its and markers	4.3.3
15:30 (20/30 min)	Ladder of Abstraction	Diverging	Flip chart / markers	3.1.19
16:00 (5 min)	Clustering	Reverging	Flip over sheets, Tape, markers, post its	3.2.3
16:05 (15 min)	Restating the problem	Converging	Flip over sheet, marker	3.3.1
16:20 (10)	SP + Reflecting	SPARK the PAP and reflect	Flip over sheet, marker	4.3.4
16:30 (5 min)	Break		Drinks / snack	
16:35 (5 min)	Brainwriting	Diverging	Post its, marker, flip over sheets	3.1.2
16:40 (5 min)	Cluster	Reverging	Flip over sheets, tape, markers, flip over sheets	3.2,3
16:45 (5 min)	Hits and Dots	converging	Dots stickers	3.3.2
16:50 (10 min)	Wrapp up and closing		camera	4.3.8

APPENDIX F: CO-CREATION SESSION PLANS

Session 2: Starting question from previous session – Session set up prepared in the online platform Canva

Time	What	Aim	Material	Notes
15:00 (10 min)	Welcome & Introduction Agenda Code of Conduct		Agenda en code of conduct	4.3.1
15:15 (5 min)	Briefing		PAG	4.3.2
15:20 (5 min)	Warming up oefening			
15:25 (5 min)	Purge			4.3.3
15:30 (10 min)	H2	Diverging		3.1.17
15:40 (5 min)	Clustering	Reverging		3.2.3
15:45 (5 min)	Hits and Dots	Converging	Dots for voting	3.3.1
15:50 (5 min)	SP	SPARK the PAP + short reflect		4.3.4
15:55 (5 min)	Break			
16:25 (5 min)	Criminal round or hidden presumptions	Diverging		3.1.5 3.1.7
16:40 (5 min)	CB	Reverging	Matrix	3.2.4
16:45 (5 min)	Hits and Dots (evt PC)	converging	Dots for voting	3.3.2
16:50 (10 min)	Wrapp up and closing			4.3.8

Brainstorm regels:

Diverging: Postpone judgement

- Quantity breeds quality
- Hitchhike
- Freewheel

Reverging: Inquiring mindset

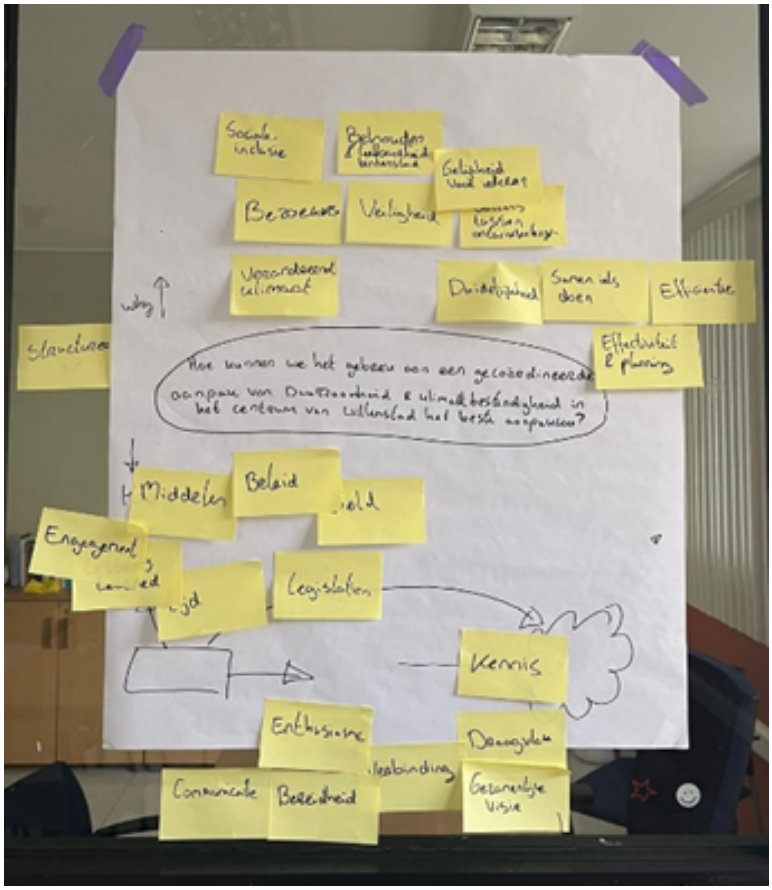
- Be jointly active
- Listen responsively
- Move circularly

Converging: Affirmative judgement

- Protect originality
- Trust the hedonic space
- Have action in mind

APPENDIX G: OUTCOMES FIRST CO-CREATION SESSION

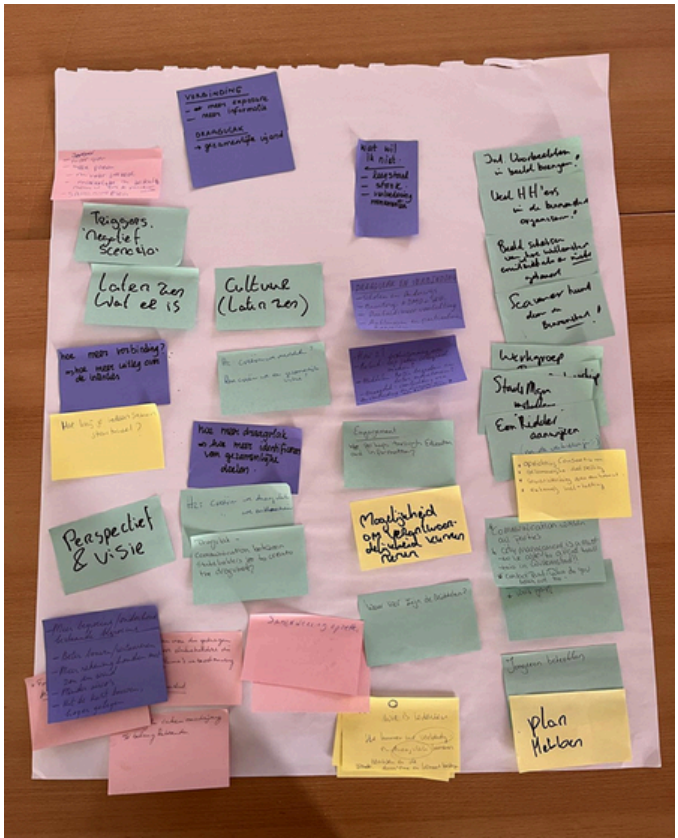
Key insights:
The co-creation session yielded several important insights that both validated interview findings and provided new perspectives on collaboration challenges for climate resilience in Willemstad's inner city:



Primary barriers to collaboration
-Lack of shared vision and broad-based support ("Draagvlak")
Participants consistently identified the absence of a unified vision as a major obstacle to progress. This aligns with themes previously identified in the interview phase, confirming its critical importance.

-Communication challenges
Communication was frequently mentioned as a determining factor that either enables or hinders collaborative efforts. Participants noted needs for:

"Communication within all parties"
"Communication between stakeholders to create the “draagvlak”"
"More explanation about intentions"
-Resource constraints



A significant barrier identified was the lack of various resources needed for effective climate resilience initiatives:
-Financial resources (funding)
-Policy frameworks
-Time
-Legislation
-As captured in one participant's question: "Where are the resources?"

