

**A QUALITATIVE STUDY OF THE INFLUENCE OF THE  
DEMOCRATIC PERFORMANCE OF GOVERNANCE NETWORKS  
ON INCLUSIVE OUTCOMES IN MERWE-VIERHAVENS**



**Author: Clara Gayaneh Glachant**

Student number: 572238

Erasmus University Rotterdam

MSc Urban Governance

Erasmus School of Behavioral and Social Sciences

Institute for Housing and Urban Development Studies

Supervisor: Dr. Alberto Gianoli

Second reader: Dr. José Nederhand

Date: August 5<sup>th</sup>, 2021

Word count: 19 927

## **Abstract**

Innovation districts have gained attention in the field of urban economics for the past decades. In those geographic areas located at the core of cities, governmental institutions, companies, civil organizations and research institutions collaborate in a Quadruple Helix model to trigger innovation and economic prosperity. Multiple studies have investigated the impact of innovation districts on exclusion and inequalities, due to the clustering of a highly skilled workforce and processes of urban transformation. Nonetheless, it is not yet known whether governance networks arrangement influence inclusion. This research questions the sufficiency/necessity relationship between democratic performance of governance networks and inclusive outcomes in innovation districts, with the case of Merwe-Vierhavens in Rotterdam. This study is informed by a document review and interviews with local stakeholders.

The analysis showed that the occurrence of meta-governance, accountability and representativeness contribute to the democratic performance of the network and channel process-based inclusion. Specifically, the dominance of meta-governance over the two other variables exposes the presence of the shadow of a government hierarchy, highlighting the tension between organic and planned development. Empirical evidence suggests that inclusion challenges observed in M4H originate from the struggle to connect with surrounding areas, the rise of real estate prices and the mismatch of skills between historical workforce of the port and innovative industries. Nevertheless, social organizations and cultural venues foster the inclusion of residents in the development of M4H. The Municipality also collaborates with local companies to enhance inclusion through education and skills by providing training to potential workers.

The results of the study conclude that if there is evidence that the democratic performance of the network has a positive influence on inclusive outcomes, this is not a sufficient condition. Other necessary conditions for inclusive outcomes were shown such as control over housing prices, ensuring a socio-spatial link with surrounding areas through urban amenities and the presence of art and culture facilities. Building on the empirical findings, this study suggests three recommendations for practitioners to ensure inclusion in the future.

**Key words:** innovation district, governance networks, inclusion, democratic performance, meta-governance, accountability, representativeness, income and wealth, education and skills

## Preface

Dear reader,

I am pleased to present my master thesis “A qualitative study of the influence of the democratic performance of governance networks on inclusive outcomes in Merwe-Vierhavens”. This research was conducted from January 2021 until August 2021, as part of the Master of Science Urban Governance at Erasmus University Rotterdam. In this preface, I would like to acknowledge the guidance and support of the individuals who contributed to the completion of this research.

I would like to express my deepest gratitude to Dr. Alberto Gianoli for his valuable feedback and supervision throughout the process of writing this Master thesis. I very much appreciate your insightful suggestions and contribution to my research.

2021 was a tough year but my education at Erasmus University opened new perspectives, from my home in M4H. I would like to thank all professors, coordinators, researchers and classmates who contributed to enlightening my days with their knowledge, ideas and viewpoints.

I want to extend my gratitude to all interviewees who participated in this research by giving valuable information on governance arrangements and inclusion in M4H. This research would not have been possible without you.

I am grateful to Dr. Flor Avelino and my colleagues Vaishali and Lara, who enabled me to nurture my critical spirit and expand research skills within the research program *Vital Cities and Citizens* and especially in our research group on Just Sustainability Transitions.

Last but not least, I want to thank my friend Benedetta and my sister Violette for supporting me in this long but nonetheless vibrant journey. A special thank you to Jasper for your unconditional support and proof-reading my thesis.

I wish you, dear reader, *une bonne lecture!*

Clara Glachant

## Table of Contents

<b>Abstract</b> .....	<b>1</b>
<b>Preface</b> .....	<b>2</b>
<b>List of tables</b> .....	<b>5</b>
<b>List of figures</b> .....	<b>5</b>
<b>List of pictures</b> .....	<b>6</b>
<b>List of abbreviations</b> .....	<b>6</b>
<b>Chapter 1: Introduction</b> .....	<b>7</b>
<b>I. Background</b> .....	<b>7</b>
<b>II. Problem statement</b> .....	<b>8</b>
<b>III. Research objectives</b> .....	<b>10</b>
<b>IV. Research questions</b> .....	<b>11</b>
<b>V. Scientific relevance</b> .....	<b>11</b>
<b>VI. Societal relevance</b> .....	<b>12</b>
<b>VII. Overview of the research</b> .....	<b>12</b>
<b>Chapter 2: Theoretical framework</b> .....	<b>14</b>
<b>I. Innovation districts</b> .....	<b>14</b>
a. Definition .....	14
b. Quadruple helix in innovation districts .....	16
c. Clustering of the creative class .....	17
<b>II. Governance networks</b> .....	<b>18</b>
a. Theoretical background: governance in networks .....	18
b. Democratic performance of governance networks .....	19
c. Critical approach .....	19
d. Conditions of democratic performance of governance networks .....	21
<b>III. Inclusion</b> .....	<b>22</b>
a. Definition and current debates .....	23
b. Necessity of inclusion in cities.....	23
c. Complex inclusion: process and outcome.....	25
d. Inclusion in the context of innovation districts: an inherent contradiction? .....	26
e. Dimensions of inclusion: income and wealth .....	27
f. Dimension of inclusion: education and skills .....	29
<b>IV. Impact of governance networks on inclusion in innovation districts</b> .....	<b>30</b>
a. Meta-governance for inclusion .....	31
b. Accountability for inclusion.....	31
c. Representativeness for inclusion.....	32
<b>V. Conceptual framework</b> .....	<b>33</b>
<b>Chapter 3: Methodology</b> .....	<b>34</b>
<b>I. Research design</b> .....	<b>34</b>
a. Case-study .....	34
b. Case selection: M4H and previous steps.....	35
<b>II. Research methods</b> .....	<b>35</b>
a. Interviews .....	35
b. Document review .....	37

c. Overview .....	37
<b>III. Operationalization of the research .....</b>	<b>37</b>
<b>IV. Data analysis.....</b>	<b>42</b>
<b>V. Limitation and ethics .....</b>	<b>42</b>
a. Reliability .....	42
b. Construct, internal and external validity .....	42
<b>Chapter 4: Empirical findings and analysis .....</b>	<b>44</b>
<b>I. Description of the case study.....</b>	<b>44</b>
a. Introduction of the area .....	45
b. Governance and stakeholders in the area .....	47
c. The Makers District: a strategy in M4H .....	49
<b>II. Democratic performance of governance networks in M4H .....</b>	<b>52</b>
a. Meta-governance.....	52
b. Accountability .....	54
c. Representativeness .....	55
<b>III. Inclusion: challenges in M4H.....</b>	<b>56</b>
a. Situation in M4H.....	56
b. Income & wealth.....	59
c. Education & skills .....	61
<b>IV. Democratic performance: a sufficient condition?.....</b>	<b>62</b>
a. Democratic performance and income & wealth.....	63
b. Democratic performance and education & skills.....	65
c. Beyond democratic performance: necessary conditions for inclusive outcomes.....	68
<b>V. Wrap-up: findings in short.....</b>	<b>69</b>
<b>Chapter 5: Conclusion and recommendations .....</b>	<b>71</b>
<b>I. Research question.....</b>	<b>71</b>
<b>II. Contribution to the field and future research .....</b>	<b>73</b>
<b>III. Discussion.....</b>	<b>74</b>
<b>IV. Recommendations.....</b>	<b>75</b>
<b>References.....</b>	<b>77</b>
<b>Appendices.....</b>	<b>85</b>
<b>Appendix 1: Code tree.....</b>	<b>85</b>
<b>Appendix 2: Informed consent form.....</b>	<b>85</b>
<b>Appendix 3: Interview guide.....</b>	<b>89</b>
<b>Appendix 4: Additional findings .....</b>	<b>92</b>

## List of tables

### 3. Methodology

Table 1. Overview respondents

Table 2. Operationalization

### 4. Empirical findings and analysis

Table 3. Statements from neighborhood profiles used in the document review

## List of figures

### 2. Theoretical framework

Figure 1. Types of assets in innovation districts

Figure 2. Quadruple helix model

Figure 3. Democratic anchorage

Figure 4. Multi-dimensional approach to inclusive cities with interventions aimed at inclusion in each dimension

Figure 5. Diffusion of Innovation and adopter categories

Figure 6. Matrix of the forms of exclusion and types of capital

Figure 7. Conceptual model

### 3. Methodology

Figure 8. Research framework

### 4. Empirical findings and analysis

Figure 9. Satellite image of Merwe-Vierhavens as part of the Stadshavens urban development

Figure 10. M4H, developed between port and city

Figure 11. The Quadruple Helix model in M4H

Figure 12. Types of assets found in M4H

Figure 13. Map of M4H and surrounding neighborhoods

## List of pictures

### 4. Empirical findings and analysis

Picture 1. Waterwagon

## List of abbreviations

M4H	Merwe-Vierhavens
RDM	Rotterdam Droogdok Maatschappij
RID	Rotterdam Innovation District
SI	Social Innovation

## Chapter 1: Introduction

### I. Background

In the last decades, the rise of knowledge-based economy resulted in the emergence of new complementary urban forms, called innovation districts. Those are areas, located close to inner cities, where governments, private sectors and research and educational institutes cluster and connect to enhance economic growth, social cohesion and the improvement of the quality of life (Cosgrave et al., 2013). Innovation districts offer potential to enhance productive, inclusive and sustainable development, but also expand employment for populations of surrounding areas. Thanks to high-quality physical assets, the presence of innovative organizations and strong networking assets, those districts support the emergence of a strong innovation ecosystem (Katz & Wagner, 2014). This approach has been adopted in many cities around the globe, from Barcelona to Boston, and arise as an opportunity to improve areas and create a suitable environment for the *creative class*, a highly educated labor force (Florida, 2014).

The rise of this creative class is criticized by numerous scholars for its neoliberal urban agenda, based on inter-urban competition, consumption-oriented urban landscape, and widely associated with gentrification (Peck, 2005; Lawton et al., 2014). Urban transformation projects have social effects, as a result from the rise of housing prices, changes in the local economy or break patterns of social interactions within neighborhoods.

In *Capital in the Twenty-First century*, Thomas Piketty underlined the rise of inequalities, due to the accumulation of capital. This phenomenon is especially visible in knowledge-intensive economies (Florida, 2014). This is due to the spatial preferences of professional groups (Boterman et al., 2017). The settlement of a creative class in an area evokes the risk of the clustering of highly educated and probably highly paid individuals. The establishment of certain amenities to attract and maintain this class in the area, could result in the rise of housing prices (Florida, 2017). This would lead to the exclusion of a part of the population, based on their income and wealth but also on their education and skills.



From the industrial economy in the Port being pushed away towards the sea throughout the years to a service-oriented economy and lately a knowledge-based economy: the city of Rotterdam is in transition (MRDH, 2016). Indeed, the Municipality and the Port of Rotterdam decided to turn former iconic port areas into innovative and circular spaces for knowledge-based economy, such as Merwe-Vierhavens (M4H) (Stadshavens Rotterdam, 2015). Launched in 2015, the former refurbished port area is developed as a fertile ground for the meeting of innovative firms, educational institutions and “young urban creatives” (Stadshavens Rotterdam, 2015 : 2). M4H is labeled as an innovation district, where boundaries between living, working and leisure would blur. If the area of M4H was mainly an industrial zone before the urban development plan, the surrounding areas are historically inhabited: Spangen, Bospolder, Tussedijken and Oud-Mathenesse, which are neighborhoods concentrating social issues such as unemployment and poverty. Hence, the issue of inclusion is especially important.

## II. Problem statement

Innovation districts aim to generate economic growth, attract creative and highly skilled individuals and stimulate employment. In addition, there are said to contribute to urban transformation in former industrial districts for instance (Katz & Wagner, 2014). However, clustering highly educated professionals in a neighborhood could lead to the creation of enclaves in the city and result in segregation. Segregation is defined as the spatial representation of inequalities. In the strategy usually associated with innovation districts, rising inequalities are often mentioned as a challenge those neighborhoods want to tackle (Katz & Wagner, 2014). Indeed, authors highlight the urgency to promote inclusive growth, as innovation districts should offer educational and employment opportunities for low-income inhabitants. Thus, innovation districts could have a role in neighborhood revitalization and poverty alleviation (Wagner et al., 2017). This statement can be linked to inclusion, defined as a “*process of improvement of participation in society, particularly for people who are disadvantaged, ensuring equal opportunities, resources, voice and respect for rights for all citizens regardless of their background*” (United Nations, 2016 : 42). Consequently, innovation districts could play a role in reducing the existing tension between innovation and inclusion (Wagner et al., 2017).

