

A CHANGING MUNICIPALITY

RECOGNIZING DESIGN THINKING THEMES & ORGANIZATIONAL CHANGE MANAGEMENT ELEMENTS IN SCHIEDAM

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P5-Report



A CHANGING MUNICIPALITY

Recognizing Design Thinking themes and Organizational Change management elements in Schiedam.

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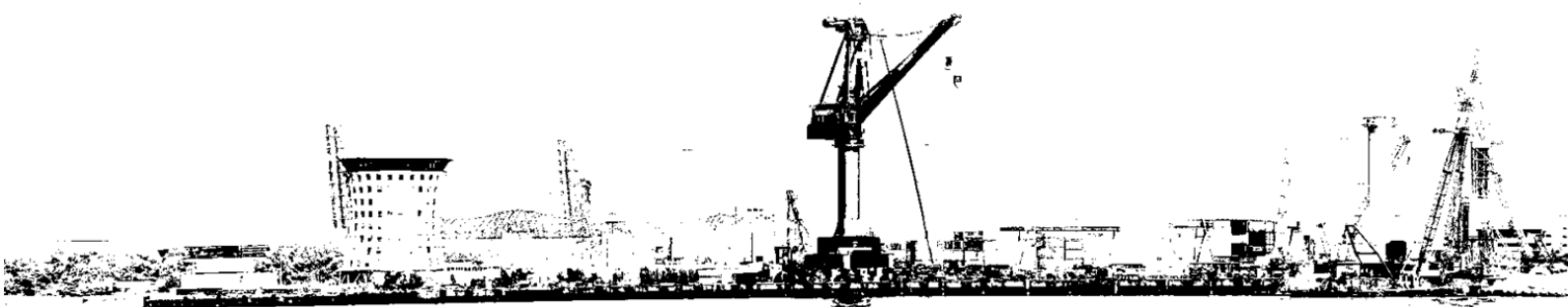
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i. PREFACE

In front of you is my P5 report, which serves as my final graduation report and describes how design thinking is implemented in the case of the Schiedam port area redevelopment and which Organizational Change Management elements can be recognized within the change process of the municipality of Schiedam

I started the master Management in the Built Environment wanting to become a project manager. During the first year of my master, I noticed that I became more and more interested in urban area development. I became fascinated by how a project or process manager was able to manage such big developments. This fascination is still alive today.

When I started my graduation year, it was not hard for me to choose a subject for my research, as I could finally combine my two biggest interests: project management and urban area development. This combination resulted in my research into how design thinking is implemented in urban area redevelopment projects. The case of attention for this research is the one of the Schiedam port area. This case was chosen after my first mentor, Louis Lousberg, mentioned the municipality of Schiedam coping with an urban development project at the moment I started my graduation. After looking into it, I got in contact with Bart Heinz, process manager in charge of the case, who further fueled my interest for this case.

Personally, I gained a lot of insight on how the redevelopment of the Schiedam port area is managed and how Design Thinking themes are recognized within that project. Adding to this, I learned a lot about organizational change management, and how the municipality of Schiedam is dealing with organizational change.

I hope you enjoy reading this document as much as I enjoyed working on it. But most of all, I hope this document brings you new insights about managing urban development projects, Design Thinking, and organizational change management.

Enjoy reading!

Joan Ruiz Pion

- January 2018

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CHAPTER 1

GLOBAL INTRODUCTION

This chapter serves as a global introduction to this thesis and provides a reasoning to this research's set-up, as it consists of two different parts.

At first, this research focused mainly on Design Thinking, and how it is implemented in the redevelopment project of the Schiedam port area. During the course of the research, the focus shifted away from this topic, as it became clear that the municipality of Schiedam was in a process of change, which moved away from a strong, active land policy towards a more process based approach that involves hooking on to, and strengthening, plans/initiatives from society and companies (Municipality of Schiedam, 2016; Heinz, 2017, pp. 1-2: Interview A1). Because of this shift, this research became two-sided.

As means to provide a comprehensive thesis, it was decided to treat both topics as being individual researches, both consisting of their own introduction, research proposal, analysis and conclusion. Therefore, this thesis consists of two parts: (1) Design Thinking in practice, and (2) Organizational change in practice.

1. DESIGN THINKING IN PRACTICE

As mentioned, the first part focuses on Design Thinking, and how it is implemented in an urban area development project. Therefore, an urban development project will be analyzed: the redevelopment of the Schiedam port area. This research opts to provide insights on how Design Thinking is implemented in a context other than private, product development. The main question for this part is as follows:

"How is design thinking implemented in the Schiedam port area redevelopment project?"

2. ORGANIZATIONAL CHANGE IN PRACTICE

The second part focuses on organizational change management and opts to provide insights in how the municipality of Schiedam is changing, and how it copes with its change. In order to do so, this part will describe organizational change management elements and will demonstrate if, and how, they are recognized within the municipality's change process. This research's main question is as follows:

"To what extent are organizational change management elements recognized within the municipality of Schiedam in its change towards becoming a director municipality?"

Both parts will be preceded by their own summary. Furthermore, it should be mentioned that although being different researches, the two parts contain interactions, as both focus on the municipality of Schiedam.

Design thinking is an ambiguous term regarding its meaning. It can be seen as an approach that opts to define and solve problems by incorporating designers' approaches, methods and tools to problem solving. As it is believed that all managers already do think like a designer, it is questioned how design thinking is implemented in the management of the Schiedam port area redevelopment. In depth analysis of the case elucidates how different design thinking themes are recognized within the management of the port area redevelopment, although being part as a process management approach. Subsequently, the case study demonstrates how it is not always necessary to implement every design thinking theme.

Keywords: *Design Thinking, Project Management, Process Management, Urban area development*

Introduction.

Design thinking is a rather ambiguous term when it comes to its meaning (Carlgren et al., 2016). It is considered to be a new methodology for improving innovation outcomes from a practitioners' point of view (Brown, 2009; Kelley & Littman, 2006; Liedtka & Ogilvie, 2011; Martin, 2009). In the literature, there are many definitions given for design thinking. When combining the main points of these various definitions, design thinking can be defined as being an approach that opts to define and solve problems by incorporating designers' approaches, methods and tools to problem solving. In the management of urban area development, design thinking can be applied to improve the decision-making and problem-solving processes, as it is best suited to decision contexts in which uncertainty and ambiguity are high (Liedtka, 2014). Such an area development project is for example the redevelopment of the Schiedam port area. Regarding this case, and looking at Boland and Collopy's (2004) statement that managers already do think like designers and implement design thinking to a certain extent, the following question arises:

"How is design thinking implemented in the Schiedam port area redevelopment project?"

In order to answer this question, this paper will describe the following steps:

- first, a research proposal is set up that will describe the research that is to be conducted.

- Second, theoretical research is conducted in order to get a deeper understanding of the topic, and will include framing design thinking and comparing it to both process- and project management. This, as a mean to elucidate whether design thinking themes are present in project- and process management. This is deemed important as it is possible that the process manager of Schiedam, involved in the redevelopment of the port area, implements Design Thinking without knowing he does so, and as, for example, part of process management.
- Third, the research's case study is addressed, which is followed by an analysis of the specific case.
- Finally, the research is concluded with the answer to its main question and recommendations for further research

Research proposal.

The first step of establishing a research proposal, is determining the research's goal. The main goal of this research is to elucidate how design thinking is implemented in urban area development projects, whilst demonstrating the added value of design thinking and why it should be implemented. In order to do so, this research aims at elucidating which design thinking themes from literature are recognized in the redevelopment of the Schiedam port area. Next, is the establishment of the research's relevance. This research will provide information on how design thinking is implemented in the public sector of urban

area development. These results are useful to scholars studying design thinking and urban development management, or anyone wanting to get a deeper understanding of the subject. Next to this scientific relevance, this research also has a practical relevance, since it is relevant and useful to project and process managers, especially of urban area development projects, that are interested in, and wanting to, implement design thinking. Since it is plausible that the situation in Schiedam also occurs in multiple other municipalities, and even in other organizations, the results of this research can be beneficial for a multitude of cases.

After establishing both this research's goal and relevance, the following research components can be discussed: (1) the research strategy, (2) the research design, (3) the research sample, and (4) the research methods.

1. Research strategy

A research strategy is general orientation to the conduct of research. For this research, a qualitative research strategy will be used: a strategy emphasizing words rather than quantification in the collection of data (Bryman, 2012, pp. 35-37). This research strategy is chosen for its following features (Bryman, 2012, p. 380):

1. Qualitative research tends to an inductive view of the relationship between theory and research. This means that theory is created out of the research.
2. Qualitative research stresses on the understanding of the social world through an examination of the interpretation of that world by its participants.
3. Qualitative research implies that social properties are outcomes of the interactions between individuals.

2. Research design

The research design represents the structure that guides the execution of a research method and the analysis of the subsequent data (Bryman, 2012, p. 45). For this research, a case study design is chosen. This is a research design that entails the detailed and

intensive analysis of a single case (Bryman, 2012, p.66), which for this research is the case of the Schiedam port area. Yin (2009, p. 4) argues that in general, case studies are the preferred method the more research question(s) seek to explain "how" or "why" some social phenomenon works and when the investigator has little control over events. This is supported by Massis and Kotlar (2014, p.16).

3. Research sample

A sample is a segment of a whole that is selected for investigation (Bryman, 2012, p. 187). This can be a segment of the population, organizations etc. For this research, a purposive sampling approach is adopted, since the research question give a clear indication of what units need to be sampled. With a purposive sampling approach, sampling is conducted with reference to the goals of the research, so that units of analysis are selected in terms of criteria that will allow the research questions to be answered (Bryman, 2012, p. 418). The sample for this research consist of several actors involved in the case, of which some specific for a certain research question: the process manager of Schiedam, representatives of the port area businesses, civil servants of the municipality etc.

4. Research methods

Research methods are techniques for collecting data (Bryman, 2012, p. 46). For this research, a literature study is performed. Several sources have been analyzed and compared to gain in-depth knowledge about the subject. Next to a literature study, semi-structured interviews will be used. This refers to a context in which the interviewer has a series of questions that are in the general form of an interview schedule, but is able to vary the sequence of questions. Using a semi-structure interview provides some latitude to ask further questions in response to what are seen as significant replies (Bryman, 2012, p. 212).

Design thinking: a framework.

In order to establish how design thinking is implemented in the redevelopment of the Schiedam port area, it is necessary to frame

Design Thinking in order to recognize it. Carlgren et al. (2016) conducted research in order to form a framework on design thinking. They mention five themes that characterize the use of design thinking. These themes emerged from a study among companies that claimed to implement design thinking and are represented in the basic structure of their framework. See Figure 1.

Themes	Principles /Mindsets	Practices	Techniques
Theme 1			
Theme ...			
Theme N			

Figure 1: The basic structure of the design thinking framework. Carlgren et al. (2016).

The five themes are: (1) user focus, (2) problem framing, (3) visualization, (4) experimentation, and (5) diversity. These themes are elaborated below.

1. User focus

This theme refers to a fundamental user focus, expressed in empathy building, deep user understanding and user involvement. It is about having an open attitude, remaining open-minded without judging, feeling comfortable with people of different backgrounds and opinions, and involving users in idea-forming processes (Carlgren et al., 2016, p. 46-51).

2. Problem framing

Problem framing revolves around widening, challenging, and reframing problems instead of trying to solve them immediately (Carlgren et al., 2016, p. 46-51).

3. Visualization

The third theme refers to making ideas tangible by means of representations, sketching, making models, acting, role-playing, storyboarding, storytelling and analogies (Drews, 2009; Ward et al., 2009; Stanford d. school, 2010; Liedtka & Ogilvie, 2011). This theme proved to be of importance in creating consensus and sharing insights (Carlgren et al., 2016, p. 46-51).

4. Experimentation

This theme focuses on learning by trying things out, testing solutions and getting feedback. Creativity and unconstrained thinking were considered as important mindsets by the companies that were interviewed by Carlgren et al. (2016, p. 48-49).

5. Diversity

Lastly, diversity refers to focusing on a wide range of stakeholders, encompassing collaboration in diverse teams, and the integration of diverse outside perspectives throughout the process (Carlgren et al., 2016, p. 48).

These themes will be used to research how design thinking is implemented in the redevelopment of the Schiedam port area. An analysis of the process' course will elucidate whether or not these themes can be recognized and if so, how these themes are implemented. This framework, together with the research proposal, can be summarized in a conceptual model. See Figure 2 on the next page.

Design thinking vs project management.

Project management is the discipline of planning, organizing and managing resources to achieve the successful completion of specific project goals and objectives (Collins, 2011). It is about ensuring the effective delivery of the project mission for the client (Winch, p. 8). Oisen (1971) and Atkinson (1999) describe project management as the use of a set of tools and techniques to direct the application of diverse resources toward the accomplishment of a unique, complex, one-time task within time, cost and quality constraints. This definition includes criteria that are used to measure the success of the project: cost, time and quality. These criteria are also used in the definition of project management given by the UK Association of Project Management (APM): The planning, organization, monitoring and control of all aspects of a project and the motivation of all involved to achieve the project objectives safely and within agreed time, cost and performance criteria.

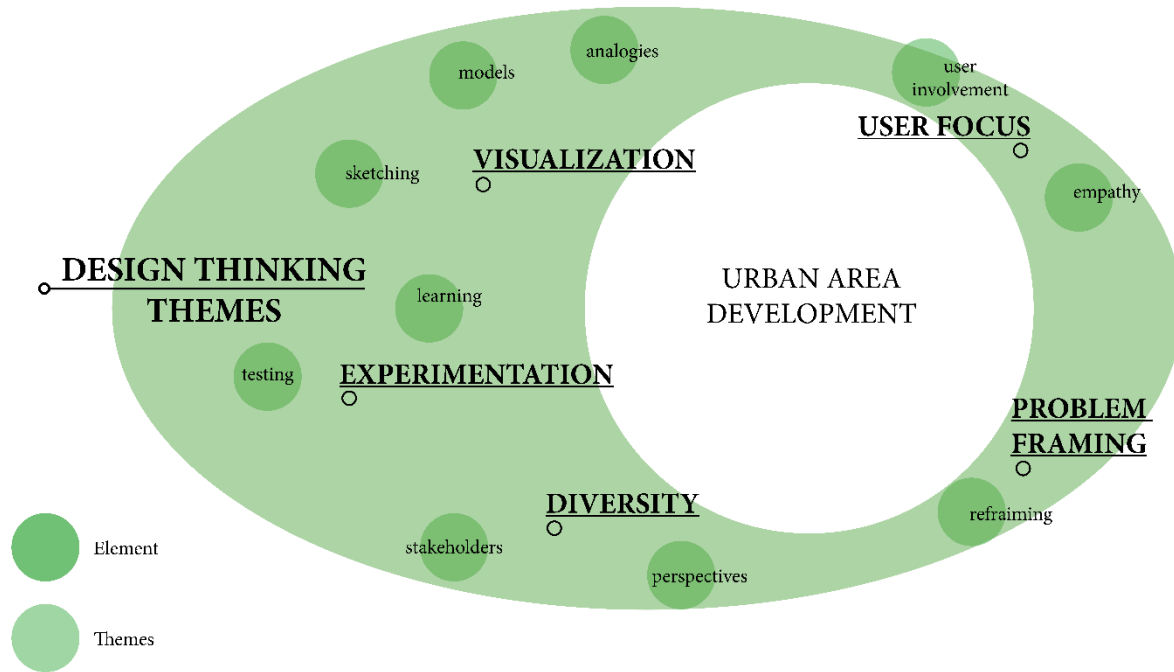


Figure 2: conceptual model integrating the five design thinking themes described by Carlgren et al. (2016) and possible new themes. Own Illustration.

Project management revolves around the assumption that problems and solutions are stable within certain boundaries. This

assumption allows for the use of project management tools like time schedules, predefined end product, clear frameworks and a clear goal. The result of this project approach is linear and structured decision-making (Bruijn et al., 2010, p.15). When situations involve innovative contexts where uncertainty and complexity is prevalent, standard project management approaches prove to be ill suited (Brady & Davies, 2004; Brady, Davies, & Nightingale, 2012; Lenfle, 2008; Loch, De Meyer, & Pich, 2006). In such situations, design thinking is of added value to project management, as it opts to reduce complexity and solve wicked problems by incorporating designers' approaches and tools, and by broadening problems to increase the solution space (Brown, 2008, 2009; Carlgren et al., 2016; Johansson-Sköldberg et al. 2013; Mahmoud-Jouini et al. 2016; Martin 2009; Liedtka, 2014).

Design thinking vs process management.

Process management entails the in-depth analysis of an area development, the insurance of active involvement and support, and the design of an effective decision-making process that will lead to a sustainable urban area development (Franzen et al., 2011, p. 119). According to De Bruijn et al. (2010), the basic principle of process management is the management of the interests of the many actors involved in the project, with its main objective of providing a good process. De Bruijn et al. (2010, p. 41) describe a good process as an open process in which actors have the security that their core values are protected, while offering sufficient incentives for progress and guaranteeing the substantive quality of the results. Furthermore, De Bruijn et al. (2010, p. 63) established a set of activities that can be performed when designing a process. See Figure 3.

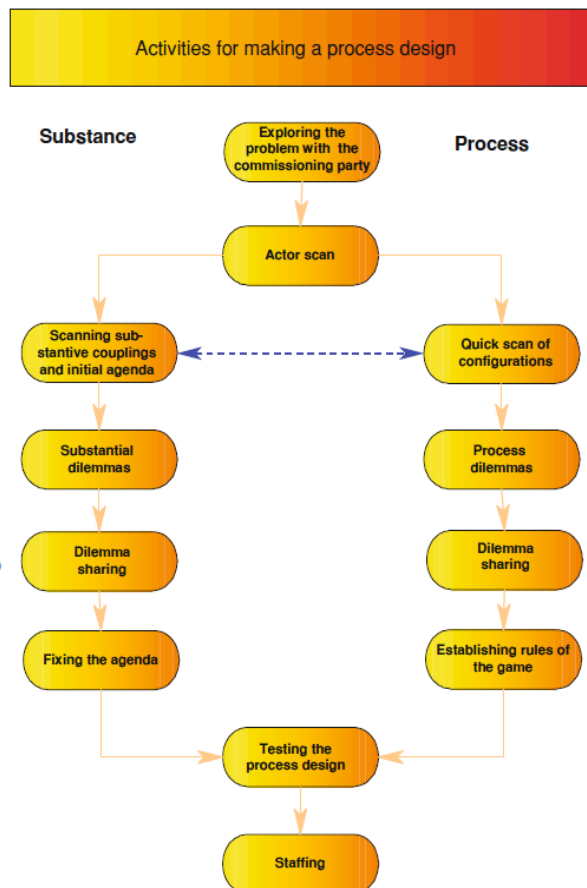


Figure 3: The activities of making a process design. De Bruijn et al., 2010, p. 64

The comparison of process management and design thinking, is done on basis of the five design thinking theme.

1. User focus

Regarding urban area development projects, the users can be considered to be the many stakeholders that are involved in the process. In this prospect, user focus forms a fundamental part of process management as its four core elements focus on the stakeholders, thus the users, to certain extents. Openness for example, ensures that all relevant actors are involved in the decision-making process and offers them the chance to address topics or ideas that are relevant to them while providing transparency, so all the stakeholders know how the process will progress (Bruijn et al., 2010, p. 41-55).

2. Problem framing

Problem framing referred to widening, challenging and reframing problems instead

of trying to solve them. This is done in order to create a larger solution space. In their book *'Management in Networks'*, De Bruijn and Ten Heuvelhof (2008) describe a similar action regarding process management. They mention that problems are to be formulated in such a way that they become interesting to other actors. 'Goal stretching' and 'naming and framing' are helpful to achieve this. Goal stretching entails 'stretching' a goal or problem to make them sufficiently recognizable to a critical mass of actors.

3. Visualization

When specifically looking at process management in urban area development, Franzen et al. (2011) state that urban area development processes involves various plans, which are not just an instrument of implementation. Instruments of an urban planner play a predominant role in reaching a consensus among actors involved in an urban area redevelopment processes. A master plan for example, incorporates spatial and functional elements, providing an indication of what the future development might look like. It generally includes a representation of each actor's interests, translated in a plan that integrates all urban demands; It is a visual representation of consensus (Castells, 1975; in Franzen et al., 2011, pp. 30-31).

4. Experimentation

When looking at the process management literature, an example of experimentation can be found in the strategies used by process managers to deal with dilemmas. A strategy showing some kind of experimentation is the 'pilot option' strategy: one solution to a dilemma is implemented as a pilot on a small scale. The results of the pilot are monitored after which the experiment of the pilot is evaluated to be either successful or unsuccessful (Bruijn et al., 2010, p. 72).

5. Diversity

The last Design thinking theme refers to focusing on a wide range of stakeholders, encompassing collaboration in diverse teams and integrating different perspectives (Carlgren et al., 2016, p. 48). This can be

linked to the basic principle of process management, which is the management of the interests of the many actors involved in a project (Bruijn et al., 2010).

Process management vs project management.

Process- and project management have fundamental differences. Where the basic principle of project management is achieving a predefined goal, the basic principle of process management is managing the different interests of the many actors (Franzen et al., 2011, p. 126). The biggest, fundamental differences are listed in Table 1.

Table 1: the differences between project and process management. Based on Franzen et al., 2011.

	Project management	Process management
Goals	Known	Unknown
Stakeholders	Known	Partly known
Phase of project	After initiative	All phases
Philosophy	Control	Goal-seeking
Decision-making	Operational	Strategic
Context	'Frozen' context	Interwoven, erratic

Project and process management also differentiate in terms of management skills. See Table 2.

Table 2: the differences in management skills. Based on Franzen et al., 2011.

Project manager	Process manager
Controlling	Initiating
Understanding regulations and contracting	Making actors enthusiastic
Risk management	Understanding interests
Making trade-offs and decisions	Understanding strategic behavior
Conflict resolution	Searching common ground / integrative negotiation
External communication	Selective activation
Pushing	Timing

A difference between project- and process management can also be detected on the grounds on which they operate: the former operating in a hierarchy. See table 3.

Table 3: the differences between a hierarchy and network. (Bruijn, Heuvelhof, 2008, p. 10)

Hierarchy	Network
Uniformity	Variety
Unilateral dependencies	Mutual dependencies
Receptive to hierarchical signals	Closed to hierarchical signals
Stability, predictability	Dynamic, unpredictability

The municipality of Schiedam: a case study.

The municipality of Schiedam is changing. It is moving away from an active land-policy, towards a more facilitating and process based way of working. The municipality

identifies itself as being a *director municipality*: a municipality that hooks on to plans/incentives from society and companies, and strengthens these plans by giving their input as municipality in terms of providing knowledge, creating support, and giving permits.

This change is enforced by several factors. First, the role of municipalities in urban development has shrunk, as the role of end-users has increased. Second, the numbers of stakeholders involved in urban area development has greatly increased. This affects the steering opportunities of the government. And thirdly, there is less money. Together with the crisis of 2008, these factors caused the active land-policy to end, as it was no longer an effective way of achieving municipal goals (Municipality of Schiedam, 2016).

These changes reflect on the management of municipals projects, one of which is the redevelopment of the Schiedam port area. Starting from May 2014, plans have been developed for the port area of Schiedam. The incentive for these plans was a conversation between the municipality of Schiedam and the companies of the port area, with the latter having the ambitions to expand and to tackle bottlenecks to their business, such as parking nuisance, traffic flows, environmental legislation and the bad state of the harbor quays. The purpose of these plans is to realize a sustainable, future proof port area with a strong maritime cluster and healthy living environment, which adds to a better connection with the city (Municipality of Schiedam, 2016, p. 3).



Image 1: the port area of Schiedam. Picture retrieved from: <https://www.schiedam.nl/Havens.html>

Interviews with the process manager leading this project allowed for an exploration as to see whether or not the five design thinking themes are present in the management of the project, and how these themes are implemented.

Analysis of the process course finds that actors were invited to show their ambitions and jointly form a map depicting all the different ambitions. See the following chapter. Adding to this, several meetings and work sessions were held that were open to all who were interested, so not only to the actors directly involved in the decision-making process. This is in accordance with Carlgren et al.'s description of 'User focus', which focuses on user understanding and involvement.

In the port area redevelopment, the companies of the Wiltonport were the initiators. They wanted to expand and asked the municipality of Schiedam to help them with their plans.

The municipality, while working on the expansion plans for the companies, decided to see these plans in the context of a broader area redevelopment. The surrounding area was involved in the project, making the intensification of the port companies a part of a bigger urban redevelopment. This mirrors the design thinking them 'Problem framing': widening problems as means to create a larger solution space (Carlgren et al., 2016, pp. 46-51).

When looking at the course of the redevelopment process, to main ways of making ideas tangible by visualization can be discovered: the Ambitionmap (Image 2) and the Urban Strategy Tool of TNO. Both were used to make ideas and ambitions visible, tangible to all actors. This is in line with Carlgren et al. (2016, pp. 46-51) and Liedtka (2015), who state that visualization is of importance in creating consensus, sharing insights and learning.

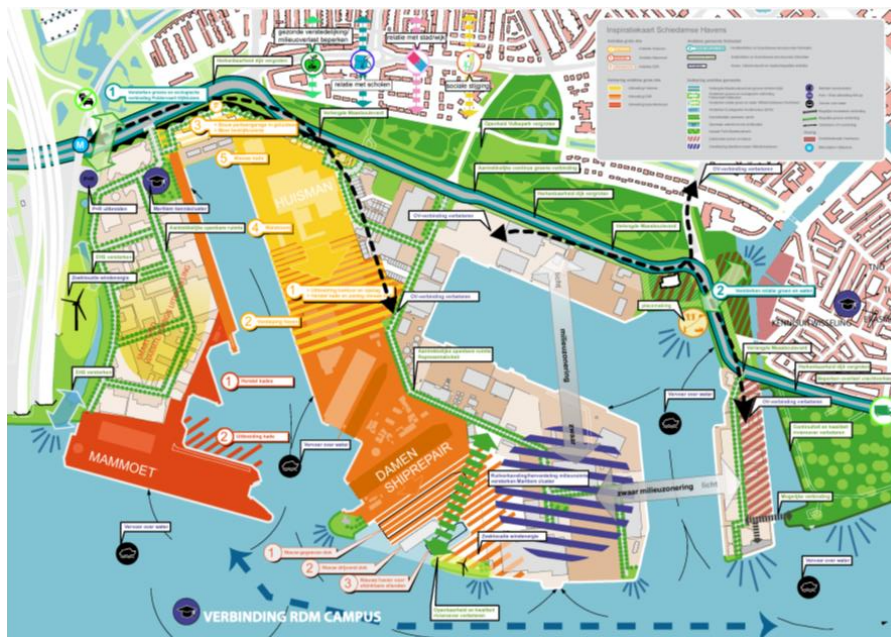


Image 2: The Ambitionmap.

One of the port area's issues was the safety for cyclists. Since there were no speedbumps, the many trucks traveling in the area were not forced to slow down, which caused unsafe situations for cyclists. Therefore, the municipality wanted to add

speedbumps in the area. In order to find the right speedbump, one that forces trucks to slow down but does not cause too much of a hindrance, different trucks drove over different types of speed bumps in the city of Schiedam. This is in accordance with

Carlgren's et al. (2016, pp. 48-19) description of the Design Thinking theme 'Experimentation'.

At the beginning of the process, the process manager organized a boat trip through the area with 150 actors. Afterwards, the group split into smaller groups to work on the different themes around the redevelopment of the port area. In these smaller groups, the different actors jointly came up with findings, bottlenecks and solutions, which mirrors Carlgren et al.'s (2016) description of 'Diversity'.

Conclusions.

After conducting the research, the main question can be answered, which was as follows:

"How is design thinking implemented in the Schiedam port area redevelopment project?"

Design thinking has been implemented in the Schiedam port area redevelopment project in the following different ways:

1. The process focusses on users: actors are addressed as equals by the process manager and involved where possible. Actors were invited to show their ambitions and jointly form, and work on, the Ambitionmap.
2. Objectives are seen in a broader context: instead of solely focusing on the port area, the municipality used this possibility to form a greater area redevelopment, while attracting more actors who share an interest in the broader picture.
3. Visualization plays a prominent role in the process: all ambitions are elaborated and made visible in the Ambitionmap, which serves as process vehicle. Together with the Urban Strategy tool of TNO, the Ambitionmap served as means to make ideas visible, tangible, and to start discussions.
4. Experimentation took place by means of the Urban Strategy tool, and on a physical level, by literally driving over several kinds of speedbumps in order to find the right one.

5. The project consisted of a diverse set of actors, who's different perspectives were integrated in the plan by inviting them to join work groups in which different themes for the redevelopment of the port were worked out.

Furthermore, it is concluded that not all Design Thinking theme is necessarily present in every urban (re)development project, as elucidated by Stad's own experience with the topic. Subsequently, Gouweleeuw adds to this that the approach employed for the redevelopment of the Schiedam port area redevelopment, though considered to be the only way to deal with the project's complexity, should not necessarily be employed in every urban (re)development project, as not all projects are as complex as the redevelopment project of the port area, and should not be made more complex than they are.