APPENDIX G: OUTCOMES FIRST CO-CREATION SESSION

Shared vision elements
When discussing the desired future for the inner city (the why), participants emphasized:

-Preservation of the inner city's character
-Liveability
-Social inclusion and equality for everyone
-Need for collaborative knowledge development
-Enthusiasm and willingness to connect

Participants noted that achieving this vision requires "doing something together," establishing clarity, and finding balance between various development priorities.
Potential approaches to improvement

Several themes emerged regarding how to improve collaboration:

Strengthening connections
-Increasing exposure and information sharing
-Organizing roundtable meetings
-Establishing a sounding board
-Creating structured collaboration
-Finding ways to bring everyone together systematically
-Identifying shared goals

Youth engagement
-Involving younger generations in planning and implementation
-Using education and information to engage youth
-Creating connections between educational institutions and stakeholders

APPENDIX G: OUTCOMES FIRST CO-CREATION SESSION

During the final brainstorming at the end of the session, participants proposed several potential solution directions:

Creating accountability mechanisms
-Developing structures that enable stakeholders to take responsibility
-Create a shared vision

Motivating through consequence awareness
-Visualizing negative outcomes if action isn't taken
-Identifying common challenges that can unite stakeholders

Demonstrating successful examples
-Showcasing examples of successful climate resilience initiatives

Building social connections
-Organizing informal gatherings like "happy hours" in the inner city to

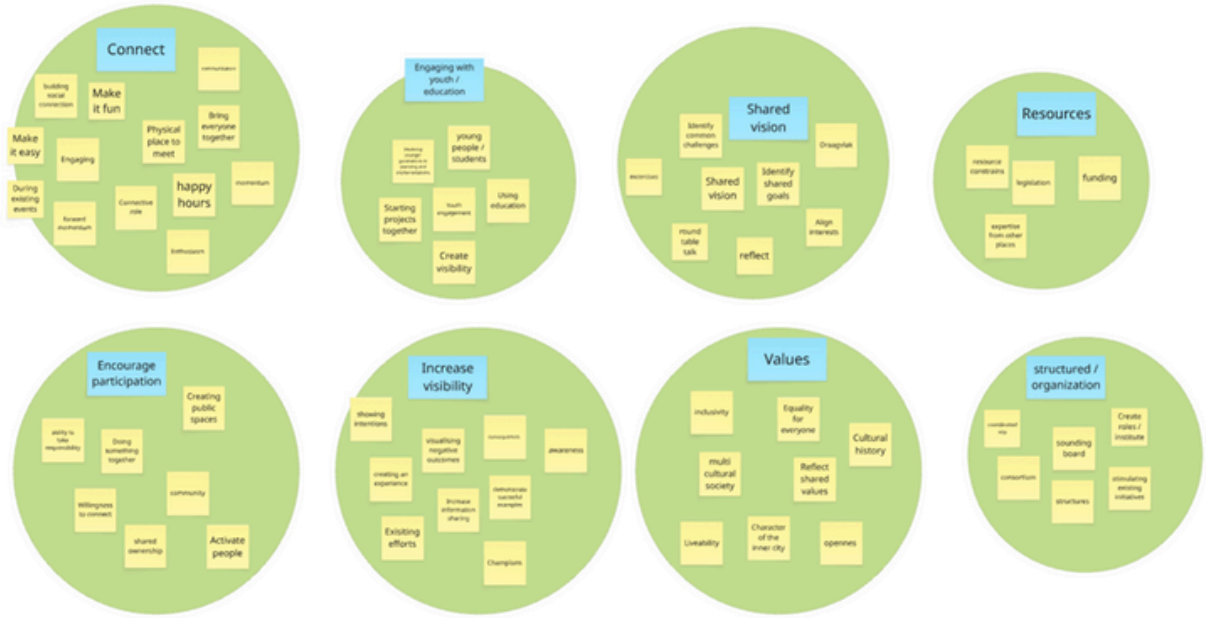
strengthen relationships between stakeholders
Formal structures
-Forming a consortium of stakeholders
-Developing a comprehensive plan with clear roles and responsibilities

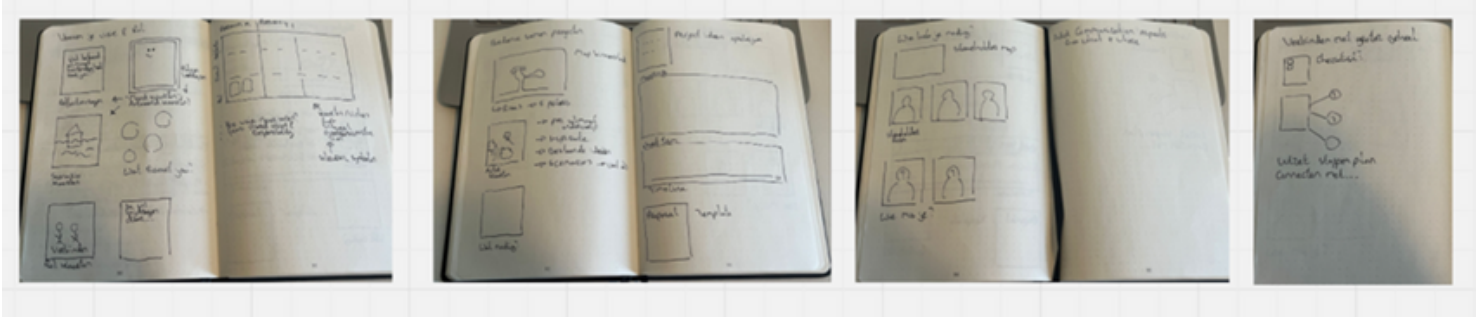
Generational inclusion
-Actively involving young people

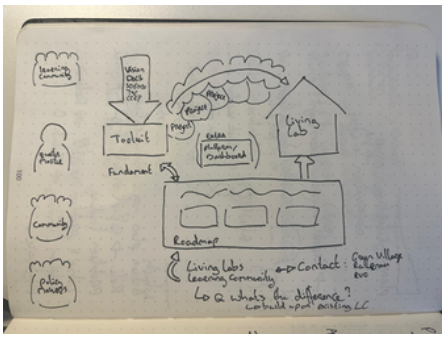
These solution directions provide valuable starting points for developing more concrete recommendations and implementation strategies in the next phase of the project.

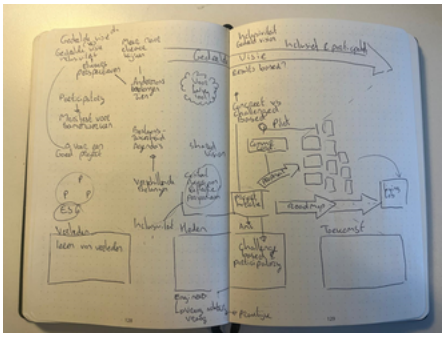
The session made clear that a solution should not only offer structure but also space for engagement, communication tools, and a strategy for growing shared vision over time. These reflections have directly informed the design of the engagement catalyst.