However, a pitfall of innovation districts is the underlying risk of exclusion. Morisson & Bevilacqua (2019) argue that the strategy behind innovation districts echoes renewal programs aiming at developing central areas in cities, leading to gentrification. This phenomenon is defined as the rehabilitation of working-class housing leading to the displacement of poorer groups (Atkinson, 2004). One could then assume that the clustering of innovation and high-skilled workers who encourage segregation and exacerbate inequalities (Tach, 2014).

This debate highlights the challenge to link innovation and inclusion in those neighborhoods, which can be studied from a governance perspective. Wagner et al. (2017) mention a horizontal governance structure, including research institutes, associations, industries, governmental bodies and individuals as a guiding principle of innovation districts. Such governance models encourage a more collaborative and inclusive community. Innovation districts are characterized by innovative governance practices and processes, involving local stakeholders from different sectors – government, industry, research and civil society – in the making of the neighborhood. Stakeholders' involvement is thus central to ensure sustainable and inclusive growth (Katz & Wagner, 2014).

Innovation districts are characterized by the interaction of its stakeholders in a network (Katz & Wagner, 2014). Those are governance networks. This term is defined by Klijn & Koppenjan (2016 : 11) as *“more or less stable patterns of social relations between mutually dependent actors, which cluster around a policy problem, a policy programme, and/or a set of resources and which emerge, are sustained, and are changed through a series of interactions”*. However, governance network is a broad concept, thus this study looks at specific conditions of governance networks, selected from the literature and relevance to inclusiveness as an outcome. The Quadruple Helix model is especially relevant in the case of M4H, as government, businesses, academia and civil society interact in the area (Carayannis & Campbell, 2009).

Governance networks raise many questions in relation to democratic values (Sørensen & Torfing, 2005; Bogason & Musso, 2006; Molin & Masella, 2016). While it is argued that those networks present an opportunity to tackle the limitation of representative democracy, governance networks might hamper representativeness and accountability (van Meerkerk et al., 2015). For this reason, this study introduces the democratic performance as a criteria of

governance networks in relation to inclusion. Democratic performance is defined as the extent to which the network is attached to democratic practices and values – such as inclusion – (Anttiroiko & de Jong, 2020). By looking at the inclusiveness of the process, one might also wonder if a supposedly inclusive process necessarily triggers an inclusive outcome.

Innovation districts are increasingly popular in the world and especially in Dutch cities, with the Knowledge Mile in Amsterdam or Strijp-S in Eindhoven. However, the chosen case of M4H is unique because it connects the city and the port, creating a hybrid zone for innovation (Stadshavens Rotterdam, 2015). The area facilitates crossovers between clean tech, maritime industries, food industries and innovative medical companies, in a creative environment, with art venues, cafes and co-working places. The presence of stakeholders associated with those sectors is highly valued: they are involved in the making of the area (Stadshavens Rotterdam, 2015). Hence, protagonists of the innovation district shape it through continuous interactions, resulting in a flexible urban form.

### **III. Research objectives**

The objective of this research is to understand how governance networks influences inclusion in M4H. This study examines inclusion from the perspective of the income and wealth level of users of the district and their level of education and skills. In relation with inclusion, the democratic performance of governance networks is tested. Through three conditions of the performance, insights are given on the necessity and the sufficiency of those. Overall, the outcomes of this study can inform decision-makers on conditions to foster inclusion in M4H.

From a broader perspective, this study aims at generating further knowledge on innovation districts, which redefines the spatial geography of innovation economy. Innovation districts should not be oversimplified. This research could then give insights on the context-specific efforts of local stakeholders to guide the development and inclusion in innovation M4H.

#### **IV. Research questions**

This research looks at governance processes associated with innovation districts and if they can contribute to or hinder inclusion, in the context of M4H. Consequently, the following research question guides this study:

##### **How does the democratic performance of governance networks influence inclusive outcomes in Merwe-Vierhavens (M4H)?**

To answer the previously mentioned question, one may answer the following sub-questions:

1. What are the characteristics/conditions of governance networks in M4H?
2. Through which channels is democratic performance of governance networks linked to process-based inclusion?
3. What are the concerns regarding inclusion in M4H and how is it connected to the context of innovation districts?
4. Is the democratic performance of governance networks (process) a sufficient condition for inclusive outcomes in innovation districts?

#### **V. Scientific relevance**

This study contributes to academic discussions in urban governance by filling three gaps. Innovation district is a rather new topic in urban studies and if some aspects, especially related to knowledge-economy and economic growth, are well-documented, some lack of scientific development. Wagner (2019) mentions inclusiveness and “inclusive innovation” from the perspective from economic development, but overall, literature focuses to a lesser extent on inclusiveness in social terms. Enhancing inclusiveness is an urgent task for cities, as emphasized by the United Nations in the Sustainable Development Goals, but also a complex and broad topic this thesis attempts to uncover. This complexity is addressed by examining inclusiveness in relation with governance arrangements.

Moreover, there is an extensive body of literature on innovation districts and collaboration and networked interactions (Katz & Wagner, 2014; Wagner et al., 2017), but a

neglected area in the field is the relationship between governance networks and inclusiveness. This contribution indicates the innovative aspect of this thesis, uncovering the relationship between inclusion and governance arrangements in innovation districts. This research sheds a light on the outcomes of those processes and inclusiveness.

In addition, existing research on governance networks seem to focus on networked approach in relation with democratic principles and inclusiveness (Sørensen & Torfing, 2005; Bekkers & Edwards, 2007), on the process rather than on the outcome. The goal of this thesis is to tackle this process in the context of innovation districts and investigate whether it leads to inclusive outcomes.

## **VI. Societal relevance**

A better understanding of inclusiveness and its relationship with governance contributes by addressing societal challenges such as exclusion, unemployment or poverty. This study provides keys to comprehend the city as a place where all individuals can access social and economic opportunities. From a practical view, this research can give indications to policy makers to design inclusive innovation districts which will lead to inclusive outcomes. Understanding governance processes associated to collaboration and their impact on inclusion would then allow to avoid downfalls of spatial geography of innovation such as displacement of population and gentrification. By questioning the meta-governance role of the local government within those networks, this study also highlights changing dynamics in urban governance. In M4H, this research could inform policy makers on processes which could enhance inclusiveness and thus contribute to the improvement to the quality of life in the area. Moreover, understanding dynamics leading to more inclusiveness in M4H, would reinforce the connection with the neighboring areas Oud-Mathenesse, Bospolder, Tussendijken and Spangen.

## **VII. Overview of the research**

This research is organized as follows. First, theories framing the research and its conceptual model are analysed in the theoretical framework (Chapter 2). The methodology used in this research is outlined in Chapter 3. Chapter 4 discusses the research findings. Finally, Chapter 5 gives recommendations and the conclusions of this study.

## **Chapter 2: Theoretical framework**

In this theoretical framework, the main concepts are defined and developed, from urban economics and public administration literature. First, the concept of innovation district is presented, with a focus on relevant governance arrangements and its potential impact on inclusion in this context. In a second section, governance networks are presented, with an explanation of the relevance of the democratic performance in relation with inclusion (as a process). The framework continues with a conceptualization of inclusion and its implications for innovation districts. Finally, a section explains the relations between the concepts and a conceptual model closes this chapter.

### **I. Innovation districts**

#### **a. Definition**

In the last decades, cities have received much attention as vectors of economic growth and innovation. Firms can benefit from locating close to one other because of input sharing, technological and knowledge spill-overs and accessible workforce (Lawrence et al., 2019). These economies of agglomeration, which justify the very existence of cities (Duranton & Puga, 2004; Glaeser, 2011), result in a process of “sharing, matching, learning”, leading to economic growth. Hence, this competitive advantage of inner cities holds an important place in urban studies (Porter, 1995). By clustering economic activities, in science parks and technology clusters for instance, companies may be able to innovate, thus leading to more growth (Duranton & Puga, 2004; Lawrence et al., 2019). Innovation districts are the latest form discussed, with roots in agglomeration economics but implications in policy-making and urban design (Lawrence et al., 2019).

The concept of innovation districts rose from the limitations of science parks, places of knowledge-based economy development, rather isolated from city centres (Florida, 2017). Science parks have a limited focus on quality of life or the integration of other functions such

as housing or recreation (Katz & Wagner, 2014). Innovation districts thus emerged as a complementary urban model. Katz & Wagner (2014 : 1) define innovation districts as “*geographic areas where leading-edge anchor institutions and companies cluster and connect with start-ups, business incubators, and accelerators*”. In those districts, innovation is not solely an engine of economic growth but also shapes solutions to environmental, social and economic challenges (Wagner et al., 2017). They show potential for positively impacting quality of life in cities, with the proximity of vibrant public space, recreational amenities and high-quality public transport solutions (Cosgrave et al., 2013). Katz & Wagner (2014) highlight three categories of assets present in innovation districts: economic assets, which are firms and organizations driving the innovation environment; physical assets, as buildings, public space and other infrastructures aiming at enhancing collaboration and innovation; and networking assets, which are the connections between actors susceptible to generate innovation. The combination of those three types of assets in innovation districts is a fertile ground for an innovation ecosystem (see figure 1).

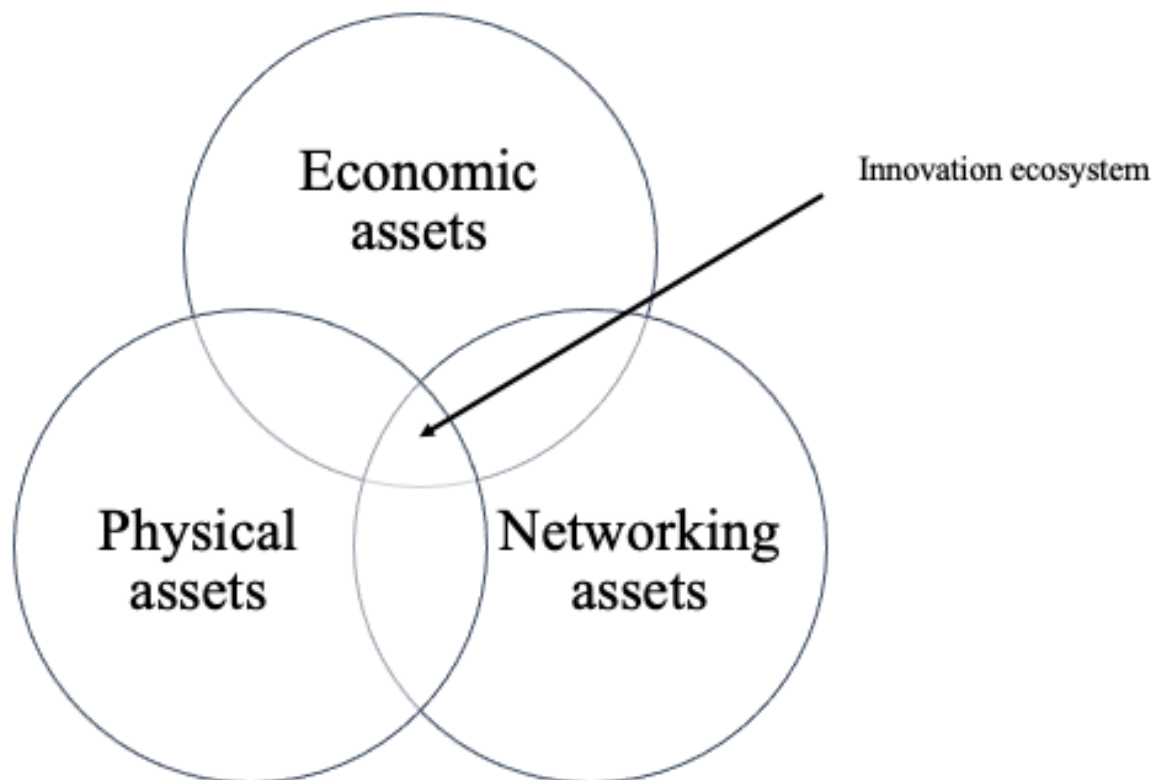


Figure 1. Types of assets in innovation districts. Source: own construct, based on Katz & Wagner (2014).



**b. Quadruple helix in innovation districts**

Interactions are central in innovation districts: those are characterized by integrated, collaborative and inclusive stakeholder involvement (Katz & Wagner, 2014; Wagner et al., 2017). Governmental, business, research and civil society stakeholders collaborate in order to generate knowledge-based economic growth. This collaboration occurs the Triple Helix model, which is an interplay between industry, government and academia in enabling innovation-based economies (Borkowska & Osborne, 2018). Carayannis & Campbell (2009) added a fourth dimension to this model, with the consideration of civil society in the innovation system (Figure 2). Borkowska & Osborne (2018) recognize the main difference between the Triple Helix and the Quadruple Helix to be the involvement of socially inclusive innovation. This gives a community-oriented perspective to innovation districts, allowing surrounding communities to benefit from growth and mitigate potential negative effects from gentrification (Lawrence et al., 2019).