Recommendations.

Three recommendations for further research can be made based on questions that arose from this research, or on subjects that are considered to have a so called open-ending.

Firstly, this research mentions how the specific way of working employed in the management of the Schiedam port area redevelopment project is not unique. Further research can be conducted on in which situations this approach is adopted, and why it is adopted.

Secondly, this research described how process management can flow into project management in the course of a project. Further research can be conducted on how process management flows into project management in practice.

Thirdly, the added value of Design Thinking to project management has been addressed from a theoretical point of view. Further research can be conducted on if this added value prevails in practice

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The municipality of Schiedam is in a process of change. Subsequently, successful management of change is a necessity to survive in an eminent competitive and continuously changing environment (Luecke, 2003; Hemmington, Okumus, 1998), which leads to the question if, and to what extent, change management elements are recognized in the municipality of Schiedam's process of change. This research answers this question, whilst demonstrating in which way the elements are recognized. Analysis shows how different elements are recognized by different interviewees who are part of the organization, and how the change process is experienced in different, sometimes contrasting, ways.

Keywords: *Organizational Change Management, Change by rate of occurrence, Change by how it comes about, change by scale, Schiedam, Dutch municipalities*

Introduction.

In the Netherlands, there is a long tradition of extensive governmental involvement in preparing, establishing and implementing spatial planning. Through active participation in the land market and land development, local authorities give direction to spatial development by undertaking urban land development itself. Municipalities have the accessibility to a set of instruments that allow them to put spatial planning in place and to endeavor to achieve the desired physical and spatial quality (Louw et al., 2003, p. 358). This system has functioned well for decades. However, in the last years changes have occurred which are changing the way spatial planning is implemented. Private actors have been showing a growing interest in the land development process, which has forced local authorities to rethink how they govern land development and land-use policy. Due to increasing geographical scales of social and economic processes, and the shift from government to governance, the Dutch planning system faces huge challenges (Louw et al., 2003, p. 358).

An example of a municipality facing such changes is the municipality of Schiedam. This municipality's culture regarding urban area development has always been very makeable, with an active-land policy. In recent years, the municipality of Schiedam is shifting from this policy towards a passive one, in which the municipality hooks on to initiatives from others and facilitates where

possible. By doing so, the municipality shifts from a project based way of working, to a process based way of working in urban area development. Such changes in an organization can have big consequences (source). According to Luecke (2003), and Hemmington & Okumus (1998), successful management of change is a necessity to survive in an eminent competitive and continuously changing environment. Therefore, organizational change management is a highly required managerial skill (Senior, 2002). When looking at existing organizational change management literature, regarding the changing situation of the municipality of Schiedam, the following question arises:

'To what extent are organizational change management elements recognized within the municipality of Schiedam in its change towards becoming a director municipality?'

In order to answer this question, this paper will describe the following steps:

- First, a research proposal is set up that will describe the research that is to be conducted.
- Second, a theoretical research is conducted in order to get a deeper understanding of the topic, which includes defining organizational change management and addressing the different aspects of change. Subsequently, elements of organizational change management will be determined and

selected as to allow an analysis of Schiedam's change process.

- Third, the changing situation within the municipality of Schiedam will be addressed and analyzed using the selected organizational change management elements.
- Finally, the research is concluded with the answer to its main question and recommendations for further research

Research proposal.

The first step of establishing a research proposal, is determining the research's goal. The main goal of this research is to gain insight on how the municipality of Schiedam copes with its transition from a project-based, towards a process-based way of working. In order to do so, this research aims at elucidating which elements from organizational change management literature can be recognized within the case of the municipality of Schiedam.

This research will provide information on organizational change management, and will elucidate the changing situation of the municipality of Schiedam and, subsequently, the challenges they face in their transition. This research will show which elements of organizational change management literature can be recognized within the case of Schiedam, which will provide insights on how the municipality is coping with change. These insights are useful to scholars studying organizational change management, as it provides a link with a real-life case, or anyone wanting to get a deeper understanding of the subject. Next to this scientific relevance, this research also has a practical relevance, as lessons can be learned from how the municipality of Schiedam undertakes its transition and how it deals with setbacks.

After establishing both this research's goal and relevance, the following research components can be discussed: (1) the research strategy, (2) the research design, (3) the research sample, and (4) the research methods.

1. The research strategy

A research strategy is general orientation to the conduct of research. For this research, a qualitative research strategy will be used: a strategy emphasizing words rather than quantification in the collection of data (Bryman, 2012, pp. 35-37). This research strategy is chosen for its following features (Bryman, 2012, p. 380):

4. Qualitative research tends to an inductive view of the relationship between theory and research. This means that theory is created out of the research.
5. Qualitative research stresses on the understanding of the social world through an examination of the interpretation of that world by its participants.
6. Qualitative research implies that social properties are outcomes of the interactions between individuals.

2. The research design

The research design represents the structure that guides the execution of a research method and the analysis of the subsequent data (Bryman, 2012, p. 45). For this research, a case study design is chosen. This is a research design that entails the detailed and intensive analysis of a single case (Bryman, 2012, p.66), which for this research is the case of the Schiedam port area. Yin (2009, p. 4) argues that in general, case studies are the preferred method the more research question(s) seek to explain "how" or "why" some social phenomenon works and when the investigator has little control over events. This is supported by Massis and Kotlar (2014, p.16).

3. The research sample

A sample refers to a segment of a whole that is selected for investigation (Bryman, 2012, p. 187). Since this research focuses on a changing situation within a specific municipality, that of Schiedam, this is considered to be the sample. The 'whole' to this sample are municipalities facing similar changes as the municipality of Schiedam.

4. The research methods.

Research methods are techniques for collecting data (Bryman, 2012, p. 46). For this research, a literature study is performed. Several sources have been analyzed and compared to gain in-depth knowledge about the subject. Next to a literature study, semi-structured interviews will be used. This refers to a context in which the interviewer has a series of questions that are in the general form of an interview schedule, but is able to vary the sequence of questions.

Organizational Change Management.

Change is a continuous aspect of organizational life, both at an operational and strategic level (Burnes, 2004). Successful management of change is a necessity to survive in today's eminent competitive and continuously evolving environment (Luecke, 2003; Hemmington, Okumus, 1998). Because of this importance, change management is a highly required managerial skill (Senior, 2002). It is defined as *'the process of continually renewing an organization's direction, structure, and capabilities to serve the ever-changing needs of external and internal costumers'* (By, 2005, p. 369; Based on Brightman, Moran, 2001, p. 111). In order to get a better understanding of change management, it is important to know that there are different kinds of change. Senior (2002) divided change into three different categories in order to link different theories about- and approaches to change: change by rate of occurrence, change by how it comes about, and change by scale.

Change By Rate Of Occurrence.

Different types of change can be detected when looking at change characterized by rate of occurrence: (1) discontinuous change, (2) continuous change, and (3) incremental change.

1. Discontinuous change

Discontinuous change can be defined as change which is marked by fast shifts in strategy, structure or culture. Or in all three (Grundy, 1993, p. 26). It is a onetime event that takes place through large, widely separated initiatives that are followed up by

long periods of consolidation and stillness (Luecke, 2003, p. 102).

2. Continuous change

Suggested to be a better approach to change is the situation where an organization continuously monitor, sense and respond to its external and internal situation as an ongoing process consisting of small steps (Luecke, 2003). This continuous change is therefore defined as the ability to change continually in a fundamental way to keep up with the rapid pace of change (Burnes, 2004).

3. Incremental change

The third type of change is incremental change: a situation in which individual parts of an organization deal increasingly and separately with one problem at a time.

Change By How It Comes About.

When characterizing change by how it comes about, multiple approaches are recognized: (1) Planned, (2) Emergent, (3) Contingency, (4) Choice.

1. planned

The planned approach to change tries to explain the process that brings changes (Burnes, 1996), while emphasizing the importance of understanding the different states which organizations will have to undergo to be able to move from the unsuitable situation to the identified desired state (Eldrod II, Tippet, 2002).

2. Emergent

The emergent approach to change highlights that change should not be seen as a series of linear events during a certain period of time, but as a continuous, open-ended process of acclimating to changing circumstances, while emphasizing the unpredictable nature of change (Burnes, 1996, 2004; Dawson, 1994), and perceiving change as a process of learning (Altman, Iles, 1998; Davidson, De Marco, 1999; Dunphy, Stace, 1993).

3. Contingency

This approach indicates how to vary change strategies to achieve maximum fit with the

changing environment (Dunphy, Stace, 1993, p. 905).

4. Choice

This approach revolves around organizations not necessarily needing to change in order to adapt to their external environment. Organizations can adopt an approach of choice in which they choose to influence situational variables in order to change their internal practices to match with external variables, instead of being forced to do so (Burnes, 1996).

Change By Scale.

This third category of change can also be divided in four characteristics: (1) fine-tuning, (2) incremental adjustment, (3) modular transformation, (4) and corporate transformation (Dunphy, Stace, 1993).

1. Fine-tuning

Fine-tuning describes change as an ongoing process with the purpose of developing personnel suited to the present strategy and refine policies, methods and procedures (Senior, 2002).

2. Incremental adjustment

Incremental adjustment revolves around modifications to management processes and organizational strategies, disregarding radical change (Senior, 2002).

3. Modular transformation

Modular transformation can be classified as change identified by major shifts of one, or multiple, departments or divisions. This change is focused on a part of an organization instead of on the organization in its entirety (Senior, 2002)

4. Corporate transformation

Corporate transformation can be described as change that is corporate-wide and characterized by radical adjustments in the business strategy (Dunphy, Stace, 1993).

Process Of Change.

Regarding successful organizational transformation, several authors describe different steps of achieving a successful process. These steps are incorporated in Table 1, which also serves as a comparison between the authors.

Table 1: a comparison of different models of change. Based on By, 2007, p. 376.

	Kanter et al, 1992	Kotter, 1996	Luecke, 2003
1.	Analyze the organization and the need to change	X	Joint identification of business problems and solutions
2.	Form a vision and a common direction	Develop a vision and strategy	Develop a shared vision of how to organize and manage
3.	Separate from the past	X	X
4.	Create a sense of urgency	Establish a sense of urgency	X
5.	Support a strong leader role	X	Identify leadership
6.	Line up political sponsorship	Create a guiding coalition	X
7.	Craft an implementation plan	X	X
8.	Develop enabling structures	Empower broad-based action	X
9.	Communicate, involve people, be honest	Communicate the change vision	X
10.	Reinforce and institutionalize change	Anchor new approaches in the culture	Institutionalize success through policies and structures
11.	X	Generate short-term wins	X
12.	X	Consolidate gains and produce more change	X
13.	X	X	Focus on result, not activities
14.	X	X	Do not push change from the top, but let it spread to different units
15.	X	X	Monitor and adjust strategies in response to problems

The Changing Role Of The Municipality Of Schiedam.

The change within the municipality of Schiedam has two main causes. The first reason is an administrative, political one: both the mayor and the city council stepped up. This made fundamental changes in the organization necessary, especially regarding trust and how to interact with each other, on an organizational level (Gouweleeuw). The second reason revolves around social developments: *how does the municipality cope with information and which role should the municipality adopt*. These questions led to the decision to become a director municipality: one that utilizes the opportunities outside of the organization. The municipality had to start thinking from the outside towards the inside: look at what problems, solutions, tasks there are in the city, and bring those inside the organization.

This contrasts the old situation, in which plans were conceived inside the organization, and where brought to the city (Gouweleeuw). These two issues happened at the same time, and force the municipality to change in different ways.

Findings.

In order to analyze the situation of the municipality of Schiedam, different members of the organization were interviewed about the changing role of the municipality and change management. Table 2 demonstrates these findings of the interviews, in which (+) indicates that an element is present, (-) indicates that it is absent, and (~) indicates that it is only partly recognized. The number of signs corresponds with the number of interviewees in who's answers the specific element at stake was recognized, if recognized at all.

Table 2: Findings.

Element	Recognition	Elaboration
Discontinuous	-/+ / +/~	According to Hende and Gouweleeuw, this approach does not apply to the change process in Schiedam, as the municipality has to continuously change in order to keep up with its environment. In contrast, Stad and Heinz mention how they lack active steering on changing. Adding to this, Stad mentions experiencing a relapse to old behavior.
Continuous	+/- / -/+	This approach is considered to be the only possible approach considering that the environment is always changing. Therefore, the municipality must continuously change to keep up (Hende, Gouweleeuw). However, the municipality is also considered to be an organization that does not easily adapt to changes and does not actively steer on change (Stad, Heinz).
Incremental	+ / + / +	Examples like refugee crisis show how the municipality can deal with one issue at the time (Gouweleeuw). Subsequently, this approach is considered to be the base to the municipality's <i>'task steering'</i> (Stad, Hende).
Planned	- / - / -	The changes the municipality is experiencing were not planned. This, as the changes flow from apparent reasons that could not be planned, being the departure of a mayor, a city council, and a financial crisis (Hende, Heinz, Gouweleeuw).
Emergent	+ / + / +	The process of change is considered to be non-linear, as it is open-ended. Due to the pace of change, it is impossible to make finite plans for change (Hende, Stad). Furthermore, experiencing a booming effect that forces great changes, within a context of continuously having to change, can be inferred as also being a non-linear process of change (Gouweleeuw).
Contingency	This element did not prevail in any of the interviews.	
Choice	~/ - / - / -	All interviewees stress how the municipality had no choice but to change, which leads to the conclusion that this approach was not implemented within this case. However, elements of this approach are still recognizable, as changing was an intentional, deliberate choice, albeit an involuntarily one (Hende).

Fine-tuning	+	Fine-tuning is considered to be a way of polishing policies, which is something the municipality of Schiedam does (Hende).
Incremental Adjustment	+/-	Like fine-tuning, incremental adjustment is considered to be a way of polishing strategies and processes (Hende). In contrast, the municipality of Schiedam is not perceived as an organization that does things in small ways (Stad).
Modular transformation	+ / +/-	The changes the municipality of Schiedam experiences, are considered to be corporate wide (Gouweleeuw). Hende however, explains how it is possible that certain departments within the municipality experience change to different extents, which fits modular transformation.
Corporate transformation	+ / + / + / +	All interviewees described the change as being corporate wide. This, as the overall quality to the outside world must be the same, regardless of which department of the municipality is at stake (Hende).

Conclusion.

This research elucidated how the municipality of Schiedam is changing as reaction to internal changes: the departure of a mayor, the city council, and an ill organizational culture of distrust and non-transparency; as well as to external changes: the always changing environment and the economic crisis. These factors lead to the municipality of Schiedam becoming a *director municipality*: one that no longer conceives plans inside the organization and pushes those plans through to the outside environment, but instead looks at what problems, solutions, tasks there are in the city, and brings those inside the organization. Subsequently, this research showed how successful management of change is a necessity to survive in today's eminent competitive and continuously evolving environment (Luecke, 2003; Hemmington, Okumus, 1998).

Using the described organizational change management elements, the changing situation of the municipality of Schiedam was analyzed. This allowed for this research's main question to be answered, which is as follow:

"To what extent are organizational change management elements recognized within the municipality of Schiedam in its change from a project- to a process-based way of working in urban area development?"

The analysis has led to the conclusion that some of the organizational change management elements are recognized within the municipality's change process, while others are considered to be absent or less present. This further leads to the conclusion that the change process is experienced in different ways within the organization. Comparing the different views on the municipality's change, shows how there are contrasting views between different layers of the organization. Where a higher layer of the organization, Hende (director) and Gouweleeuw (alderman), both identify the change as being continuous, the lower layer, Heinz and Stad, experiences the change as being discontinuous and lacking active steering on the invitation policy.

In addition to the organizational change management elements, this research addressed challenges of change, and showed possibilities on how to cope with them. On this topic it can be concluded that some complex problems can be solved in a non-complex way.

Recommendations.

Following this research, some recommendations can be made for the municipality of Schiedam and further research.

Firstly, this research addressed the changing role of the municipality of Schiedam. Further research can be conducted on changes within Dutch municipalities in general. This research could elucidate whether or not other municipalities in the Netherlands experience change the same way as, or similar to, the municipality of Schiedam, and if changes have led to similar situations as the one experienced by the process manager of Schiedam.

Secondly, several different steps of achieving a successful process of change have been described in this research. As different authors mention different steps of how to reach success in a process of change, research can be conducted on which steps are recognized within change processes that are concluded.

Thirdly, Further research can be conducted on how other municipalities deal with the problems they come across in their course of change. This research could show what problems are most common in municipal organizational change, and what approaches or strategies municipalities apply in order to solve them.

Fourthly, since it is concluded that the change within the municipality of Schiedam is experienced in different ways among different layers of the organization, the question arises as to what the reasoning behind this difference is. Therefore, further research can be conducted on how this difference arose and which factors contributed to it. Such research can subsequently focus on how this issue could possibly be solved.

When looking at the specific case of Schiedam, it is recommended that the organization starts to actively steer towards the desired situation, as to better promote change. This, as the interviews showed that people within the organization are missing such steering. Doing so, may also help prevent people from getting the feeling that

the idea of change is just something that was poured over the organization, as it shows that the municipality is truly adopting a continuous approach to change.

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CHAPTER 2

INTRODUCTION

Design thinking is a rather ambiguous term when it comes to its meaning (Carlgren et al., 2016). It is considered to be a new methodology for improving innovation outcomes from a practitioners' point of view (Brown, 2009; Kelley & Littman, 2006; Liedtka & Ogilvie, 2011; Martin, 2009), as well as an academic point of view (Glen, Suci, & Baughn, 2014; Gruber, de Leon, George, & Thompson, 2015; Johansson-Sköldberg, Woodilla, & Çetinkaya, 2013; Liedtka, 2014; Seidel & Fixson, 2013). These outcomes can be in terms of products, services or strategies. Design thinking can be described as a human-centered approach to innovation based on the ways designers think and work (Brown, 2008; Brown, 2009; Martin 2009) that emphasizes observation, collaboration, fast learning and the visualization of ideas (Lockwood, 2009). This is in line with the five themes Carlgren et al. (2016) mention as being characteristics of Design Thinking: visualization, user focus, experimentation, diversity and problem framing.

Design Thinking is perceived as an opposing approach to linear and analytical problem-solving approaches that are unlikely to resolve *wicked problems*¹ (Mahmoud-Jouini et al., 2016). It is in this way that design thinking can complement project management, which is a set of concepts, tools, and techniques on how to execute projects on time, within budget, and to required customer specifications within the context of an explicit company strategy (Morris, 2013). Therefore, design thinking can be considered to be of interest to all project managers (Lafley, Martin, Rivkin, & Siggelkow, 2012; Liedtka, King, & Bennett, 2013; Liedtka & Ogilvie, 2011; Martin, 2009), including managers of urban area development projects.

Urban area development projects are deemed as being highly complex projects due to the number of actors involved, the high amount of uncertainty and the fact that these projects often reach beyond their physical boundaries (Franzen et al., 2011). It is in such conditions that project management is considered to be ill suited for decision-making and problem solving (Morris, 2013; Shenhar, Dvir, 2007). In such large and complex projects, where uncertainty is prevalent, the project management approach results in poor performance (Brady & Davies, 2004; Brady, Davies, & Nightingale, 2012; Lenfle, 2008; Loch, De Meyer, & Pich, 2006). In the management of urban area development, design thinking can be applied to improve the decision-making and problem-solving processes, as it is best suited to decision contexts in which uncertainty and ambiguity are high (Liedtka, 2014). Such an area development project is for example the redevelopment of the Schiedam port area. Plans for this redevelopment started in May 2014, and the main goal of these plans is to realize a sustainable and future-proof port area (Municipality of Schiedam, 2016). The municipality of Schiedam, together with the Union of WiltonPortUsers, agreed upon the fact that the port area should be better connected to the city. Regarding this case, and looking at Boland and Collopy's (2004) statement that managers already do think like designers and implement design thinking to a certain extent, the following research question arises:

"How is design thinking implemented in the Schiedam port area redevelopment project?"

To answer this research question, this paper addresses a conducted research and is structured as follows:

- First, the research proposal is addressed. This includes the research questions, research methods, and the research's relevance and goal.
- Second, the theoretical research elaborates in depth on Design Thinking and the management types of process- and project management. A comparison between the three

¹ Wicked Problems are problems that lack both definitive formulations and solutions and are characterized by high uncertainty and ambiguity (Rittel, 1972).

is included, that opts to clarify and classify the differences and similarities between project management, process management, and Design Thinking.

- Third, this research's case study is introduced, which concerns the redevelopment of the Schiedam port area. This case will form the base for further analysis.
- Fourth, this research is made operational. This operationalization addresses the objective of the interviews, the selection of the interviewees and how the interviews were conducted. It also shows how Design Thinking literature is used to form the interview questions.
- Fifth, the case for this research will be analyzed in depth using the information gained from the interviews. This will ultimately allow drawing up conclusions and answering the main research question.
- Finally, this part is concluded with the answer to this part's main research question, a reflection on the conclusions and recommendations.

CHAPTER 3
RESEARCH FRAMEWORK

This chapter entails this research's goals and the questions that are to be answered with this research. It further addresses the problem statement and the scientific and practical relevance of this research.

3.1 RESEARCH GOAL

The main goal of this entire research is to gain insight. For this specific part, the goal is to gain insight on how design thinking is implemented in urban area development projects, whilst demonstrating the added value of design thinking and why it should be implemented. In order to do so, this research aims at elucidating which design thinking themes from literature are recognized in the redevelopment of the Schiedam port area.

3.2 RESEARCH QUESTIONS

As stated in the introduction of this paper, the main research question of this research is:

“How is design thinking implemented in the Schiedam port area redevelopment project?”

To help answer this main question, the following sub-questions are to be answered:

1. How can design thinking be defined?
2. How can design thinking be framed?
3. How does project management relate to design thinking?
4. How does project management relate to process management?
5. How does design thinking relate to process management?
6. What does the Schiedam port area redevelopment project encompass?
7. Which themes, as described by Carlgren et al. (2016), can be recognized in the redevelopment of the Schiedam port area?
 - a. And how are these themes represented?

To answer the main research question, and the sub-questions, different methods of researching will be applied. These are elaborated in the following chapter. As demonstrated by sub-questions 4, 5 and 6, the relations between project management, process management, and design thinking will be addressed. This, to distinguish if the design thinking themes mentioned by Carlgren et al. are exclusive to design thinking. This, since it is plausible that the themes are recognized, but have been applied as being part of project- or process management.

3.3 PROBLEM STATEMENT

A lot is mentioned in literature about how design thinking compliments project management, how it helps to deal with problems and uncertainty and how it promotes innovation (Brown, 2009;

Kelley & Littman, 2006; Liedtka & Ogilvie, 2011; Martin, 2009). Design thinking however, is often linked to project management in private, product-focused sector. As Carlgren et al. (2016) mention, an inclusive, empirically informed framing of design thinking is lacking, which possibly hinders further research into design thinking and adds to the ambiguity surrounding the term. In their paper, Carlgren et al. (2016, p. 48) describe a framework to design thinking, but continue to state that it is notable that the concept of design thinking varies across contexts. As urban area development entails a different context than the private-sector companies researched by Carlgren, it is possible that their framework does not hold stand. Therefore, research is needed to indicate whether the five themes, described by Carlgren et al. (2016) as being characteristic to design thinking, are prevalent in the management of urban area development projects.

3.4 RESEARCH RELEVANCE

This research's relevance lies in the usability of its results, and can be divided into (1) scientific relevance and (2) practical relevance.

1. Scientific relevance

As mentioned in the previous paragraph, this research will provide information on how design thinking is implemented in the public sector of urban area development. It will thereby demonstrate if the five themes described by Carlgren et al. (2016) can hold their stand in a context other than the private, product-focused sector, thereby filling the knowledge gap. These results are useful to scholars studying design thinking and urban development management, or anyone wanting to get a deeper understanding of the subject.

2. Practical relevance

The results of this research are relevant and useful to project and process managers, especially of urban area development projects, that are interested in, and wanting to, implement design thinking. It will show how design thinking is implemented in Schiedam and how it can be further adopted. From this research's result, lessons can be learned about how to implement design thinking in the projects that project- and process managers are involved in themselves.

CHAPTER 4

RESEARCH PROPOSAL

The research that is to be conducted in order to provide an answer to the research question and sub-questions, consist of several components: (1) the research strategy, (2) the research design, (3) the research sample, (4) the research method, and (5) the research organization. These components are elaborated in this chapter.

4.1 RESEARCH STRATEGY

A research strategy is, as described by Bryman (2012, p. 35), the general orientation to the conduct of research. Bryman distinguishes two different research strategies: quantitative research strategy and qualitative research strategy. A quantitative research strategy can be construed as a strategy that emphasizes quantification in the collection and analysis of data. Qualitative research on the other hand, can be construed as a research strategy that emphasizes words rather than quantification in the collection and analysis of data (Bryman, 2012, p. 35-37).

For this research a qualitative research strategy will be used. This research strategy is chosen for its following features (Bryman, 2012, p. 380):

1. Qualitative research tends to an inductive view of the relationship between theory and research. This means that theory is created out of the research.
2. Qualitative research stresses on the understanding of the social world through an examination of the interpretation of that world by its participants.
3. Qualitative research implies that social properties are outcomes of the interactions between individuals.

Looking at the research question, the main goal of this research and the features mentioned above, a qualitative research strategy is considered the most appropriate for this research.

4.2 RESEARCH DESIGN

The research design represents the structure that guides the execution of a research method and the analysis of the subsequent data (Bryman, 2012, p. 45). Five different research designs can be distinguished: experimental design, cross-sectional design, longitudinal design, case study design and comparative design (also referred to as multi-case studies) (Bryman, 2012, p. 50-75). Yin (2009, p. 2) explains that each method has its own advantages and disadvantages, depending on three conditions: the type of research question, the control the investigator has over actual behavioral events, and the focus on contemporary as opposed to historical phenomena.

Yin (2009, p. 4) argues that in general, case studies are the preferred method the more research question(s) seek to explain “how” or “why” some social phenomenon works and when the investigator has little control over events. This is supported by Massis and Kotlar (2014, p.16). As this applies to this research, a case study design is chosen. This is a research design that entails the detailed and intensive analysis of a single case (Bryman, 2012, p.66), which for this research is the case of the Schiedam port area. Yin (2009) distinguishes five different cases, one of which is the critical case: a case chosen on the grounds that the researcher knows it will allow for a theory to be tested. During the exploratory interview with Bart Heinz, themes were recognized that could be classified as design thinking themes, e.g. the ambitions-map. Therefore, the case of the Schiedam port area is considered to be a critical case.

4.3 RESEARCH SAMPLE

A sample is a segment of a whole that is selected for investigation (Bryman, 2012, p. 187). This can be a segment of the population, organizations etc. For this research, a purposive sampling approach is adopted, since the research question give a clear indication of what units need to be sampled. With a purposive sampling approach, sampling is conducted with reference to the goals of the research, so that units of analysis are selected in terms of criteria that will allow the research questions to be answered (Bryman, 2012, p. 418). The sample for this research consist of several actors involved in the case, of which some specific for a certain research question: the process manager of Schiedam, representatives of the port area businesses, civil servants of the municipality etc.

4.4 RESEARCH METHODS

Research methods are techniques for collecting data (Bryman, 2012, p. 46). For this research, a literature study is performed. Several sources have been analyzed and compared to gain in-depth knowledge about the subject. Next to a literature study, semi-structured interviews will be used. This refers to a context in which the interviewer has a series of questions that are in the general form of an interview schedule, but is able to vary the sequence of questions. Using a semi-structure interview provides some latitude to ask further questions in response to what are seen as significant replies (Bryman, 2012, p. 212).

4.5 RESEARCH ORGANIZATION

This paragraph will elaborate on the different aspects of this research's organization: the scientific domains and the mentors.

4.5.1 Scientific domains

This research touches two scientific domains within the master track Management in the Built Environment. The first one is Design & Construction Management, since the research mainly focuses on design thinking incorporated with project management. The second one is Urban Area Development, since the research is specific about urban area development projects. This results in a research that fits two graduation labs: Design Thinking and Next Generation Waterfronts.

4.5.2 Mentors

Since this research touches two scientific domains and fits into two different graduation labs, two mentors are chosen associated with the two different domains and graduation labs. Bart Heinz, process manager of the municipality of Schiedam, has agreed on being the company mentor. He will provide inside information about the process of the Schiedam port area development, and contact information of relevant interviewees. The mentors are:

1st mentor: Louis Lousberg – 'Design Thinking'
Domain: Project management

2nd mentor: Tom Daamen – 'Next Generation Waterfronts'
Domain: Urban area development
Specialization: Waterfront development

Company mentor: Bart Heinz
Occupation: Process Manager of the municipality of Schiedam

CHAPTER 5
DESIGN THINKING

This chapter will elaborate on Design Thinking. It will provide a definition for Design Thinking and will form a framework around it as to allow research on how Design Thinking is implemented in the Schiedam port area redevelopment project. This chapter will provide an answer to the following questions: *'How can Design Thinking be defined?'* and *'How can Design Thinking be framed?'*.