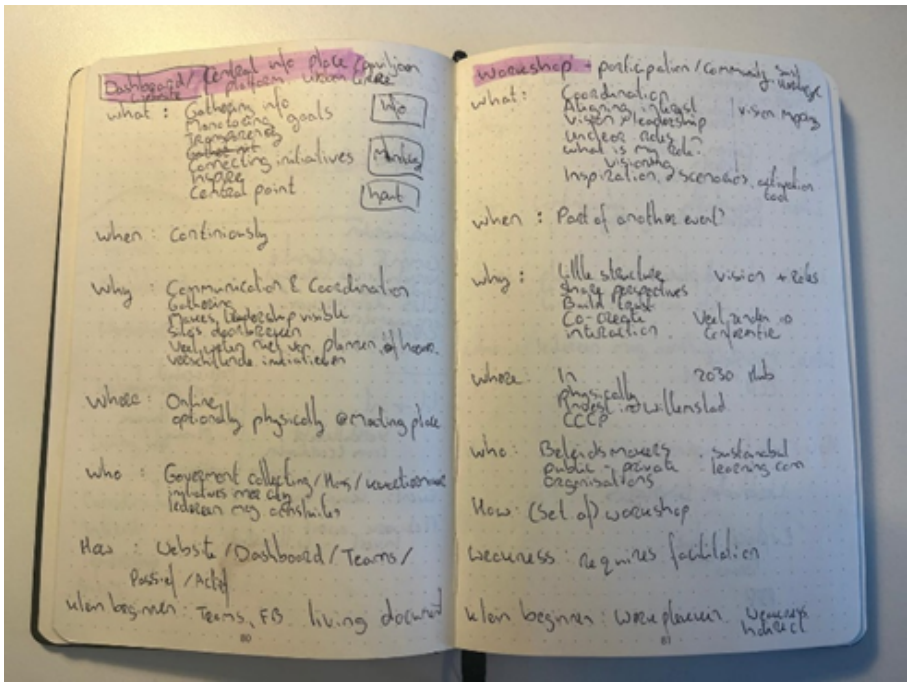
APPENDIX H: IDEATION



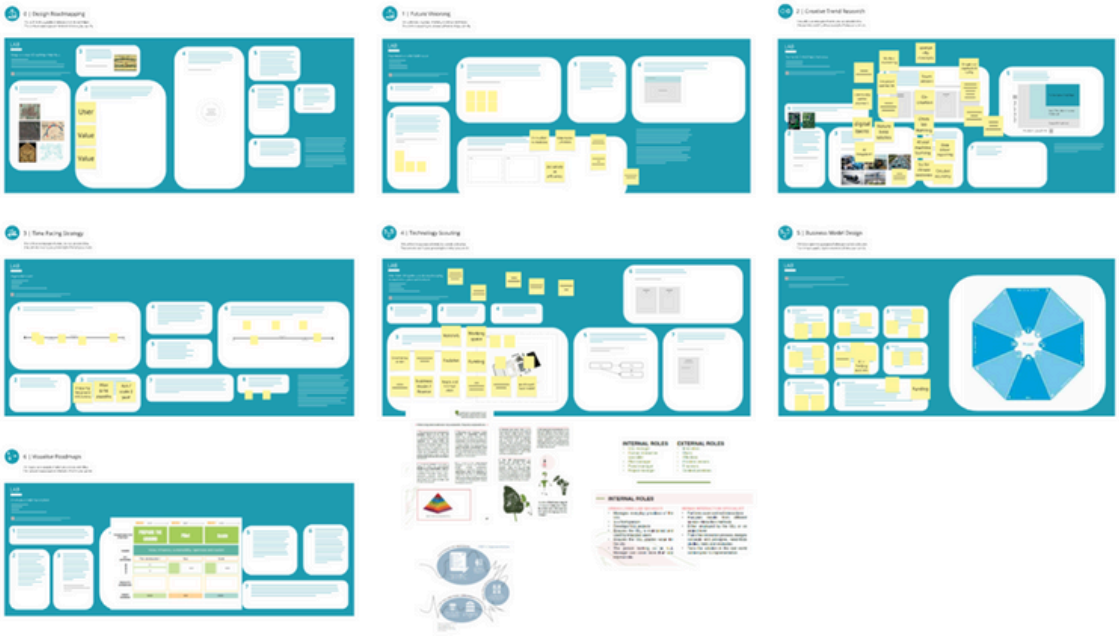








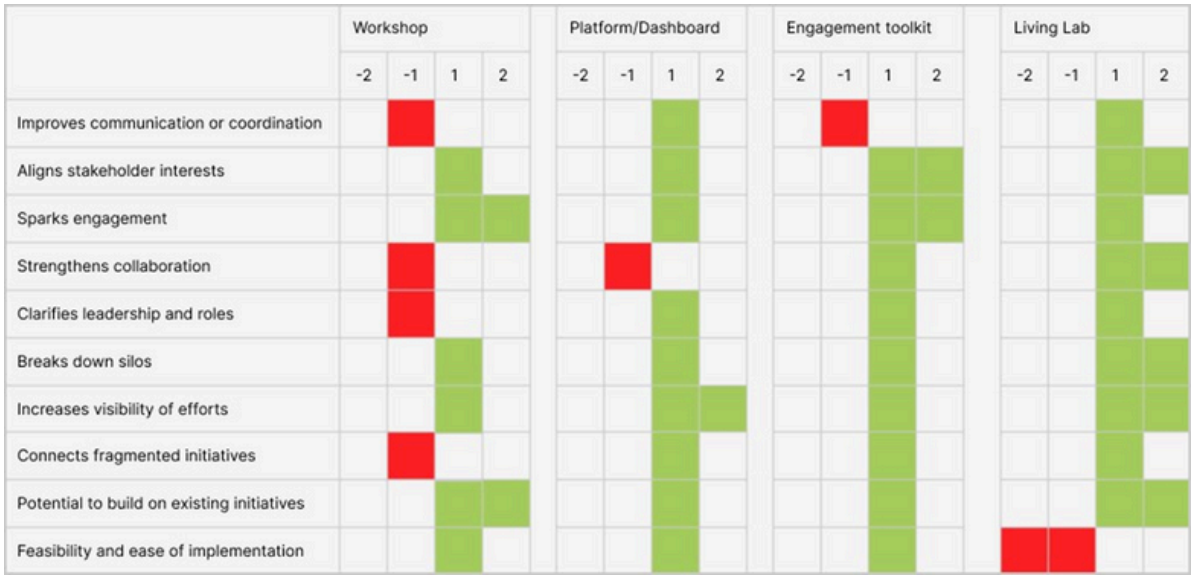
APPENDIX H: IDEATION



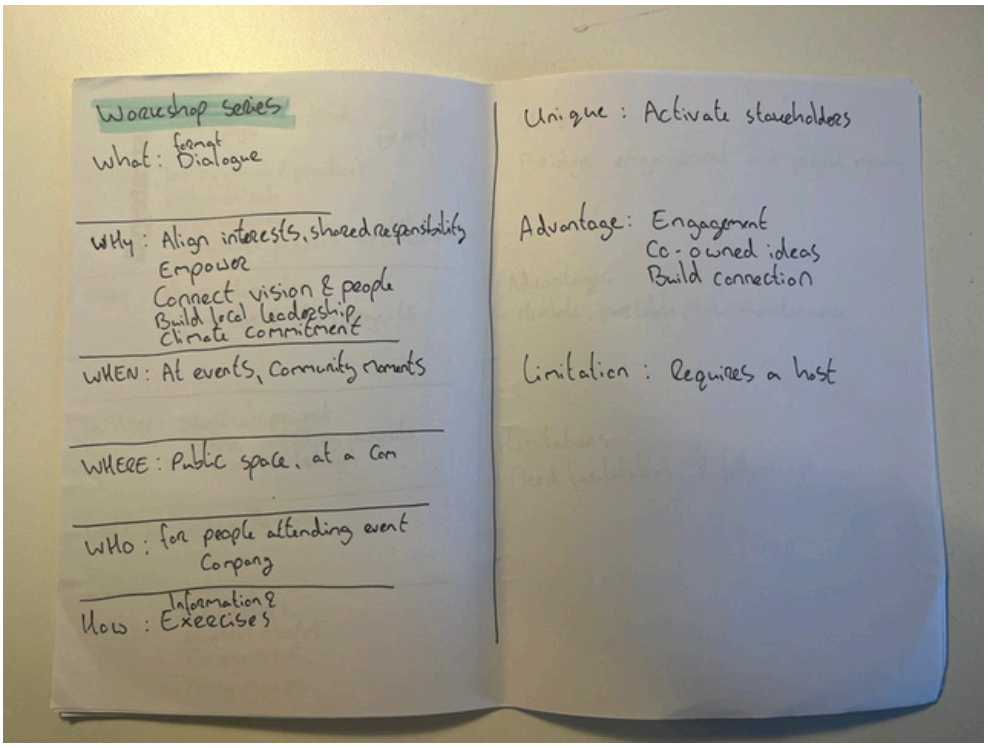
APPENDIX I: HARRIS MODEL

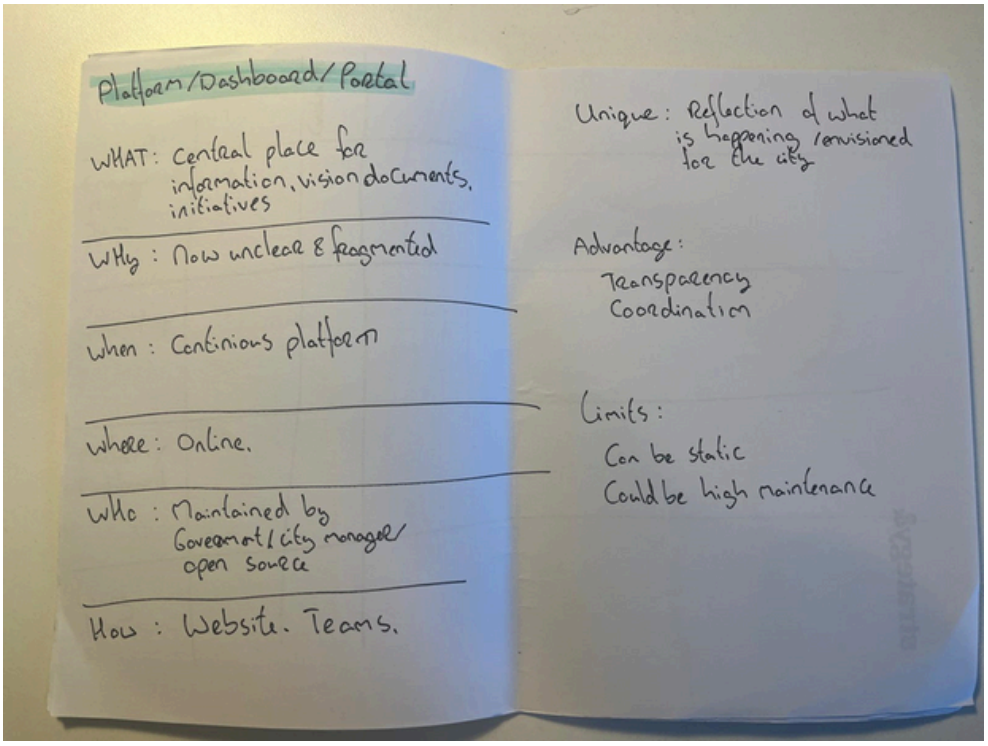
To evaluate and compare the four concept directions, a Harris Model was used. This decision-making tool helps to visualise relevance and prioritize options based on multiple predefined criteria. Each concept was assessed against key factors derived from the research and co-creation phases, allowing for a structured comparison
The assessment criteria included:

Improves communication or coordination
Aligns stakeholder interests
Sparks engagement
Strengthens collaboration
Clarifies leadership and roles
Breaks down silos
Increases visibility of efforts
Connects fragmented initiatives
Potential to build on existing initiatives
Feasibility and ease of implementation