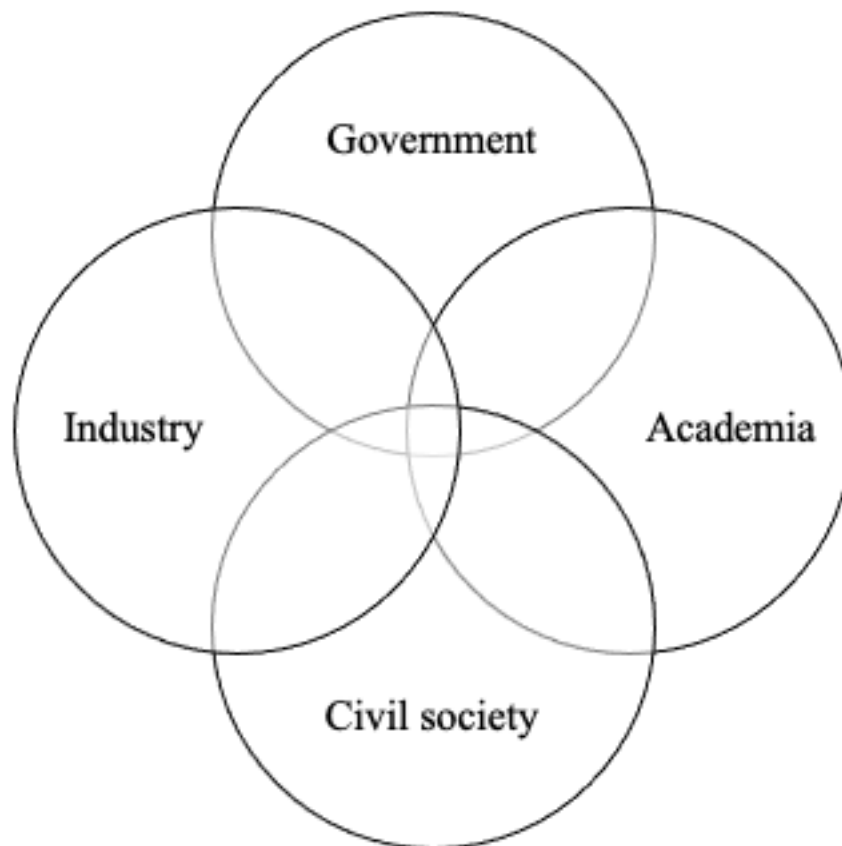


Figure 2. Quadruple helix model. Source: own construct, adapted from Carayannis & Campbell (2009)

Moreover, Wagner et al. (2017) highlight the flexibility and decentralized aspect of innovation districts, which is not controlled by a single actor (Lawrence et al., 2019). This echoes governance networks, as a horizontal network of interdependent actors interacts in those districts. However, the range of stakeholders participating in innovation districts varies from place to place.

### c. Clustering of the creative class

Innovation districts do not only benefit from the clustering of firms but also of talent and skills those industries require (Florida, 2017). They attract innovative and creative individuals, which we called the *creative class*. Florida (2014 : 197) defines the creative class as individuals with “*jobs in knowledge-intensive industries that involve the production of new ideas and products, or that engage in creative problem solving*”. Skilled individuals of the creative class are a mobile factor of production and should be captured and nurtured (Florida, 2014). Thus, innovation districts should be an appealing and open environment for them to express their creativity. If a creative class assembles in a city, jobs will follow, as opposed to the former process of people moving to follow jobs (Peck, 2005). Peck (2005 : 740) discusses this new credo of creativity in cities, to attract creative workers and addresses it as a “new capitalism based on human creativity”. The clustering of the creative class in some neighborhoods raises concerns over exclusion of certain populations (Atkinson, 2004; Tach, 2014; Florida, 2017; Morisson & Bevilacqua, 2019; Wagner, 2019). Indeed, innovation economy enhances the risk of economic polarization, which takes up a spatial dimension when discussing innovation districts. This gives rise to questions on the access to the opportunities offered by innovation districts to individuals issued from the working or service class. On the one hand, authors highlight the benefits of innovation districts for low-income communities, as it would create opportunities to provide those residents with jobs and include them in economic growth (Wagner et al., 2017). On the other hand, others suggest that innovation district a new buzzword for gentrification (Lawrence et al., 2019). The risk is that innovation benefits to those who already have access to education, social capital, real estate and highly paid jobs (Lawrence et al., 2019).

## II. Governance networks

### a. Theoretical background: governance in networks

In modern societies, issues tend to be increasingly complex which means that problems cannot be solved by one organization only (Koppenjan & Klijn, 2004). There are many examples of complex governance processes in the literature, such as the restructuring process of inner cities in which municipalities need to work together with non-profit, private actors and citizens groups (Klijn & Koppenjan, 2016), highlighting the relevance of this approach in the case of innovation districts. Interactions between government, businesses, and nonprofit organizations emerge as the new structures of governance as opposed to hierarchical organizational decision making (Bingham et al., 2005). Societal actors thus interact in governance networks and collaborate to reach effective outcomes. Sørensen & Torfing (2005 : 197) define a governance network as “*a stable articulation of mutually dependent, but operationally autonomous factors (...), who interact through conflict-ridden negotiations that take place within an institutionalized framework of rules, norms, shared knowledge and social imaginaries (...) and contribute to the production of public values*”. The main characteristics of those networks are the complexity of policy problems they deal with; interdependencies between stakeholders because resources necessary to tackle those issues are sparsely owned; the strategic complexity of their interactions and durability over time (van Meerkerk et al., 2015; Klijn & Koppenjan, 2016).

To deal with the complexity of interactions within governance networks, network governance is a form of coordination. Klijn & Koppenjan (2016 : 11) define it as “*a set of conscious steering attempts or strategies of actors within governance networks aimed at influencing interaction processes and/or the characteristics of these networks*”. The government still participates in decision-making, but it is rather a decentralized governance based on interdependence, negotiation and trust (Sørensen & Torfing, 2005)

Katz & Wagner (2014) highlight the importance of thinking and acting in a networked and multi-dimensional manner to foster innovative growth and expand employment and educational opportunities for all residents in innovation districts. Indeed, industry, academia,

government and civil society interact in a Quadruple Helix model of governance, which stresses the relevance of governance networks theory for innovation districts.

**b. Democratic performance of governance networks**

An extensive body of literature addresses the democratic performance of governance networks. Most scholars focus on compatibility between networks and democratic values (Sørensen & Torfing, 2005; Bogason & Musso, 2006; Molin & Masella, 2016). In other words, they question whether governance networks lead to democratic processes. First, governance networks are considered more democratic as they give room for direct involvement of those who are usually outside the traditional framework of public administrators, interest groups and legislative staff (Bogason & Musso, 2006). Governance networks also promote deliberation and improve responsiveness in service provision (Bogason & Musso, 2006). By improving the link between policy-making and diverse stakeholders, governance networks have a potential to overcome the limitation of representative democracy (van Meerkerk et al., 2015). Therefore, stakeholder participation in governance networks improves the quality of the input and throughput of the decision-making process (Bekkers & Edwards, 2007). It enhances the quality of representation because it allows “weak interests” to sit at the table. One may argue that governance networks are inclusive processes because they foster stakeholder participation.

**c. Critical approach**

After having conceptualized governance networks and their possible contribution to democracy and inclusion, one must look at its criticism. If inclusion is an opportunity for governance networks, exclusion is a risk: groups involved in governance networks are not necessarily representative of the larger population. Torfing et al. (2012) explain that actors with stronger skills could decide who is included and who is excluded. Moreover, requirements for participation are often non-reachable for “ordinary” citizens (Roiseland & Vabo, 2016). As a result, eloquent actors may use the political arenas to gain more influence. In addition, accountability is scattered among different actors in governance networks (Bogason & Musso, 2006; van Meerkerk et al., 2015). Hence, it is difficult to hold someone accountable because networks do not have elections, nor an opposition. Overall, governance networks are not a panacea for (un)democratic governance and exclusion.

To assess the democratic performance of network governance, Sørensen & Torfing state that it should be anchored in their *democratic anchorage* model. Considered to be democratic if it matches four criteria. First, network governance should be representative of the affected population and organizations in their processes. Second, network governance should be accountable to citizens affected by the decision-making or service produced. Third, network governance should follow democratic rules and norms. Finally, network governance should be associated to democratically elected politicians, to guarantee that the decisions are compliant to the popular will (Molin & Masella, 2016)

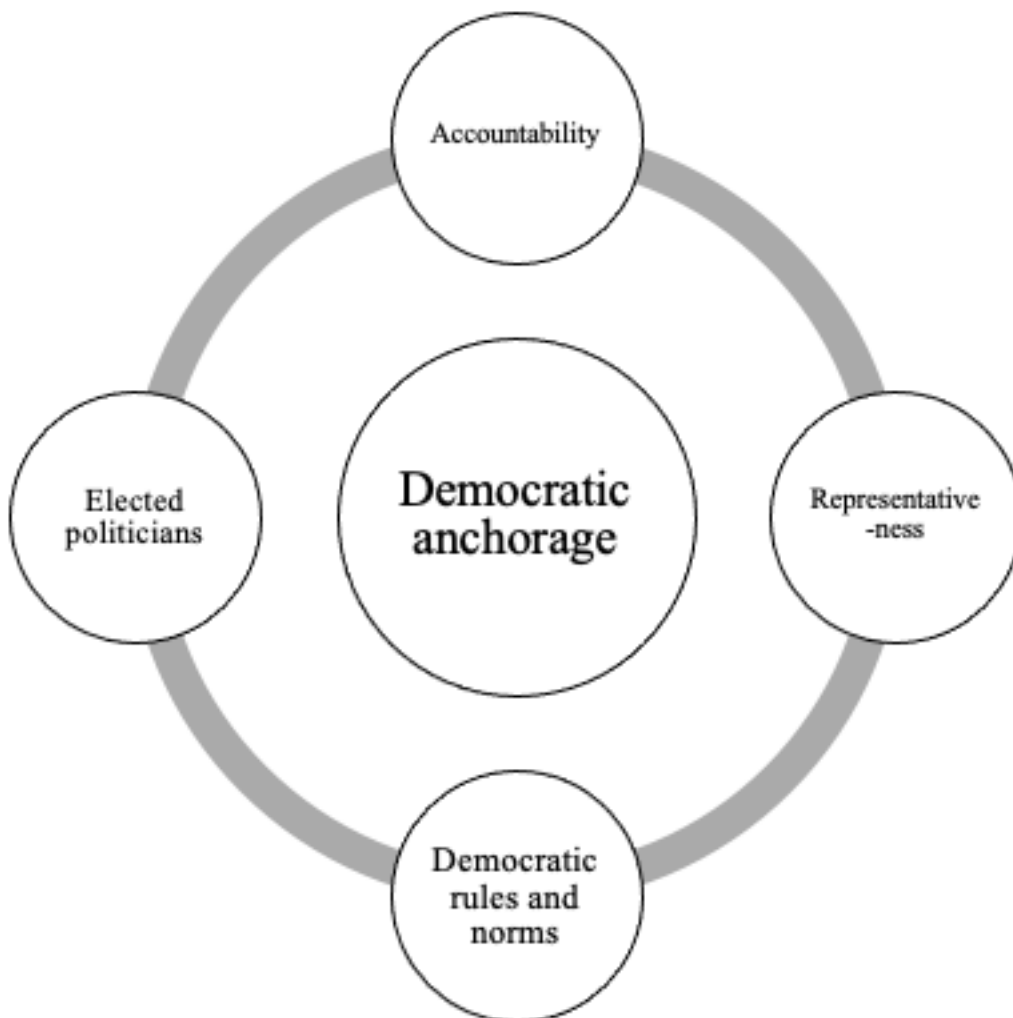


Figure 3. Democratic anchorage. Own constructed, based on Sørensen & Torfing (2005) and Torfing et al. (2012)

#### d. **Conditions of democratic performance of governance networks**

In this research, democratic performance of governance networks is studied, to measure their influence on inclusion as an outcome in innovation districts. Building upon on the definition of Sørensen & Torfing (2005) on democratic anchorage, the definition of democratic performance considered in this study is the following: “*the democratic performance of governance networks is the extent to which the network is controlled by democratically elected politicians, represents the participating group or organization and is accountable to a territorially defined citizen group.*” This research uses the term performance deliberately, to differ from *democratic anchorage* as only three of the four criteria mentioned by Sørensen & Torfing (2005) are considered.

The democratic performance of governance networks is paramount because it gives an insight on whether inclusiveness of the process is a necessary condition to inclusiveness of the outcome. Sørensen & Torfing (2005) develop requirements and criteria related to the four conditions of democratic anchorage – accountability, representativeness, democratic norms and values, elected politicians – and specify that the democratic aspect can be assessed to a certain degree and not as those conditions being necessary. This study looks at some aspects of democratic performance.