5.1 DEFINING DESIGN THINKING

As mentioned in the introduction of this paper, design thinking is an ambiguous term in regards of its meaning (Carlgren et al., 2016). For doing research on design thinking however, an explicit meaning of the term is needed. This is done by comparing the meanings given to design thinking in literature.

The concept of design thinking developed with the objective of bringing designers principles, approaches, methods and tools to problem solving (Brown, 2009). It originated as a human-centered approach to innovation based on the ways designers think and work (Brown, 2008, 2009; Martin 2009). Design thinking is considered an inspiration to any other discipline. People from such disciplines can learn from the way designers think and work and apply this to their operations (Brown, 2009; Holloway, 2009; Brown, Katz, 2011; Frisendal, 2012).

According to Wylant (2010, p. 228), design thinking is the discipline of understanding how sense can be made of something, by going through multiple contextual exercises of placements. Given this, a designer is then able to choose which contexts should be prevalent and the manner in which they should. Kimbell (2011) describes design thinking in three different ways:

- (1) Design thinking as a cognitive style of designers engaged in problem solving;
- (2) Design thinking as a general theory of design as a field of discipline focused on taming wicked problems;
- (3) Design thinking as an organizational resource for businesses and other organizations in need of innovation

As described by Mahmoud-Jouini et al. (2016) design thinking is an approach to deal with ill-structured situations where problems are not articulated. It is a problem *'defining and solving'* approach that is considered a hypothesis where action stimulates thoughts to inspire better hypotheses. This is in line with Liedtka's (2014) definition of design thinking: a hypothesis-driven process that focuses on problem and solution.

Johansson-Sköldberg et al. (2013) mention that design thinking can be discussed as two separate discourses: (1) Designerly thinking and (2) design thinking.

1. Designerly thinking

Designerly thinking links theory and practice from a design perspective, and is established in the academic field of design. It refers to the professional designer's practice, practical skills and competence, and how to interpret and characterize this non-verbal competence of the designers (p. 123).

2. Design thinking

This is a term for the discourse where design practice and competence are used beyond the design context, for and with people without a scholarly background in design, particularly in management. 'Design thinking' then becomes a way of describing a designer's methods that are integrated into an academic or practical management discourse (p. 123). Some of these methods are, as described by Lockwood (2009), observation, collaboration, fast learning and the visualization of ideas.

The design thinking discourse is in consonance with Wylant's (2010) and Kimbell's (2011) second definition of design thinking.

When combining the main points of these various definitions, it is concluded that design thinking is an approach that opts to define and solve problems by incorporating designers' approaches, methods and tools to problem solving. It is a way of dealing with complexity in projects².

5.2 DESIGN THINKING: FRAMEWORK

In order to establish how design thinking is implemented in the redevelopment of the Schiedam port area, it is necessary to frame design thinking.

Carlgren et al. (2016) conducted research in order to form a framework on design thinking. They mention five themes that characterize the use of design thinking. These themes emerged from a study among companies that claimed to implement design thinking and are represented in the basic structure of their framework (Image 1).

THEMES	Principles/ Mindsets	Practices	Techniques
Theme 1			
Theme ...			
Theme N			

Image 1: The basic structure of the design thinking framework. Carlgren et al. (2016)

The five themes are: (1) user focus, (2) problem framing, (3) visualization, (4) experimentation, and (5) diversity. These themes are elaborated on the next page.

1. User focus

This first theme refers to a fundamental user focus, which is expressed in terms of empathy building, deep user understanding and user involvement. In Carlgren's research, it became clear that all solutions the different companies came up with were made with the user in mind. Every activity had as a goal to find solutions the user needed. The companies considered gaining a deep

² This definition is based on Brown (2008; 2009), Johansson-Sköldberg et al. (2013), Mahmoud-Jouini et al. (2016), Martin (2009), and Liedtka's (2014).

understanding of the users and their needs as a crucial part of design thinking. Empathy proved to be of high importance, leading to different principles: having an open attitude, remaining open-minded without judging, feeling comfortable with people of different backgrounds and opinions and involving users in idea-forming processes (Carlgren et al., 2016, p. 46-51). The importance of empathy and human-centeredness is supported by Liedtka (2015).

2. Problem framing

This theme refers to how problems are tackled. Instead of trying to solve the problem, the problems are widened, challenged and reframed. This helps create a larger solution space. Different mindsets surfaced as being important: unconstrained thinking and openness to unexpected events. Problem framing was explicitly addressed by brainstorming about problems, etc. (Carlgren et al., 2016, p. 46-51).

3. Visualization

The third theme refers to making ideas tangible by means of representations, sketching, making models, acting, role-playing, storyboarding, storytelling and analogies (Drews, 2009; Ward et al., 2009; Stanford d. school, 2010; Liedtka & Ogilvie, 2011). This theme proved to be of importance in creating consensus and sharing insights (Carlgren et al., 2016, p. 46-51), and is in line with Liedtka's (2015) statement that the role of visualization and prototyping, specifically in order to learn, is critical to design thinking.

4. Experimentation

The fourth theme focuses on learning by trying things out, testing solutions and getting feedback. Creativity and unconstrained thinking were considered as important mindsets by the companies that were interviewed by Carlgren et al. (2016, p. 48-49).

5. Diversity

The last theme refers to focusing on a wide range of stakeholders, encompassing collaboration in diverse teams, and the integration of diverse outside perspectives throughout the process. The different companies stress that having a diverse team with combinations of different skills has its strengths and that openness to different backgrounds are essential (Carlgren et al., 2016, p. 48).

The themes (2) problem framing and (4) experimentation correspond with different aspects of design thinking described in literature: the focus on wicked problems (Rittel & Webber, 1973), problem exploration (Rittel & Webber, 1973; Schön, 1983; Dorst & Cross, 2001) learning focus and a hypothesis-driven approach (Schön, 1983), and a focus on what might be (Schön, 1983).

These themes will be used to research how design thinking is implemented in Dutch urban area development projects. It is important to mention that out of the companies researched by Carlgren et al. (2016), there was no company represented from the public sector. The five themes are therefore based on how private parties implement design thinking. Furthermore, Carlgren et al. (2016) mention that it is notable that the concept varies across contexts, with emphasis on, for example, iteration in one setting, and deep user understanding in another (p. 48). The themes however, are considered to characterize design thinking and it is therefore plausible that these themes are also prevalent in the management of urban area development projects, all be it in a different way.

The next step after defining and framing Design Thinking, is to address both project- and process management. This will allow a comparison between both management types, and between Design Thinking. Doing so will elucidate whether or not the Design Thinking themes are exclusive to Design Thinking, or if they are also part of project- and/or process management. This is done in the following chapter.

CHAPTER 6

MANAGEMENT TYPES

This chapter will address project management and process management in detail. Both management types will be compared to each other, after which a comparison will be made the different management types and design thinking. This, as a mean to elucidate whether or not the five design thinking themes are present in project- and process management. This is deemed important as it is possible that the process manager of Schiedam, involved in the redevelopment of the port area, implements Design Thinking without knowing he does so, and as, for example, part of process management. Therefore, this chapter will answer the following research questions: '*How does project management relate to process management?*', '*How does project management relate to design thinking?*', and '*How does design thinking relate to process management?*'.

6.1 PROJECT MANAGEMENT

Project management is the discipline of planning, organizing and managing resources to achieve the successful completion of specific project goals and objectives (Collins, 2011). The concept of project management arose in the nineteenth century. It emerged as industrial societies started to build complex systems (Winch, 2008) and grew out of the practical problems raised by coordinating activities in complex undertakings (Morris et al., 2010). Project management is essentially an organizational innovation, it is the about ensuring the effective delivery of the project mission for the client (Winch, p. 8). Oisen (1971) describes project management as the use of a set of tools and techniques to direct the application of diverse resources toward the accomplishment of a unique, complex, one-time task within time, cost and quality constraints (Atkinson, 1999). This definition includes criteria that are used to measure the success of the project: cost, time and quality. These criteria are also used in the definition of project management given by the UK Association of Project Management (APM): The planning, organization, monitoring and control of all aspects of a project and the motivation of all involved to achieve the project objectives safely and within agreed time, cost and performance criteria. Morris (1994) argues that project management is about the total process, not just about realizing a specification to time, cost and quality. He distinguishes the *management of projects* as a strategic approach from *project management* as a toolbox approach to delivering the project mission.

Project management revolves around the assumption that problems and solutions are stable within certain boundaries. This assumption allows for the use of project management tools like time schedules, predefined end product, clear frameworks and a clear goal. The result of this project approach is linear and structured decision-making (Bruijn et al., 2010, p.15).

6.2 PROCESS MANAGEMENT

A project-approach can only work in static situations where there is little uncertainty. In urban area development projects, where conditions are dynamic and there are high amounts of uncertainty, project management results in poor performance (Brady & Davies, 2004; Brady, Davies, & Nightingale, 2012; Lenfle, 2008; Loch, De Meyer, & Pich, 2006). In such situations, there is a need for a process approach (Bruijn, Heuvelhof, Veld, 2013, p. 15; Healey, 1998).

In urban area development, process management refers to the management of activities at the scale of a district or neighborhood within the range of a project having its own defined objectives. Process management entails the in-depth analysis of an area development, the insurance of active involvement and support, and the design of an effective decision-making process that will lead to

a sustainable urban area development (Franzen et al., 2011, p. 119). According to De Bruijn et al. (2010), the basic principle of process management is the management of the interests of the many actors involved in the project. This, in contrast with project management, where the basic principle is to achieve the predefined goal (Franzen et al., 2011).

6.2.1 The four core elements

The main objective of a process manager is to provide a good process. De Bruijn et al. (2010, p. 41) describe a good process as an open process in which actors have the security that their core values are protected, while offering sufficient incentives for progress and guaranteeing the substantive quality of the results. With this description of a good process, De Bruijn et al. (2010, p.41) classify four core elements that are fundamental for a good process: (1) Openness, (2) Protection of core values, (3) Progress, and (4) Substance.

1. Openness

Openness entails the involvement of all relevant parties in the decision-making process, transforming substantive choices into process-type agreements and being transparent. In process management, the initiator of a project does not take unilateral decisions, but adopts an open attitude. The many actors are offered the chance to participate in the decision-making and elucidate the topics they are interested in as to place them on the agenda. When talking about the 'relevant stakeholders' and who they might be, De Bruijn et al. (2010, p. 43) first distinguishes three types of stakeholders/parties:

- Stakeholders who have productive or obstructive power. Productive power refers to a stakeholder's ability to help implement an initiative by having the means to do so, e.g. competencies, finances, expertise. Obstructive power means that a stakeholder can obstruct an initiative.
- Stakeholders who have taken a particular position regarding the initiative (support or oppose), and parties who have not done so.
- Large parties and small parties.

Initiators often tend to only invite large parties who support the initiative and have productive power. However, parties with obstructive power will also have to be invited into the process to prevent them from using their power and thus from blocking the initiative. Adding to this, the exclusion of small parties may stimulate others to support these parties as they often have their sympathy. Therefore, it is sensible to also invite small parties. According to De Bruijn et al. (2010, p. 44) this does not mean that everyone should be invited, as having too many parties involved can stall decision-making or even result in indecision. Therefore, three considerations are important:

- The total of parties being involved should be an accurate representation of the parties that have an interest in the decision-making process. There may be many small parties have an interest in the process, but inviting them all will be impossible. Therefore, at least some of these small parties will have to be invited as for them to be represented.
- Parties can be involved in a process in different ways: it is possible to invite some parties in the initial phase of a process, adding more parties later on. Also, parties can act in different roles: some can be involved in the decision-making process, while others are invited as experts in the process.
- Parties can be invited into the decision-making based on moral arguments. These are parties that have no significant power, but that can affect potential decisions.

Next to involving all relevant parties, the number of substantive choices preceding the process is to be minimized. It is less appealing to parties to join a process in which many substantive choices have been made prior to their enrollment. Transforming substantive choices into process agreements offers room to all parties in which their interests will be heard (Bruijn et al., 2010, p. 45).

Openness also entails a transparent decision-making process; all parties know how the process will unfold, which other parties are involved, which decision-making rules apply and how their interests are protected. The lack of transparency may lead to distrust or conflicts, as parties are not able to review the process' integrity. The role of the process manager must also be transparent: he or she is an independent facilitator that should focus on the process rather than the substance (Bruijn et al., 2010, p. 45).

2. Protection of core values

This second core element is about protecting the core values of the many parties involved in the decision-making process. These parties should not have the feeling of getting trapped in a process, in which decisions have already been taken resulting in a funnel trap. Offering parties the protection of their core values is a way in which to prevent this. This ensures parties that they will not have to adopt a certain behavior or make certain choices against their will. It is important to understand that a core value is not the same as a position adopted by an organization in a decision-making process. Core values go beyond the level of a single process or point of view, and are more generic in nature (Bruijn et al., 2010, p. 46).

Following the protection of the core values, it is important to have parties commit to the process rather than to an end-result. Committing to an end-result may give parties the impression that all substantive choices have already been made. Committing to the process provides safety and space, which allows parties to develop a commitment to the result during the process (Bruijn et al., 2010, p. 47).

Also, an important issue in creating safety and space is providing exit rules. These are rules that allow parties to leave the process. Ideally, no party will opt to use this option, as the process should be sufficiently appealing (Bruijn et al., 2010, p. 48).

3. Progress

Progress entails the assurance that progress is made within the process. A process may result in sluggish decision-making, affecting the commitment of parties to the process and therefore its chances of success. One way of tackling this is to have the prospect of gain. This is the main incentive for progress. Parties who foresee a gain will have an interest in completing the process and collecting their reward. Therefore, parties should be convinced that the process is and will remain appealing to them. This results in their willingness to bring the process to a good conclusion (Bruijn et al., 2010, p. 50). One way of giving parties the prospect of gain is by creating quick wins. However, these wins should not be gained too soon in the process, as this may stimulate parties to leave. The same can happen if the prospect of gain is too far away (Bruijn et al., 2010, p. 50).

A process manager can also use options for command and control to ensure progress. While this is more specific to project management, there is space for command and control within process management. In a case of disagreement, a process manager can steer by command and control (Bruijn et al., 2010, p. 53).

4. Substance

Although substance can never determine the course of the decision-making process, it cannot be ignored. A decision-making process that wanders too far from the substance may appear to lack focus. Therefore, the process has to allow for relevant substantive ideas to be addressed during the process. One way of guaranteeing that the process remains substantial is by including substantive experts. They can add substantive knowledge as to facilitate the process by

conducting analyses, familiarize parties with the latest insights and so on (Bruijn et al., 2010, p. 53). The inclusion of experts within a process offers parties to question these experts about analyses results or beliefs, which adds to the reliability of the process and its integrity (Bruijn et al., 2010, p. 54).

Another way to guarantee sufficient substance is to tolerate a large variety of substantive ideas at the start of the process. This ensures that all relevant insights have the chance to be addressed within the process. In the end, some of these substantive ideas are selected. This increases the substantive quality of the decision-making process, as parties do not limit their attention to only certain ideas from the start of the process (Bruijn et al., 2010, p. 54).

Any process design has to do justice to the four core elements, making it a trade-off among these four elements.

6.2.2 Designing a process

Providing a good process starts with a good process design. Not only is it necessary for the process manager to ensure that all core elements of a good process are prevalent, but he or she must also provide a good process design to ensure that the negotiation process will deliver positive results (Bruijn et al., 2010).

There are several activities a process architect³ can perform that will result in a process design, see Image 2. There are some remarks about this set of activities however. Firstly, it is important to notice that it is not always necessary to undertake all these activities in order to achieve a good process design. The number of activities necessary depends on the substantive complexity and the nature of the conflicts of interest. Secondly, it is not necessary to do the various activities in the specific order showed in Image 2.

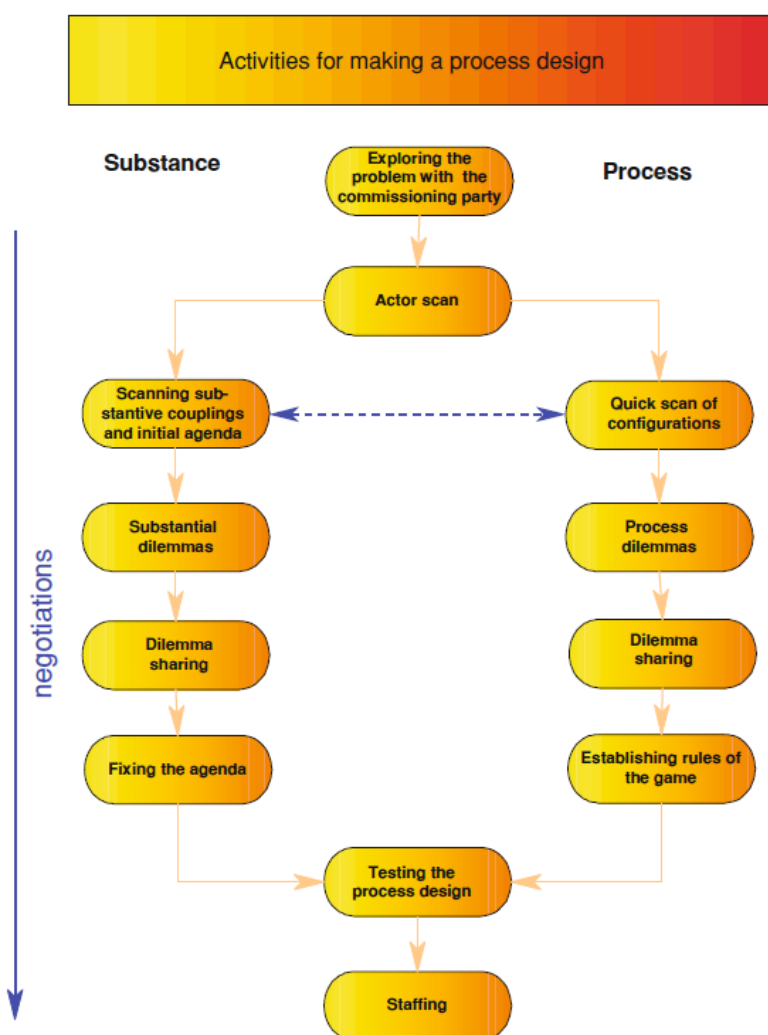


Image 2: The activities of making a process design. De Bruijn et al., 2010, p. 64

³ The process manager will be referred to as process architect when in relation to making a process design.

It may also be necessary that some activities are repeated once, or several times. Lastly, undertaking these activities, with the provision of the four core elements of a good process, does not necessarily or automatically result in a good process design, as this activity is not mechanistic. It requires managerial creativity, sensitivity, a sense of managerial relations and a sense of people and characters (Bruijn et al., 2010, p. 63).

At the start of a process, there is often one actor who is the initiator (or a limited number of actors). This initiator contacts the process architect and commissions him or her to get the decision-making process started. Together, the commissioning party and the process architect come up with an initial list of relevant actors, after which they map the sense of urgency of the process by making an inventory of the views of the other actors (Bruijn et al., 2010, p. 65). This last step is performed more in depth during the actor scan, in which the process architect aims at gathering certain data about each individual actor such as interests, views, core values etc. Following this, the information gathered will allow the process architect to make a quick scan of the configuration of the parties: which actors hold extreme views? Which actors communicate frequently? And which actors operate in social isolation? (Bruijn et al., 2010, pp. 63-69).

After the process architect scans the actors and analyses the configuration, he or she will make a process that appeals to the parties. This results in a representation of the potential substantive couplings between issues, which form the base for the agenda that marks the start of the process. When formulating the agenda, the process architect frames conflicting views that can cause a conflict as being a dilemma where possible. This is followed by linking the dilemmas that influence each other, and determining in which order the dilemmas are going to be dealt with (Bruijn et al., 2010, pp. 69-74).

The next step is to establish rules of the game. These rules can, for example, concern accuracy vs speed: should the process be fast, but risk inaccuracy, or should it be highly accurate, but very time-consuming? A rule in this example can be that actors must all perform a quick scan to compare alternative options available. When a situation arises in which there is doubt about the results of the scan, the actors can request a full, in-depth analysis (Bruijn et al., 2010, pp. 74). After the rules are established, the process architect can choose to test the process design if needed. This is elaborated in chapter 9 paragraph 9.1.4. The final step is assembling all the actors to the process. However, it may be desirable that the participants of the designed process, have been involved in the design process of it, since this can be a learning process for all parties. After the process has been designed, the decision-making process and negotiations can start (Bruijn et al., 2010, pp. 75-76).

6.3 PROJECT MANAGEMENT VS PROCESS MANAGEMENT

As can already be derived from the previous paragraphs, there are fundamental differences between project and process management. The basic principle of project management is achieving a predefined goal. This contrasts the basic principle of process management, which is managing the different interests of the many actors (Franzen et al., 2011, p. 126). Bakkering (2001) describes project management as the control of the interior of a closed system, which contrasts a process approach: the management of exterior factors and the understanding of the context. See table 1 on the next page for a comparison.

Table 1: the differences between project and process management. Based on Leijten, 2016.

	Project management	Process management
Goals	Known	Unknown
Stakeholders	Known	Partly known
Phase of project	After initiative	All phases
Philosophy	Control	Goal-seeking
Decision-making	Operational	Strategic
Context	'Frozen' context	Interwoven, erratic

Next to the fundamental differences between project and process management, there is also a difference in management skills. See table 2.

Table 2: the differences in management skills. Based on Leijten, 2016.

Project manager	Process manager
Controlling	Initiating
Understanding regulations and contracting	Making actors enthusiastic
Risk management	Understanding interests
Making trade-offs and decisions	Understanding strategic behavior
Conflict resolution	Searching common ground / integrative negotiation
External communication	Selective activation
Pushing	Timing

A difference between project- and process management can also be detected on the grounds on which they operate: the former operating in a hierarchy, whilst the latter operates in a network. In a hierarchy, there is a leading, powerful actor, which has all the information and power necessary for effective decision making. This actor is at the top of the hierarchy and steers its subordinates. This structure presupposes stability: relations of superiority and inferiority exist, which are not subjected to change (Bruijn, Heuvelhof, 2008, pp. 8-10). A network on the other hand, is a situation in which there is no omnipotent actor that can impose strategies or policies unilaterally. It is defined by (a) a multitude of actors with (b) different goals and interests and (c) different resources, (d) who depend on each other for the realization of their goals. Furthermore, networks can be intra-organizational as well as inter-organizational and is found in both the public and the private sector (Bruijn, Heuvelhof, p. 1, 2008). See table 3.

Table 3: the differences between a hierarchy and network. (Bruijn, Heuvelhof, 2008, p. 10)

Hierarchy	Network
Uniformity	Variety
Unilateral dependencies	Mutual dependencies
Receptive to hierarchical signals	Closed to hierarchical signals
Stability, predictability	Dynamic, unpredictability

Another difference between project and process management is the ability to cope with wicked problems: problems where there is no unambiguous or authoritative solution. The cause of wicked problems is twofold: there is no objectifiable information available, and there is no consensus concerning the standards that must be applied to solve the problem (Franzen et al., 2011, p. 126). See table 4 on the next page. De Bruijn et al. (2010) argues that a process approach is necessary to cope with such unstructured problems.

Table 4: the origin of wicked problems. (Leijten, 2016).

	Knowledge available, consensus on facts	Not enough knowledge available, dissension on facts
Consensus on normative standards	Tamable problem	(un-)tamable scientific problem
Dissension on normative standards	(un-)tamable political problem	Unstructured/wicked problem

Because of the large amount of involved parties, opinions from different sectors and disciplines must be weighed against each other. This leads to discussions concerning the amount of weight that should be given to each opinion. Furthermore, wicked problems are dynamic in nature: the problem changes over time. Due to this dynamic nature, the solutions to wicked problems also change over time. According to De Bruijn et al. (2010), choosing a project approach to deal with such problems only leads to conflicts. Despite solutions being unobjectifiable, it is possible to find an authoritative solution that will be accepted by all the different parties involved. This however, requires that those parties are involved in the formulation of the problem and the solution. This generates negotiated knowledge: knowledge that arises from a process in which interested parties contributed their own information and values (Franzen et al., 2011, p. 126-127).

6.3.1 From process- to project management

The differences between process and project management do not mean that one excludes the other. Within the life cycle of a project, there is room for both project and process management. This is possible due to the reduction of complexity and uncertainty within a project as it matures. Winch (2010) states that the main problem in the management of information is uncertainty: the lack of all information needed to make a decision at a certain point in time. Uncertainty has two main causes (see Image 3):

- Complexity: the information is available, but is too costly or time-consuming to collect and analyze.
- Predictability: to cope with an unknown future, one can rely on past experience as a valuable guide to the future. However, there are conditions in which the past is not a reliable guide.

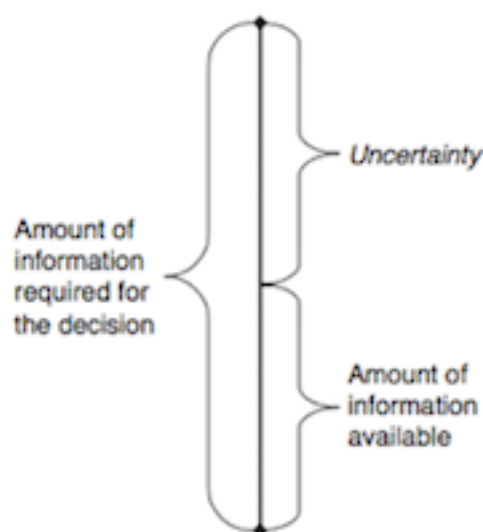


Image 3: the definition of uncertainty (Winch, 2010, p.6). Developed from Galbraith, 1977, fig. 3.1.

As a project moves through the life cycle, more information becomes available, thus reducing the amount of uncertainty. The level of uncertainty at a specific point in time, compared to earlier and later points in the life cycle of project, is considered to be the level of dynamic uncertainty on the project (Winch, 2010, p. 7). Image 4 illustrates how the amount of dynamic uncertainty reduces as more information becomes available during the life cycle of a project.

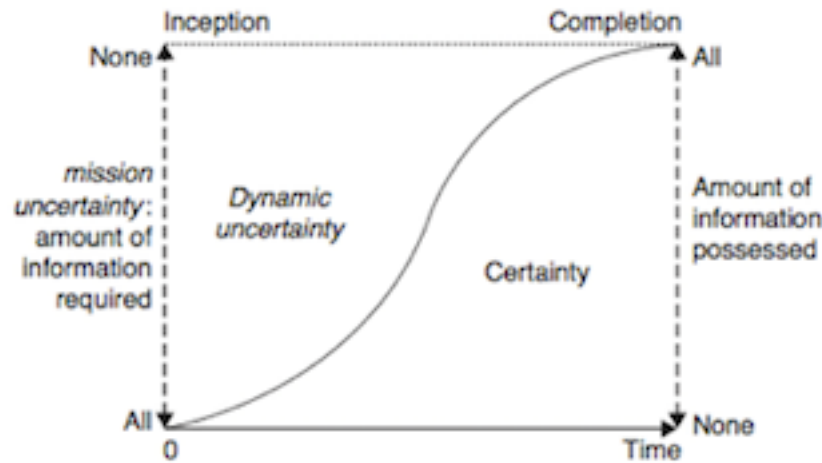


Image 4: the reduction of dynamic uncertainty (Winch, 2010, p.7).

An increase of certainty coincides with the reduction of the project's complexity, as uncertainty is one of the main causes of a project's complexity (Franzen et al., 2011). This allows for the use of project management tools to realize the project goals. In this way, process management flows into project management.

6.4 PROJECT MANAGEMENT VS DESIGN THINKING

According to Mahmoud-Jouini et al. (2016), researchers have recognized that standard approaches to project management are ill suited to address changes in the environment, especially in innovative contexts where uncertainty and complexity is prevalent (Morris, 2013; Shenhar & Dvir, 2007). As mentioned before, project management is a set of tools, concepts and techniques on how to execute projects on time, within budget, and to required customer specifications within a certain context (Morris, 2013). It is a performance-oriented practice aiming at the constitution, coordination, and control of activities within a project (Blomquist, Hällgren, Nilsson, & Söderholm, 2010). In the project management view, resources should be optimized for a stated goal, and clearly defined specifications are assumed not to change during the course of a project.

In large and complex projects where uncertainty is common, this approach results in poor performance (Brady & Davies, 2004; Brady, Davies, & Nightingale, 2012; Lenfle, 2008; Loch, De Meyer, & Pich, 2006). In such projects, problems lack formulations and solutions and customer requirements are not necessarily known at the start. Therefore, the basic assumptions of project management do not hold (Mahmoud-Jouini et al., 2016). These situations require an uncertainty reduction strategy that can be achieved through a learning-focused, hypothesis-driven approach (Beckman & Barry, 2007; Owen, 2007; Schön, 1982). It is in this way that design thinking is of added value to project management, as it opts to reduce complexity and solve (wicked-)problems by incorporating designers' approaches and tools, and by broadening problems to increase the solution space (Brown, 2008, 2009; Carlgren et al., 2016; Johansson-Sköldberg et al. 2013; Mahmoud-Jouini et al. 2016; Martin 2009; Liedtka, 2014).