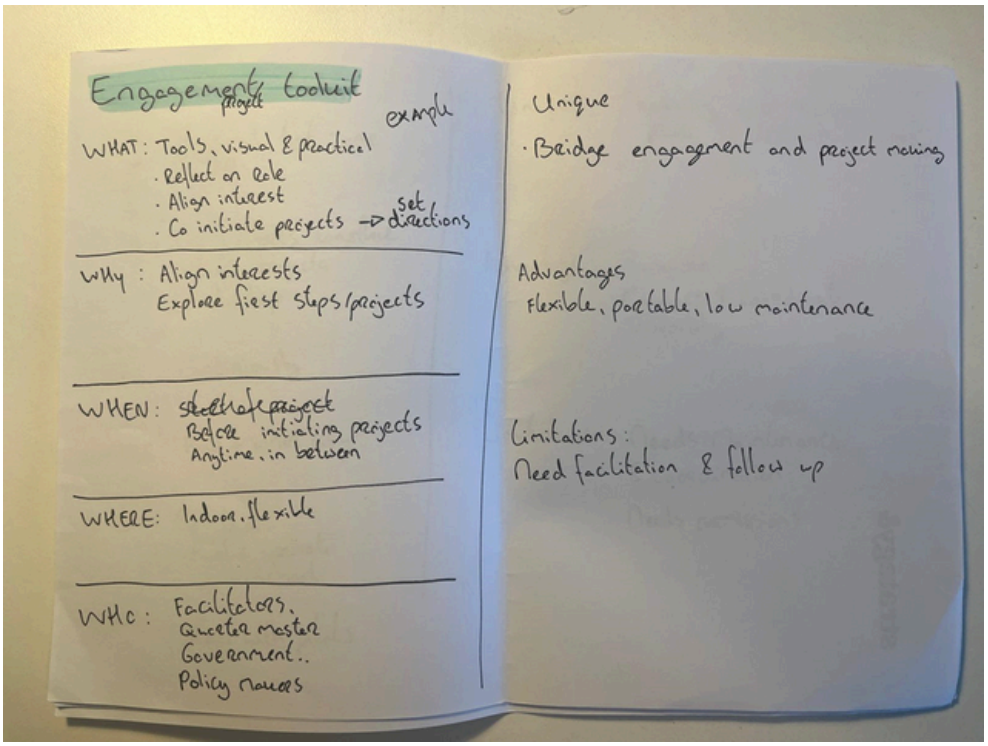


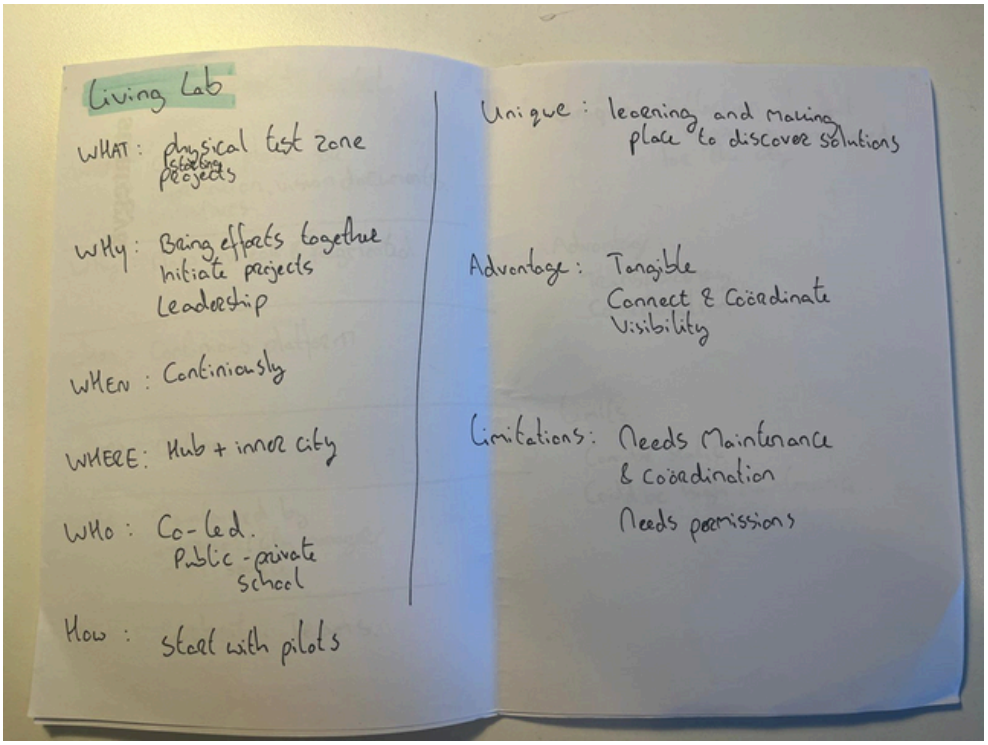
APPENDIX J. DESIGN ITERATIONS





APPENDIX J. DESIGN ITERATIONS





APPENDIX K. OBSERVATION FORM

Observation form

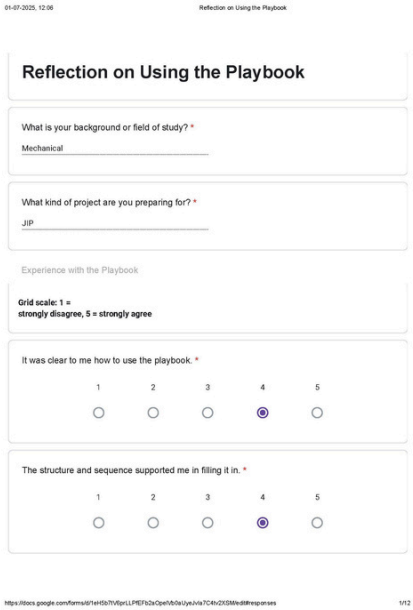
Navigation and ease of use
Where does the student get stuck?
Which parts seem intuitive?
Does the student seem confident in what he/she is doing?
Is there progress or stagnation?

Language and understanding
Does the student understand what is being asked in the playbook?
Are terms recognized, or is confusion created?

Interaction and collaboration
Does the student engage in conversation with others using the playbook?
Does it stimulate joint reflection?

Time	Step	Navigation and ease of use	Language and Understanding	Interaction and Collaboration

APPENDIX L. FORM FEEDBACK PLAYBOOK



01-07-2025, 12:06 Reflection on Using the Playbook

Reflection on Using the Playbook

What is your background or field of study? *

Mechanical

What kind of project are you preparing for? *

JIP

Experience with the Playbook

Grid scale: 1 =
strongly disagree, 5 = strongly agree

It was clear to me how to use the playbook. *

1 2 3 4 5

The structure and sequence supported me in filling it in. *

1 2 3 4 5

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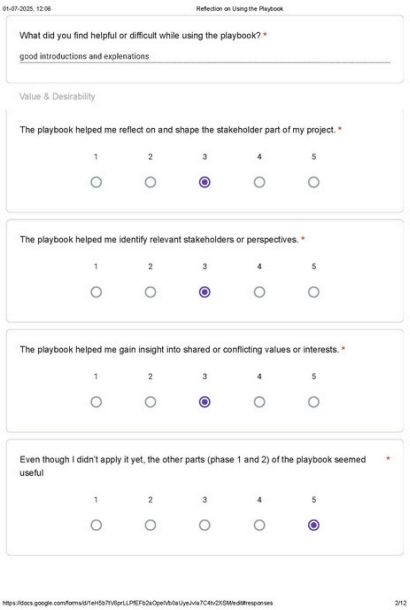

01-07-2025, 12:06 Reflection on Using the Playbook

What did you find helpful or difficult while using the playbook? *

good introductions and explenations

Value & Desirability

The playbook helped me reflect on and shape the stakeholder part of my project. *

1 2 3 4 5

The playbook helped me identify relevant stakeholders or perspectives. *

1 2 3 4 5

The playbook helped me gain insight into shared or conflicting values or interests. *

1 2 3 4 5

Even though I didn't apply it yet, the other parts (phase 1 and 2) of the playbook seemed useful *

1 2 3 4 5

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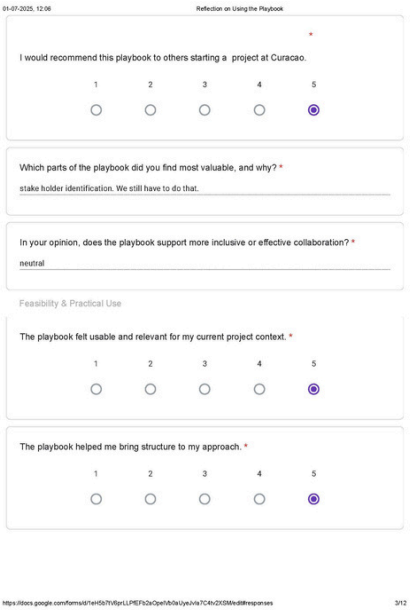

01-07-2025, 12:06 Reflection on Using the Playbook

*

I would recommend this playbook to others starting a project at Curacao.