First, a governance network is democratically performing if politicians take on the role of guiding the actions of the network, defined as meta-governance (Sørensen & Torfing, 2005). This means that politicians grant legitimacy to a network by controlling the creation and functioning of governance networks. In other words, politicians and administrators shape the conditions of the interactions of the actors of the network, through structure, influence and construct (Sørensen & Torfing, 2005). Metagovernors focus on regulating self-regulated networks (Sørensen & Torfing, 2007), by the means of three forms as defined by Kickert et al. (1997): network design, network framing, network participation. First, network design entails the attempts to shape the network: metagovernors decide on some rules and decision-making structures which establish the scope of the governance networks (Sørensen & Torfing, 2005). Second, network framing encompasses the establishment of political goals and common objectives for the network. Politicians might frame the network through the formulation of a shared vision for instance. Finally, network participation corresponds to the participation of politicians in the activities of the network. Participation in governance networks allows

politicians to have a greater influence on the policy agenda of the network and possibly to align it on the overall governmental agenda (Sørensen & Torfing, 2005). Politicians may participate in public hearings or negotiation meetings.

Second, the governance network should be accountable to citizens living within the area within which it operates and produces policy outcomes. In this context, “*accountability is defined as the degree to which the governance network is held responsible by a defined group of citizens who are (indirectly) affected by the decisions taken in the network*” (based on Torfing et al., 2012). Accountability encompasses a mechanism to hold decision-makers responsible for their actions (Lindberg, 2013). Literature highlights that, as members of the networks are not elected, accountability is more difficult (Sørensen & Torfing, 2005; Torfing et al., 2012; van Meerkerk et al., 2015). For this reason, public debate and proofs of the definition of policy problems should be available to the citizenry. It implies transparent, accessible and informative accounts of the actions of the network. Citizens should also be able to dialog with the members of the network: responsiveness is considered as an important aspect of accountability (Sørensen & Torfing, 2005).

Third, representativeness is the last criteria considered for the democratic performance of governance networks in this study. It entails who represents individuals in the network and how. First, representativeness can be measured by the affiliation of stakeholders involved in the network. Second, this means that individuals are given the opportunity to participate or influence decision-making in those networks and to provide an informed opinion and criticism about the performance of their representatives. Representativeness encompasses the ability of the participating groups and organizations to communicate with their representatives (Torfing et al., 2012). For instance, feedback mechanisms can be used for participating groups to address their concerns to the actors of the network. Relevant groups must also have access to information on the actions of the network regarding their claims.

## **II. Inclusion**

The other main concept of this research is inclusion. Inclusion is relevant in the context of rapid urbanization and innovation districts, as it refers to strategies that privilege economic growth

and resulting the exclusion of individuals (McGranahan et al., 2016). Inclusion is a broad term and requires a rigorous conceptualization to be operationalized empirically.

#### **a. Definition and current debates**

By 2030, 60 % of the world's population is projected to live in cities (United Nations, n.d.). In cities, populations can enjoy jobs, education and cultural amenities. However, global societal challenges such as environmental threats, resource scarcity or social inequalities manifest themselves to a greater extent in cities. As benefits of urbanization are not equally distributed (World Bank, 2015), the United Nations set as a Sustainable Development Goal: « *Make cities inclusive, safe, resilient and sustainable* ».

Inclusion is attracting considerable interest due to the rising inequalities and forms of spatial, social and economic exclusion in cities (World Bank, 2015). To realize the full potential of cities in terms of environmental and social goals, an inclusive urban policy is necessary (McGranahan et al., 2018). Inclusion can be understood by looking at its opposite: exclusion. Anttiroiko & de Jong (2020 : 25) refer to exclusion as the “*lack of access to or participation in opportunities and activities and lower levels of expectation for chances of success and enjoyment in life and future prospects to change the status quo*”. Building on this definition, this study considers exclusion of innovation districts to be *the lack of access to or participation in opportunities and activities offered by innovation districts*.

Inclusion is linked to concepts such as social inequalities and poverty. Hence, promoting inclusion appears as a moral imperative (Anttiroiko & de Jong, 2020). In the literature, those have been at the core of recurring debates, linked to theories on urban justice (Dikeç, 2001; Fainstein, 2014; Hambleton, 2014, Boterman et al., 2017). Indeed, urban justice encompasses a criticism of systematic exclusion, domination and oppression.

#### **b. Necessity of inclusion in cities**

In the urban context, issues of inclusion are often linked to the tension between the improvement of public space – urban transformation –and enabling residents to have access to places with better work opportunities, schools and quality of life. However, in practice, well-off individuals have a higher purchasing power and can then move to those newly accessible



and affordable areas. With their arrival in neighborhoods, housing prices increase and it becomes not affordable for lower-income populations. Many studies focus on segregation related to housing market positions of population, and in a later stage, on gentrification related to residential practices of middle-class groups (Atkinson, 2004; Lees, 2008). Gentrification can lead to the fragmentation of urban areas and increased inequalities. This is especially relevant when looking at innovation districts, as they are mostly associated with the urban transformation of disused/deprived areas (Katz & Wagner, 2014). In this context, inclusion refers to the ability of all to enjoy the improvement of the neighborhood.

Furthermore, inclusion is related to normative values, such as equity and equality of outcome (Anttiroiko & de Jong, 2020). This research focuses on the end-result, which should be inclusive, from the perspective of social justice – how justly the privileges individuals have is distributed in a society – and equity – if the same level of satisfaction is reached by populations on similar outcomes – (Anttiroiko & de Jong, 2020).

Furthermore, inclusion encompasses the access to housing and services, which can be difficult for low-income households. Also, access to jobs and opportunities to build wealth, equal rights and participation of all are essential to inclusion (World Bank, 2015). There are three dimensions to the inclusive city: the spatial dimension, including access to land, housing and infrastructure, the social dimension which is equal rights and participation and the economic dimension, meaning the possibility of all to build wealth and have access to jobs. This study considers the economic dimension of the inclusive city, although all dimensions are intertwined (World Bank, 2015). Figure 4 illustrates the multi-dimensional approach to inclusive cities and interventions towards inclusion in the three dimensions.

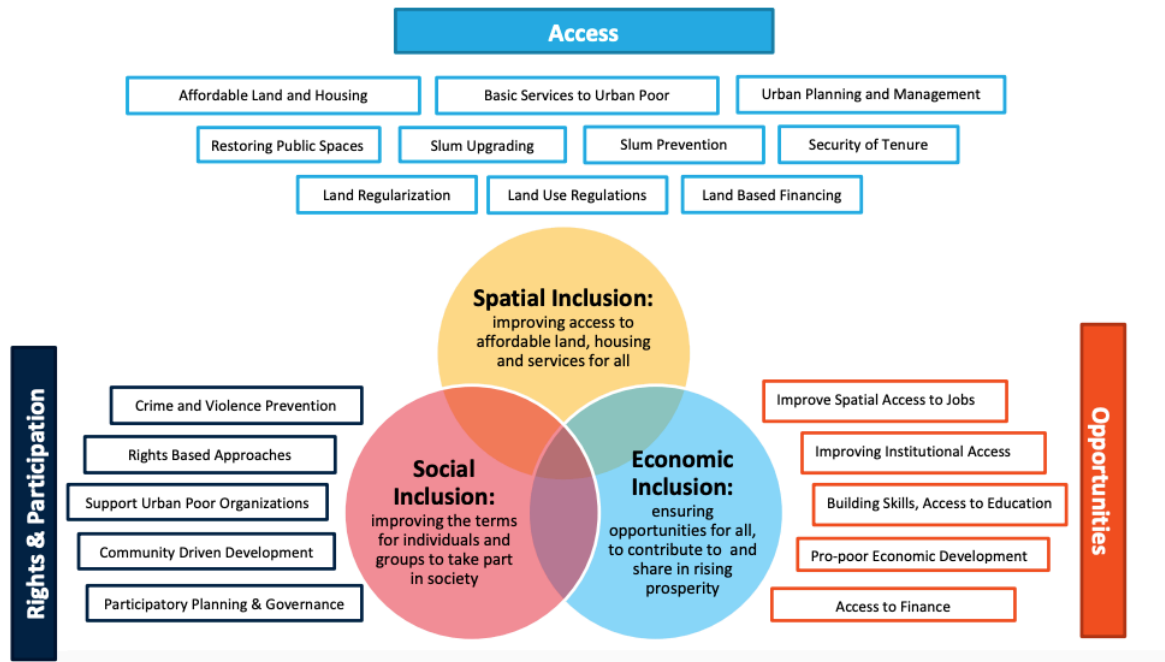


Figure 4. Multi-dimensional approach to inclusive cities with interventions aimed at inclusion in each dimension. Source: World Bank, 2015.

**c. Complex inclusion: process and outcome**

Previously mentioned authors on inclusion highlight the complexity of this term. Adding up to those theories, a difference is made between process- and outcome-based inclusion. Inclusive decision-making processes have been widely investigated in relation to citizen participation and representative democracy (Bogason & Musso, 2006; Bekkers & Edwards, 2007; Sørensen & Torfing, 2005; van Meerkerk et al., 2015). Inclusive processes are defined as the process of improving terms for citizens to participate in society (World Bank, 2015). Indeed, community participatory processes are considered as an important factor in achieving inclusion, through the involvement of the community in governance (World Bank, 2015).

Process-based inclusion encompasses who is included in the decision-making process why, how and to what effect (Menocal, 2020). A growing distance between decision-making and marginalized groups can result in the failure to represent the population, hence affecting the quality of democratic processes. The World Bank (2015) explains that the failure of inclusive process can lead to negative externalities, such as exclusive outcomes. The lack of opportunities and voice can undermine economic opportunities for individuals and result in

social tension. Furthermore, it is essential to highlight the difference between inclusion as an outcome or as a process (Menocal, 2020). This thesis looks at inclusion as an outcome for the sake of clarity, regarding the conceptualization of network governance, which is considered as a process.

The relationship between inclusive process and inclusive outcome is unclear, which indicates that inclusive process does not necessarily serve inclusive outcomes (Menocal, 2020). Lund (2018) explains that forms of network governance were widely stimulated to tackle social exclusion. Said to be more inclusive, such processes created new space for participation. However, it can still exclude marginalized and disempowered groups. Ianniello et al. (2019) highlight that granting many stakeholders the right to participate in the governance process could lead to negative consequences, as one must consider differences in knowledge, skills, vested interest and time. This fosters the participation of “expert citizens” and ultimately contributes to excluding outcomes (Lund, 2018: 36). In addition, Fainstein (2014) explains that democratic processes can lead to exclusionary practices, as all social classes are rarely proportionally represented. If an inclusive process gives all stakeholders equal opportunities to be heard, those are equally able to make themselves heard, nor equally competent or resourceful (Lund, 2018). If such processes do not take underlying inequalities into account, they rarely produce inclusive outcomes.

#### **d. Inclusion in the context of innovation districts: an inherent contradiction?**

Previous paragraphs brought to light the complexity and multi-dimensionality of inclusion. In the context of innovation districts, this wickedness also derives from the dialectical tension between innovation and inclusion. The diffusion of innovation curve, theorized by Rogers in his book *Diffusion of Innovations* in 1962, can be used to question the inclusive nature of innovation (Figure 5). This theory illustrates how innovation diffuses among society over time. In the initial phase of diffusion, innovators adopt a new idea, product or practice. Over time, the innovation reaches the critical mass. The diffusion curve shows that initially, innovators represent a limited share of the total social system. In those terms, innovation can be considered as exclusive, as it does not include most societal actors.

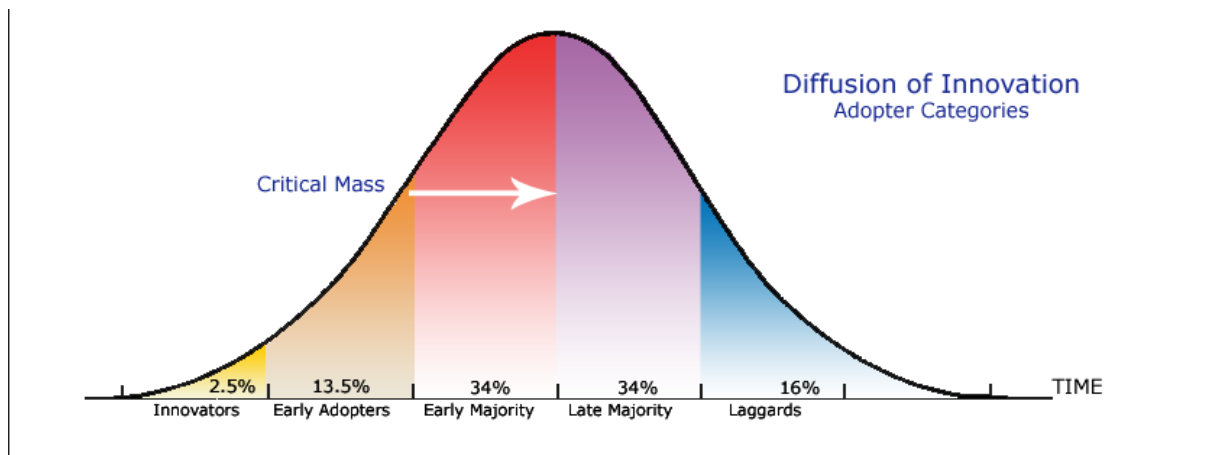


Figure 5. Diffusion of Innovation and adopter categories. Source: Kaminski, 2011.