6.5 PROCESS MANAGEMENT VS DESIGN THINKING

After comparing project management to both design thinking and process management, the question arises of how design thinking relates to process management. To answer this question, process management literature is linked to the five design thinking themes described by Carlgren et al. (2016): (1) user focus, (2) problem framing, (3) visualization, (4) experimentation, and (5) diversity.

6.5.1 User focus

As previously described, the first theme of Design Thinking refers to a fundamental user focus, which is expressed in terms of empathy building, user understanding and user involvement. Important principles of this theme were considered to be having an open attitude, feeling comfortable with people of different backgrounds and opinions and involving users in idea forming processes (Carlgren et al., 2016, p. 46-51). Regarding urban area development projects, the users can be considered to be the many stakeholders that are involved in the process. In this prospect, user focus forms a fundamental part of process management as its four core elements focus on the stakeholders – thus the users – to certain extents. Openness ensures that all relevant actors are involved in the decision-making process and offers them the chance to address topics or ideas that are relevant to them while providing transparency, so all the stakeholders know how the process will progress. The users are given the assurance that their core values are protected and are provided exit rules as to remove the feeling of entering a funnel trap. The third core element ensures users that progress will be made during the process. They are offered the prospect of gain by quick wins. Furthermore, users are guaranteed that the process will remain substantial and that attention will not be limited to only certain ideas from the start of the process (Bruijn et al., 2010, p. 41-55).

6.5.2 Problem Framing

Problem framing referred to widening, challenging and reframing problems instead of trying to solve them. This is done in order to create a larger solution space. In their book *'Management in Networks'*, De Bruijn and Ten Heuvelhof (2008) describe a similar action regarding process management. They mention that problems are to be formulated in such a way that they become interesting to other actors. 'Goal stretching' and 'naming and framing' are helpful to achieve this. Goal stretching entails 'stretching' a goal or problem to make them sufficiently recognizable to a critical mass of actors. Goals are not only related to a problem definition, but also to the stakeholders involved. The broader the goal, the greater the chance that it appeals to the stakeholders (Bruijn, Heuvelhof, 2008, p. 66). Naming and framing is about the language in which a goal is expressed. In a process approach, the framing of a goal depends on whether support for it can be won among other actors with as its main question: how can a goal be framed so as to create the maximum chance of support for it (Bruijn, Heuvelhof, 2008, p. 66-67).

6.5.3 Visualization

This third theme referred to making ideas tangible by means of representations, sketching, making models storytelling and analogies (Drews, 2009; Ward et al., 2009; Stanford d. school, 2010; Liedtka & Ogilvie, 2011). This theme is of importance in creating consensus and sharing insights (Carlgren et al., 2016, p. 46-51). Visualization can be found in one of the approaches a process manager can adopt: a design-based approach. This approach combines a mixture of perspectives from different disciplines and actors. The actors come to a shared vision that is developed through designing and drawing up a plan. In this approach, design is seen as management: interaction takes place through the act of designing, which is considered a means of communication and insight sharing. In this way, design is used as a *'vehicle'* for the development process (Franzen et al., 2011, pp. 130). This approach can help break a deadlocked decision-

making process. It gives the involved actors an understanding of the possibilities and limitations of a location and the specific qualities of an area, as well as one another's interests. The added value of this approach lies in the designer: his or her creativity, interdisciplinary working methods and conceptual abilities, which enables the visualization of the qualities and values that actors consider important. Opportunities are illustrated, dilemmas are articulated, and solutions are proposed that can overpass differences in opinion. This usually proceeds in stages, with alternatives being sketched out to feed the debate. Some tools for this approach are scenarios, strategies, opportunity charts and conceptual images (Franzen et al., 2011, pp. 131).

When specifically looking at process management in urban area development, Franzen et al. (2011) state that urban area development processes involves various plans, which are not just an instrument of implementation. Instruments of an urban planner play a predominant role in reaching a consensus among actors involved in an urban area redevelopment processes. A master plan for example, incorporates spatial and functional elements, providing an indication of what the future development might look like. It generally includes a representation of each actor's interests, translated in a plan that integrates all urban demands; It is a visual representation of consensus (Castells, 1975; in Franzen et al., 2011, pp. 30-31).

6.5.4 Experimentation

Experimentation focuses on trying things out, testing solutions and getting feedback (Carlgren et al., 2016, p. 48). When looking at the process management literature, an example of experimentation can be found in the strategies used by process managers to deal with dilemmas. Two of the strategies show some kind of experimentation. With the 'pilot option' strategy, one solution to a dilemma is implemented as a pilot on a small scale. The results of the pilot are monitored after which the experiment of the pilot is evaluated to be either successful or unsuccessful (Bruijn et al., 2010, p. 72). The second strategy is the 'mothball variant': one solution is chosen as a try-out and is fully implemented, while the other is mothballed. If the first proves to be unsuccessful, the latter can be directly de-mothballed to be implemented in its place (Bruijn et al., 2010, p. 72). The strategies to help cope with dilemmas are addressed more in depth in chapter 10, paragraph 10.3.

A different example is found in the way process managers test their process design. This can be done by performing a *prima facie* test: organizing a brainstorm session about the rules of the game that have been established. During this session, the future participants of the process examine the process design carefully, in order to see whether it serves their interests and if it is likely to be successful (Bruijn et al., 2010, p. 75). Simulation is another, more detailed way of testing a process design, in which a process manager simulates the reality of decision making as accurately as possible. The actors start the simulation by addressing process rules. By monitoring the actors' behavior, the process manager can analyze the functioning of the process rules and evaluate their results. After this evaluation, rules may be adapted if deemed necessary (Bruijn et al., 2010, p. 76).

6.5.5 Diversity

The last Design thinking theme refers to focusing on a wide range of stakeholders, encompassing collaboration in diverse teams and integrating different perspectives (Carlgren et al., 2016, p. 48). This can be linked to the basic principle of process management, which is the management of the interests of the many actors involved in a project. As previously described, a process manager operates in a network, which is defined by a multitude of actors with different goals and interests. There is no single actor that can fully realize his goals on his own, there exists interdependency (Bruijn et al., 2010, p. 14).

Diversity can also be linked to the activities of making a process design by the process architect. One of these steps is the actor scan: selecting relevant actors to gain as much information as possible about each individual actor. This information is mostly about the actor's views, interests, core values, and also about risks and opportunities the actors may identify (Bruijn et al., 2010, pp. 65-66). Afterwards, the different actors' views are mapped on several issues, together with their pluriformity. This, in an effort to elucidate if the total of actors is homogenous or if there are big differences between them. In the end, the process architect will have multiple actor maps, like Image 5 (Bruijn et al., 2010, pp. 65-77).

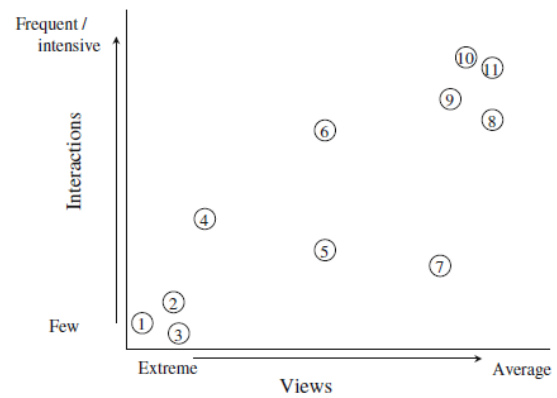


Image 5: the position of different actors in a network. Bruijn et al., 2010, p. 69.

A third link is that of offering protection to the actors' core values and providing openness, which are two of the four core elements of process management. Due to the multitude of interests in a network, there is a risk that some interests may not be addressed sufficiently during the process. This can leave an actor, or multiple actors, dissatisfied with the results. Therefore, protection is offered to the actors by, for example, exit rules (Bruijn et al., 2010, pp. 41-46). Openness resolves around involving actors in the decision-making process and in the making of the agenda, allowing them to exert their influence (Bruijn et al., 2010, p. 41-44).

6.6 CONCLUSION

This chapter opted to provide a comparison between project management and process management, and process management and design thinking. These comparisons lead to the conclusion that project- and process management have fundamental differences regarding decision-making, goals, philosophy and context. Where process management operates in a network that is characterized by variety, unpredictability and mutual dependencies, project management operates in a hierarchy, which is marked by uniformity, predictability and unilateral dependencies. This chapter also elucidated that process management can flow into project management during the later stages of a project's life cycle, in which complexity and uncertainty are reduced.

Comparing design thinking to process management found that all five design thinking themes are present in process management. Process management however, goes further than design thinking. Where design thinking is a way to reduce complexity and solve (wicked) problems, process management describes how to design a good process in detail and provides strategies detailing how to deal with process problems, contrasting views of actors, and interdependencies. Therefore, design thinking is seen as a way to reduce complexity and deal with problems that is part of process management, and can be applied in the hierarchical environment of project management. See Figure 1 on the next page.

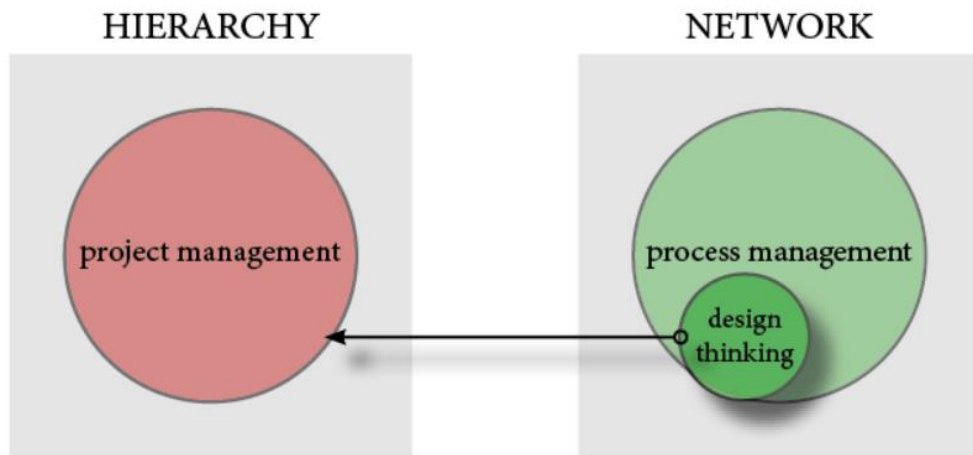


Figure 1: Design thinking as being part of process management that can be applied within project management. Own illustration.

Using this view on design thinking position compared to project management and process management, the case of the Schiedam port area redevelopment will be analyzed in later chapters. The following chapter will address organizational change management, since the municipality of Schiedam is currently in a process of change. Therefore, literature on this topic can provide useful insights on how to cope with changes within an organization and how such changes affects the way the municipality of Schiedam executes their tasks.

CHAPTER 7
CASE: SCHIEDAM PORT AREA

This chapter introduces the case of the Schiedam port area redevelopment, which serves as case study to this research and forms the foundation of further analysis. In this chapter, this case will be addressed and described in detail, including the project budget, the problem statement, the project objectives and deliverables. This specific case will form the base for further analysis in the following chapters, in which it will be explored which design thinking themes can be recognized in the management of this project. This chapter will answer the following sub-question: *‘What does the Schiedam port area redevelopment project encompass?’*.

7.1 PROJECT DESCRIPTION

Starting from May 2014, plans have been developed for the port area of Schiedam. One of the incentives for these plans was a conversation between the municipality of Schiedam and the companies of the port area, with the latter having the ambitions to expand and to tackle bottlenecks to their business, such as parking nuisance, traffic flows, environmental legislation and the bad state of the harbor quays (Municipality of Schiedam, 2016, p. 3). The purpose of these plans is to realize a sustainable, future proof port area with a strong maritime cluster and healthy living environment, which adds to a better connection with the city. The municipality of Schiedam has signed a letter of intent [Dutch: intentieovereenkomst] with the Port of Rotterdam, the Association of Wilton Port Users, the Business Association, the Ministry of I&M, the Province of South Holland, the Traffic Association, and the Municipal Health Services [Dutch: GGD].



Image 6: the port area of Schiedam. Picture retrieved from: <https://www.schiedam.nl/Havens.html>

This cooperation has led to an integral area development whereby the sludge-depot is to be transformed into a port area with the necessary environmental- and traffic measures (Municipality of Schiedam, 2016, pp. 3-4). Image 6 on the previous page shows the port area of Schiedam, central to this research.

7.2 PROJECT FINANCING & PLANNING

In the summernote of 2017, an amount of € 4.056.000,- of additional resources was reserved for the port area. Besides that, an amount of € 4.971.250,- is reserved that is covered by existing resources. That makes a total of around 9€ million on municipal resources. An amount of approximately 13€ million is included in the budgeting as contributions from external public parties: the state, the province, the region etc. These public funds will become available in the course of 2017 and 2018 for the current project. The sludge depot and quays are funded by private parties: HBR, Damen repair, Huisman, and Mammoet. Their resources are around 70€ million (Municipality of Schiedam, 2016, p. 11). See Table 5.

Table 5: Budget description for the redevelopment of the port area. Municipality of Schiedam, 2016, p. 11.

Budget description	Budget
Municipality of Schiedam	€ 9 million
Other public parties (State, Province, Region).	€ 13 million
Port of Rotterdam and companies from the maritime cluster	€ 70 million
Total	€ 92 million

The project does not only consist of multiple temporary subprojects, but also of structural linear activities like: branding, strengthening of the area's image, stimulating sustainability, innovation, and mobility. Therefore, the nature of this project entails that there is no clear planning, since it concerns a multitude of plans. For this reason, the planning and phasing is deduced from the longest activity: the cleaning of the sludge depot in combination with the construction of a new longitudinal port. See Table 6 below.

Table 6: Phasing for the remediation of the sludge-depot. Municipality of Schiedam, 2016, p. 11.

Phase	Start	End	Period
Definition phase	September 2017	December 2017	3 months
Development phase (engineering)	January 2017	September 2017	9 months
Preparation phase (procedures)	September 2017	December 2018	15 months
Procurement	December 2018	June 2019	6 months
Realization phase	June 2019	December 2020	18 months
Evaluation phase	December 2020	April 2021	4 months
Administration transfer	April 2021		

7.3 PROBLEM STATEMENT

The Association of Wilton Port Users is the initiator in this project. They expressed their ambition to expand and that they encountered several bottlenecks hindering this ambition:

- Lack of physical space
- Poor traffic flows

- High parking pressure
- Environmental standards/complaints/legal procedures
- Bad state of the harbor quays

In order to provide more clearance on the assignment, a survey was conducted in May 2015. This survey indicated that half of the port companies had the desire to expand within five years. Other findings include the indication of the main bottlenecks in realizing the ambition to expand: poor traffic flows/ traffic jams (60%), lack of physical space to expand (47%), and high parking pressure (43%) (Municipality of Schiedam, 2016, pp. 4-6). See Image 7.

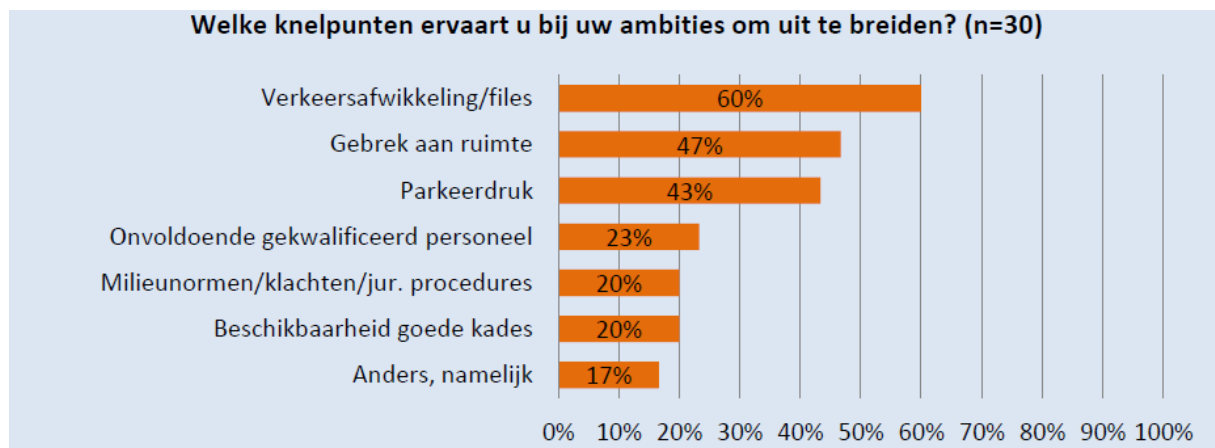


Image 7: Bottlenecks in realizing ambition to expand. Municipality of Schiedam, 2016, p. 4.

The port area of Schiedam consists of three parts: Vijfsluizen, Wilhelminahaven and the Havenstraat (Wiltonhaven). The Vijfsluizen business center is in a good state of maintenance, has an active business association, and has a BIZ-status (Company investment zone status) [Dutch: Bedrijven Investerings zone]. This is in contrast with the Wilhelminahaven and Wiltonhaven, which are in a poor state of maintenance. The companies in the Wilhelmina port have indicated that the public area is in a poor state and that there are unsafe traffic situations. Bicycle roads in the area are unsafe, there is a shortage of parking spaces and there is a lot of air pollution and noise nuisance. These factors contribute to the Wilhelmina port having a bad appearance and image (Municipality of Schiedam, 2016, p. 5).

The port area of Schiedam has a strong maritime tradition. In the 90's, big companies settled in this area, and experienced big growth from 1990 till 2014. A total of 46 companies profiles themselves as being a maritime company on their website. These companies include Huisman, Damen, Mammoet, Tebodin, and many more. The municipality of Schiedam deems it plausible that these companies form an important economical factor for the city, providing lots of job opportunities. In the same survey mentioned previously, the companies were also asked what factors they deem important for settling in the Schiedam maritime cluster (Municipality of Schiedam, 2016, p. 5). The results are shown in Image 8 on the next page.

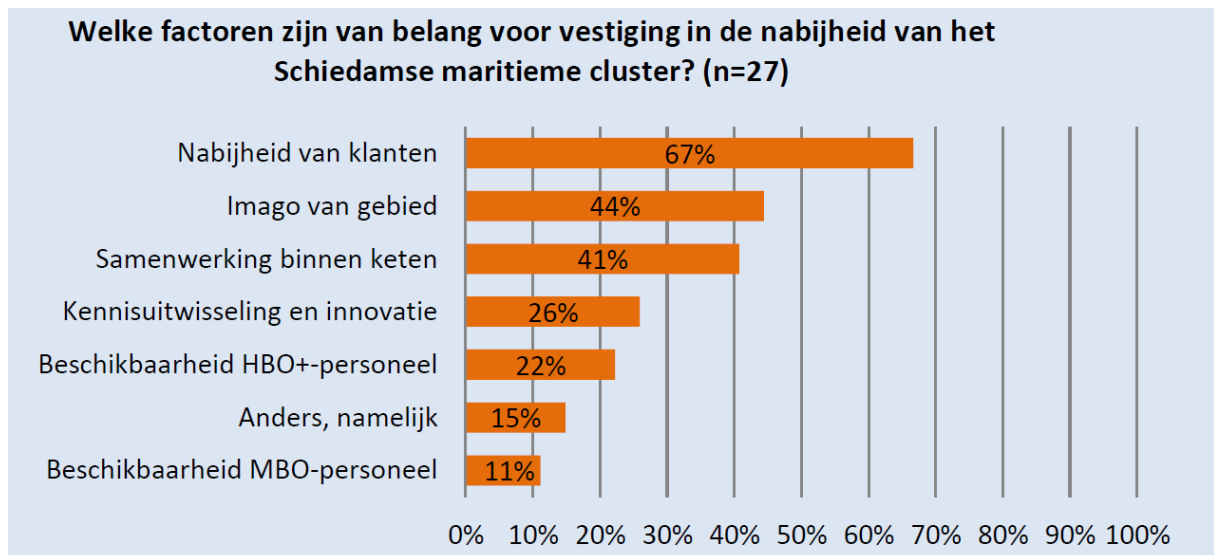


Image 8: Bottlenecks in realizing ambition to expand. Municipality of Schiedam, 2016, p. 5.

The problem however, is that the city and the port are badly connected. The facilities level of the city (attractive living environment, houses and inner city) does not match the needs of the port. The housing stock in the city is one-sided and there is a lot of pollution around the port area. From the three biggest port related companies in Schiedam, less than 1/3 of the personnel lives in Schiedam. Therefore, many high educated people leave the city. Adding to this, the educational institutions in the city are badly connected to the port area. In Schiedam, there is a high need for jobs and opportunities for lower educated people by means of education, employment and internships. This is to be realized by enhancing the connection between the city and the port and increasing the facilities level of the city (Municipality of Schiedam, 2016, pp. 5-6).

7.4 MAIN THEMES OF REDEVELOPMENT

To realize the goals of the project, six themes were established that were to be worked out in different project groups, all consisting of different actors. The different themes are: Transport & mobility, Healthy environment, Innovation & Sustainability, Education & Knowledge, Public space, and Branding. These themes are elaborated in the following paragraphs.

7.4.1 Transport & Mobility

A structural solution is needed for parking in the area, preferably in terms of parking facilities and stimulation of other forms of transport as to increase the accessibility of the port businesses for their employees. Initiatives on this subject include the realization of a boarding point for the watertaxi, the improvement of the public transport, and the enhancing of the bicycle-connections at the Wilhelminaport and Vijfsluizen (Municipality of Schiedam, 2016).

7.4.2 Healthy environment

The municipality of Schiedam has set the goal of reducing nuisance from the port as much as possible for residents living near the port, while offering them a healthy living- and work environment. Most reports about nuisance from the area mainly concern noise. This is caused by traffic, business activities and generators necessary for the hotel function of the sea shipping traffic. The biggest problem in this, is the one regarding the so called “low-frequency sound”. There are less reports on air pollution. In this area, great progress has been made in recent years, and air pollution is barely notable. However, it has not disappeared yet. Specially regarding air pollution, there is a risk of health damage even at lower concentrations (Municipality of Schiedam,

2016). Furthermore, measures have been taken to reduce environmental nuisance. These include using Walstroom⁴ instead of diesel generators, shifting and isolating business activities that produce a lot of nuisance, and reducing traffic. Hereby, good communication between residents and companies is very important. Also, it is important to make the river banks and the area more attractive by adding green and recreational opportunities, like sports. This will ensure a healthier living environment. Using Walstroom proves to be very costly, therefore research has been done on alternatives, the two main alternatives being mobile generators and silencers. The port businesses are willing to work on lowering the impact they have on the environment as much as possible (Municipality of Schiedam, 2016).

7.4.3 Innovation & Sustainability

Almost all of the companies located in the port area use fossil fuel (oil and gas). Transition into renewable energy offers opportunities for this company to switch to more environmental friendly energy. There are opportunities in using waste heat (Dutch= restwarmte) and generating sustainable (solar & wind) energy. Due to the strong presence of high-end engineering companies, there are many opportunities in the port area for energy transition, and almost all these company are working on this. Some examples include: geothermal energy and tidal currents by Huisman, floating wind turbines by Gusto Msc, and energy from the fermentation of algae (Municipality of Schiedam, 2016). Currently, this theme has been adopted by Pronton Ventures, who, together with the other companies in the port area, is conducting research into the sustainability of the area. The municipality contributes financially to this, and has already resulted in the addition of solar panels on the business premises of Mammoth and HSM-offshore.

7.4.4 Education & Knowledge

Businesses in the area have insufficient knowledge about each other's education initiatives. Therefore, it is important to make those initiatives visible so that companies can make 'smart' combinations themselves as to create new jobs, facilitate education and encourage innovation. The municipality of Schiedam wants a better connection between the city and the port regarding knowledge development. It is being researched what the needs, wishes and obstacles are regarding cooperation between port companies and education/knowledge institutes. One option of combining these two, is the realization of a Maritime Educational and Innovation Center, a so called MEIC. Whether this will be a physical building, or an online platform is to be investigated (Municipality of Schiedam, 2016).

7.4.5 Public space

The most important aspects of this theme are the realization of a good connection between the city and the waterfront, and to make the character of the waterfront more visible. This is to be done by making new connections and realizing meaningful spots within the area. Adding to this, more space is to be reserved for bicycle roads and pavements. There are two important aspects regarding the public space: 'the city needs to be well connected to the river', and 'the character of the river zone must be made well visible'. This happens in three ways: making connections, creating meaningful places, and giving the area a meaningful décor. These actions were worked out into a concrete plan in which it is advised to (Municipality of Schiedam, 2016):

- Realize more space for good cycling- and walking roads through the area.
- Provide routes that make the water accessible, and to specially provide more visibility of the area from the water.
- Create more connections to the inner city and to the green environment of the Poldervaart.

⁴ Using Walstroom means that ships tap electricity from the public electricity net.

7.5 PROJECT DELIVERABLES

For this project, a list of deliverables was created that includes the products that are to be delivered and the goals that are to be realized. The main one being the redevelopment of the sludge depot of the Wiltonport and the realization of a longitudinal port. Other products/goals include decreasing nuisance, traffic measures, redevelopment of the Havenstraat, stimulation of sustainability by supporting the use of wind-energy in the area, stimulation of sustainable innovations, and the restructure of the companies of the Wiltonport and the Wilhelminaport. For a complete overview of the deliverables, see Appendix 1.

CHAPTER 8

OPERATIONALIZATION

This chapter entails the operationalization of this research. To make this research operational, a framework is construed around Design Thinking. This is followed by a description of the interviews for this research, which is done by describing the objective of the interviews, the selection of the interviewees, how the interviews are conducted and how they are analyzed.

8.1 OPERATIONALIZING DESIGN THINKING

Following the analysis on Design Thinking, and subsequently the description of the Schiedam port area redevelopment, a framework can be formed around design thinking. This, as a mean to identify how and if Design Thinking is implemented in the case of Schiedam. To operationalize Design Thinking, its five themes, as described by Carlgren et al (2016) mentioned in Chapter 5 paragraph 5.2, will be used. These themes are used, as they are described as being characteristics of Design Thinking (Carlgren et al., 2016; Drews, 2009; Ward et al., 2009; Stanford d. school, 2010; Liedtka & Ogilvie, 2011). Table X shows the different Design Thinking themes, framed with their definition.

Table 7: operationalization of the design thinking themes.

			Definition
DESIGN THINKING THEME	1.	User Focus	Fundamental user focus expressed in user understanding, involvement, and empathy building.
	2.	Problem Framing	Widening, challenging, and reframing problems to create greater solution space.
	3.	Visualization	Making ideas tangible by visualizing them as to create consensus and share insights.
	4.	Experimentation	Learning through trying things out, testing and getting feedback.
	5.	Diversity	Focus on a wide range of stakeholders, encompassing collaboration in diverse teams.

The definitions in Table 7 form the base of the interview questions. These are included in Appendix 2. Figure 2 shows how this operationalization is visualized in a conceptual model. After this operationalization, the next step is to lay focus on the technique that will be used to collect data: interviewing. This is done in the following paragraphs.

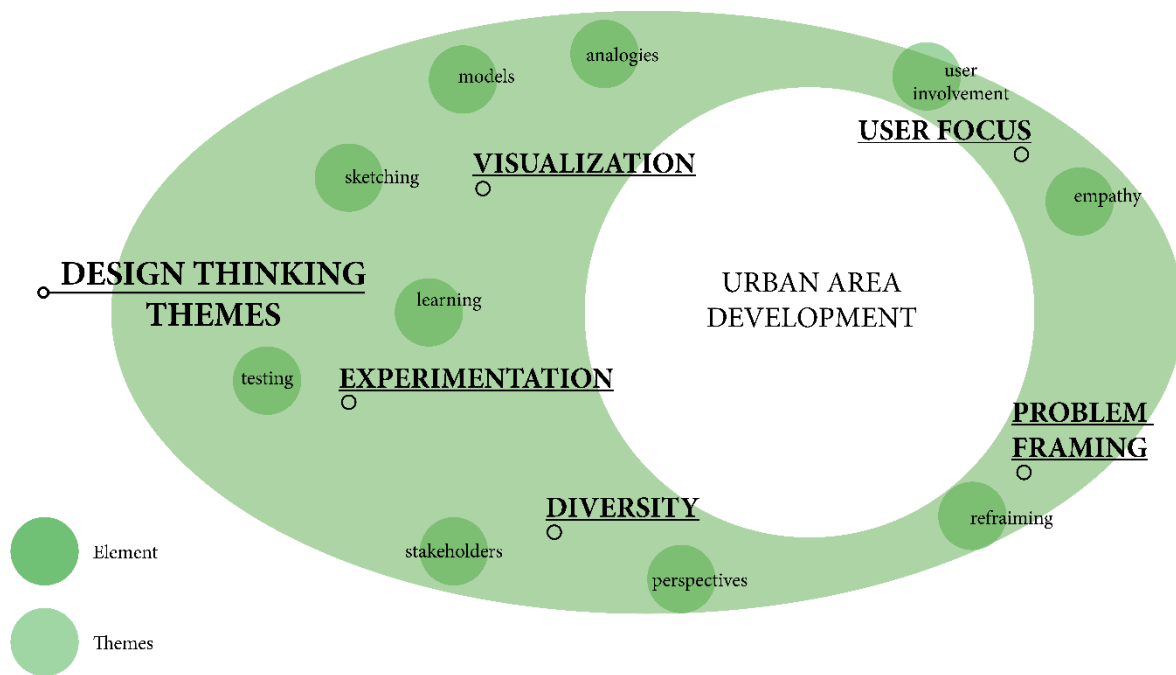


Figure 2: Conceptual model. Own illustration.