1 2 3 4 5

Which parts of the playbook did you find most valuable, and why? *

stake holder identification. We still have to do that.

In your opinion, does the playbook support more inclusive or effective collaboration? *

neutral

Feasibility & Practical Use

The playbook felt usable and relevant for my current project context. *

1 2 3 4 5

The playbook helped me bring structure to my approach. *

1 2 3 4 5

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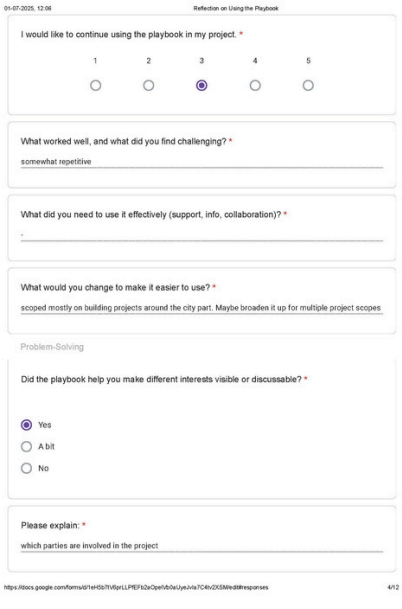

01-07-2025, 12:06 Reflection on Using the Playbook

I would like to continue using the playbook in my project. *

1 2 3 4 5

What worked well, and what did you find challenging? *

somewhat repetitive

What did you need to use it effectively (support, info, collaboration)? *

-

What would you change to make it easier to use? *

scoped mostly on building projects around the city part. Maybe broaden it up for multiple project scopes

Problem-Solving

Did the playbook help you make different interests visible or discussable? *

- Yes
- A bit
- No

Please explain: *

which parties are involved in the project

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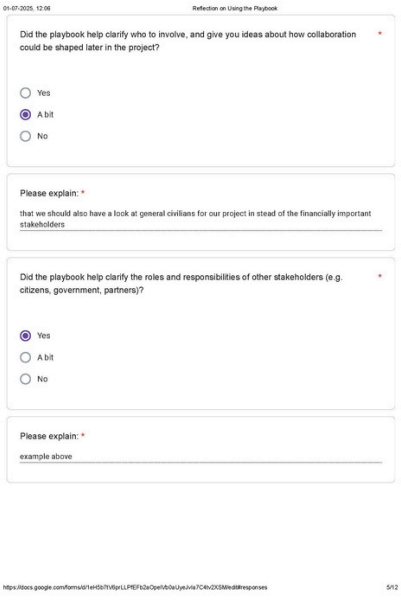

01-07-2025, 12:06 Reflection on Using the Playbook

Did the playbook help clarify who to involve, and give you ideas about how collaboration could be shaped later in the project? *

- Yes
- A bit
- No

Please explain: *

that we should also have a look at general civilians for our project in stead of the financially important stakeholders

Did the playbook help clarify the roles and responsibilities of other stakeholders (e.g. citizens, government, partners)? *

- Yes
- A bit
- No

Please explain: *

example above

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01-07-2025, 12:06 Reflection on Using the Playbook

To what extent does the playbook meet your needs as a project initiator? *

1 2 3 4 5

What did the playbook contribute to the early stage of your project? *

I would say guidance in stead of initiator

Further remarks or suggestions:

/

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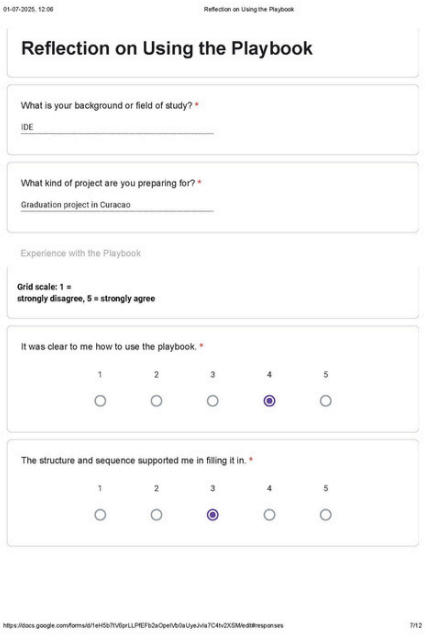
APPENDIX L. FORM FEEDBACK PLAYBOOK



01-07-2025, 12:06 Reflection on Using the Playbook

Reflection on Using the Playbook

What is your background or field of study? *

IDE

What kind of project are you preparing for? *

Graduation project in Curacao

Experience with the Playbook

Grid scale: 1 =
strongly disagree, 5 = strongly agree

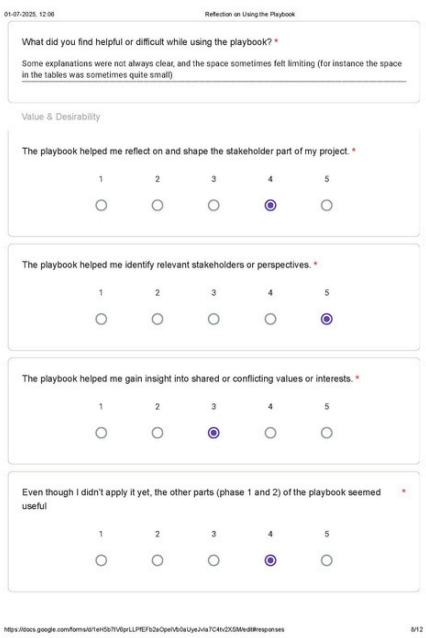
It was clear to me how to use the playbook. *

1	2	3	4	5
○	○	○	◉	○

The structure and sequence supported me in filling it in. *

1	2	3	4	5
○	○	◉	○	○

https://docs.google.com/forms/d/1eH5b7tVl6prLLPtEFb2aOpeIVb0aUyeJvIa7C4tv2XSM/edit#responses 7/12



01-07-2025, 12:06 Reflection on Using the Playbook

What did you find helpful or difficult while using the playbook? *

Some explanations were not always clear, and the space sometimes felt limiting (for instance the space in the tables was sometimes quite small)

Value & Desirability

The playbook helped me reflect on and shape the stakeholder part of my project. *

1	2	3	4	5
○	○	○	◉	○

The playbook helped me identify relevant stakeholders or perspectives. *

1	2	3	4	5
○	○	○	○	◉

The playbook helped me gain insight into shared or conflicting values or interests. *

1	2	3	4	5
○	○	◉	○	○

Even though I didn't apply it yet, the other parts (phase 1 and 2) of the playbook seemed useful *

1	2	3	4	5
○	○	○	◉	○

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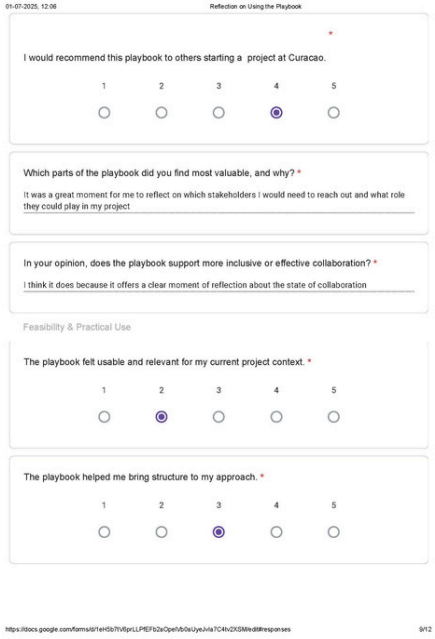

01-07-2025, 12:06 Reflection on Using the Playbook

*

I would recommend this playbook to others starting a project at Curacao.

1	2	3	4	5
○	○	○	◉	○

Which parts of the playbook did you find most valuable, and why? *

It was a great moment for me to reflect on which stakeholders I would need to reach out and what role they could play in my project

In your opinion, does the playbook support more inclusive or effective collaboration? *

I think it does because it offers a clear moment of reflection about the state of collaboration

Feasibility & Practical Use

The playbook felt usable and relevant for my current project context. *

1	2	3	4	5
○	◉	○	○	○

The playbook helped me bring structure to my approach. *

1	2	3	4	5
○	○	◉	○	○

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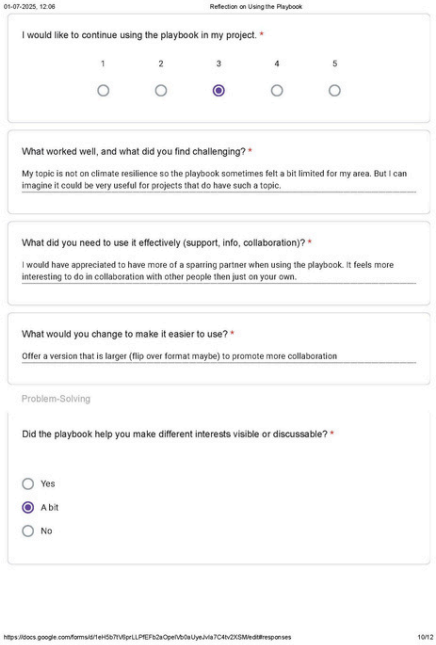

01-07-2025, 12:06 Reflection on Using the Playbook

I would like to continue using the playbook in my project. *

1	2	3	4	5
○	○	◉	○	○

What worked well, and what did you find challenging? *

My topic is not on climate resilience so the playbook sometimes felt a bit limited for my area. But I can imagine it could be very useful for projects that do have such a topic.

What did you need to use it effectively (support, info, collaboration)? *

I would have appreciated to have more of a sparring partner when using the playbook. It feels more interesting to do in collaboration with other people then just on your own.

What would you change to make it easier to use? *

Offer a version that is larger (flip over format maybe) to promote more collaboration

Problem-Solving

Did the playbook help you make different interests visible or discussable? *

- ○ Yes
- ◉ A bit
- ○ No

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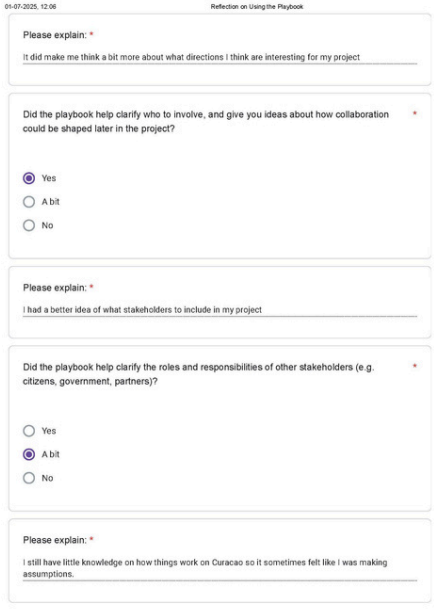

01-07-2025, 12:06 Reflection on Using the Playbook

Please explain: *

It did make me think a bit more about what directions I think are interesting for my project

Did the playbook help clarify who to involve, and give you ideas about how collaboration could be shaped later in the project? *

- ◉ Yes
- ○ A bit
- ○ No

Please explain: *

I had a better idea of what stakeholders to include in my project

Did the playbook help clarify the roles and responsibilities of other stakeholders (e.g. citizens, government, partners)? *

- ○ Yes
- ◉ A bit
- ○ No

Please explain: *

I still have little knowledge on how things work on Curacao so it sometimes felt like I was making assumptions.