It raises questions on the capture of innovation. Indeed, once an innovation is adopted by the critical mass, is it still a new idea or practice? One could say that once an innovation is widely adopted, it becomes mainstream, which contradicts the very definition of innovation. Hence, in the context of innovation districts, there is an intrinsic contradiction between inclusion, which is *the access to or participation in opportunities and activities offered by innovation districts*, and innovation, which is a new idea, product or practice diffused by a reduced population group in society.

Nonetheless, the relationship between innovation and inclusion can also be positively examined. Innovation is not solely technological or economic, but also entails the context in which new actors and new institutions generate new ideas, practices or power structures. This type of innovation, called Social Innovation (SI), can serve purposes of inclusion in society. In the past decades, there have been many discussions about SI among innovation scholars but also in transition studies (Avelino et al., 2019; Pel & Bauler, 2015). SI is defined as “*change in social relations, involving new ways of doing, organizing, knowing and framing*” (Avelino et al., 2019). While SI is still a concept in development, it appears that it could help to improve living conditions and respond to societal challenges such as poverty, exclusion and segregation, which cannot find solutions in market-based or hierarchical forms of coordination (Lund, 2018).

**e. Dimensions of inclusion: income and wealth**

To understand inclusion in the innovation district, this research looks at on what condition individuals are excluded from enjoying the opportunities offered by the district. According Anttiroiko & de Jong's framework (2020), exclusion is conceptualized by the basis on which the individual or group is excluded. The authors mention many forms of exclusion (Figure 6). In this study, exclusion on the basis of income and wealth is considered. The level of wealth of individuals has a fundamental effect to limitations they face to access different types of capital in the city (Anttiroiko & de Jong, 2020).

First, income, which is defined as the available resources to an individual, is a determinant factor of inclusion in innovation districts.. Specifically, rates of low-income households in the neighborhood and its surroundings indicates are suitable indicators. In addition, the access to housing market is an indirect representation of the level of income and wealth of inhabitants. In neighborhoods in which high-income populations are installed, the housing stock tends to be renovated and inhabitants are mostly owners of their houses. Such housing is rarely accessible to lower-income populations, thus making it exclusive on the basis of income and wealth. In neighborhoods with lower income inhabitants, there is a higher demand pressure for social housing, as liberal housing is not accessible. Thus, to measure inclusion on the basis of income and wealth, one could assess housing affordability and access to housing market.

In a neighborhood, inclusion can be enhanced by the local government or local actors, as a strategy for the area. In that sense, inclusion in a neighborhood could be fostered through programs and policies to support economically vulnerable populations (World Bank, 2015). This support can entail financial subsidies to local businesses or programs to stimulate one's skills and abilities. Dani & De Haan emphasize the importance of social policy and programs to increase access to productive assets, goods and services, strengthen governance and promote an equitable access to economic opportunities (2008).

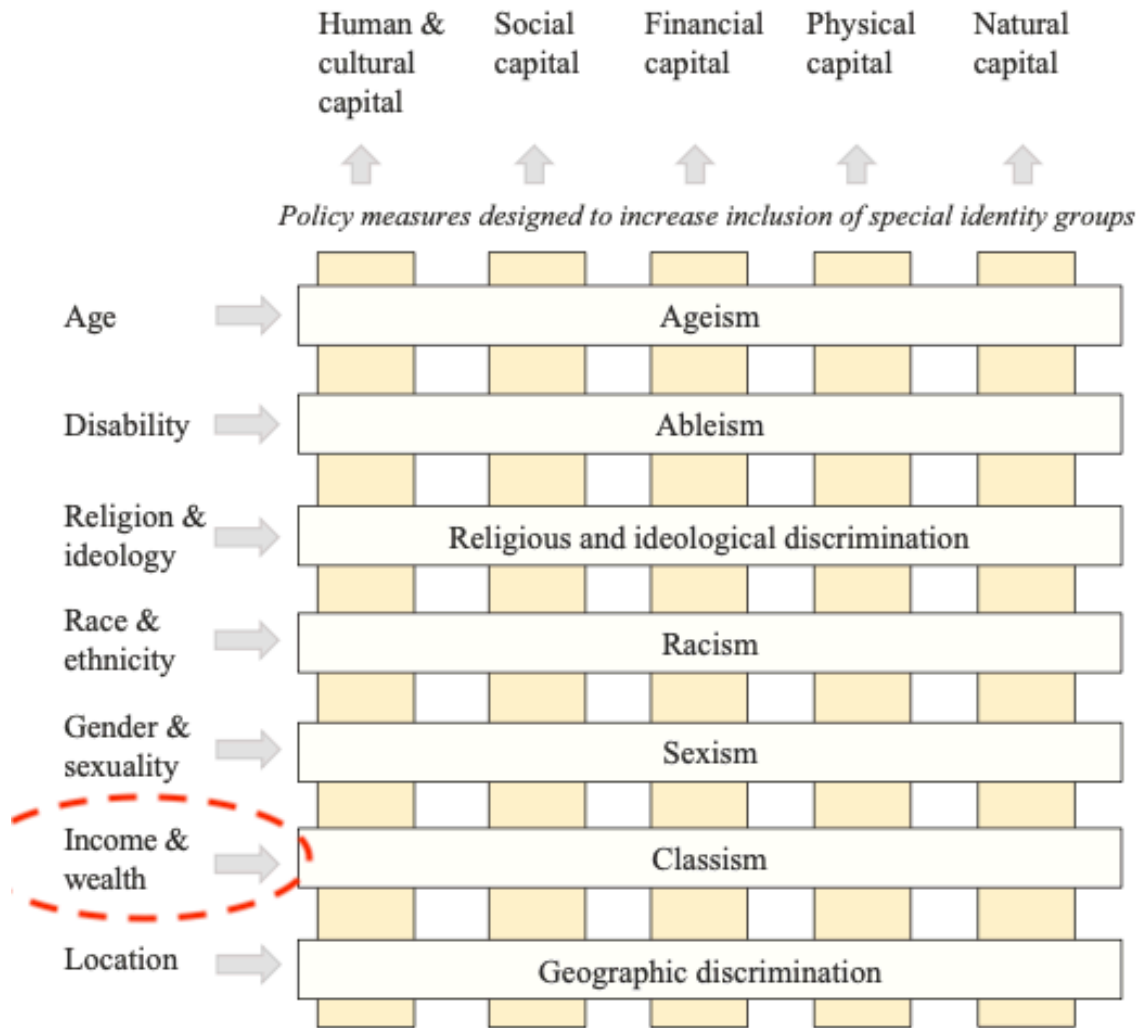


Figure 6. Matrix of the forms of exclusion and types of capital. Source: Anttiroiko & de Jong (2020).

**f. Dimension of inclusion: education and skills**

If the link between education and inclusion has been widely investigated (EASNIE, 2018), it poses specific challenges in the context of innovation districts and in knowledge-intensive industries. Florida’s theory on creative class exposes the separation between a class of creatives, made of individuals who followed specialized education paths and have qualification to offer on the labour market and a service class, composed of vulnerable employees with limited qualifications, temporary contracts and who are interchangeable with each other (Anttiroiko & de Jong, 2020). This dominance based on education and skills tend to intensify exclusion of groups which do not meet the qualification requirements of the creative

class. This type of exclusion operates in a circle: individuals are excluded of employment in innovation districts because of a skills mismatch and then ends up in low-paying positions that fails to provide a stable source of income (World Bank, 2015). Schienstock (2001) explains that knowledge-based economy is characterized by flexible work strategies. It can lead to the exclusion of less skilled individuals, who are less flexible on the labor market. Low skilled workers would be forced to move from one flexible job to another while young and highly qualified benefit from newly created jobs. This exposes the link between creativity and polarization of society and contributes to the creation of an “underclass”, made of individuals with limited skills and network who do not benefit from innovation districts (Peck, 2005; Schienstock, 2001).

Inclusion through education and skills can be assessed in several ways. First, years of education is a good indicator of inclusion on education and skills. This sub-variable is important because the level of education often affects one’s chance on the labor market (United Nations, 2009). Second, inclusion does not depend only on one’s degree but also on qualifications acquired while working in the field. This sub-variable is essential in regard to professional retraining due to the decline of industrial activities and the rise of technology-oriented specialization. Third, the rate of unemployment can be considered in relation with the previously mentioned indicators. It is defined by the percentage of labour force unemployed. As highlighted previously, the type of job is also examined to assess inclusion. A strategy is inclusive if it does it not give more opportunities to creative technology-trained workers but also to workers of manufacturing and service industries.

### **III. Impact of governance networks on inclusion in innovation districts**

In this section, the relationship between the previously defined concepts is investigated. As highlighted in the first chapter, the relationships between the democratic performance of governance networks and inclusion have not been extensively studied in previous research. Consequently, there is no pre-established framework to understand the relationship between governance networks and inclusive outcomes in innovation districts.

**a. Meta-governance for inclusion**

The first condition of democratic performance considered in the meta-governance practices of politicians and administrators. It involves the influence, construct and structure they use to regulate self-regulating networks. This dimension is related to inclusiveness, first in the process, covering who is included in the process and how (Menocal, 2020).

By looking at this condition, this study aims at understanding the impact of inclusiveness in the process on the inclusiveness of the outcome. Wagner (2019) explains that engagement could lead to more inclusion in innovation districts. Also, politicians can encourage the formulation of an inclusive agenda, thus supporting weaker interests (Sørensen & Torfing, 2005). Meta-governors also have a role in addressing exclusion through social programs. In innovation districts, the goal is to make the city more attractive to firms and creative industries, resulting in economic growth. Nonetheless, one must not separate economic programs from social programs. Indeed, programs promoting employment of excluded groups could help in redressing path-dependent dynamics (Dymski, 1996). In this matter, debates around the role of the government in urban economic growth (Blakely & Small, 1996; Dymski, 1996; Fainstein & Gray, 1996; Porter, 1995) and discussions around new public management and network governance (Pennink, 2017) intersect. In the new public management paradigm, deregulation, privatization and outsourcing of public tasks are dominant trends. However, wicked problems such as social inequalities, exclusion and poverty must be tackled as well: in the network governance approach, the government alone is supported by a wide range of actors from other sectors to solve those (Pennink, 2017). The government does not steer the policy process but organizes bottom-up processes and incorporates the idea that policy-making takes place in a network, hence pursuing a meta-governance role.

**b. Accountability for inclusion**

The second condition of democratic performance of governance networks in this research is the accountability to a territorially defined citizenry. This condition facilitates public contestation of the outcomes of governance networks, which ensures that all voices and feedback of the constituency are heard. This relates to diversity and inclusion. Indeed,



accountability is a process through which actors inform and justify their actions, behavior and results (Torfing et al., 2012). Inclusion is a moral imperative grounded in social justice. In relation to inclusion, accountability then implies that one or more actors are undertaking this responsibility. Once again, this relates to the debate on state intervention: if the government takes a meta-governor role in a network, accountability remains unclear. What is the extent of the responsibility of the government in achieving inclusion? Accountability is not necessarily a task for the government: it can be shared or also reside in other actors. Nonetheless, accountability is paramount, otherwise stakeholders tend to overlook social goals. This is due to two reasons: first, accountability creates an expectation of what to expect in terms of inclusion and transparency to reach this goal. Second, accountability enables decision-making: the agent (accountable) must take action to promote inclusive outcomes.

### **c. Representativeness for inclusion**

Finally, the last condition of governance networks in the research is representativeness. This condition is studied to complement the first two items: by studying representativeness, this study illustrates whether the needs of local users are represented, thus avoiding the exclusion of groups in the process. Representativeness is traditionally associated to democratic legitimacy and political equality (Bekkers & Edwards, 2007). Through representative mechanisms, the will of the population is converted into public policies: it protects people from politicians to pursue actions that are contrary to the interests of their electorate. In that sense, it is related to inclusion, as it represents all interests, even the weakest (Bekkers & Edwards, 2007). Representative processes can contribute to inclusion as they give a voice to citizens and empower them to be heard. Hence, it appears as a channel through which democratic performance is linked to process-based inclusion: the population can select and instruct their representatives, form an informed opinion about their performance and express their views about it (Sørensen & Torfing, 2005). Bekkers & Edwards (2007) highlight that network governance goes beyond interest representation, with a prominence of mutual learning through dialogue.

Nonetheless, when all citizens are given equal opportunities to start or enter a public discussion and defend their arguments – inclusive process -, inclusive outcomes are not

guaranteed. Individuals could encounter difficulties to organize themselves as a group, thus threatening the representation of all interests. This could lead to situations of exclusion: those who do not have necessary resources, time and skills would be set aside from decision-making processes. The quality of representation depends on instruments used to foster the involvement of “weaker” groups (Bekkers & Edwards, 2007).

#### IV. Conceptual framework

In this section, the conceptual framework of this study is explained, highlighting the relationships between the theories defined in the previous sections. Democratic performance of governance networks is the independent variable of this research. In the context of innovation districts, the specific dimension of this variable studied are a meta-governance, accountability and representativeness. This thesis questions the influence of the democratic performance governance networks on inclusion (dependent variable) in innovation districts. Inclusion is understood through its antonym (Anttiroiko & de Jong, 2020). In this case, exclusion is defined as the lack of access to opportunities and benefits offered by innovation districts. Based on Anttiroiko & de Jong (2020), we designate exclusion with the basis on which individuals or groups are excluded: income & wealth and education & skills.