8.2 INTERVIEWING

This paragraph elaborates on the interviewing technique used in this research as mean of data collection. First the objective of the interviews will be described, followed by a description of how the interviewees were selected. Subsequently, it will be described how the interviews were conducted and analyzed. This paragraph will be closed with a table that provides the main findings of the interviews.

8.2.1 Objective of the interviews

For this research, the interviews' main objective is to provide insights on how Design Thinking is implemented in the redevelopment project of the Schiedam port area, if implemented at all. Interviewees are asked question that incorporate the definitions of the five Design Thinking themes, as to identify whether or not the themes can be recognized.

8.2.2 Selection of the interviewees

For this research, most of interviewees were selected through snowballing: selecting interviewees by recommendation of other interviewees. The first interview was conducted with Bart Heinz, the process manager leading the redevelopment project of the Schiedam port area. He also serves as main contact within the municipality of Schiedam, and is included in both parts of this thesis, as he provided answers specific to both design thinking and organizational change management. The same applies to Nathalie Gouweleeuw. The list of interviewees for this part can be seen in Table 8 on the next page.

Table 8: List of interviewees.

	Name	Function	Focus of questions
INTERVIEWEE	B. Heinz	Process manager Schiedam	- Design thinking (Changing role of the Municipality of Schiedam)
	M. van Leijten	Assistant Professor TU Delft	- Coping with dilemma's - Unilateral decision making
	N. Gouweleeuw	Alderman (wethouder) Schiedam	- Design thinking (Changing role of the Municipality of Schiedam)
	R. Schelwald	Secretary of WiltonPortUsers association	Cooperation between city and port
	B. Stad	Project manager Schiedam	- Design thinking (Changing role of the Municipality of Schiedam)

8.2.3 Conduct of the interviews

The data about Design Thinking in the redevelopment project of the Schiedam port area was collected by means of semi-structured interviewing. For this, a set of open-ended questions was formulated, based on the findings of the theoretical research and, subsequently, the operationalization Design Thinking. The interviews were conducted face-to-face with the interviewees, and were recorded using a laptop or phone. The transcripts of the interviews were sent back to the interviewees for validation and verification, after which the recordings were deleted. The verified transcripts can be found under Appendix 3.

8.2.4 Result of the interviews

The main result of the interviews can be summarized as seen in Table 9, which shows a matrix of the various elements of organizational change management and the interviewees. The matrix shows which Design Thinking themes are recognized by which interviewee, or in which interview, by indicating if a theme is present (green), absent (red), or partly present (yellow). If a field is left open, no definitive answer could be given about whether an element from the organizational change management literature could be recognized by the interviewee.

Table 9: summarized results of the interviews.

			Stad (interview D)	Heinz (interview A1)	Gouweleeuw (interview E)
DESIGN THINKING THEME	1.	User Focus			
	2.	Problem Framing			
	3.	Visualization			
	4.	Experimentation			
	5.	Diversity			

These results will be elaborated in detail in the following chapter, and serve as a way to analyze how Design Thinking is recognized within the case.

CHAPTER 9

DESIGN THINKING IN PRACTICE

Following the description of this research's case, it can be explored whether the design thinking themes are present or not. This chapter will not only reflect on the five design thinking themes, but it will first address the process based way of working employed by the process manager of the case study, Bart Heinz. This is done as means to get a better understanding on how and why the design thinking themes are applied, if applied at all. This chapter will provide an answer to the following questions: *'Which themes, as described by Carlgren et al. (2016), can be recognized in the redevelopment of the Schiedam port area?'*, and *'How are these themes represented?'*.

9.1 A PROCESS APPROACH

Heinz, the process manager of Schiedam, describes his process based approach of working as being transparent, open and based on equality, as this leads to trust between him and the different actors. It involves constant communication about everything that is going on, while being completely honest about everything, as everything depends on each other: strings are short, networks are very large, and your reputation can be ruined by the smallest thing [Heinz, 2017, pp. 9-11: Interview A1]. The *'open'* element is supported by Schelwald, the secretary of the Wiltonport-user association [Schelwald, 2017, pp. 2: Interview B]. He describes Heinz's way of working as being very open and correct, without hidden agendas. However, he adds that this way of working is not unique. It is new compared to the traditional way, in which, to put it in an excessive way, the municipality pushes something through and the market just has to deal with it. Nowadays, there is much more cooperation, and negotiations revolve around incorporating each other's interests in an open and communicative way.

What the process manager also considers to be of big importance in his way of working, is having something tangible as a process vehicle. This is important to make ideas visible and to get people talking about it. Regarding such process vehicle, the process manager stresses that it is important to provide just enough information to lure people into talking about it and coming up with ideas; but it must not contain too much information, to still allow for enough input. For this process, the process vehicle was the Ambitionmap, which illustrated the different ambitions of the different actors for the area. See paragraph 9.2.3. His way of working further revolves around thinking together, and putting oneself in a vulnerable position. It is about making plans with the city itself, without predefined restrictions. When decisions were made, for example broadening a street, it was explained to the actors involved in this decision that city council was the one making the final decision, expressing that the process manager could not guarantee that the decisions were going to be accepted. The actors were invited to the council meeting, to show support for the decision. The process manager also expressed how this way of working is being applied more and more by urban area development managers of the municipality of Schiedam [Heinz, 2017, pp. 9-11: Interview A1].

9.2 DESIGN THINKING IN THE SCHIEDAM PORT AREA REDEVELOPMENT PROJECT

After describing the process manager's way of working, and the case of the Schiedam port area redevelopment, it can be explored whether or not the five design thinking themes can be recognized in the management of the project, albeit to a certain extent. This paragraph elaborates on the findings from the interviews, as depicted in Table 9, under paragraph 8.2.4.

9.2.1 User focus

Regarding the nature of the project, an urban redevelopment project comprising a big area, it is almost certain that the design thinking theme ‘user focus’ is present. Especially when the process manager’s way of working revolves around involving the other actors as much as possible, treating them as equals and having an open attitude. When looking at the course of the process so far, actors have been involved in different ways. Actors were invited to show their ambitions and jointly form a map depicting all the different ambitions [Heinz 2017, pp. 2: Interview A1; Gouweleeuw, 2017, pp. 3: Interview E]. Adding to this, several meetings and work sessions were held that were open to all who were interested, so not only to the actors directly involved in the decision-making process [Heinz, 2017, pp. 2: Interview A1]. This is in accordance with Carlgren et al.’s description of ‘*User focus*’, which focuses on user understanding and involvement.

9.2.2 Problem framing

Since the redevelopment of the Schiedam port area concerns an urban redevelopment project, it can be expected that problems are formulated in such a way, that they become interesting to other actors. This is necessary, since in urban area development there are a multitude of actors involved who depend on each other (Bruijn, Heuvelhof, 2008, p. 66). It is even more so necessary when a process based approach is adopted that strongly relies on other actors.

In the port area redevelopment, the companies of the Wiltonport were the initiators. They wanted to expend and asked the municipality of Schiedam to help them with their plans. The municipality, while working on the expansion plans for the companies, decided to see these plans in the context of a broader area redevelopment. The surrounding area was involved in the project, making the intensification of the port companies a part of a bigger urban redevelopment. By doing so, the municipality could attract parties that are were interested in the bigger redevelopment. These parties were offered the possibility to promote their ideas as input for the project, which could then be taken into account. The main reason to do so, was to create more support for the plans and to see whether or not there were ambitions between the stakeholders that could strengthen each other [Heinz, 2017, pp. 7: Interview A1]. This mirrors the design thinking them ‘*Problem framing*’: widening problems as means to create a larger solution space (Carlgren et al., 2016, pp. 46-51). Subsequently, Gouweleeuw [2017, pp. 3: Interview E] mentions how this is the core of the project, as the challenge of this development consists of multiple issues. It is a question about traffic, safety, accessibility, and nuisance. The solution has to do justice to all those issues.

9.2.3 Visualization

When working with lots of different actors, who may not share the same level of knowledge or understanding, it may be necessary to make ideas tangible by visualization. Therefore, it is plausible that this design thinking theme is present in the redevelopment of the port area.

When looking at the course of the redevelopment process, to main ways of making ideas tangible by visualization can be discovered: (1) the Ambitionmap and (2) the Urban Strategy Tool of TNO. These are elaborated on the next page.

1. Ambitionmap

As already mentioned, the Wiltonport companies wanted to expand their business. The process manager started by making an extension plan for the companies, for which he took a blank map of the area that only showed the existing buildings. This map was brought to the companies and they were asked what their ambitions are for the future development. These ambitions were made visible in the map. See Image 10 [Heinz, 2017, pp. 5-6: Interview A1].

Subsequently, the same was done with residents. In the end, the process manager had created a map of the entire area that visualized all the different ambitions of the different actors. This served two reasons. Firstly, it gave the process manager insight on what ambitions there existed for the area and how these ambitions could strengthen or weaken each other. Secondly, the map itself became a good way of showing the actors what each other's views and ambitions are. The final version of the Ambitionmap is provided in appendix 4. Since this research, a new version of this Ambitionmap has been created, which shows the projects that are currently being realized/worked on. This new version is provided in appendix 5.



Image 10: Wiltonport users' ambitions. Municipality of Schiedam, 2016.

2. Urban Strategy Tool

In the redevelopment of the Schiedam port area, the process manager used the Urban Strategy tool that was developed by TNO [Heinz, 2017, pp. 6: Interview A1] for parties that develop and/or assess spatial plans, like municipalities, project developers, and spatial consultancies (TNO, 2017). The Urban Strategy Tool is a tool that accelerates and enhances spatial planning in an urban environment by making information from linked, high quality computer models interactively accessible. It does so by connecting a central database containing information about the built environment to independent computer models. The models simulate aspects of the physical living environment, such as: traffic, nuisance, air quality, sustainability, and costs. The interaction between these models happens through a separate communication layer. This allows for every change in results of one of the models to be directly calculated and reflected in the other models. Furthermore, changes can be made to the database, like creating more houses, changing routes of transport, and closing roads. The effects of these changes are directly calculated and made visible by the Urban Strategy tool. The results of the models can be presented by a 3D-view of the built environment, a 2D-mapview and 1D-tables (TNO, 2017).

For this project, the 3D option was used and showcased the entire port area of Schiedam, including building heights, environmental aspects, traffic flows, number of cars and trucks using the roads. The model also included environmental aspects in relation to ships, like the amount of noise nuisance and particulate matter produced by the ships. The process manager held sessions, in which civilians were invited to join, where the impacts of several developments and actions were visualized by the use of the Urban Strategy tool. One example of an aspect that was visualized, is that of noise nuisance. Areas where noise emissions were above the standards were characterized by red color. When sound screens were introduced into the model, the decrease of nuisance becomes visible by the change in color from red to yellow or green (green indicating that there is

no more nuisance). Another example is the introduction of a flat into the model. By doing so, the Urban Strategy tool made visible that noise nuisance decreases behind the flat, but that traffic flows increase, since a flat attracts more people [Heinz, 2017, pp. 6: Interview A1]. An example of a 3D option is shown in Image 11.



Image 11: 3D depiction of an area in the Urban Strategy tool. From: <https://tnomediaprod.blob.core.windows.net/mediacache/5/0/b/f/7/7/50bf779f84a3caa9d8acfa95021bd5941a30fc7e.jpg>

The main goal for the use of this tool, was to make different design solutions visible, and thus tangible, to the public, as well as to demonstrate the impact these solutions and other developments will have on the Schiedam port area and its surroundings. The goal of the Ambitionmap was to make the different ambitions of actors visible. This formed the entire base of the project [Gouweleeuw, 2017, pp. 2: Interview E]. By doing so, the process manager opts for consensus building between the citizens, the municipality of Schiedam and the Union of WiltonPortUsers [Heinz, 2017, pp. 5-7: Interview A1]. This is in line with Carlgren et al. (2016, pp. 46-51) and Liedtka (2015), who state that visualization is of importance in creating consensus, sharing insights and learning.

9.2.4 Experimentation

The Urban Strategy tool, also proved to be an adequate tool for experimenting. Actors could experiment with, for example, building heights, sound screen heights etc. This ended up being very efficient, since the tool immediately shows the consequences of each modification. As experimentation took place with the use of the Urban Strategy tool, it is plausible that it also happened in a different way, since the process manager indicated that the use of the tool was very costly. When looking at the case study, one of the port area's issues was the safety for cyclists. Since there were no speedbumps, the many trucks traveling in the area were not forced to slow down, which caused unsafe situations for cyclists. Therefore, the municipality wanted to add speedbumps in the area. Since there are many trucks in the area, truck companies expressed their worries about the speed bumps: if the speed bumps are too high, low carriers will not be able to cross them. The companies in the Schiedam port area have a lot of knowledge about traffic and transport, which they used for this specific topic. MAMMOET's traffic department, together with other traffic experts, identified and tested multiple speed bumps in the city of Schiedam. The testing was done by driving over the different types of speed bumps with different types of trucks. In the end, they were able to identify the type of speed bump that was best suited for this situation: one that was big enough to allow the desired types of trucks to pass them without causing them

too much hindrance, but causing just enough hindrance to force the trucks to slow down, increasing traffic safety for cyclists [Heinz, 2017, pp. 6: Interview A1].

By experimenting, both in a physical and virtual environment, the various stakeholders involved in the port area redevelopment project learned by trying things out, like in the example with the speed bumps, and by testing solutions and getting feedback, which was done by using TNO's Urban Strategy tool. This is in accordance with Carlgren's et al. (2016, pp. 48-19) description of the Design Thinking theme '*Experimentation*'. Adding to this, Gouweleeuw [2017, pp. 2: Interview E] considers the entire approach to this development to be an experiment. Visiting everyone involved with a blank map of the area, asking them to write their ambitions down on the map, is considered to be very experimental. That is not a regular execution of an urban area development within the municipality.

9.2.5 Diversity

Urban area developments are characterized by dynamic conditions, which is partly due to the amount and the variety of actors that are involved (Franzen et al., 2011). This is backed up by Gouweleeuw [2017, pp. 3: Interview E]. Furthermore, De Bruijn et al. (2010) state that the basic principle of process management is the management of the interests of these many actors. This leads to the expectation that the design thinking theme '*diversity*' is present in this project.

At the beginning of the process, the process manager organized a boat trip through the area with 150 actors, including port companies, the Port of Rotterdam, the GGD, the association of residents, the ministry of economy and many more. Afterwards, the group split into smaller groups to work on the different themes that were developed for the redevelopment of the port area, see chapter 8, paragraph 8.5. In these smaller groups, the different actors jointly came up with findings, bottlenecks and solutions. This was later presented in a group session, after which a letter of intent was signed. This was to show the actors that their ideas and solutions were truly going to be incorporated in the project. In this way, cooperation in diverse teams was promoted and different perspectives were integrated [Heinz, 2017, pp. 7: Interview A1]. This clearly mirrors Carlgren et al.'s (2016) description of '*Diversity*'.

After exploring whether or not design thinking principles could be recognized in the management of the Schiedam port area redevelopment, it can be concluded that all five themes are prevalent. This is in line with Boland and Collopy's (2004) statement that managers already do think like designers and implement design thinking to a certain extent. It also follows Liedtka's (2014) statement that in the management of urban area development, design thinking can be applied to improve the decision-making and problem-solving processes, as it is best suited to decision contexts in which uncertainty and ambiguity are high.

It should be mentioned however, that when discussing design thinking with the process manager of this case, he stated that he had never heard of it and that, if the design thinking themes were present in his management, it was applied as being part of process management instead of being exclusive to design thinking. This is in accordance with the conclusion in Paragraph 6.6, which states that design thinking is part of process management.

9.3 DESIGN THINKING: A DIFFERENT POINT OF VIEW

After analyzing the presence of the Design Thinking themes within the case of the Schiedam port area redevelopment, the question arises whether these themes could also be recognized in other projects of the municipality of Schiedam. Therefore, the five themes were presented to Brenda Stad, project manager within the municipality, to see if, and how, she recognized the themes. The findings are as follow:

User Focus	Regarding this theme, Stad [2017, pp. 7: Interview D] states that the idea of involving the city in the development of the city, is a good principle. However, involving inhabitants into the decision-making process is often difficult. Practice shows that people often find it difficult to think about urban developments that will last for 10 to 15 years, and are often not willing to participate. As example, Stad mentions how they organized a meeting regarding the development of a promenade, to which inhabitants were invited. With mood boards, the municipality showed the inhabitants the possibilities regarding the development, so they themselves could decide what they wanted. Unfortunately, that led to nothing, as people found it difficult to form an opinion about it. Therefore, this is not something that is often done in practice.
Problem framing	This theme is recognized, as Stad [2017, pp. 6: Interview D] especially focuses on the opportunities and challenges in the city. An example is the development of cinema on Schieveste, near the Schiedam train station. The city was dealing with a parking problem, so it was decided to incorporate this problem in the development of the cinema, and realize extra parking places. In this way, the initial challenge was broadened.
Visualization	Visualization is not recognized like in the case of the port area redevelopment. Stad [2017, pp. 5: Interview D] mentions that in her project, Schieveste, there are visualizations in form of urban plans. But these are not visualizations with the purpose of sharing insights and reaching consensus.
Experimentation	Experimentation is something that Stad [2017, pp. 6: Interview D] always tries to do: trying things out in order to learn from it. The problem is however, that experimenting always costs money. There are market players that want a plot of land for 15 years to try something out, but that often leads to nothing, as the municipality wants a certain price for that plot that is in line with market prices. With all that calculating, such developments often don't happen. There is however an example of when such an experiment did happen. In Schieveste, there is a temporary school that combines both practical teaching as theoretical teaching, in which students are schooled in making streets and classes are giving about laying cables. This is all practiced in a big sandbox located next to the school. This school is a temporal, experimental development, to see how things go.
Diversity	This is always the case in urban area development, especially now that an even more diverse group makes it way to the market [Stad, 2017, pp. 7: Interview D].

This shows that not all design thinking themes prevail in every development.

After performing a theoretical research on organizational change management and analyzing the changing situation of the municipality of Schiedam, the conclusions to this research can be drawn. This is done in the following chapter, which is followed by a reflection and recommendations.

CONCLUSIONS, REFLECTION & RECOMMANDATIONS

CHAPTER 10 CONCLUSIONS

This research elucidated how design thinking is an approach that opts to define and solve problems by incorporating designers' approaches, methods and tools to problem solving (Brown, 2008; 2009; Johansson-Sköldberg et al., 2013; Mahmoud-Jouini et al., 2016; Martin, 2009; Liedtka, 2014). Subsequently, a framework was formed around Design Thinking using its five characterizing themes described by Carlgren et al. (2016), as shown in Table 10 below.

Table 10: operationalization of the design thinking themes.

DESIGN THINKING THEME			Definition
	1.	User Focus	Fundamental user focus expressed in user understanding, involvement, and empathy building.
	2.	Problem Framing	Widening, challenging, and reframing problems to create greater solution space.
	3.	Visualization	Making ideas tangible by visualizing them as to create consensus and share insights.
	4.	Experimentation	Learning through trying things out, testing and getting feedback.
	5.	Diversity	Focus on a wide range of stakeholders, encompassing collaboration in diverse teams.

This research also compared project management, process management and Design Thinking. The comparison between project- and process management lead to the conclusion that these two management types have fundamental differences regarding decision-making, goals, philosophy and context. However, this research also described how process management can flow into project management during the later stages of a project's life cycle, in which complexity and uncertainty are reduced.

The comparison of project management and Design Thinking elucidated how the latter is of added value to the former, as project management often results in poor performance in complex projects where uncertainty is common (Brady & Davies, 2004; Brady, Davies, & Nightingale, 2012; Lenfle, 2008; Loch, De Meyer, & Pich, 2006), while Design thinking opts to reduce complexity and solve (wicked-)problems (Brown, 2008, 2009; Carlgren et al., 2016; Johansson-Sköldberg et al. 2013; Mahmoud-Jouini et al. 2016; Martin 2009; Liedtka, 2014).

Comparing design thinking to process management found that all five design thinking themes are present in process management. Process management however, goes further than design thinking. Where design thinking is a way to reduce complexity and solve (wicked)problems, process management describes how to design a good process in detail and provides strategies detailing how to deal with process problems, contrasting views of actors, and interdependencies. Therefore, design thinking is seen as a way to reduce complexity and deal with problems that is part of process management, and can be applied in the hierarchical environment of project management. See the Figure 3 on the next page.

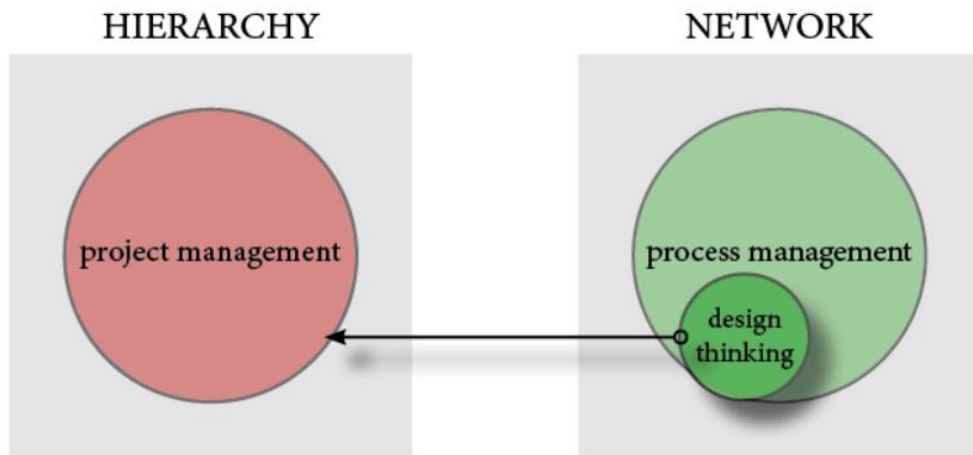


Figure 3: Design thinking as being part of process management that can be applied within project management.
Own illustration.

Using this view on Design Thinking, and its framework, the redevelopment project of the Schiedam port area was analyzed. This allowed for this research's main question to be answered, which is as follow:

“How is Design Thinking implemented in the Schiedam port area redevelopment project?”

This analysis has led to the conclusion that all design thinking themes, as described by Carlgren et al. (2016), are recognized in the management of the Schiedam port area redevelopment, albeit as part of process management. This fuels the conclusion that design thinking is a way to reduce complexity and deal with problems, that is part of process management and can be applied in the hierarchical environment of project management.

The design thinking themes have been recognized in the Schiedam port area redevelopment project in the following different ways:

The process focusses on users	Actors are addressed as equals by the process manager and involved where possible. Actors were invited to show their ambitions and jointly form, and work on, the Ambitionmap. Furthermore, actors were invited to join council meetings and to freely express their opinions on multiple topics.
Objectives are seen in a broader context	Instead of solely focusing on the port area, the municipality used this possibility to form a greater area redevelopment, while attracting more actors who share an interest in the broader picture. This led to broader support for the plans and a bigger solution space.
Visualization plays a prominent role in the process	All ambitions are elaborated and made visible in the Ambitionmap, which serves as process vehicle. Together with the Urban Strategy tool of TNO, which was used during special sessions in which actors experienced the impacts of several measures, the Ambitionmap served as means to make ideas visible, tangible, and to start discussions.

Experimentation took place

Not only did the actors experiment on a virtual level, by means of the Urban Strategy tool, but also on a physical level, by literally driving over several kinds of speedbumps in order to find the one speedbump that was high enough to force trucks to slow down, but low enough to allow all kinds of trucks to pass them without experiencing too much hindrance.

The project consisted of a diverse set of actors

The actor's perspectives were integrated in the plan. This was done by inviting the relevant actors to join work groups in which different themes for the redevelopment of the port were worked out.

Lastly, it is concluded that not all Design Thinking theme is necessarily present in every urban (re)development project, as elucidated by Stad's [2017: Interview D] own experience with the topic. Subsequently, Gouweleeuw [2017: Interview E] adds to this that the approach employed for the redevelopment of the Schiedam port area redevelopment, though considered to be the only way to deal with the project's complexity, should not necessarily be employed in every urban (re)development project, as not all projects are as complex as the redevelopment project of the port area, and should not be made more complex than they are.

After addressing this research's conclusion, and answering its main question, the next step is to reflect on the results. This is done in the following chapter.

CHAPTER 11

REFLECTION

This chapter will reflect on the relevance and usefulness of this research's results. It will reflect on the scientific relevance and the practical relevance. As described in Paragraph 3.4, this research's relevance lies in the usability of its results.

This research opted to provide information on how design thinking is implemented in the public sector of urban area development. It ended up demonstrating how the five design thinking themes were recognized in one specific urban area redevelopment case. On a scientific level, this information is relevant to scholars studying design thinking or urban development management, or anyone wanting to get a deeper understanding of the subject, as it provides a concrete example of the way in which the different design thinking themes were recognized.

On a practical level, this research's relevance depends on how well the results for this one specific case can be generalized. Generalization concerns the question whether the results of a study are applicable in a broader context beyond the one in which the research was conducted (Bryman, 2012, p. 711). Regarding generalization, Bryman (2012, p. 205) states that any findings can only be generalized to the whole from which the sample was taken. Adding to this, it is often suggested that it is impossible to know how the findings from qualitative interviews, conducted with a small number of individuals in a certain locality or organization, can be generalized to other settings. Bryman (2012, p. 406) and Yin (2009) state that it is the quality of the theoretical inferences that are made from qualitative data that is crucial to the assessment or generalization.

The conclusion that design thinking is part of process management and that its themes are recognized in the redevelopment of the Schiedam port area, can be generalized, to some extent, to municipal urban area redevelopment projects in which complexity is high and a process manager adopts a process based approach to management. The five design thinking themes can all be recognized within process management, which makes it plausible that they are also recognized in process based approaches to urban area development management. However, as mentioned in paragraph 9.3, it may not be necessary to adopt a process approach in which all Design Thinking themes are present, as it may not be necessary to do so depending on the complexity of the project.

With that in mind, the results of this research are relevant to project managers, process managers, and municipalities dealing with complex projects, as this research showed a process manager's way of working in order to deal with complexity. From this research's results, lessons can be learned about how the Design Thinking themes, albeit as being of process management, are implemented in one specific case.

The final step after reflecting on this research's results, is to establish recommendations for further research. This is done in the following chapter.

CHAPTER 12

RECOMMENDATIONS

Following this research, some recommendations can be made regarding further research. These recommendations are based on questions that arose from this research, or on subjects that are considered to have a so called open-ending. See below.

Firstly, both Heinz and Schelwald mentioned that the specific way of working employed in the management of the Schiedam port area redevelopment project is not unique. Further research can be conducted on in which situations this approach is adopted, and why it is adopted. Doing so may shine light on factors considered to be of importance in deciding what approach is best suited to deal with certain (re)development projects, e.g. the degree of complexity, etc.

Secondly, this research described how process management can flow into project management in the course of a project, as complexity is reduced (Winch, 2010). This statement however originates from the theoretical research part of this thesis. Further research can be conducted on how process management flows into project management in practice. This could elucidate in which stage in a process one starts using project management tools, as well as help pinpoint what factors mark the turning-point.

Thirdly, the added value of Design Thinking to project management has been addressed from a theoretical point of view. Like the previous recommendation, research can be conducted on if this added value prevails in practice. Such research demonstrates whether or not Design Thinking is truly of added value to project management in real-life cases.

With these recommendations, this research is concluded. The following chapters will focus on the second part of the thesis, which addresses the changing situation of the municipality of Schiedam.

CHAPTER 13

INTRODUCTION

In the Netherlands, there is a long tradition of extensive governmental involvement in preparing, establishing and implementing spatial planning. Through active participation in the land market and land development, local authorities give direction to spatial development by undertaking urban land development itself. Municipalities have the accessibility to a set of instruments that allow them to put spatial planning in place and to endeavor to achieve the desired physical and spatial quality (Louw et al., 2003, p. 358). This system has functioned well for decades. However, in the last years changes have occurred which are changing the way spatial planning is implemented. Private actors have been showing a growing interest in the land development process, which has forced local authorities to rethink how they govern land development and land-use policy (Louw et al., 2003, p. 358).