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01-07-2025, 12:06 Reflection on Using the Playbook

To what extent does the playbook meet your needs as a project initiator? *

1	2	3	4	5
○	○	○	◉	○

What did the playbook contribute to the early stage of your project? *

Helped me orgnanize my thoughts

Further remarks or suggestions:

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APPENDIX M. FOCUS GROUP LIST

Government and policymakers

In example:

Ministry of General Affairs (AZ)
Risk Management and Disaster Policy Department (Directie Risicobeheersing & Rampenbeleid (DDR))

https://gobiernu.cw/nl/ministries/algemene-zaken-en-minister-president/directie-risicobeheersing-rampenbeleid-drr/
The DDR is responsible for ensuring effective protection and security for lives, property, the environment, and social continuity in Curaçao before, during, and after significant natural and cultural disasters. The DRR aims to mitigate the impact of disasters, such as rising sea levels and the effects of hurricanes. The proximity of the World Heritage Site to the sea and the condition of its monuments present several risks. During disasters, the DRR takes the lead in coordinating the response.

Ministry of Traffic, Transport and Spatial Planning (VVRP)
Since Curaçao gained autonomy, the government structure has been reorganized, placing World Heritage matters under the responsibility of the director of Infrastructure and Spatial Planning. In this position, the director is involved in developing management policies.

-Infrastructure and Urban Planning, Urban Development and Planning (ROP)

https://vvrp.cw/organisashonnan/servisio-pa-planifikashon-urbano/
Urban Planning and Development (ROP) is responsible for ensuring the sustainable and balanced use of land in Curaçao. It evaluates proposals for new urban developments and the condition of existing areas to ensure compliance with the quality standards set by the Government. ROP plays a crucial role in organizing and managing the public space in Curaçao, contributing to the orderly development and resilience of the urban environment.

-Infrastructure and Urban Planning, Public Works (OW)

https://vvrp.cw/organisashonnan/servisio-pa-obra-publiko/
The Public Works Service is responsible for maintaining and constructing physical infrastructure, including both above ground and underground structures, as well as public facilities, spaces, and green areas.

APPENDIX L. FOCUS GROUP LIST

-Meteorological Department Curaçao (Meteo) & Curaçao Climate Change Platform (CCCP)

https://www.meteo.cw/about.php?Lang=Eng&St=TNCC&Sws=R11
https://www.weather.cw/cccp/index.php?p=3
These organizations provide climate data and support research on climate change, helping to inform adaptation and mitigation strategies as well as policy development. The Curaçao Climate Change Platform is part of Meteo Curaçao, The CCCP was established to develop a climate strategy. This platform includes organisations from diverse sectors, such as public and private entities, financial institutions, academia, and NGOs.

Ministry of Economic Development (MEO)
https://gobiernu.cw/nl/ministries/economische-ontwikkeling/
The Ministry of Economic Development strives to ensure sustainable economic growth for Curaçaoan society. Additionally, MEO oversees the development and promotion of activities and investments in the city centre.

Ministry of Health, Environment and Nature (GMN) Sector Landbouw, Milieu & Natuur
- Agrarisch en Visserijbeheer (AVB): Agricultural and Fisheries Management
https://gobiernu.cw/nl/ministries/gezondheid-milieu-natuur/sector-landbouw-milieu-natuur/agrarisch-visserijbeheer-avb/
AVB oversees the upkeep of public gardens and greenery, including those within the World Heritage Site.

- Milieu en Natuurbeheer (MNB): Sector of Environment & Nature Management
https://gobiernu.cw/nl/ministries/gezondheid-milieu-natuur/sector-landbouw-milieu-natuur/milieu-natuurbeheer-mnb/
The MNB focuses on managing Curaçao's natural resources and environmental policies, supporting sustainability efforts in both urban and rural areas.

APPENDIX L. FOCUS GROUP LIST

Academia: science and education

In example:

University of Curaçao (UoC)

https://www.uoc.cw/
The University of Curaçao is the island's official institution for higher education and academic research. It is dedicated to enhancing education and awareness, incorporating heritage education into its curriculum. The University is increasingly prioritizing planetary health. Furthermore, UoC participates in collaborative initiatives, such as a learning community with TU Delft and The Hague University of Applied Sciences. It bolsters its ability to support sustainable urban planning and climate resilience.

University of the Dutch Caribbean

https://udc.cw/over-udc/
The University of the Dutch Caribbean is a private institution offering academic programs and conducting research in various fields.

TNO (Academia / Industry)

https://www.tno.nl/nl/newsroom/2021/01/living-lab-verduurzamen-economie-curacao/
TNO is an independent research institute focused on various innovations related to sustainable technologies. TNO collaborates with Curaçao in a living lab aimed at transitioning to a sustainable energy system. This open ecosystem enables the testing of new technologies and approaches in areas such as renewable energy and sustainable urban development. TNO's involvement merges research expertise with practical solutions, establishing it as a valuable partner in developing climate adaptation and mitigation strategies.

APPENDIX L. FOCUS GROUP LIST

Industry / private

In example:

Algemeen Pensioenfonds Curaçao (General Pension Fund of Curaçao)

https://apc.cw/over/
The Pension Fund invests in various sectors locally and internationally. Its involvement in financing climate resilience infrastructure projects, particularly in urban areas, is important for supporting sustainable development initiatives on the island.

Aquaelectra

https://www.aqualectra.com/company-profile/
Aqualectra is the government-owned utility company of Curaçao, producing and distributing water and electricity to more than 80,000 households and businesses. It also oversees public lighting throughout the island.

CHATA (Curaçao Hospitality & Tourism Association)

https://chata.org/about-chata/
Chata represents the hospitality and tourism sector, which is one of the main pillars of Curaçao's economy. As tourism is concentrated in the World Heritage Site of Willemstad, it is important for the sector to align its development strategies with climate resilience and sustainability goals.

Curaçao Ports Authority (CPA)

https://curports.com/port-authority/
CPA manages the ports of Willemstad, which are essential for maritime trade and tourism. The authority plays a significant role in ensuring that the port infrastructure remains resilient to climate impacts such as rising sea levels and extreme weather events.

APPENDIX L. FOCUS GROUP LIST

Curaçao Tourist Board (CTB)

https://www.curacaotouristboard.com/about/
The Curaçao Tourist Board oversees tourism in Curaçao, promoting sustainable practices while preserving the status of the World Heritage Site. The Organizational Vision is “to be the driving force for sustainable growth and development in tourism by aligning public and private institutions to coordinate planning, promotion, and management efforts.”

EcoVision N.V.

https://ecovisionnv.com/
EcoVision is an independent environmental consultancy firm specializing in environmental research, nature assessments, and environmental impact assessments. Their expertise in sustainable development and environmental management can provide valuable insights to support the development of climate adaptation strategies.

Fundashon Kas Popular (FKP) (The Curaçao Housing Foundation)

https://www.fkp.cw
FKP focuses on the restoring and managing social housing, particularly in the historic regions of Willemstad. The foundation’s initiatives contribute to the preservation of lively and habitable neighborhoods, enhancing the residential function of the historic inner city.

Selikor

https://selikor.cw/about-us/
Selikor is Curaçao's largest waste management company, overseeing waste collection and recycling services in Willemstad. It handles both residential and commercial waste, playing a key role in the island’s waste reduction and sustainability initiatives.