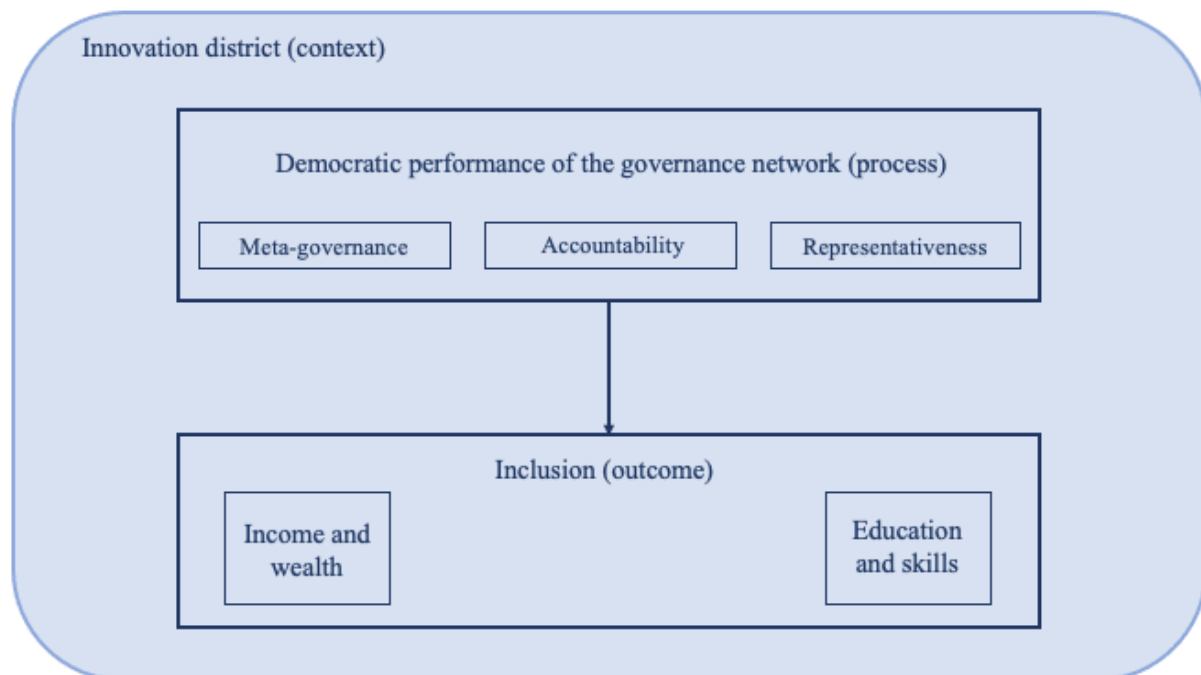


Figure 7. Conceptual model. Source: own construct.

## Chapter 3: Methodology

This chapter explains how the concepts outlined in the theoretical framework will be operationalized for empirical research and how data will be collected and analyzed to answer the main research question and sub-questions.

### I. Research design

The research design specifies the strategy used to collect and analyze data to answer the research questions (Bryman, 2016).

#### a. Case-study

This research makes use of a case study as a research strategy. Yin (1994) defines a case study as a research strategy aiming at illuminating processes: the rationale for their occurrence, implementation and results. A case study seems to be the most appropriate to understand the influence of network governance on inclusion in an innovation district, because it gives in-depth insight on the phenomenon in its socio-economic context, rooted in time and space (Verschuren & Doorewaard, 2010). Moreover, based on the research question: *How does the democratic performance of governance networks influence inclusive outcomes in Merwe-Vierhavens (M4H)?*, the case study strategy is suitable, according to Yin (1994): a “how” question is asked about an event, which is not controlled by the researcher. Overall, the case study is chosen in this study to compare its empirical result to previously developed theory (Yin, 1994).

There are four types of designs for case studies in social science research (Yin, 1994). In this research, a holistic single-case study is used, with a focus on M4H. This design has been chosen because urban governance theories supporting this case study are holistic themselves (Yin, 1994).

## **b. Case selection: M4H and previous steps**

This case is chosen because it is an innovation district, where actors of four sectors – public, private, academia and civil society – interact and co-produce in a network governance model. In this research, the democratic performance of those governance arrangements is the independent variable, divided in three conditions which are studied empirically to answer the formulated research questions.

First, the Rotterdam Innovation District (RID) was considered. The RID is made of two neighborhoods separated by the Maas: M4H and RDM. After a first interview in May 2021, RDM is excluded of the scope because the interviewee explained that there is no social purpose in the development of the area, which is mainly turned towards innovation and research. This aspect is a major limitation in consideration of the dependent variable – inclusive outcomes – and the Quadruple Helix model as defined earlier in this study. Consequently, M4H only is included in the scope of this research.

## **II. Research methods**

A research method corresponds to methods of data collection (Bryman, 2016). As highlighted in the previous section, the research design used in this research will be a case study. Hence, a qualitative method is considered fitting (Verschuren & Doorewaard, 2010). Interviews will be used, with a focus on understanding respondents' perspectives, context and processes rather than quantified information. However, those individual interviews will be combined with other sources, such as policy documents. Using different data collection methods is called the triangulation of methods.

### **a. Interviews**

Data is gathered by the means of individual interviews, which offer the opportunity to get more insight into the perceptions of the interviewees on the specific themes and topics tackled in the interviews (Bryman, 2016). In this study, semi-structured interviews are held with stakeholders in the area, belonging to groups of the Quadruple Helix model (Peek & Stam,

2016). In addition, an expert interview has been conducted with a researcher with in-depth knowledge on the area and its innovation ecosystem.

The interviews start with general introductory questions about the studied theme. From those questions, a discussion starts and takes the direction given by the interviewees' perspectives on the issue (Bryman, 2016). An interview guide was determined beforehand for the sake of consistency (appendix 3). Consequently, interviews are more structured and comparable. Moreover, semi-structured interviews are chosen because they are flexible and emphasizes the way interviewees frame issues and events (Bryman, 2016). Open-ended questions are drafted to gain a keen understanding on the influence of network governance conditions on inclusiveness, from the perspective of the multiple respondents (Bryman, 2016).

As per the COVID pandemic, most interviews were conducted through live video connection. The respondents chosen in this study are a strategic sample, which means that their selection is consciously guided by the conceptual framework and research questions. 9 interviews were conducted, recorded and transcribed with the consent of respondents, who signed an informed consent form detailing the process and privacy concerns linked to this research. This form can be found in appendix 2. To protect the personal data of respondents, all respondents were given a code name, with the indication of their position in table 1.

<b>Code</b>	<b>Position</b>
I1	Program Manager (local government)
I2	Coordinator (civil organization)
I3	Manager (business)
I4	Program secretary (local government)
I5	Business owner (business)
I6	Project coordinator (civil organization)
I7	Business owner (business)
I8	Researcher (academia)
I9	Director (business)

Table 1. Overview respondents. Source: own construct.

## b. Document review

In addition to individual interviews, documents are studied in this research. The aim is to shed light on the stakeholders present in the area and their interactions in a governance network and to gain insight on the socioeconomic status of users of the area. First, primary data is collected from documents issued by the local government: visions, strategy documents, reports and official communications about the development of the area. They give information on the governance model and strategy in M4H. Data issued by the Municipality of Rotterdam on the profile of neighborhoods studied is also considered. Second, case studies on M4H are analyzed, as a secondary source of data. A total of 15 documents are reviewed in this research. A table in appendix 5 presents the main findings of this review.

## c. Overview

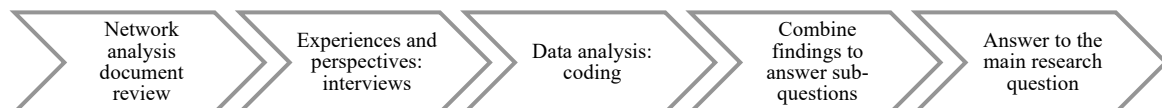


Figure 8. Research framework. Source: own construct.

## III. Operationalization of the research

Democratic performance of governance networks and inclusion, which are the key concepts developed in theoretical framework are formulated into indicators and operationalized

in the following section. The relations between those concepts are studied in abovementioned conceptual framework, based on a literature review. From those definitions, indicators are defined to be able to empirically measure the relationship between those concepts in the context of M4H. Democratic performance of governance networks is a broad concept, derived from the *democratic anchorage* as defined by Sørensen & Torfing (2005). Consequently, the theoretical framework of this study established three conditions which are studied in this research: meta-governance, accountability and representativeness. As for inclusion, it was previously defined by the means of its antonym, exclusion. In the theoretical framework, two dimensions of exclusion were elaborated upon, namely the income & wealth and education & skills. The indicators formulated to measure those conditions can be found in table 2.

<i>Concept</i>	<i>Used definition</i>	<i>Variable</i>	<i>Sub-variable</i>	<i>Indicators</i>	<i>Source</i>	<i>References</i>
<b>Democratic performance of governance networks</b>	“The democratic performance of governance networks is the extent to which the network is controlled by democratically elected politicians, represents the participating group or organization and is accountable to a territorially defined citizen group.”	Meta-governance	Network design : attempts to shape the network	Number of objectives/rules/decision-making structures for the area issued by the local government	Interview	Bogason & Musso, 2006; Kickert et al., 1997; Koppenjan & Klijn, 2004; Klijn & Koppenjan, 2016; Sørensen & Torfing, 2005; 2007 Torfing et al., 2012 Van Meerkerk et al., 2015
			Network framing: the formulation of political goals and objectives for the network	Extent to which a shared vision has been defined (Likert 1-5)	Interview, document review	
			Network participation: participation of politicians in the network activities	Number of public hearings and negotiation meetings	Interview	
		Accountability	Transparency of information regarding the actions of the network	Number of public reports on the activity of the network online	Interview, document review	



			Responsiveness from the part of the network	Dialogue tools with groups of citizens (website, service point, public meetings)	Interview	
		Representativeness	Transparency and openness of representative selection	Number of public meetings to discuss synergies/networks with inhabitants	Interview	
			Opportunity to express opinions about the representatives' performance	Feedback mechanisms in place for inhabitants/workers in the area to address their concerns	Interview	
			Affiliation of stakeholders involved in the network (government, industry, research or civil society)	Share of each sector involved in the network	Interview, document review	
<b>Inclusive outcomes</b>	Understood through its antonym, exclusion. Defined as “the lack of access to	Income and wealth	Income level	Average income in the area, Rate of low-income households	Interview, document review	Anttiroiko & de Jong, 2020; Florida, 2014; Peck, 2005;

	or participation in opportunities and activities offered by innovation districts.”		Access to housing markets	Demand pressure for social housing, rent prices	Interview, document review	Schienstock, 2001; Wagner et al., 2017; World Bank, 2015;
			Support to vulnerable groups	Programs to support economically vulnerable groups	Interviews, document review	
		Education and skills	Education	Average years of schooling	Interview, document review	
			Qualification	Average years of experience in the current sector	Interview, document review	
			Employment	Rate of employment in M4H	Interview	

Table 2. Operationalization. Source: own construct based on cited authors.

#### **IV. Data analysis**

The data collected is analyzed with the software Atlas.ti. It allows a more thorough study of what interviewees said, it corrects limitations or adaptation of memory and opens data to other researchers (Bryman, 2016). Moreover, coding qualitative and secondary data enhances the reliability of the research and the triangulation of data. A codebook is structured in accordance with the operationalized variables (appendix 1). In addition, relevant information about the neighborhood, its history, development strategy and connection with surrounding areas are coded to enrich the analysis.

#### **V. Limitation and ethics**

##### **a. Reliability**

Reliability can be defined by the possibility to demonstrate that the operations of the research, such as data collection processes, can be repeated by other researchers, with the same end-result (Yin, 1994). Nevertheless, two main issues could emerge from such a case study. First, this thesis measures the perceptions of respondents in a qualitative approach, which could attenuate the objectivity of the findings. Second, the bias of the researcher could hinder the reliability of this research: one's perspective could steer the results. To ensure the reliability of this study, the researcher highlights the transparency of data collection and consistency of data collection methodology, thanks to recorded, transcribed and coded interviews.

##### **b. Construct, internal and external validity**

There are three types of validity commonly used to determine the quality of empirical research: construct, internal and external validity (Yin, 1994). Those validity are defined and assessed in the context of this study. First, construct validity which corresponds to the identification of accurate operational indicators to measure the concepts researched. This is

especially challenging in a case study research, as insufficient operational set of measures would lead to subjective judgments in data collection (Yin, 1994). In this thesis, the tactic used to ensure construct validity is the use of multiple sources of evidence, in the theoretical framework. Moreover, internal validity refers to the extent to which the research measures the causal relationship between two variables and possible other variables interfering in this relationship (Yin, 1994). The single-case study approach used in this research can be a threat to internal validity, due to the restricted number of respondents interviewed in M4H, thus leading to rival explanations and possibilities have not been considered. However, this research uses the triangulation of methods. In addition, respondents with different backgrounds are interviewed. Finally, external validity should be tested to ensure the quality of this research. External validity can be defined as the degree to which the study's findings can be generalized (Yin, 1994). Verschuren & Doorewaard (2010) mention limited external validity as an important downfall of case studies, and especially single-case studies. Indeed, applying research results to similar cases is difficult because only one case is considered. However, the goal of this research is to expand theories, the so-called analytical generalization, rather than generalizing to populations or universes, which is statistical generalization (Yin, 1994).