In the Netherlands, there are three levels of government: the central government, the 12 provinces at a regional level, and the municipalities at the local level. Each authority has a role in spatial planning. Municipalities implement spatial planning through the land development policy for urban restructuring and greenfield developments. Land policy that benefits urban extension areas has always attracted particular attention, as this is an important implementation instrument for housing and spatial economic policy. Land use is laid down in statutory land-use plans, drawn up by municipalities. These plans are mostly altered when demand arises for new dwellings or industrial estates. To implement land-use plans, municipalities engage in the land development process as actors in the land market. This is referred to as active land policy, which means that a municipality buys land in order to service it, divide it into plots, and release it to builder and occupiers (Louw et al., 2003, p. 359). This is contrasted by a passive land policy, which entails a situation in which the instruments of land acquisition are not pro-actively used. The main reason for adopting an active land policy is that municipalities can exert more influence on the spatial development process than if they apply a passive one, in which municipalities can only control spatial developments on the basis of their powers under the Spatial Planning Act. The total set of control opportunities is referred to as *directive function* (Louw et al., 2003, p. 359).

Due to increasing geographical scales of social and economic processes, and the shift from government to governance, the Dutch planning system faces huge challenges (Louw et al., 2003, p. 358). The development of residential areas became commercially attractive for developers and investors through the emphasis on the construction of owner-occupied dwellings, the relatively low mortgage interest rates, and the favorable economic prospects that left consumer confidence unremittingly high. The withdrawal of central government subsidies has increased the risk for municipalities and made a municipality's choice for an active land policy less obvious. Adding to this, the real estate sector gained a greater role. For example, developers and investors acquired land on a very large scale and at an early stage in the VINEX construction locations, as to ensure building rights through land ownership (Louw et al., 2003, p. 361).

Municipalities are finding it difficult to maintain their position on the land market, as market forces increasingly play a part in land development. It is therefore that municipal land ownership is no longer self-evident. According to Verhage and Needham (1997, p. 2066), there are three ways in which municipalities could react to the increasing influence of market forces:

- Cooperate with private actors and negotiate with them in public-private partnerships.
- Revert to the powers which municipalities have always had in the development process.
- Create new mechanism under public law to safeguard their negotiating power and thus their influence on the environment.

In accordance with the shift from government to governance, Verhage and Needham conclude that the first option frequently takes place.

Louw et al. (2003) conclude that the directive function of municipalities will be concentrated on preconditions and procedures and less on control through taking on land development themselves. Therefore, their focus will lie less on material control, for which an active land policy is an example (p. 365). Instead of taking a leading role in executing their directive function, municipalities would be better served in searching for new form of cooperation with market forces and regional authorities. Louw et al. (2003) furthermore conclude that Dutch municipalities are not yet fully aware of governance as a coordination mechanism in which hierarchies and bureaucracy have changed to self-organizing networks of actors (p. 365).

An example of a municipality facing such changes is the municipality of Schiedam. This municipality's culture regarding urban area development has always been very makeable, with an active-land policy. In recent years, the municipality of Schiedam is shifting from this policy towards a passive one, in which the municipality hooks on to initiatives from others and facilitates where possible. By doing so, the municipality shifts from a project based way of working, to a process based way of working in urban area development. Such changes in an organization can have big consequences (source). According to Luecke (2003), and Hemmington & Okumus (1998), successful management of change is a necessity to survive in an eminent competitive and continuously changing environment. Therefore, organizational change management is a highly required managerial skill (Senior, 2002). When looking at existing organizational change management literature, in regard to the changing situation of the municipality of Schiedam, the following question arises:

‘To what extend are organizational change management elements recognized within the municipality of Schiedam in its change towards becoming a director municipality?’

Answering this research question will elucidate how the municipality of Schiedam copes with its changing situation, and if it does so in the best way possible according to the literature. In order to answer this research question, this thesis will elaborate on the following subjects:

- First, the research proposal for this part is addressed. This entails the research goal, questions, the problem statement, and this parts relevance.
- Second, a literature study is done on organizational change management which will provide a framework that is used to analyze the way in which the municipality of Schiedam copes with change.
- Third, the specific changing situation of Schiedam will be addressed in the case study.
- Fourth, a specific problem, as experienced by the process manager Bart Heinz, is described and analyzed in detail, as to elucidate how the municipality deals with occurring problems in its transition towards a passive, process based approach to urban area development.
- Fifth, by using the organizational change management framework, the situation of Schiedam will be analyzed. This will allow drawing up conclusions and answering the main question.
- Finally, this second part is concluded with the answer to this part's main research question.

CHAPTER 14

RESEARCH PROPOSAL

This chapter consists of several aspects that are addressed as follows: first, the specific goal of this part will be described. Second, the main research question of this part is detailed, with the sub-questions that are to be answered with this research. The answers to the sub-questions will all add to answering the main research question. Third, the problem statement is described, which elucidates the specific problem that is at stake. And fourth, the relevance of this part will be addressed.

14.1 RESEARCH GOAL

The main goal of this entire research is to gain insight. For this specific part, the goal is to gain insight on how the municipality of Schiedam copes with its transition from a project-based, towards a process-based way of working. In order to do so, this research aims at elucidating which elements from organizational change management literature can be recognized within the case of the municipality of Schiedam.

14.2 RESEARCH QUESTIONS

As stated in the introduction of this part, the main research question of this research is as follow:

'To what extend are organizational change management elements recognized within the municipality of Schiedam in its change towards becoming a director municipality?'

To help answer this main question, the following sub-questions are to be answered⁵:

1. In which way is the municipality of Schiedam changing?
2. What are the causes for this change?
3. How does the municipality of Schiedam deal with change?
4. How is the municipality of Schiedam structured?
5. How can the change process of the municipality be described?
6. What problems does the municipality of Schiedam experience in their process of change?
7. How can these problems be dealt with?

Other sub-questions relate more to literature and aims at getting a deeper understanding of the topic that is to be research:

8. What is organizational change management?
9. What types of organizational change can be distinguished?

⁵ The majority of these questions were established based on the framework formed around organizational change management. See chapter X, paragraph x.x

10. What characterizes the different types of change? And the different types of approaches to change?

14.3 PROBLEM STATEMENT

A lot is mentioned about the challenges Dutch municipalities face, as private actors have been showing a growing interest in the land development process, which has forced local authorities to rethink how they govern land development and land-use policy. Due to increasing geographical scales of social and economic processes, and the shift from government to governance, the municipal system of spatial planning is changing (Louw et al., 2003, p. 358). Change however, is considered to be a continuous aspect of organizational life, both at an operational and strategic level (Burnes, 2004). Therefore, successful management of change is advised as being a necessity to survive in today's constantly changing environment. However, not many links have been laid between the changes within Dutch municipalities and organizational change management. Therefore, in order to fill this gap in knowledge, research is needed on if, and how, organizational change management elements can be recognized within the change process of Dutch municipalities.

14.4 RESEARCH RELEVANCE

This research's relevance lies in the usability of its results, and can be divided into (1) scientific relevance, and (2) practical relevance.

1. Scientific relevance

This research will provide information on organizational change management, and will elucidate the changing situation of the municipality of Schiedam and, subsequently, the challenges they face in their transition. This research will show which elements of organizational change management literature can be recognized within the case of Schiedam, which will provide insights on how the municipality is coping with change. These insights are useful to scholars studying organizational change management, as it provides a link with a real-life case, or anyone wanting to get a deeper understanding of the subject.

2. Practical relevance.

The results of this research are relevant and useful to municipalities who are currently, or will be in the future, in a similar position as the municipalities of Schiedam, as they may learn lessons from how the municipality of Schiedam undertakes its transition. As this research will also address the challenges the municipality of Schiedam faces, it is relevant to municipalities wanting to become aware of possible setbacks regarding change within their organization. As the introduction of this part mentions, Dutch municipalities are finding it difficult to maintain their position on the land market (Verhage, Needham, 1997), it is therefore that the results of this research can be beneficial for a multitude of cases.

CHAPTER 15

RESEARCH STRATEGY

As this part asks for new information, more research is needed. Therefore, a research strategy is to be construed that consist of several components: (1) the research strategy, (2) the research design, (3) the research sample, (4) the research method, and (5) the research organization. These components are elaborated in this chapter.

15.1 RESEARCH STRATEGY

A research strategy is, as described by Bryman (2012, p. 35), the general orientation to the conduct of research. For this research a qualitative research strategy will be used. This research strategy is chosen for its following features (Bryman, 2012, p. 380):

4. Qualitative research tends to an inductive view of the relationship between theory and research. This means that theory is created out of the research.
5. Qualitative research stresses on the understanding of the social world through an examination of the interpretation of that world by its participants.
6. Qualitative research implies that social properties are outcomes of the interactions between individuals.

Looking at the research question, the main goal of this research and the features mentioned above, a qualitative research strategy is considered the most appropriate for this research.

15.2 RESEARCH DESIGN

The research design represents the structure that guides the execution of a research method and the analysis of the subsequent data (Bryman, 2012, p. 45). Yin (2009, p. 4) argues that in general, case studies are the preferred method the more research question(s) seek to explain “how” or “why” some social phenomenon works and when the investigator has little control over events. This is supported by Massis and Kotlar (2014, p.16). As this applies to this research, a case study design is chosen. This is a research design that entails the detailed and intensive analysis of a single case (Bryman, 2012, p.66), which for this research is the case of the Schiedam.

15.3 RESEARCH SAMPLE

A sample refers to a segment of a whole that is selected for investigation (Bryman, 2012, p. 187). Since this research focuses on a changing situation within a specific municipality, that of Schiedam, this is considered to be the sample. The ‘whole’ to this sample are municipalities facing similar changes as the municipality of Schiedam.

15.4 RESEARCH METHODS

Research methods are techniques for collecting data (Bryman, 2012, p. 46). For this research, a literature study is performed. Several sources have been analyzed and compared to gain in-depth knowledge about the subject. Next to a literature study, semi-structured interviews will be used. This refers to a context in which the interviewer has a series of questions that are in the general form of an interview schedule, but is able to vary the sequence of questions.

15.5 RESEARCH ORGANIZATION

This paragraph elaborates on the different aspects of this research's organization, which include scientific domains and mentors.

15.5.1 Scientific domains

This research touches the scientific domain of Urban Area Development within the master track Management in the Built Environment. This, as it concerns changes within a municipality's way of working regarding urban area development.

15.5.2 Mentors

The mentors for this research remain the same as for the first part of this thesis. See below.

1st mentor: Louis Lousberg – 'Design Thinking'
Domain: Project management

2nd mentor: Tom Daamen – 'Next Generation Waterfronts'
Domain: Urban area development
Specialization: Waterfront development

Company mentor: Bart Heinz
Occupation: Process Manager of the municipality of Schiedam

CHAPTER 16
ORGANIZATIONAL CHANGE MANAGEMENT

This chapter addresses organizational change management. This, in order to understand what organizational change management entails, and which elements or organizational change management can be distinguished. This will allow to draw up a framework, consisting of these elements, that is used to analyze the change within the municipality of Schiedam.

This chapter will first describe what organizational change management is, and why it is important. This is followed by a description of the different categories of change. By doing so, this chapter provides an answer to the following sub-questions: *‘What is organizational change management?’*, *‘What types of organizational change can be distinguished?’*, and *‘What characterizes the different types of change? And the different types of approaches to change?’*.

16.1 ORGANIZATIONAL CHANGE MANAGEMENT

Change is a continuous aspect of organizational life, both at an operational and strategic level (Burnes, 2004). It is therefore that it is important to any organization to determine what their future will look like, and how necessary changes to get there can be managed (By, 2005). Successful management of change is a necessity to survive in today’s eminent competitive and continuously evolving environment (Luecke, 2003; Hemmington, Okumus, 1998). Because of this importance, change management is a highly required managerial skill (Senior, 2002). It is defined as *‘the process of continually renewing an organization’s direction, structure, and capabilities to serve the ever-changing needs of external and internal costumers’* (By, 2005, p. 369; Based on Brightman, Moran, 2001, p. 111). In early theories on organizational change management, it was suggested that organizations could not be effective if they were in a state of constant change, as people need routines to be effective and to improve their performance (Rieley, Clarkson, 2001; Luecke, 2003). More recently however, it is argued that it is of crucial importance to organizations that people are able to undergo continuous change (Burnes, 2004; Rieley, Clarkson, 2001).

Change tends to be reactive, discontinuous and ad hoc since the need for it is often unpredictable. It is often triggered by a certain situation or organizational crisis (Burnes, 2004; Meyer, De Wit, 2005; Luecke, 2003; Nelson, 2003), and comes in all shapes and sizes (Balogun, Hope Hailey, 2004; Burnes, 2004; Carnall, 2003; Kotter, 1996, Luecke, 2003), therefore affecting all organizations in every industry (By, 2005). In the current business environment, the pace of change is greater than ever before (Balogun, hope Hailey, 2004; Burnes, 2004; Carnall, 2003; Kotter, 1996; Luecke, 2003; Brightman, Moran, 2001; Hemmington, Okumus, 1998; McCalman, Paton, 2000; Senior, 2002).

16.2 TYPES OF CHANGE

In order to get a better understanding of change management, it is important to know that there are different kinds of change. Senior (2002) divided change into three different categories in order to link different theories about- and approaches to change. The three categories divide change as characterized by the rate of occurrence, by how it comes about and by scale. See below.

16.2.1 Change characterize by rate of occurrence

Different types of change can be detected when looking at change characterized by rate of occurrence: (1) discontinuous change, (2) continuous change, and (3) incremental change.

1. Discontinuous change

Discontinuous change can be defined as change which is marked by fast shifts in strategy, structure or culture. Or in all three (Grundy, 1993, p. 26). It is a onetime event that takes place through large, widely separated initiatives that are followed up by long periods of consolidation and stillness (Luecke, 2003, p. 102). Such rapid changes can be caused by mayor internal problems or by external shock (Senior, 2002). It is argued that this approach is cost-effective, as it does not endorse perpetual processes of costly change initiatives, and that it creates less tumult caused by continuous change (Guimaraes, Armstrong, 1998). However, some authors agree that the benefits from discontinuous change do not last (Bond, 1999; Grundy, 1993; Holloway, 2002; Love et al., 1998; Taylor, Hirst, 2001). For example, Luecke (2003) discusses that this approach allows for defensive behavior, complacency, inward focus and routines, which creates situations where major reform is constantly necessary.

2. Continuous change

Suggested to be a better approach to change is the situation where an organization continuously monitor, sense and respond to its external and internal situation as an ongoing process consisting of small steps (Luecke, 2003). This continuous change is therefore defined as the ability to change continually in a fundamental way to keep up with the rapid pace of change (Burnes, 2004).

3. Incremental change

The third type of change characterized by occurrence is incremental change: a situation in which individual parts of an organization deal increasingly and separately with one problem at a time. This approach argues that change is best implemented through successive, limited, and negotiated shifts (Burnes, 2004). Incremental change can be further specified into smooth incremental change: change that evolves slowly in a predictable way at a constant rate (Grundy, 1993); and bumpy incremental change: change characterized by periods of rest punctuated by acceleration in the pace of change (Grundy, 1993; Holloway, 2002).

Regarding continuous and incremental change, Burnes (2004) differentiates the two by describing continuous change as departmental, operational, ongoing changes and incremental change as being concerned with organization-wide strategies and the ability to constantly adapt these to the demands of the external and internal environment (By, 2005, p. 372).

16.2.2 Change characterized by how it comes about

When characterizing change by how it comes about, multiple approaches are recognized. See Table 11 below.

Table 11: change characterized by how it comes about and their main literature source (By, 2005, p. 373)

Type of change	Burnes (1996)	Dunphy, State (1993)	Senior (2002)
Planned	X		X
Emergent	X		X
Contingency		X	
Choice	X		

The planned approach to change tries to explain the process that brings changes (Burnes, 1996), while emphasizing the importance of understanding the different states which organizations will

have to undergo to be able to move from the unsuitable situation to the identified desired state (Eldrod II, Tippet, 2002).

The emergent approach to change highlights that change should not be seen as a series of linear events during a certain period of time, but as a continuous, open-ended process of acclimating to changing circumstances, while emphasizing the unpredictable nature of change (Burnes, 1996, 2004; Dawson, 1994), and perceiving change as a process of learning (Altman, Iles, 1998; Davidson, De Marco, 1999; Dunphy, Stace, 1993). This approach to change is more concerned with change readiness and facilitating for change than with providing specific, pre-planned steps for each change project (By, 2005, p. 375; Based on Burnes, 1996, p. 13). The contingency approach to change on the other hand, reflects that not only organizations are operating in continuously changing environments, but that there is also a range of approaches to change. It is an approach that indicates how to vary change strategies to achieve maximum fit with the changing environment (Dunphy, Stace, 1993, p. 905).

Next to the previous three approaches to change characterized by how it comes about, Burnes (1996, p. 16) suggests that organizations do not necessarily need to change in order to adapt to their external environment. Organizations can adopt an approach of choice in which they choose to influence situational variables in order to change their internal practices to match with external variables, instead of being forced to do so (Burnes, 1996).

16.2.3 Change characterized by scale

This third category of change can also be divided in four characteristics: fine-tuning, incremental adjustment, modular transformation and corporate transformation (Dunphy, Stace, 1993). Fine-tuning describes change as an ongoing process to match the organization's strategy, processes, people and structure, with the purpose of developing personnel suited to the present strategy and refine policies, methods and procedures. Incremental adjustment revolves around modifications to management processes and organizational strategies, disregarding radical change (Senior, 2002). Modular transformation can be classified as change identified by major shifts of one, or multiple, departments or divisions. In contrast with incremental adjustment, this change can be radical, but focuses on a part of an organization instead of on the organization in its entirety (Senior, 2002). Corporate transformation can be described as change that is corporate-wide and characterized by radical adjustments in the business strategy (Dunphy, Stace, 1993).

16.3 PROCESS OF CHANGE

The management world is becoming more perceptive to the process-related aspects of change. The substantive aspects of change are complex to such a degree, that for the change process to be a success, there is a need for explicit attention to the process aspects (Bruijn et al., 2010, p. 1). Experiences with the process of change and management are often disappointing. Bruijn et al. (2010, pp. 2-3) describes three reasons for this disappointing experience. Firstly, the person who aspires and initiates the change is often functioning in a network of dependencies. He or she is dependent on others and will never be able to impose one-sided change. Other parties may revise or obstruct the change during the decision-making phase as well as during the implementation.

Secondly, many problems are so complex that there is no unambiguous substantive solution. Therefore, a person aspiring a certain change and supports this with substantive arguments will often fail to convince other parties. Thirdly, many changes are designed in a project-like way. There are strict problem definitions, clear goals, and tight time schedules. However, a project approach has a narrow meaning in a network of dependencies Chapter 6, Paragraph 6.3.

The bottom line is that an initiator of change depends on others, who may not be convinced by the initiator's substantive arguments. Excessive substantive steering at the start of a change process

can stimulate resistance and result in substantive dilemmas (Bruijn et al., 2010, p. 23). It is possible that the other parties feel as if their own ideas are not sufficiently reflected in the proposed change. Therefore, they may frustrate the project planning (Bruijn et al., 2010, p. 3). Only when these parties are involved in the change, they may be able to recognize their own ideas in the problem definition and solution, which will result in their acceptance of the change. Initiating change calls for a process approach: involving all relevant parties in a process of interaction in which problems and solutions are discussed and negotiated. This will allow for parties to make process agreements to bring the change process to a successful end (Bruijn et al., 2010, p. 3). Furthermore, a process approach to change can reduce resistances to the change, since it does not specify the substance of the change, but only the process towards a possible change (Bruijn et al., 2010, p. 23).

Regarding successful organizational transformation, several authors describe different steps of achieving a successful process. These steps are incorporated in Table 12, which also serves as a comparison between the authors.

Table 12: a comparison of different models of change. Based on By, 2007, p. 376.

	Kanter et al., 1992	Kotter, 1996	Luecke, 2003
1.	Analyze the organization and the need to change	X	Joint identification of business problems and solutions
2.	Form a vision and a common direction	Develop a vision and strategy	Develop a shared vision of how to organize and manage
3.	Separate from the past	X	X
4.	Create a sense of urgency	Stablish a sense of urgency	X
5.	Support a strong leader role	X	Identify leadership
6.	Line up political sponsorship	Create a guiding coalition	X
7.	Craft an implementation plan	X	X
8.	Develop enabling structures	Empower broad-based action	X
9.	Communicate, involve people, be honest	Communicate the change vision	X
10.	Reinforce and institutionalize change	Anchor new approaches in the culture	Institutionalize success through policies and structures
11.	X	Generate short-term wins	X
12.	X	Consolidate gains and produce more change	X
13.	X	X	Focus on result, not activities
14.	X	X	Do not push change from the top, but let it spread to different units
15.	X	X	Monitor and adjust strategies in response to problems

It should be mentioned that the authors mentioned in Table 12 all refer to emergent change, as described in paragraph 16.2.2. Dunphy and Stace (1993, p. 905) argue that there is more need for a model of change that is situational and indicates how to vary change strategies to achieve the best fit with the changing environment, instead of presenting one strategy as being best suited for all organizations, at all times.

CHAPTER 17
CASE: MUNICIPALITY OF SCHIEDAM

This chapter will address how and why the municipality of Schiedam is changing. In order to do so, it will first explain how the municipality is structured. This, as it is important to understand how the municipality functions as an organization, in order to fully understand why or how some choices are made. This chapter will therefore answer the following sub-questions: '*How is the municipality of Schiedam structured?*', '*In which way is the municipality of Schiedam changing?*', and '*What are the causes for this change?*'.

17.1 ORGANIZATIONAL STRUCTURE

The board of the municipality consists of three administrative bodies: (1) The city council [Dutch: gemeenteraad], who is at the top of the organization. It represents, and is elected by, the inhabitants of the city. The city council sets the main guidelines of municipal policies and sees to it that the Mayor & Executive Board complies with it; (2) The Mayor & Executive Board [Dutch: college van B&W], who carries out the municipal policies and offers proposals to the city council; and (3) The mayor, who forms an administrative body on his/her own (Municipality of Schiedam, 2017).

The board of the municipality is supported by the council apparatus [Dutch: ambtelijk apparaat]. The city council is also separately supported by the Registry [Dutch: griffie], for which the council clerk [Dutch: griffier] functions as chairman. The municipal secretary is responsible for all aspects of the primary policy process within the municipality. In addition to this, the municipal secretary is general manager and bears the final responsibility for the adjective organization. He is responsible for integral management and the establishment of a strategic vision. He also contributes to the integral management of the organization (Municipality of Schiedam, 2017). The municipal structure is visualized schematically in Image 4 on the next page.

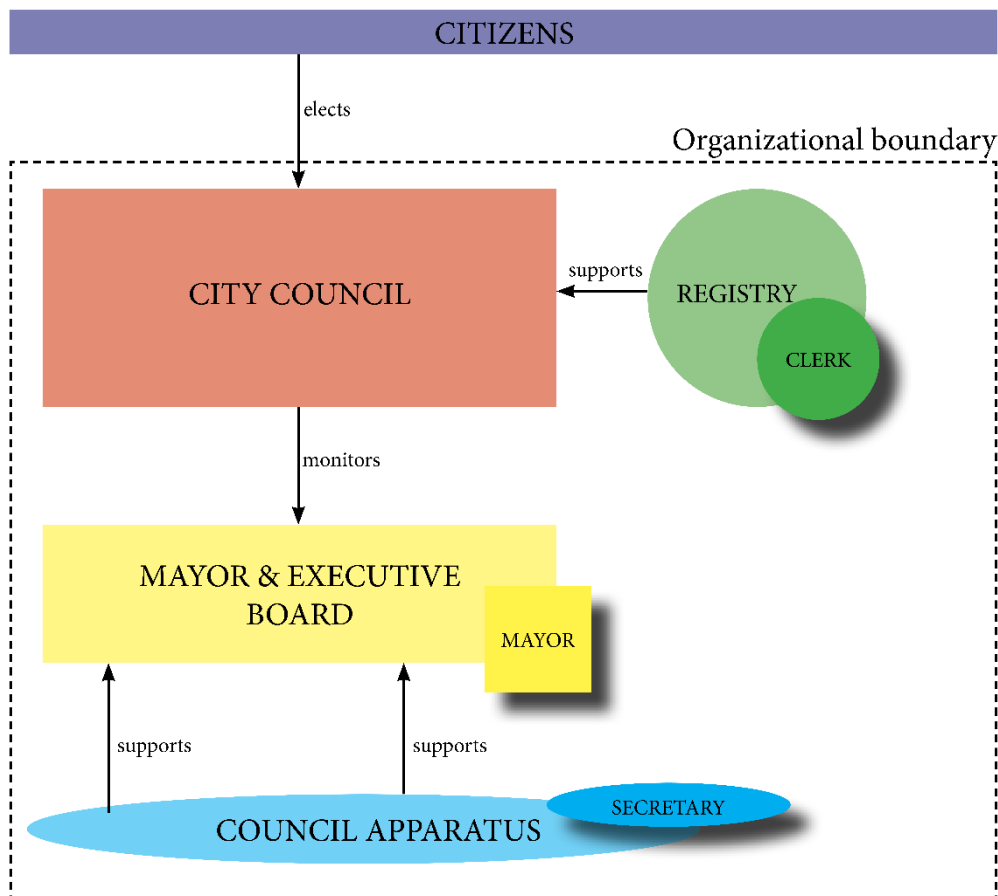


Figure 4: Organizational structure of the municipality of Schiedam. Own illustration

17.2 THE CHANGING ROLE OF THE UNICIPALITY

The culture of the municipality of Schiedam, especially regarding urban area development, is changing. The municipality has always had an active land-policy [Dutch= grondbeleid] in the past. This land policy entailed actively acquiring land for new, desired developments, making all the plans and delivering the plots all prepared [Dutch= bouwrijp]. This has always been the tradition in Schiedam (Municipality of Schiedam, 2016). The position of the municipality was strengthened by the fact that there is a lot of leasehold [Dutch: Erfpacht] in Schiedam. Areas such as the business districts, the port, and the residential areas, are all on leasehold. The contracts for this leasehold end after a period of 50 years, after which the municipality makes new plans that are then presented to the companies in Schiedam. Companies can choose to go along with the municipal plans, after which their contracts are extended, or they can decline, resulting in their contracts not being extended and the municipality forcing these companies to leave and search for new contract partners. This proved to be a very effective way of managing urban redevelopment [Heinz, 2017, pp. 1: Interview A1].

With the establishment of the Land-Policy Note in 2009, the active land-policy of the municipality of Schiedam ended. This was due to happen as a result of a multitude of causes. Firstly, the role of municipalities in urban area development has shrunk, as the role of end-users has increased. Private parties, citizens, landowners and so on, have gained more influence in urban redevelopment (Municipality of Schiedam, 2016). Secondly, there is an increase in the number of stakeholders, each having their own interests, which affects the steering opportunities of the government. Traditional big parties, with high investment capabilities made room for a multitude of small parties with little investment capabilities. And thirdly, there is less money. Where in the past the municipality had the financial means to actively acquire land for their developments, they

now have to be more creative in finding ways of financing urban area developments (Municipality of Schiedam, 2016). The main cause however, was the crisis of September 2008 [Heinz, 2017, pp. 1-2: Interview A1]. Due to the crisis, the municipality of Schiedam was no longer able to make plans and finance them. That was considered to be too risky. The municipality had invested in a multitude of plans and land acquisition. Due to the crisis, that land had greatly decreased in value, resulting in a shortage of 90€ million on the municipality's land use [Dutch: Grondexploitatie] in only a couple of months.

These motives have had their consequences for the municipality of Schiedam. To cope with the new situation, the municipality decided to end the active land-policy and transition into a passive land-policy, in which the municipality hooks on to initiatives from others and facilitate where possible. The municipality still participates in idea-forming, but more as an equal partner, instead of being the superior actor. This formed the origin of their slogan '*van maakbaarheid naar haadbaarheid*', which can be interpreted as moving away from making things themselves to hooking on to plans to help others make things [Heinz, 2017, pp. 1-2: Interview A1]. The municipality is moving towards becoming a '*director municipality*' (Dutch= *regiegemeente*): a municipality that hooks on to plans/initiatives from society and companies, and strengthens these plans with giving their input as municipality in terms of providing knowledge, creating broad support, providing subsidies and giving permits; A municipality that is no longer on the leading position, but facilitates on an equal level [Heinz, 2017, pp. 1-2: Interview A1]. The active land-policy role of the municipality has become obsolete, and no longer fits within the new role of *director municipality*. The same applies to the evaluative role of the municipality: checking building regulations (Dutch= *bouwregelgeving*) and land-use plans. This way of working is inadequate to achieve the right movement. The municipality has to bring local parties together and persuade them. This requires a more process like approach, a so-called '*uitnodigingsplanologie*', which freely translates to '*invitation policy*'. This way of working involves solutions being brought up, and planning being picked up by society. The municipality has a more modest role: it remains involved in the projects, but does not impose solutions to issues. The municipality sets up global frameworks and takes on a facilitating role while coordinating and connecting [Heinz, 2017, pp. 1-2: Interview A1].