2bays

https://www.2bays.com/
2Bays is a consultancy focusing on sustainable development, particularly in the context of the port area. They provide expertise in integrating sustainable technologies and solutions,

APPENDIX L. FOCUS GROUP LIST

Community

In example:

Fundashon Ser'i Otrobanda (Ser'i Otrobanda Foundation)

https://www.facebook.com/seriotrobandacuracao/?locale=nl_NL
Fundashon Ser'i Otrobanda tackles social challenges in the Ser'i Otrobanda community, particularly focusing on young people. They organize and back various social events in the area, actively engaging the community in collaborative initiatives such as creating urban gardens and advocating for the arts.

Federashon Otrobanda (Otrobanda Federation)

https://www.facebook.com/federashon.otrobanda?locale=nl_NL
The Otrobanda Federation is an umbrella organization for various neighborhood groups, with the main goal of promoting Otrobanda as a beautiful, clean, and safe place for residents, businesses, and visitors.

Fundashon Rif

https://www.facebook.com/Fundashonrif/
Fundashon Rif advocates for the interests of the Rif neighborhood in Otrobanda, focusing on the preservation of the area, including the protection of the mangrove park.

Kaya Kaya

https://www.kayakaya.org/
Kaya Kaya began organizing street festivals in Ser'i Otrobanda with the aim of revitalizing the area. Their goal is to enhance safety, boost commercial and tourism prospects, and ultimately improve the investment climate for the island. One of their objectives is "To create a clean, safe, and attractive living environment."

SKO: Sosiedat di Komersiantenan di Otrobanda (SKO) (Merchants Society of Otrobanda),

https://www.facebook.com/sko.curacao/?locale=nl_NL
SKO advocates for the interests of merchants in the Otrobanda district of the World Heritage Site. The organization works to make Otrobanda a commercially and socially thriving area, ensuring its continued growth and development as an integral part of Willemstad.

APPENDIX L. FOCUS GROUP LIST

Stichting belanghebbenden Pietermaai

https://pietermaaidistrict.com/about-and-join/
The Stichting Belanghebbenden Pietermaai represents the interests of residents, business owners, and other stakeholders in the Pietermaai district of Willemstad. The foundation works to enhance the district's commercial viability while preserving its cultural and historical identity.

Unidat di Bario (Unity of district offices for service, work and income)

https://www.facebook.com/jeannette.juliet/
Unidat collaborates with all neighborhood organizations on Curacao that focus on well-being in the broadest sense by organizing socio-educational, socio-cultural, socio-economic, and recreational activities. Unidat emphasizes raising awareness in society regarding the position and importance of the neighborhood as a unit.

Inhabitants of the Inner City
The residents greatly impact the site's use. They are most impacted by alterations in the public space and by climate threats. However, representation varies among residents in different districts, making it essential to address this issue.

Climate and sustainability

(These organizations may fall under Industry / Private or Community, but form a separate expertise group.) In example:

Amigu di Tera

https://www.foei.org/member-groups/curacao/
https://www.facebook.com/p/Amigu-di-Tera-100064848181958/
Amigu di Tera is an environmental organization dedicated to nature conservation and promoting sustainable development in Curaçao. They actively protect natural resources and work on projects that enhance the island's long-term sustainability.

CARMABI (Caribbean Research and Management of Biodiversity)

https://www.carmabi.org/
CARMABI is a research institute dedicated to conserving biodiversity in Curaçao. It conducts ecological research, manages natural resources, and provides environmental education. Its mission is to contribute to the sustainable development and management of Curaçaos natural resources through research, nature management, and community engagement.

APPENDIX L. FOCUS GROUP LIST

Club 17

https://www.dtapfoundation.com/club17curacao
Club 17 is an organization dedicated to raising environmental awareness and promoting sustainability. They organize events and campaigns that engage stakeholders on climate issues and spur them to action for a more sustainable Curaçao.

Future Islands

https://www.future-islands.org/about-us
Future Islands is an independent knowledge platform that connects and mobilizes stakeholders. The founders of Future Islands aim to contribute to the sustainability of the Caribbean islands. This contribution is realized by developing and sharing knowledge on sustainability-related themes. Publishing knowledge and organizing events to connect people and organizations fosters awareness and constructs an active movement to promote sustainability.

Green phenix

https://greenphenix.com/
Green Phenix is a social enterprise that promotes sustainable development by fostering circular and inclusive economies, protecting oceans, empowering resilient island communities, and enhancing foresight-based governance for lasting sustainability.

Green Town Curacao

https://greentown-curacao.com/about-us/
Green Town Curaçao plans to redevelop the site of the former Isla oil refinery, transforming it into a clean, zero-emission town powered entirely by sustainable energy sources. This initiative aligns with the Inner City's goals for a resilient and sustainable future.

Groen Otrobanda

Groen Otrobanda is a community-based group focused on greening the Otrobanda district. Currently acting as an informal group.

APPENDIX L. FOCUS GROUP LIST

Heritage

To protect and conserve Curaçao's built heritage, various governmental and non-governmental organizations and institutions are involved, each with its own responsibilities. Among them:

Monumentenplatform

The Monumentenplatform serves as a coordination body for various heritage organizations in Curaçao. It facilitates collaboration between these stakeholders and ensures that heritage preservation strategies align with broader urban development. A link between the focus group and the heritage organisations could be formed via the monument platform.

Monumentenraad Curaçao (Council for Cultural Heritage)

https://curacaomonuments.org/organization/#:~:text=Monumentenraad%20Cura%C3%A7ao%20(Council%20for%20Cultural,appointed%20by%20the%20island's%20Government.
Its members are specialists experienced in monument preservation. They are appointed by the Island Government. The Council advises on monument policy, criteria for designating monuments, appeals from owners regarding designation, and requests for demolishing monuments.

Stichting Monumentenfonds Curaçao (Curaçao Monument Fund Foundation)

https://www.monumentenfonds.org/
On behalf of the government, Stichting Monumentenfonds Curaçao offers financial support for the conservation of built heritage through grants and loans. The foundation also provides information on financial, legal, and structural issues related to restoration. Additionally, it can assist monument owners throughout the restoration process, from preparation to implementation.

Stichting Monumentenzorg Curaçao, (SMC) (The Curaçao Heritage Foundation)

https://monumentenzorg.cw
The Foundation's main responsibility is to acquire, restore, and manage cultural property to preserve it for future generations. Additionally, it aims to raise public awareness and interest in Curaçao's cultural heritage.

APPENDIX L. FOCUS GROUP LIST

N.V. Stadsherstel Curaçao (The Willemstad Urban Rehabilitation Corporation)

https://stadsherstel.com/
The company was established to support the execution of the building policy and the restoration of Willemstad. N.V. Stadsherstel also acquires, restores, and manages numerous historical buildings, all within city limits.

National Archaeological Anthropological Memory Management Foundation (NAAM)

https://naam.cw
NAAM manages cultural resources in a broad sense. In addition to a museum housing various artifacts, NAAM undertakes archaeological and anthropological research. Furthermore, NAAM launches initiatives aimed at fostering (inter)national cooperation, knowledge, and commitment regarding Caribbean heritage matters.

The Pro Monumento Foundation

https://curacaomonuments.org/organization/
One of the primary goals of this private foundation is to foster awareness and interest among the local population in Curaçao's heritage. To this end, ProMo organizes events such as Open Monument Days. Additionally, this independent foundation serves as a watchdog and has taken legal action multiple times when built heritage was at risk.

Foundation for the Documentation and Conservation of the Modern Movement Curaçao – DOCOMOMO

Facebook: Docomomo-Curaçao
Docomomo's working group on Curaçao consists of volunteers passionate about the Modern Movement and knowledgeable in the field. They raise public awareness through lectures, architecture tours, and efforts to advocate for the preservation of endangered sites and buildings.

STATEMENT ON AI USE

This thesis utilized AI tools, such as ChatGPT and Grammarly, for language editing, organizing ideas, and generating feedback. All content and conclusions are solely the author's own, and critical analysis was conducted independently.