## **Chapter 4: Empirical findings and analysis**

This chapter presents the empirical findings and their analysis. The aim of this chapter is to answer the four sub-questions formulated in the introduction.

The first section presents relevant background information on the case studied in this thesis and connects it with the theoretical and conceptual frameworks developed in the previous chapters. Additionally, it clarifies the conditions of collaboration and governance networks in M4H. The second section informs the reader of the democratic performance of governance networks in M4H while the third section tackles the issue of inclusion in the area and how it relates to the context of innovation districts. Lastly, the fourth section presents findings regarding democratic performance as a sufficient condition to inclusion in M4H.

### **I. Description of the case study**

Due to globalization and changing perceptions towards environmental requirements, port-related industries pushed further to the sea, leaving space and iconic industrial buildings for use. For this reason, the Municipality of Rotterdam initiated the redevelopment of four harbors, including M4H, as part of a redevelopment project (see figure 9).

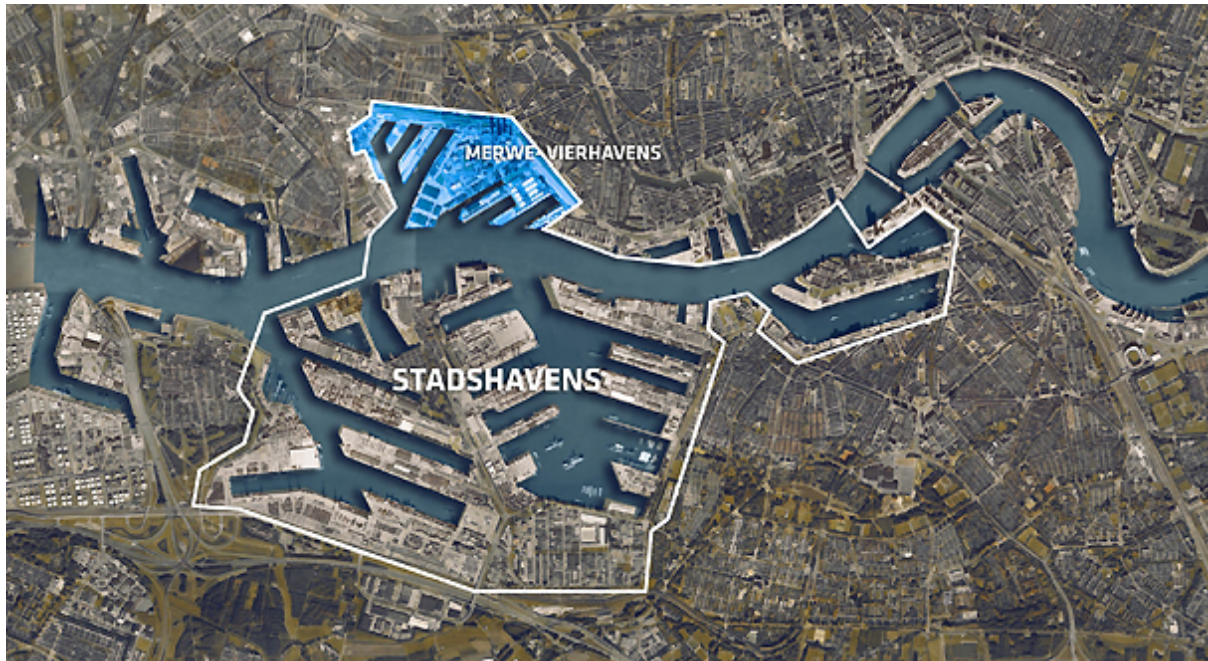


Figure 9. Satellite image of M4H as part of the Stadshavens urban development. Source: Urbanisten.nl.

#### **a. Introduction of the area**

##### *i. History of M4H*

M4H is a 200-hectare neighborhood on the north bank of the river Maas. It is made of two areas: Vierhaven and Merwehaven, built early 20<sup>th</sup> century (Van der Zandt, 2018). Unlike other surrounding port areas, Merwehaven is still partly in use (Europans15, 2019). In 2011, a structure vision was established by the Municipality of Rotterdam, presenting M4H as the heart of innovative energy transition industries (Stadshavens Rotterdam, 2011: 29).

The neighborhood is part of the RID, a joint development of the Port of Rotterdam and the Municipality (Deloitte, 2015). The second area of the RID is located on the southern side of the Maas: RDM Rotterdam. Launched in 2015, the strategy of the Municipality for M4H is to create a platform for innovative and creative entrepreneurs, multinationals and research institutes, with housing and other amenities (Deloitte, 2015). This marks a shift in the strategy for the area, with a more organic development based on the interactions between local

stakeholders. To illustrate the unique context of Rotterdam, the RID is renamed Rotterdam Makers District in 2018 (Interviewee I1, May 2021).

The situation of M4H is not a typical “port out, city in” model, but rather a hybrid form (Deloitte, 2015), because some port activities remain in the area. Historically, fruit and juice industries were active in the area, but new businesses emerged such as a beer brewery, design firms and a repair shop (Rotterdam Makers District, 2018). The neighborhood offers vibrant cultural amenities and bars. In M4H, there are also associations: such as the Dakpark association, a group of citizens who initiated the construction of the local park. Located in the Vierhavensblok, Voedseltuin is also active in the area, bringing together volunteers and residents (Interviewee I2, June 2021). In 2015, the Municipality and the Port issued a call for innovative initiatives, bottom-up groups and local networks to co-produce in the area (Peek & Stam, 2016).

*ii. Development plan*

The development of M4H is organized in three parts, from 2015 until after 2025. In November 2015, a strategy for the transformation of the area was introduced by the project office of the Municipality and the Port (Deloitte, 2015). There are two goals to these redevelopment projects: first, to strengthen the economy and enhance the attractiveness of the riverside (Stadshavens Rotterdam, 2011).

Currently, the area includes one apartment building but there are plans to build between 4500 and 6000 houses (Interviewee I4, June 2020). Overall, port and city will be mixed in M4H, with a right balance of living and working environment, as illustrated in the figure 10.

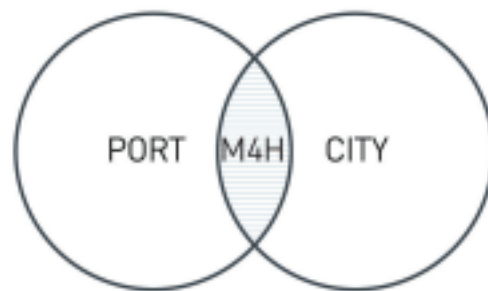


Figure 10. M4H, developed between port and city. Source: Del Bono & Franco (2020).

**b. Governance and stakeholders in the area**

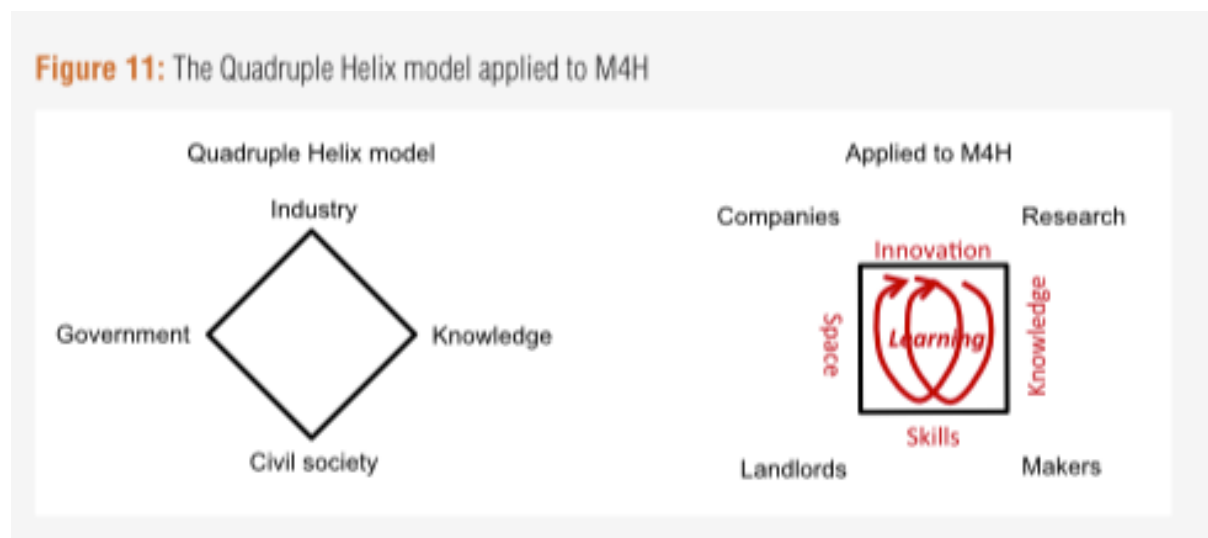


Figure 11. The Quadruple Helix model in M4H. Source: Peek & Stam (2016)

While RDM functions in a Triple Helix model with research institutions, industry and government to foster innovation, M4H is less preplanned and innovation is generated from the Quadruple Helix model, with the participation of civil society (Meijer & Peek, 2017). The Municipality and the Port work with a network of relevant actors to support the ambitions of their strategy (Deloitte, 2015). On figure 11, the Quadruple Helix model is applied to M4H. Unlike the Quadruple Helix model of Carayannis & Campbell (2009), civil society has a lesser role in M4H.



First, designers Daan Roosegaarde and Joep van Lieshout have a strong role in the area. They settled in M4H many years ago and participate in the creation of the brand of the neighborhood (Meijer & Peek, 2017). Those “iconic occupiers” collaborate with actors of M4H: they help in expanding the network, enhancing the area and inspire other relationships. Designer Joep van Lieshout installed art throughout the neighborhood, shaping public space in the area (see picture 1). In addition, AVL Mundo, founded in 2008, is a non-profit organization settled in M4H, aiming at stimulating the growth of Atelier van Lieshout by fostering creative talent, transforming the area and creating a positive impact.



Picture 1. Waterwagon. Source: Atelier van Lieshout.

Multi-company buildings are typical in the area and fertile ground for collaboration: Keilewerf 1 and 2 host a variety of innovative businesses. Creative makers based in the buildings rent a space from the owners, and support each other if needed (Interviewees I2; I6, June 2021). Buurman, a shop with an open space to build objects out of second-hand material is located in Keilewerf 1. Give a Bike Foundation can also be found in the building: the foundation is collecting bikes which are no longer in use from companies, people and other organizations (Interviewee I6, June 2021). The foundation is well connected to other actors in the neighborhood such as the PlusPunt, which is a place where socially isolated individuals get to work (PlusPunt, n.d.).

The research helix is mostly represented by the Erasmus Center for Entrepreneurship, linked to Erasmus University Rotterdam and based in the Science Tower. It promotes entrepreneurship in the region and fulfills the role of an innovation platform (Rotterdam Makers District, 2018). The center accelerates relationships between actors in the area and supports companies involved in creative industries.

Recreational space holds an important role in the neighborhood: M4H hosts several cafes and restaurants, including the KeileCafe and Weelde. Boulder Neoliet is also located in M4H: in this sport center, individuals can come to enjoy inside climbing infrastructure. Those places strongly participate in the attractiveness of the area (Interviewees I3; I7, June 2021). In addition, residents can visit the Dakpark and Voedseltuin, the two green spaces in the area. Voedseltuin was created, to provide food and activities for unemployed people in Rotterdam but is also a central place where local workers meet for lunch (Interviewee I2, June 2021).

**c. The Makers District: a strategy in M4H**

M4H is home of the “makers”, which are startups and enterprises creating and making (Peek & Stam, 2016). The development of the area aims to remove barriers, increase connectivity and collaborate on the “making city” (European15, 2019). Hence, the collaboration between actors is highly valued and encouraged:

*“Stadshavens is realized by residents, organizations and companies that participate in the emergence of a socio-cultural and economic community” (Stadshavens Rotterdam, 2011; 21)*

Some local makers are pointing towards manufacturing, in Keilewerf 1 for instance, while other companies are high-tech makers, some of them located in the Werkplaats (Interviewee I8, June). Hence, there is a diversity of entrepreneurs in the area. In addition to manufacturing and craft industries, the Makers paradigm encompasses the Next Economy thinking, in which students, engineers, designers come together to experiment with new materials (Deloitte, 2015). Ultimately, M4H should be a place where businesses collaborate to grow into large enterprises (Rotterdam Makers District, 2018). In the Next Economy, collaboration in the network has a strong economic value.