CHAPTER 18

OPERATIONALIZATION

This chapter entails the operationalization of this research. To make this research operational, a framework is construed around organizational change management. This is followed by a description of the interviews for this research, which is done by describing the objective of the interviews, the selection of the interviewees, how the interviews are conducted and how they are analyzed.

18.1 OPERARIONALIZING ORGANIZATIONAL CHANGE MANAGEMENT

After analyzing organizational change management, and introducing the case of the municipality of Schiedam, a framework can be formed around it as means to identify which elements of organizational change management are recognized in the case of Schiedam. The first step in doing so, is selecting the elements of organizational change management that are going to be used for this research. As mentioned in chapter 16, three different categories of change can be distinguished (Senior, 2002). These categories will be used as the base of the organizational change management elements, since change itself, and understanding the differences in change, is fundamental to organizational change management (Senior, 2002). The three categories of change can be further divided into different types and approaches to change, see Table 13.

Table 13: categories of change.

CATEGORY OF CHANGE	→ Change by rate of occurrence	→ Discontinuous
		→ Continuous
		→ Incremental
	→ Change by how it comes about	→ Planned
		→ Emergent
		→ Contingency
		→ Choice
	→ Change by scale	→ Fine-tuning
		→ Incremental adjustment
		→ Modular transformation
		→ Corporate transformation

The different types and approaches to change have their own characteristics, which can be framed as a definition to that specific type or approach to change. This is shown in tables 14, 15 and 16 on the next page. These definitions form the first part of the organizational change management literature elements, and serve as foundation to the research questions mentioned in Appendix 6. Through interviews, answers to these questions will be given as the change process of the municipality of Schiedam is analyzed.

Table 14: characteristics of change by rate of occurrence.

Category of change	Approach		Definition
CHANGE BY RATE OF OCCURRENCE	→	Discontinuous	→ Change marked by fast shifts in strategy/culture. A one-time event followed by stillness and consolidation, caused by mayor internal/external shock.
	→	Continuous	→ Continuously monitor external/internal situation to be able to change continually.
	→	Incremental	→ Individual parts or organization deal separately with one problem at a time.

Table 15: characteristics of change by how it comes about.

Category of change	Type		Definition
CHANGE BY HOW IT COMES ABOUT	→	Planned	→ Approach that explains the process that brings change while emphasizing the importance of understanding the change.
	→	Emergent	→ Approach that sees change as a continuous, open-ended process of acclimating to changing circumstances.
	→	Contingency	→ Approach emphasizing that there is not one best strategy for all situations, but rather one best strategy to each situation.
	→	Choice	→ Adopt approach of choice when there is no necessity to adapt to external environment

Table 16: characteristics of change by scale.

CHANGE BY SCALE	→	Fine-tuning	→ Ongoing process of change with the purpose of refining policies, methods and procedures.
	→	Incremental adjustment	→ Modifications to management processes and organizational strategies (no radical change)
	→	Modular transformation	→ Major shifts in one or multiple divisions. Focus on parts of the organization.
	→	Corporate transformation	→ Radical adjustments in business strategies. Corporate-wide focus.

This operationalization of the different organizational change management elements can be visualized with a conceptual model. See Figure 5. The definitions in Tables 14, 15, and 16 form the base of the interview questions. These are included in Appendix 6.

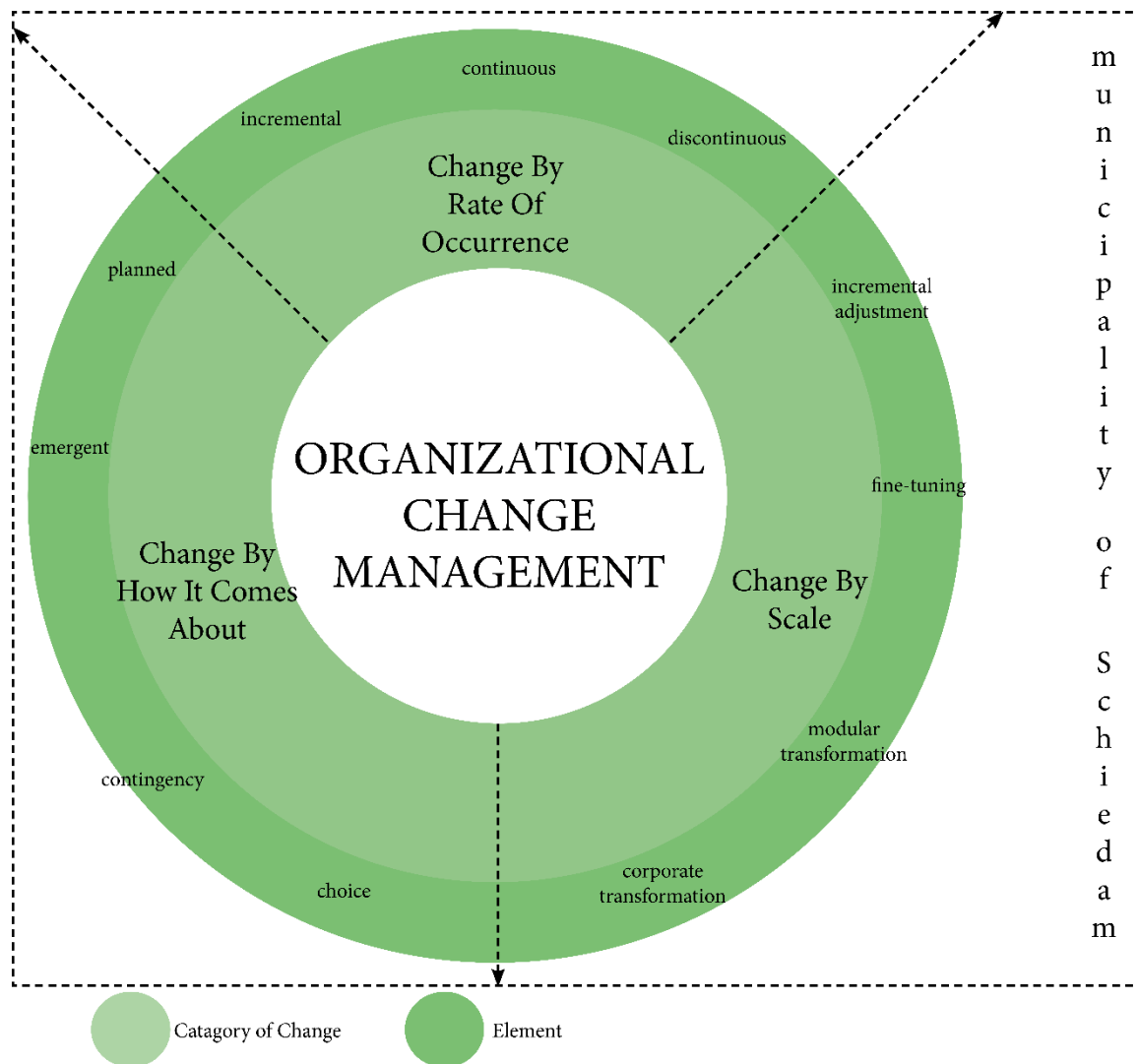


Figure 5: Conceptual model. Own illustration.

After operationalizing the various elements, the next step is to lay focus on the technique that will be used to collect data: interviewing. This is done in the following paragraphs.

18.2 INTERVIEWING

This paragraph elaborates on the interviewing technique used in this research as mean of data collection. First the objective of the interviews will be described, followed by a description of how the interviewees were selected. Subsequently, it will be described how the interviews were conducted and analyzed. This paragraph will be closed with a table that provides the main findings of the interviews.

18.2.1 Objective of the interviews

For this research, the interviews' main objective is to provide insights on how the municipality of Schiedam deals with change in their transition towards a process-based way or working in urban

area development. Interviewees are asked questions about the changing situation of the municipality, in which elements of organizational change management are incorporated, so as to identify which elements of organizational change management literature can be recognized for the case of the municipality of Schiedam.

18.2.2 Selection of interviewees

For this research, the selection of interviewees took place through snowballing: selecting interviewees by recommendation of other interviewees. The first interview was conducted with Bart Heinz, who also serves as main contact within the municipality of Schiedam. Through his recommendations, interviewees were selected whom most certainly would be able to provide answers to the research questions of this thesis. The list of interviewees for this part are shown in Table 17. It should be stated that Bart is included in both parts of this thesis, as he provided answers specific to both design thinking and organizational change management. The same applies to Nathalie Gouweleeuw.

Table 17: List of interviewees.

	Name	Function	Focus of questions
INTERVIEWEE	B. Heinz	Process manager Schiedam	• (Design thinking) • Changing role of the Municipality of Schiedam
	M. van de Hende	Director Schiedam	• Changing role of the Municipality of Schiedam
	N. Gouweleeuw	Alderman[wethouder] Schiedam	• (Design thinking) • Changing role of the Municipality of Schiedam
	B. Stad	Project manager Schiedam	• Changing role of the Municipality of Schiedam • (Design thinking)

16.2.3 Conduct of the interviews

The data about the changing situation of the municipality of Schiedam was collected by means of semi-structured interviewing. For this, a set of open-ended questions was formulated, based on the findings of the theoretical research and, subsequently, the operationalization of the organizational change management literature. The interviews were conducted face-to-face with the interviewees, and were recorded using a laptop or phone. The transcripts of the interviews were sent back to the interviewees for validation and verification, after which the recordings were deleted. The verified transcripts can be found under Appendix 3.

16.2.4 Result of the interviews

The main result of the interviews can be summarized as seen in Table 18, which shows a matrix of the various elements of organizational change management and the interviewees. The matrix shows which elements are recognized by which interviewee, or in which interview, by indicating if an element is present (green), absent (red), or has only been partly recognized (yellow). If a field is left open, no definitive answer could be given about whether an element from the organizational change management literature could be recognized by the interviewee.

Table 18: Summarized results from the interviews.

			Van de Hende interview C	Heinz interview A1	Stad interview D	Gouweleeuw interview E
Category of change	Change by rate of occurrence	Discontinuous				
		Continuous				
		Incremental				
	Change by how it comes about	Planned				
		Emergent				
		Contingency				
		Choice				
	Change by scale	Fine-tuning				
		Incremental adjustment				
		Modular Transformation				
		Corporate transformation				

These results will be elaborated in detail in the following chapter, and will serve as a way to analyze the way in which the municipality of Schiedam copes with change.

CHAPTER 19

MUNICIPALITY OF SCHIEDAM: AN ANALYSIS

This chapter will analyze the changing situation of the municipality of Schiedam in depth. This, by addressing the results from the various interviews held, as described in the previous chapter. First, the changing role of the municipality will be analyzed. This is followed by an analysis focused on recognizing organizational change management elements. This chapter will provide answers to the following sub-questions: *'How does the municipality of Schiedam deal with the change?'*, and *'How can the change process of the municipality be described?'*. It will furthermore add to some previously addressed questions: *'In which way is the municipality of Schiedam changing?'*, *'What are the causes for this change?'*, and *'How can the change process of the municipality be described?'*.

19.1 THE CHANGING ROLE OF THE MUNICIPALITY: IN DEPTH

The change within the municipality of Schiedam has two main causes. The first reason is an administrative, political one: both the mayor and the city council stepped up. This, as not only the culture, but the entire organization was considered to be ill. Subsequently, there was a BING report on the topic. This made fundamental changes in the organization necessary, especially regarding trust and how to interact with each other, on an organizational level [Gouweleeuw, 2017, pp. 4-5: Interview E]. The second reason revolves around social developments: *how does the municipality cope with information* and *which role should the municipality adopt*. These questions led to the decision to become a director municipality. One that utilizes the opportunities outside of the organization. The municipality had to start thinking from the outside towards the inside: look at what problems, solutions, tasks there are in the city, and bring those inside the organization. This contrasts the old situation, in which plans were conceived inside the organization, and where brought to the city [Gouweleeuw, 2017, pp. 4-5: Interview E]. These two issues happened at the same time, and force the municipality to change in different ways. The fundamental changes regarding trust and how people acted towards each other, were implemented top-down, as it was considered necessary that the city council gave the right example to the entire organization. Concerning seeing things from the outside in, Gouweleeuw [2017, pp. 5: Interview E] explains how it is impossible to implement that top-down, as changes will not occur if the people in the organization do not really believe that it is necessary. Hende [2017, pp. 1: Interview C] also mentions how the changes were implemented both top-down and bottom-up. Both the top and the bottom of the organization look at the environment, and work towards each other.

According to Hende [2017, pp. 1: Interview C], the municipality of Schiedam has been changing for a while, and those changes accelerated with the arrival of the new city council. In the Netherlands, there is the discussion about how the government should initiate and act in developments with other stakeholders, and what their role within the process should be. The new city council of Schiedam started the movement of *Schiedamsdoen*, which revolves around cooperation between the city and the municipality. This, as a way to organize a connection from outside the organization, towards the inside, which is in line with Gouweleeuw [2017, pp. 4-5: Interview E]. However, Stad [2017, pp. 1: Interview D] explains how she sees that people within the organization like the idea of thinking from the outside in, but start finding it a bit too exciting when ideas start to become more concrete. This, as it is difficult to test ideas from outside the municipality. Subsequently, the municipality maintains such a strong vision on certain areas, that it sets high demands for developers and other market parties. This contrasts the view of wanting to work from the outside in. Stad [2017, pp. 1-2: Interview D] stresses how it is necessary for the municipality to set demands, as the municipality is responsible for safety and the quality of public area. New developments must meet all the building regulations to ensure safety. However, the

municipality takes this too far in her opinion, considering the fact that the municipality want to offer the market possibilities to realize things. This can be partly due to the organization's culture of finding things intriguing as soon as they become concrete, and tending to put things up for discussions indefinitely. Because of that, the municipality is often doing risk management and control. Withal, this is not unique to the municipality of Schiedam, as many governments are doing risk management, trying to keep everything within budget, which is understandable, as municipalities have had a lot to deal with in recent years. However, this results in wanting to meet all the rules till infinity [Stad, 2017, pp. 2-3: Interview D].

19.2 CHANGE BY OCCURRENCE

As previously described, change by rate of occurrence can be divided in three approaches to change: (1) A discontinuous approach that is marked by fast shifts in strategy and/or culture. Often a one-time event that is caused by mayor internal and/or external shock, and is followed by stillness and consolidation (Grundy, 1993, p. 26; Luecke, 2003, p. 102; Senior, 2002); (2) A continuous approach revolving around continuously monitoring an organizations internal and internal situation, as to be able to change continually in order to keep up with the fast pace of change (Burnes, 2004; Luecke, 2003); and (3) and incremental approach, focusing on individual parts of an organization dealing separately with change, one problem at a time (Burnes, 2004). Interviews on these topics resulted in the results seen in Table 19, which are elaborated below.

Table 19: Summarized results from the interviews regarding 'Change by rate of occurrence'.

		Van de Hende interview C	Heinz interview A1	Stad interview D	Gouweleeuw interview E
Change by rate of occurrence	Discontinuous				
	Continuous				
	Incremental				

Gouweleeuw [2017, pp. 6-7: Interview E] describes how all three elements are present in the change process of the municipality of Schiedam. The continuous approach is considered to be the most ideal, as it is considered to be the only possible approach when looking at the fast pace of change in the world. So much so, that change is considered to be the only stability. Therefore, the only thing left to do, is to continuously adapt to changes. However, in Schiedam there was a clear reason for the change. The executive burn-out caused a booming effect that forced the municipality to push through and initiate changes. Following up on this, Gouweleeuw mentions that this was a one-time event. The booming effect was not continuous. This fits the description of the discontinuous approach. However, that does not distract from the fact that the organization has to keep on adjusting continuously to keep up with its environment. Within this continuous and discontinuous approaches, examples of the incremental approach can be found, one being that of the refugee crisis. That crisis just came at the municipality, and forced it to deal with it as a separate issue. Therefore, the situation concerning refugees and status holders was taken care of in an incremental way [Gouweleeuw, 2017, pp. 7: Interview E].

Regarding the discontinuous approach, Stad [2017, pp. 3: Interview D] mentions how she can imagine that that is what occurred in Schiedam. After mayor Verver left, the people within the organization wanted to end the 'fear' culture prevailing in the municipality. They started to actively try to change that culture. However, Stad mentions how she sees a return of that 'fear' culture, especially in the last year and a half. She adds to this that not everyone in the organization will agree to that, but that it is something that she experiences. Subsequently, she expresses not having the feeling that the municipality actively steers on its invitation-policy. This is backed by Heinz [2017, pp. 5: Interview A1]. Every project manager within the municipality, who is involved in an urban development project, is free to decide what way of working is to be implemented. Adding to this, the principle of the invitation-policy is believed to be part of the new environmental

law. Because of this, some people within the organization are working on it. However, since this new law will not be introduced until a couple of years, there is also an attitude within the municipality of *'It's not that far yet'*.

In contrast, Hende [2017, pp. 3: Interview C] discusses how this approach does not work. The situation is always changing, and therefore we are in a continuous process of change. Implementing change, and not following through, does not work. The municipality of Schiedam is in a continuous process of change, in which it monitors its dynamic environment, in order to decide how to relate to those changes. It is a constant process of looking at *'what is necessary'* and *'how are we going to organize that'*. Subsequently, Hende [2017, pp. 4: Interview C] mentions that there are still gains to be gained in the monitoring part, as it proves to be difficult. Subsequently, Stad [2017, pp. 4: Interview D] wonders if the continuous approach is possible within a political, governmental organization. The base principle of this approach is considered to be great, however, the municipality of Schiedam is not an organization that easily adapts to its environment, which is deemed to be difficult for a political oriented organization, as in the end, the right political or left political council decides how the organizational capacity is distributed.

Concerning the incremental approach, Stad [2017, pp. 4: Interview D] considers it to form the base principle of *'task steering'* as the municipality of Schiedam opts to implement it. It is believed that this approach allows an organization to respond with more flexibility to changes, as it does not revolve around making big plans for in the future, but rather focuses on looking at what is necessary at the moment, and dealing with it step-by-step. Subsequently, this approach does not prevent the fact that everything falls or stands with right prioritizing. So, no matter how well you incrementally deal with things, if the priorities are wrong, everything fails [Stad, 2017, pp. 4: Interview D]. This is in line with Hende [2017, pp. 2: Interview C], who recognized this approach as being the municipality's *'task steering'*. Regarding this *'task steering'*, it should be mentioned that it is also part of the upcoming environmental law, expected in 2021 [2017, pp. 4: Interview D]. With this law, the Dutch government opts to combine and simplify urban development legislation (Rijksoverheid, 2017).

19.3 CHANGE BY HOW IT COMES ABOUT

Change by rate of occurrence consists of four different approaches: (1) the planned approach, which opts to explain the process of change while emphasizing the importance of understanding the change. This concerns a top-down approach that recognizes the need to discard old behavior (Burnes, 1996; Eldrod II, Tippett, 2002; Bamfort, Forrester, 2003); (2) the emergent approach that sees change as a continuous, open-ended process of acclimating to changing circumstances. This is a bottom-up approach (Burnes, 1996, 2004; Dawson, 1994); (3) a contingency approach that emphasizes that there is not one best strategy to all situations, but rather a one best strategy for each situation (By, 2007, p. 377); and (4) the choice approach in which an organization does not necessarily have to adapt to its external environment, but stills chooses to adapt adopting an approach of choice (Burnes, 1996). Interviews on these topics resulted in the results seen in Table 20, which are elaborated below.

Table 20: Summarized results from the interviews regarding 'Change by how it comes about'.

		Van de Hende interview C	Heinz interview A1	Stad interview D	Gouweleeuw interview E
Change by how it comes about	Planned				
	Emergent				
	Contingency				
	Choice				

In explaining the causes for the municipality's change, Hende [2017, pp.: Interview C] explains how inducing this change was a very conscious decision, but not planned, as one cannot plan to dismiss a mayor and a council. However, changing was an intentional, deliberated choice to show that things could be done in a different manner. This fits the *choice approach* to a certain extent: it was a deliberated choice, but also a necessary one since there was a necessity to adopt a new culture within the municipality. Heinz mentions how the crisis of 2008 also cooperates to the change, which is a phenomenon that cannot be planned [2017, pp. 1-2: Interview A1]. Gouweleeuw [2017, pp. 5-7: Interview E] explains that the municipality of Schiedam had no choice but to change, as the entire organization was considered to be ill. Furthermore, her description of how there was a booming effect forcing the municipality to change, within the context of having to change continuously to keep up with the changing environment, can be inferred as a non-linear process of change. This, as the booming caused an acceleration in the pace of change, that slowed down later in the process. Hende [2017, pp. 3: Interview C] also describes how the process of change is not linear, as that is impossible with the current pace of change. The municipality cannot set goals for a time period of five years, for example, as these goals would probably no longer stand after that period since everything continues to change. This is in consonance with Stad [2017, pp. 4: Interview D], who mentions that in practice, it is impossible to set goals for over ten years, since you, as an organization, will never get there. This fits the *emergent approach*, as it emphasizes that change is an open-ended, nonlinear process (Burnes, 1996, 2004; Dawson, 1994).

Regarding the contingency approach, no answers given by the interviewees led directly to this approach. Therefore, it is left blank.

19.4 CHANGE BY SCALE

Change by scale can be divided into four characteristics: (1) fine-tuning, which describes change as an ongoing process with the purpose of refining policies, methods and procedures (Dunphy, Stace, 1993); (2) incremental adjustment, which revolves around non radical modifications to management processes and strategies (Senior, 2002); (3) modular transformation revolves around mayor shifts in parts or an organization (Senior, 2002); and (4) corporate transformation, which focuses radical, corporate-wide adjustments (Dunphy, Stace, 1993). Interviews on these topics resulted in the results seen in Table 21, which are elaborated below.

Table 21: Summarized results from the interviews regarding 'Change by scale'.

		Van de Hende Interview C	Heinz Interview A1	Stad Interview D	Gouweleeuw Interview E
Change by scale	Fine-tuning				
	Incremental adjustment				
	Modular Transformation				
	Corporate transformation				

Fine-tuning and incremental adjustment are considered to be ways of polishing policies and strategies, which is something that the municipality of Schiedam does [Hende, 2017, pp. 4: Interview C]. This opposes Stad's vision, who, in her experience, does not believe that the municipality of Schiedam is an organization that does things in a small way. It often revolves around radical changes. If an approach does not work, it is thrown out, and a completely different approach is adopted [Stad, 2017, pp. 5: Interview D]. This vision fits best with modular and corporate transformation. Subsequently, Stad [2017, pp. 5: Interview D] mentions how the principle of '*task steering*' is something that has been poured out over the entire organization, with the purpose of bringing about a change in the organization's culture, which fits corporate transformation in particular, and that there is a wish to initiate changes in urban area

development in specific, especially regarding culture and behavior, which fits modular transformation. Regarding both modular and corporate transformation, Hende [2017, pp. 5: Interview C] explains how both are implemented. The municipality as a whole can be seen as different, smaller organizations, all under the same roof. For the recognizability to the outside world as being one organization all together, you want to have an unambiguous way of acting. You want to have some kind of guideline. And that is corporate wide. And then, depending on whether one is part of urban development or services, you choose what fits best. And it is possible that different departments within the organization change to different extents and in different points of time. But, the overall quality to the outside world, must be the same, regardless which department of the municipality is at stake.

CHAPTER 20

DEALING WITH RESISTANCES

This chapter will describe how change can be founding grounds for untamable problems. It will elucidate how one can cope with such problems and elaborate on one specific problem: the resistance experienced by the process manager of the Schiedam port area redevelopment project. This chapter will answer the following sub-questions: *'What problems does the municipality of Schiedam experience in their process of change?'*, and *'How can these problems be dealt with?'*.

20.1 CHANGE: FOUNDING GROUNDS FOR PROBLEMS

Around organizations, there is no shortage of problems, especially regarding change. Vermaak (2009, p. 159) describes two types of problems: tamable problems and wicked problems. While the former is characterized by low amounts of complexity, the latter are characterized by high amounts of complexity: the more complex an issue is, the less the dominant change repertoire offers an answer to it. In dealing with such problems, it is important to distinguish different kinds of complexity (Vermaak, 2009, pp. 121-122):

- *Substantive complexity*: revolving around the object itself. This includes multi-dimensionality, ambiguity and dilemma's
- *Social complexity*: revolving around a multitude of subjects, their interrelationships, and views.
- *Contextual complexity*: revolving around the idea that the issue cannot be separated from the outside world and that shifting views and broader relational patterns make the issue less manageable.
- *Psychological complexity*: focusing on cognitive limits, as several aspects can escape one's notice due to limited data, disciplinary background, and predominant views.

An example of such a wicked problem, is the resistances experienced by Bart Heinz, the process manager of the Schiedam port area redevelopment project mentioned in Part I of this thesis. In the early stages of this research, he stated that he experienced resistance from some colleagues within his project team, regarding his process based way of working. Due to the process manager's way of working, some project members got the feeling that he went off making plans with stakeholders, while the municipality still had no idea about what was going on. This could result in the municipality having to disapprove to plans in hindsight. This is of course a very negative message, which the municipality preferably does not proclaim. Heinz further expressed how change, in every situation, in any field, will be a cause of difficulties among people. Especially when people have the feeling that, for example, their job may become obsolete due to the changes. Which is a factual fear, and sometimes rightly so. This causes resistance. This resistance can be perceived as being a wicked problem, as it fits in multiple types of complexity. The main issue at stake, is a dilemma, as explained on the next page, which fits substantive complexity. Furthermore, this issue fits both social and contextual complexity, as multiple actors are involved, with their own views and interests, and it cannot be seen separate from the outside world, as a changing environment is one of the drivers behind the issue.

Heinz explained however, how such resistances are not exclusive to the municipality of Schiedam, but could happen in every municipality, in different gradations. The bigger the transition from active to passive land policy is, the bigger the resistance will be. Subsequently, this problem is not exclusive to this one case within the municipality of Schiedam, as Stad also recognizes this situation in her cases [Stad, 2017, pp. 7: Interview D].

As the municipality of Schiedam wants to adopt a more process based way of working, moving towards becoming a ‘director municipality’ that implements the so called ‘invitation policy’, it becomes questionable why individuals within the municipality would oppose to the actual implementation of the process based way of working. The resistance in this case can be explained by the culture of the municipality, which traditionally included employing very active land-policy. This made the transition very tough [Heinz, 2017: Interview A1], as changing the culture within an organization proves to be difficult [Hende, 2017, pp. 2: Interview C].

Due to the municipality’s culture, individuals within the organization may want to stick to the traditional way of working, especially if they differ in substantive views from others, e.g. they may think that the traditional way, the very active land policy, is still the best way to work. Bruijn et al. (2010, pp. 70-71) describe how different views, often opposite to each other, can lead to a dilemma⁶. For this case, the dilemma would resolve around which way of working should be implemented. This dilemma can be framed as seen in Table 22.

Table 22: the framed dilemma.

Dilemma:	
<i>‘What way of working should be implemented for the redevelopment of the Schiedam port area’</i>	
Option 1 (New):	Option 2 (Traditional):
• No predefined boundaries • All other actors are considered equals • Full openness	• Only predefined boundaries, set by and agreed upon by the municipality • Semi openness
Cons:	
• Plans may be rejected by board in hindsight • Project team members may have the feeling their job is no longer needed (will oppose to this option) • Less control by municipality	• Less possibility to ‘hook on’ on existing problems for citizens (goal stretching) • Less possibilities due to predefined boundaries
Pros:	
• No options/solutions are considered impossible in advance • Better possibility to include problems from citizens in the solution (goal stretching) • Has proven to be successful (quick wins)	• Municipality forms one united front as actor • No plans will be rejected in hindsight • No project members will oppose to this option (no resistance)

20.2 COPING WITH RESISTANCES

According to Vermaak (2009), copying standardize change programs is not the answer to wicked problems, as such programs lose sight of the complexity that forms the base of the problem. Such problems can better be dealt with by many small, incremental and interrelated decisions and actions. Therefore, Vermaak’s (2009) research addresses so called ‘working mechanisms’ that describe observed dynamics regarding change processes. He describes twelve innovative and twelve stagnating mechanisms, elucidating what the dominant change repertoires are that often prove to be ill-suited for wicked problems, and what change mechanisms effectively handles wicked problems. Stagnating mechanisms are not to be disregarded too quickly however, as they are better known, easier to understand, and work well on tame problems. However, adhering to these mechanisms in situations they don’t work causes them to become fixations that start

⁶ A dilemma can be defined as a problem to which there are opposites solutions, which both have their pros and cons (Broek et al., 1998).

working against innovation. In such situation, one can deal with so called ‘competency traps’: when the predominant way of working of an organization becomes a barrier that prevents exploring other ways of working that may be more effective, especially in dealing with wicked problems (Levitt, March, 1998). The innovative mechanisms describe such other ways of working and why they work. Instead of adhering to what is known, ways of working are implemented that may seem uncommon in an organizational context (Vermaak, 2009). See Table 23 for an example of such mechanisms. A full list is included in Appendix 7.

Table 23: Example of working mechanisms (Vermaak, 2009).

Aspects		Stagnating mechanisms	Innovative mechanisms
Interactions	Inclusion	Dividing & conferencing	Transactional organizing in multiple parallel work systems
	Influence	Forcing & evading	Co-production by spreading and differentiating contributions
	Affection	Blaming & covering up	Optimizing task conflicts and resolving relationship conflicts.

The specific problem revolving around resistances was solved by removing the resisting project members from the project group. The process manager mentioned how this dilemma prevailed during every project meeting, leading to the same discussions. This was starting to cause irritation among the other project members who were not involved in this dilemma and who thought that the process was becoming very sluggish because of it. This resulted in a negative ambiance and many cancellations for the regular project teams. The process manager expressed this to the persons this concerned and to the management, but to his opinion, there was no adequate response to it (Heinz, 2017: Interview A2). The turning point was when the process manager and the resisting team members couldn’t agree about performing an environmental impact report [Dutch: Milieu Effect Rapportage. MER in short]. The process manager considered it too early and costly to do so in this stage of the process, as it was still not yet clear in which direction the planning would go. In such situations, it is not wise to carry out a costly and time-consuming research with formal consequences like the MER. Adding to this, research into large-scale housing in the port area of Schiedam was part of the chosen MER-research. This was in conflict with previous decisions by the Board of Mayor and Executives [Dutch: college van B&W] from October 2014, where a 2009 vision for housing in the port area was deemed as being unfeasible. Moreover, housing in the Schiedam port area was also in conflict with the pertinent zoning-plan and the structural vision of the City Council for 2020, which’s main point was reinforcing the maritime cluster and the connection between port and city.

Nonetheless, the project members filed for an environmental impact report, focused on residential area, in the process manager’s absence. According to the process manager, this was in conflict with his specific written instruction not to do so in his absence and to wait for a decision from management. The process manager explained how this could have been detrimental to the project. Important stakeholders, including the port authorities and the port companies who came with the initiative for the project could get the idea that the municipality wanted to turn the port into a residential area, causing them to doubt the consistency of the municipality’s policy and forfeit the project. Due to this action, the process manager stepped to the management, describing how he would no longer be able to take responsibility for the project if things continued to go this way. It was then decided by the management that the resisting project members would leave the project. Afterwards, the ambiance within the team improved eminently. This shows that such complicated problems can sometimes have uncomplicated solutions.

With this example of a wicked problem within the case of the municipality of Schiedam, the analysis is concluded. This allows for the conclusions of this research to be drawn. This is done in the following chapter.

CONCLUSION, REFLECTION & RECOMMANDATION

CHAPTER 21 CONCLUSION

This research elucidated how the municipality of Schiedam is changing as reaction to internal changes: the departure of a mayor, the city council, and an ill organizational culture of distrust and non-transparency; as well as to external changes: the always changing environment and the economic crisis. These factors lead the municipality of Schiedam to become a *director municipality*, one that no longer conceives plans inside the organization and pushes those plans through to the outside environment, but instead looks at what problems, solutions, tasks there are in the city, and brings those inside the organization.

Subsequently, this research showed how successful management of change is a necessity to survive in today's eminent competitive and continuously evolving environment (Luecke, 2003; Hemmington, Okumus, 1998). Because of this importance, change management is a highly required managerial skill (Senior, 2002). Furthermore, different elements of change were addressed and categorized by rate of occurrence, how change comes about, and by scale. See Table 24 below.

Table 24: categories of change.

CATEGORY OF CHANGE	→ Change by rate of occurrence	→ Discontinuous
		→ Continuous
		→ Incremental
	→ Change by how it comes about	→ Planned
		→ Emergent
		→ Contingency
		→ Choice
	→ Change by scale	→ Fine-tuning
		→ Incremental adjustment
		→ Modular transformation
		→ Corporate transformation

Using these organizational change management elements, the changing situation of the municipality of Schiedam was analyzed. This allowed for this research's main question to be answered, which is as follow:

"To what extent are organizational change management elements recognized within the municipality of Schiedam in its change towards becoming a director municipality?"

The analysis has led to the conclusion that some of the organizational change management elements are recognized within the municipality's change process, while others are considered to be absent. See table 25, which shows the different organizational change management elements,

while indicating whether an element is present (+), absent (-), or if only parts of the element are recognized (~). The number of signs corresponds with the number of interviewees in who's answers the specific element at stake was recognized, if recognized at all.

Table 25: Conclusion to this research's main question.

Element	Recognition	Elaboration
Discontinuous	-/+ / +/~	According to Hende and Gouweleeuw, this approach does not apply to the change process in Schiedam, as the municipality has to continuously change in order to keep up with its environment. In contrast, Stad and Heinz mention how they lack active steering on changing. Adding to this, Stad mentions experiencing a relapse to old behavior.
Continuous	+/- / -/+	This approach is considered to be the only possible approach considering that the environment is always changing. Therefore, the municipality must continuously change to keep up (Hende, Gouweleeuw). However, the municipality is also considered to be an organization that does not easily adapt to changes and does not actively steer on change (Stad, Heinz).
Incremental	+ / + / +	Examples like refugee crisis show how the municipality can deal with one issue at the time (Gouweleeuw). Subsequently, this approach is considered to be the base to the municipality's 'task steering' (Stad, Hende).
Planned	- / - / -	The changes the municipality is experiencing were not planned. This, as the changes flow from apparent reasons that could not be planned, being the departure of a mayor, a city council, and a financial crisis (Hende, Heinz, Gouweleeuw).
Emergent	+ / + / +	The process of change is considered to be non-linear, as it is open-ended. Due to the pace of change, it is impossible to make finite plans for change (Hende, Stad). Furthermore, experiencing a booming effect that forces great changes, within a context of continuously having to change, can be inferred as also being a non-linear process of change (Gouweleeuw).
Contingency		
Choice	~ / - / - / -	All interviewees stress how the municipality had no choice but to change, which leads to the conclusion that this approach was not implemented within this case. However, elements of this approach are still recognizable, as changing was an intentional, deliberate choice, albeit an involuntarily one (Hende).
Fine-tuning	+	Fine-tuning is considered to be a way of polishing policies, which is something the municipality of Schiedam does (Hende).
Incremental Adjustment	+ / -	Like fine-tuning, incremental adjustment is considered to be a way of polishing strategies and processes (Hende). In contrast, the municipality of Schiedam is not perceived as an organization that does things in small ways (Stad).
Modular transformation	+ / + / -	The changes the municipality of Schiedam experiences, are considered to be corporate wide (Gouweleeuw). Hende however, explains how it is possible that certain departments within the municipality experience change to different extents, which fits modular transformation.
Corporate transformation	+ / + / + / +	All interviewees described the change as being corporate wide. This, as the overall quality to the outside world must be the same, regardless of which department of the municipality is at stake (Hende).

This answer to this research's main question leads to the conclusion that the change process is experienced in different ways within the organization. Comparing the different views on the municipality's change, shows how there are contrasting views between different layers of the organization. Where a higher layer of the organization, Hende (director) and Gouweleeuw (alderman), both identify the change as being continuous, the lower layer, Heinz and Stad, experiences the change as being discontinuous and lacking active steering on the invitation policy. Where both Hende and Gouweleeuw recognize a top-down and bottom-up approach, Stad experiences the change as being an idea that is poured over the organization from the top down. Nonetheless, there are also similarities that can be recognized, as all interviewees agreed on the fact that the municipality had no choice but to change and that the changes affect the entire organization as a whole.

In addition to the organizational change management elements, this research addressed challenges of change, and showed possibilities on how to cope with them. On this topic it can be concluded that some complex problems can be solved in a non-complex way. This is shown by how the situation regarding the resistances experienced by the process manager was resolved. Instead of applying strategies in trying to solve the dilemma, the resistance was eliminated by the departure of the project members resisting the process manager's process based way of working.

After addressing this research's conclusion, and answering its main question, the next step is to reflect on the results. This is done in the following chapter.

CHAPTER 22

REFLECTION ON CONCLUSION

This chapter will reflect on the relevance and usefulness of this research's results. It will reflect on the scientific relevance and the practical relevance. As described in Paragraph 14.4, this research's relevance lies in the usability of its results.

This research opted to provide information, as means to gain insight, on how the municipality of Schiedam is changing, and, subsequently, how the organization deals with that change. It ended up demonstrating how different organizational change management elements are present, or absent, in the municipality's process of change. On a scientific level, this information is relevant to scholars studying organizational change management and/or the changes Dutch municipalities face, as it provides a link between the two topics in the context of a real-life case. This is also of interest to anyone wanting to get a deeper understanding of the subjects.

On a practical level, this research's relevance depends on how well the results for this one specific case can be generalized. Generalization concerns the question whether the results of a study are applicable in a broader context beyond the one in which the research was conducted (Bryman, 2012, p. 711). Regarding generalization, Bryman (2012, p. 205) states that any findings can only be generalized to the whole from which the sample was taken. Therefore, the results of this research can only be generalized to municipalities experiencing change. Subsequently, some conclusions are better generalizable than others.

The conclusion that the change process is experienced in different ways within the organization can be broadly generalized, as it is plausible and understandable that different people, in different layers of an organization, experience a process in a different way. The conclusion of to what extent the organizational change management elements are recognized however, is less generalizable. This, since the way a municipality deals with change depends on a multitude of factors which are variable instead of constant, e.g. a municipality's culture, political direction, and the cause for change.

With that in mind, the results of this research are relevant to Dutch municipalities experiencing change and wanting to learn lessons from how other municipalities dealt with change in practice, as it may help to put their own situation into perspective.

The final step after reflecting on this research's results, is to establish recommendations for further research. This is done in the following chapter.

CHAPTER 23

RECOMMENDATIONS

Following this research, some recommendations can be made regarding further research. These recommendations are based on questions that arose from this research, or on subjects that are considered to have a so called open-ending. Subsequently, some recommendations will be made for the municipality of Schiedam regarding their changing situation. See below.

Firstly, this research addressed the changing role of the municipality of Schiedam. Further research can be conducted on changes within Dutch municipalities in general. This research could elucidate whether or not other municipalities in the Netherlands experience change the same way as, or similar to, the municipality of Schiedam, and if changes have led to similar situations as the one experienced by the process manager of Schiedam. It could further address how the crisis of 2008 influenced municipalities on a national level and how municipalities dealt with that setback.

Secondly, several different steps of achieving a successful process of change have been described in this research. As different authors mention different steps of how to reach success in a process of change, research can be conducted on which steps are recognized within change processes that are concluded. Focusing on processes that are considered to have been a success, as well as on ones that are not perceived as having led to success, can furthermore elucidate whether different steps of achieving a successful process can also be recognized in unsuccessful ones. Subsequently, such research could demonstrate if including the different steps mentioned by the different authors guarantee success.

Thirdly, this research showed how one specific problem regarding the adoption of a different way of working was resolved. Further research can be conducted on how other municipalities deal with the problems they come across in their course of change. This research could show what problems are most common in municipal organizational change, and what approaches or strategies municipalities apply in order to solve them.

Fourthly, since it is concluded that the change within the municipality of Schiedam is experienced in different ways among different layers of the organization, the question arises as to what the reasoning behind this difference is. Therefore, further research can be conducted on how this difference arose and which factors contributed to it. Such research can subsequently focus on how this issue could possibly be solved.

When looking at the specific case of Schiedam, it is recommended that the organization starts to actively steer towards the desired situation, as to better promote change. This, as the interviews showed that people within the organization are missing such steering. Doing so, may also help prevent people from getting the feeling that the idea of change is just something that was poured over the organization, as it shows that the municipality is truly adopting a continuous approach to change.

With these recommendations, this research is concluded, which allows for a reflection on the research's entirety. The following section will address a reflection on this research's process, personal experience, and lessons learned.

CHAPTER 24**REFLECTION ON RESEARCH**

The reflection on this research as a whole can be divided into three parts: a reflection on the research's process, a reflection on the research elements, and the lessons learned from this research. These part are elaborated below.

24.1 REFLECTION ON THE RESEARCH'S PROCESS

Regarding this research's process, one can reflect on several topics: (1) the timespan of the research, (2) the division into two separate studies, and (3) the course of the research.

1. The timespan of the research

When looking at the duration of this research, it is noticeable that it lasted longer than anticipated. The entirety of the research, from P0 up to P5, is scheduled to fit within one academic year. This research lasted a half year longer, which was mainly due to not having passed the Real Estate Management course. In order to still pass this course, an extra assignment was to be completed. Doing so took a lot of time, sadly at the expense of the graduation work. Still, in order to graduate at all, this assignment was to be completed with a sufficient mark, so it was decided to postpone the graduation research until the assignment for Real Estate Management was finished. Graduating was delayed a second time, due to receiving a No Go for the first P4 attempt. In hindsight, this turned out to be for the best, as the final report ended up being more logical and a lot clearer than before.

2. The division into two separate studies

During the course of doing research, the focus shifted from Design Thinking towards organizational change management, as it became clear that the municipality of Schiedam was in a process of change. However, this was not well reflected in the first version of the P4 report. That version focused mainly on Design Thinking and how to deal with resistances, and mentioned change management as a kind of side issue. The entirety of change management, and how to deal with resistances for that matter, did not add in answering that P4 version's main research question: 'How are Design Thinking elements recognized within the redevelopment project of the Schiedam port area redevelopment?'. Therefore, that entire part could actually be left out. Adding to this, there was no clear consistency in the previous report regarding in which direction the research was heading. Because of these reasons, the decision was made to divide the research into two separate studies, one on Design Thinking and one on organizational change management. Both parts contain their own research questions, research proposal, research, and conclusions. By dividing the research into two separate studies, it became easier to structure both parts in a clear and logical way, making them easier to read and understand.

Following this division, changes had to be made to both parts. The part regarding Design Thinking had to be made more concise due to the fact that this report would otherwise consist of over 200 pages. Because of this, the chapters regarding strategies to resolve dilemmas and to apply

command and control within a network, were dropped. This also includes the interviews regarding this specific topics. Nonetheless, the essence of that part of the research remained the same. For the part on organizational change management, additional interviews were to be conducted and new information was to be gained through literature. This, due to the fact that the information on this topic that was already present in the report, was not sufficient to make a complete, whole worthy report about organizational change management.

3. The course of the research

The course of this research can be described as being bumpy. The first period of this research coincided with the elective Process Management and the mandatory course Real Estate management, both of 7 ECTS. Combining these two courses and graduation proved to be quite difficult, and resulted in my P2 not being at the level I personally wanted it to be. Still, having to retake the P2 came as a surprise and was experienced as setback, which diminished the motivation to continue on a bit. The next setback was not having passed the Real Estate Management course, as explained above. This was followed by yet another setback at my first P4 presentation. This all put a lot of pressure on my motivation to finalize this research. But, keeping in mind the effort that had been invested in this research by not only myself, but also my mentors, and the fact that this research concerned topics that are of a big personal interest, kept me motivated.

Adding to this, I was a little bit too fixed on showing that I could do this research as independent as possible, which led to consulting my mentors insufficiently. Because of this, I consulted my mentors less often than preferable. Meeting them more often, especially my second mentor Tom Daamen, could have prevented some of the setbacks described above.

24.2 REFLECTION ON RESEARCH ELEMENTS

The research proposal consisted of several elements: research strategy, research design, research sample, research methods. A reflection on these elements is done in the following sub-paragraphs.

24.2.1 Research Strategy

For this research, a qualitative research strategy was chosen. As Bryman (2012, p. 380) states, this strategy focuses on understanding situations in the social world through examination of the interpretation of those situations by their participants. This has been the main principle of this research: understanding how the municipality of Schiedam is changing on an organizational level, and how Design Thinking themes are implemented within the port area redevelopment project, by examining the interpretations and views of several people involved in these situations. Therefore, a qualitative research strategy proved to be the correct one.

24.2.2 Research Design

Quite early in the process it became clear that the design for this research would be a single case study, as the research focused solely on the municipality of Schiedam and one redevelopment project of that municipality. This proved to be the right choice, especially when considering that two different studies were done.

24.2.3 Research Sample

In hindsight, the sample for both researches could have been bigger. Specially for the organizational change part, as this part showed how the changes of the municipality of Schiedam are experienced very differently through the different layers of the organization. A bigger sample could have resulted in a more complete view on why the change is experienced differently and if

such differences could also be seen within the same organizational layer. Having had more interviewees would have resulted in more profound conclusions, meaning that the conclusions would provide answers to the question as to why different layers of the organization experience the change in different ways. At this moment, this question can be seen as input for further research, however, had there been more interviewees on this topic, and more time, this could have been included in this research.

Regarding the interviewees, it would be good for this research to have spoken with someone from the 'other side' of the dilemma addressed in Chapter 20 regarding which way of working should be implemented in the redevelopment of the Schiedam port area. This had always been the plan since the early stages of this research. However, the person that I approached for this, insisted on doing the interview in the presence of the process manager of the case. After consulting with the process manager, it became clear that this was not a desired situation, as the process manager considers this to still be a sensitive subject. Adding to this, I personally believed that it would be better for the interview to conduct it one-on-one, as I believed that having the process manager present would somewhat constrain the interviewee in freely answering the questions. For these reasons, I asked the person I wanted to interview if she would agree to do the interview one-on-one. After getting no reply to this, I decided not to pursue this interview any longer, as I did not want to open up old wounds or cause any problems among these colleagues. Lacking this interview remains unfortunate, as it would provide new insights on the dilemma, and a new point of view.

24.2.4 Research Methods

The research method for this research, next to a literature study, has been the conduction of interviews. Semi-structured interviews were conducted with several interviewees. The main idea regarding interviewing was to ask the interviewees general questions, and to just let them tell about their experiences regarding the changes within the municipality and/or the redevelopment of the Schiedam port area redevelopment. Using probing questions, more detailed information about topics that are considered important were to be obtained. Then, it can be investigated which Design Thinking themes and/or organizational change management elements are recognized within the information provided with the interviews. This methodology worked very well with one interview, but proved to be difficult during the others. This was mainly due to the fact that the majority of the interviewees had a limited amount of time for the interviews, mostly around 30 minutes. This amount of time proved to be too narrow to just let the interviewees tell their story and use probing questions in a decent way in order to gain usable information. Therefore, the risk emerged of ending up with information to which no Design thinking theme or organizational change management element could be linked, ultimately resulting in uselessness. To cope with this, a more structured way of interviewing was adopted in which Design Thinking themes and organizational change management elements were directly incorporated in the interview questions. The order in which the questions were asked however, was not fixed. This, as to allow to follow up on answers in the most fluent and logical way and linking similar themes or elements with each other.

As mentioned, the previously described way of interviewing worked very well with one interview: the one with Bart Heinz, process manager of Schiedam. This was mainly due to the fact that there was no limited time for the interview and he himself was happy to talk about his project of redeveloping the Schiedam port area. Therefore, a clear difference in interview style can be noticed between this first interview [interview A1] and the rest.

24.3 LESSONS LEARNED

In the course of this entire research, a lot of lessons are learned, and a lot of different new insights are gained. The main lesson learned is how to actually conduct research. During my study, I learned about different elements of doing research - research sample, design, etc. – and only had to conduct one short interview. Therefore, the entire process of conducting this research has been experienced as a learning process, in which I learned:

- How to properly set up a research report and structure it in such a way that readers can easily follow the common thread throughout the report and understand why certain steps were taken, thus making it a coherent entirety.
- How to set up interviews and conduct them. Subsequently, I learned the importance of being able to swiftly shift between the interview questions and their order, as to adequately react to the given answers and create a dynamic setting, instead of a very static one. This ultimately helps in having a fluent conversation, that helps the interviewee feel more comfortable
- The importance of explicitly defining the research's boundaries. When these boundaries are unclear, the research can become endless. This, as one can stray away from the main topic, focusing on side questions that are not really part of the main issue. Losing focus on the main topic can be detrimental to the research, especially when there is a limited time in which the research should be concluded.

The case of Schiedam proved to be a very informative one. Regarding organizational change, I learned how important it is to ensure that there is a clear vision on how an organization is going to change, why it needs to change, and what the desired state is after the change. This needs to be clear for every person within the organization, as creating a sense of urge and necessity is necessary in order to get everybody on the same line. Subsequently, active and consistent steering towards the desired end goal should take place to ensure that goal is reached. When a change process lacks both of these elements, it is possible that some individuals may not take the change seriously or that disagreements arise between individuals who think differently about the changes. Adding to this, doing a literature study on organizational change management taught me that there are different forms of change in terms of how it comes about, scale and rate of occurrence, and that successful management of organizational change is a necessity in every organization. Looking into the case of the municipality of Schiedam helped me to better understand the reasoning behind those statements.

Regarding Design Thinking, not only did I learn what it is, since I had never heard of it prior to this research, but also how to apply it in an urban area development setting. This may be of great value in my professional life. I also learned about a management methodology that was new to me: the Ambitionmap. Working with an Ambitionmap proved to be very effective in the management of the Schiedam port area redevelopment. Without this research, I would have probably never come across this method. Subsequently, I learned how it is a way of dealing with complexity, an aspect that is always present in urban area redevelopment, by opting to provide insights, form consensus and include users/actors in decision-making processes.

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APPENDICES

APPENDIX 1: OVERVIEW OF PROJECT DELIVERABLES

APPENDIX 2: INTERVIEW QUESTIONS DESIGN THINKING

APPENDIX 3: AMBITIONMAP

APPENDIX 4: NEW AMBITIONMAP

APPENDIX 5: INTERVIEW QUESTIONS ORGANIZATIONAL CHANGE MANAGEMENT

APPENDIX 6: WORKING MECHANISMS BY VERMAAK (2009)

	Producten/Doelen
1.	Herontwikkeling van het slibdepot bij de Wiltonhaven, aanleg van een insteekhaven of een langsteekhaven;
2.	Versterking van de kades in de Wiltonhaven;
3.	Herstructurering van de bedrijven in de Wiltonhaven en de Wilhelminahaven, waarbij de Milieuhinderlijke activiteiten zoveel mogelijk van de woningen af verplaatst worden (= optimalisering milieuruimte)
4.	Verbetering van het milieu en de leefomgeving van het havengebied door middel van technische milieumaatregelen.
5.	Verbetering van de verkeersafwikkeling door een verbeterde aansluiting op knooppunt Vijfsluizen;
6.	Verkeersmaatregelen (Mobiliteitsaanpak/last mile/logistiek)
7.	Reconstructie entree metrostation Vijfsluizen
8.	Realisatie drie opstapplaatsen voor de watertaxi in combinatie met aanpak openbaar gebied Karel Doormanweg en de Havenstraat
9.	Aanleg en verbetering van fietsroute Westfrankelandsedijk in combinatie met aanpak kruising Admiraal de Ruyterstraat
10.	Aanleg natuurvriendelijke oevers, ecologie, recreatie, cultuur en sport in de Wilhelminahaven, nabij Zwembad Zuid
11.	Herinrichting Havenstraat (kwaliteitsimpuls)
12.	Herstructurering Admiraal de Ruyterstraat/Nieuwe Waterwegstraat
13.	Stimulering duurzaamheid middels ondersteuning van projecten op het gebied van windenergie en hergebruik van energie, stimuleren van de ontwikkeling van nieuwe duurzame innovaties.
14.	Onderzoek naar Maritiem Onderwijs & Innovatie Centrum Schiedam. Stimulering kennis en innovatie door netwerken met elkaar te verbinden, organiseren Bijeenkomsten.
15.	Verbetering imago van de haven, branding van het havengebied, beleving van het havengebied in de stad versterken.
16.	Versterking externe organisatie/ondersteuning nieuwe ondernemersvereniging;

APPENDIX 2: INTERVIEW QUESTIONS DESIGN THINKING

Design Thinking has been operationalized as shown in the table below. With the definitions of the Design Thinking themes, the set of interview questions can be formed. It should be stated that the exact phrasing of the questions can be varied depending on the interviewee and of the course of the interview.

			Definition
DESIGN THINKING THEME	1.	User Focus	Fundamental user focus expressed in user understanding, involvement, and empathy building.
	2.	Problem Framing	Widening, challenging, and reframing problems to create greater solution space.
	3.	Visualization	Making ideas tangible by visualizing them as to create consensus and share insights.
	4.	Experimentation	Learning through trying things out, testing and getting feedback.
	5.	Diversity	Focus on a wide range of stakeholders, encompassing collaboration in diverse teams.

1.A	Is there a fundamental user focus in the Schiedam port area redevelopment project?
If yes	
1.B	How is this user focus expressed?

2.A	Have problems been widened within the Schiedam port area redevelopment project?
If yes	
2.B	How were problems widened?
2.C	What was the purpose of widening the problems?

3.A	How are ideas made tangible?
3.B	Have visualizations been used?
If yes	
4.B	With what purpose were they used?

4.A	Is there a fundamental user focus in the Schiedam port area redevelopment project?
If yes	
4.B	In which way did that happen?
4.C	What was the main objective of experimenting?

5.A	Are there a multitude of actors involved in the Schiedam port area redevelopment project?
If yes	
5.B	How is this user focus expressed?



APPENDIX 5: INTERVIEW QUESTIONS ORGANIZATIONAL CHANGE MANAGEMENT

The organizational change management elements have been operationalized as shown in the tables below. With the definitions of the different elements, the set of interview questions can be formed. It should be stated that the exact phrasing of the questions can be varied depending on the interviewee and the course of the interview.

Category of change	Approach		Definition
CHANGE BY RATE OF OCCURRENCE	→	1. Discontinuous	→ Change marked by fast shifts in strategy/culture. A one time event followed by stillness and consolidation, caused by mayor internal/external shock.
	→	2. Continuous	→ Continuously monitor external/internal situation to be able to change continually.
	→	3. Incremental	→ Individual parts or organization deal separately with one problem at a time.

Category of change	Type		Definition
CHANGE BY HOW IT COMES ABOUT	→	4. Planned	→ Approach that explains the process that brings change while emphasizing the importance of understanding the change.
	→	5. Emergent	→ Approach that sees change as a continuous, open-ended process of acclimating to changing circumstances.
	→	6. Contingency	→ Approach emphasizing that there is not one best strategy for all situations, but rather one best strategy to each situation.
	→	7. Choice	→ Adopt approach of choice when there is no necessity to adapt to external environment

CHANGE BY SCALE	→	8. Fine-tuning	→ Ongoing process of change with the purpose of refining policies, methods and procedures.
	→	9. Incremental adjustment	→ Modifications to management processes and organizational strategies (no radical change)
	→	10. Modular transformation	→ Major shifts in one or multiple divisions. Focus on parts of the organization.

→	11. Corporate transformation	→	Radical adjustments in business strategies. Corporate-wide focus.
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0.A	How is the municipality of Schiedam changing?
0.B	What caused this change?
0.C	Was there a necessity to change?
0.D	Is the change steered top-down or bottom-up?
0.E	Is the change organizational wide or departmental?

1.A	Is the change marked by fast shifts in strategy or culture?
1.B	Was the fast shift followed by stillness and consolidation?
2.A	Does the municipality of Schiedam continuously monitor its internal and external situation?
3.A	Do individual parts of the organization deal separately with the change?
3.B	Does the municipality of Schiedam deal with one problem/issue at the time?

4.A	Was the change planned?
4.B	Is the importance of understanding the change emphasized?
5.A	Is change seen as an continuous, open-ended process?
6.A	Does the municipality emphasize that there is one best strategy to each situation instead of one best strategy for all situations?
7.A	Is the municipality of Schiedam changing by choice?

8.A	Is the change marked by ongoing processes of refining policies, methods and procedures?
9.A	Is the change marked by small modifications to processes and organizational strategies?
10.A	Is the change marked by mayor shifts focused on parts of the organization instead of on the organization as a whole?
11.A	Is the change marked by radical, corporate-wide adjustments?

APPENDIX 6: WORKING MECHANISMS BY VERMAAK (2009)

Aspects		Stagnating mechanisms	Innovative mechanisms
Interactions	Inclusion	Dividing & conferencing	Transactional organizing in multiple parallel work systems
	Influence	Forcing & evading	Co-production by spreading and differentiating contributions
	Affection	Blaming & covering up	Optimizing task conflicts and resolving relationship conflicts.
Cognitions	Windows	Singular perspective & Anecdotal knowledge	Introducing cognitive diversity and meta-language
	Mirrors	Untested practices & Habits of organizing	Tightening the coupling between theory and practice
	Ambivalence	Unquestioned values & Denial of defensiveness	Reclaiming thinking space by problematizing and humor
Design of Change	Process Variety	Dominance & interference Between change strategies	Switching between contrasting change
	Development Principles	Isolated teaching exercises & Poor learning practices	Intertwining learning processes in and around work
	Planning of change	Paralysis by analysis & Initiative-itis	Emergent planning and incremental deepening with small wins
Anchoring Of Change	Facilitative Relationship	Wavering participation & Passing on responsibility for change	Paradoxical interventions, swift trust, and steering based on reflective reasoning
	Embedding Of change	Centrally driven change & Implementation interference	Decentering, unblocking, and pluralist evaluations
	Continuity Of innovation	Isolated successes, institutionalization & cloaked disciplining	Organic diffusion in networks, change processes and communities of practice