At first, the vision for the area was planned to be a large-scale urban development. In 2015, there was a shift in the strategy and the Municipality and the Port worked towards a more organic development (Peek, 2020). This implies that local actors contribute to the development in M4H. The organic development of the area, linked to the interactions in a Quadruple Helix model, touches upon adaptability and flexibility: citizens and entrepreneurs can shape the area with governments, designers, research institutions and businesses to realize their projects (Peek, 2020). The development of the area plays a part in enhancing an innovative environment. Peek & Stam (2016 : 15) say about M4H:

*“It is a Living Lab, where co-creation, exploration, experimentation and evaluation bring together public and private actors, such as companies and associations, and individuals to test new services or products”*

The organic and open urban development process coined by Peek & Stam (2016) stems from the interactions of actors in the neighborhood. Their interactions can be informal and social-oriented, through shared space. For instance, Voedseltoein is a place of interaction between the actors. Business owners have many interactions and help each other when needed, which is strengthened because they use the same co-working spaces (Interviewee I2, June 2021).

The collaboration can also take the form of a business-oriented relationship. Organizations located in the area are well-connected and often work together. For instance, the company Groencollect is collecting green waste to turn it into materials that can be used by companies in the surroundings (Interviewee I5, June 2021). To do so, they work in close collaboration with entrepreneurs in the area. Some respondents think that the area is well-connected because businesses support each other (Interviewees I2; I5, June 2021). However, if the cooperation and co-creation are present, they are not always dominant (Interviewee I3, June 2021). Indeed, if the characteristics of the network are clearly announced in the strategy for the area, some actors are more connected than others. The relationship between the Municipality and other actors of the area is not always strong (Interviewee I3, June 2021).

The strategy of the Municipality is to enable living, working and recreation spaces (Interviewee I4, June 2021). However, the companies located in the area remain on the short-

term because areas will be redeveloped and some terrains will be cleared to build housing (Interviewee I5, June 2021). Some respondents perceive that the “mixed work and living environment” planned in the vision for M4H could result in a majority of housing spaces, pushing them away due to lack of space and rise of land prices. However, this is dependent on the cleaning of the ground in M4H, which is polluted by former industries settled in the area (Interviewee I5, June 2021). This is reinforced by the fact that the most renting contracts in the area are temporary and need to be renewed yearly or bi-yearly after negotiation (Interviewees I2; I5; I6; I9, June 2021).

The social strategy for the area is not yet fully developed (Interviewees I5; I10, June 2021). This raises concerns among some respondents on the durability of this organic collaboration, and what could be a disguised gentrification (Interviewee I5, June 2021). By disguised gentrification one can understand the displacement of small businesses, currently used as “temporary brief placeholder” until the terrain becomes more accessible and cleared.

To conclude this section, M4H seems to correspond to a type of innovation district developed by Katz & Wagner (2014), the “re-imagined urban area”, close to a historic waterfront, in an industrial district in ongoing transformation. The authors explain that an innovation district realizes its full potential when three types of assets – economic, physical and networking – can be found in the area, creating an innovation ecosystem (see figure 12).

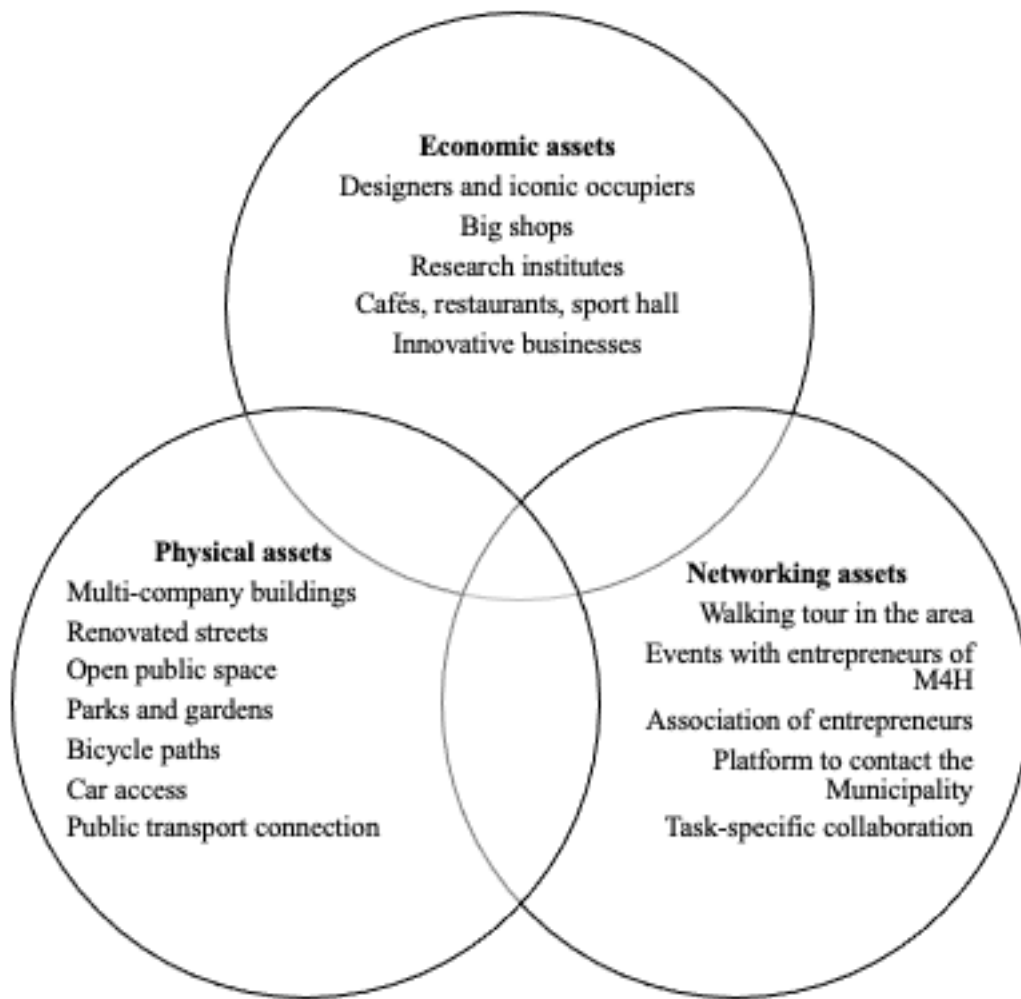


Figure 12. Types of assets found in M4H. Source: own construct based on findings and Katz & Wagner (2014).

## II. Democratic performance of governance networks in M4H

### a. Meta-governance

As it was stated in the theoretical framework, meta-governance is a condition to the democratic performance of a governance network. It is defined as the task of controlling what goes on in a self-regulating network (Sørensen & Torfing, 2005). The organic strategy led by the Municipality and the Port is rather an open invitation to local organizations to create new structures of collaboration in the area (Peek & Stam, 2016). Additionally, the City and the Port

emphasize the engagement of stakeholders of the area with the strategy “Get involved in M4H!”. The Municipality and the Port determine the scope of governance networks: they facilitate, provide guidance and connect local stakeholders (Rotterdam Makers District, 2018). An organic development does not mean that there is no governance. A situation of meta-governance can be observed in M4H. It encompasses the extent to which rules and objectives are set up by the Municipality and the Port. They issued numerous visions, strategies and spatial frameworks since they started the development of M4H. Interviewee I7 (June 2021) explains that the strategy and the legal framework is made by the city government and the Port, as they are the main landowners. The plan was made in consultation with companies in the district. The Port and the Municipality are also in charge of communication in the area, under the umbrella of the project office. In addition, they have a role in attracting companies (Interviewee I4, June 2021). As owner of the land, the Municipality has contracts with tenants and choses which contract is renewed. According to Interviewee I5, some activities could be pushed away, as the garbage dump for instance. It could be the main inhibitor for the development of the area, because of noise and smell complaints (June 2021). In the end, the Municipality makes the final decisions.

A process-oriented approach to area development is used in the case of M4H, to deal with the increasing complexity of urban development (Peek, 2020). Blueprint plans cannot be used anymore: according to this approach, local stakeholders must determine goals and functions for the neighborhood hand in hand with the Municipality. Consequently, a shared vision has been established on this development, with three core visionary principles presented in the Position paper issued by Deloitte (2015). This vision includes businesses, research institutions and local organizations and is extended for 25 years. Interviewee I5 (June 2021) explains that local companies were included in the development of the vision from the beginning. The spatial framework designed for the area is the outcome of an intensive collaboration process in which entrepreneurs and developers discussed their expectations for M4H (Stadshavens Rotterdam, 2019). Nonetheless, the Municipality of Rotterdam, the Port, the local environmental service and the Municipality of Schiedam were involved in creating the basis for this shared vision (Stadshavens Rotterdam, 2019). Hence, governmental bodies are still the initiators of the strategy for the area.

Moreover, as highlighted in the theoretical framework, meta-governance comprehends the participation of politicians in governance networks and the possibility to align the action of

the network to overall governmental goals (Sørensen & Torfing, 2005). The scope of their participation can be assessed by the number of public hearings and negotiation meetings organized by the Municipality and the Port. They dedicate a specific meeting time to discuss future plans with entrepreneurs of the area, collaborating themselves in an association of entrepreneurs<sup>1</sup> (Interviewees I2; I5, June 2021). The association of entrepreneurs gives a stronger voice to local organizations when discussing with the Municipality and the Port (Interviewee I2, June 2021). For instance, they organize events for local businesses to meet and get to know other companies.

## **b. Accountability**

Accountability is key to evaluate the democratic performance of a governance network. It embraces principles of transparency, comprehensiveness and accessibility of accounts of the actions of the network. The document review showed that most strategy documents are available online, in their long version and in their summarized version (Rotterdam Makers District, 2018; Stadshavens Rotterdam 2011; 2014; 2015; 2019). The language used is clear and the documents are available both in Dutch and in English. Those documents provide an outline of the plans for M4H, to inform local organizations about the opportunities in the area (Stadshavens Rotterdam, 2019). This can be linked to the approach to open governance adopted in the area and the perspective of the Quadruple Helix (Stam & Peek, 2016). In addition, the Port and the Municipality also insist on being transparent when dealing with new market initiatives and about their own investment decisions (Stadshavens Rotterdam, 2014).

The existence of dialogue and feedback tools is paramount to appreciate the democratic performance of the network. In the era of remote working and digital meetups, intensive dialogue can be challenging. The presence of the local government or the Port at entrepreneurs' meetings to gather feedback before COVID-19 restrictions gives an indication on the existence of such tools (Interviewee I5, June 2021). Nowadays, an online application was created, Inside. It is a community platform used to share questions, events, and news with other members of the network (M4H Rotterdam, n.d.). The platform can also be used to rent working spaces, share vacancies, and create connections with students, education institutions, entrepreneurs,

---

<sup>1</sup> *Ondernemers vereniging* in Dutch.

investors and other organizations from the innovation ecosystem of Rotterdam (Interviewee I4, June 2021).

The local government and the Port organize regular meetings to hear from local stakeholders (Stam & Peek, 2016). For instance, the Municipality accepted to change the usage function of a building to a sport facility, on the request of the local bouldering center (Interviewee I3, June 2021). Additionally, interviewee I5 argues that if the Municipality would be respondent if he presents a new project (June 2021). Overall, interviewees are mostly positive about the possibility to engage a dialogue with the Municipality. Furthermore, in the association of entrepreneurs, businesses and associations of the area can come together and negotiate with the Municipality (Interviewees I2; I6, June 2021). The Municipality and the Port have a physical meeting point, in the neighborhood. This office belongs to the Port of Rotterdam but employees of the Municipality also work there (Interviewee I4, June 2021).

### **c. Representativeness**

Representativeness includes the extent to which networks activities are discussed in public meetings. The Municipality invites actors to discuss the transition in the area (Interviewee I2, June 2021). In addition, in the position paper made by Deloitte (2015) for the Municipality, there are quotes from stakeholders of the area: this is evidence of representativeness as they are part of the vision. This highlights the will of the Municipality to include network actors in the governance process in M4H. There are also possibilities to give feedback to the local government and the Port on the vision, as highlighted in the previous argument. However, the possibility to give feedback to the Municipality is limited according to some actors (Interviewees I3; I6, June 2021). This is mostly since their relationship with the local government is not officialized.

Furthermore, representativeness can be assessed by looking at the affiliation of stakeholders involved in the network. This can be linked to the Quadruple Helix model mentioned in the theoretical framework. Small businesses are well-represented in the area, as well as in the strategy documents (Deloitte, 2015; Rotterdam Makers District, 2018). Many



companies are working in creative industries but there are also social entrepreneurs and other businesses active in circularity

Some associations are present in the area, playing a role for civil society (Interviewee I2, June 2021). Nonetheless, there are no residents yet. In urban neighborhoods of Rotterdam, there are many organizations representing citizens, which is not the case in M4H (Interviewee I8, June 2021). This illustrates a different reality of representativeness of citizens in the area.

To be rightfully represented, local actors organized themselves in sub-networks. Three types of networks have been observed in the area. First, tenants' or landowners' associations gather organizations located in the same building or same plots (Interviewees I2; I3, June 2021). Second, thematic networks can be found in the area, such as the KeileCollectief, a group of architects and interior designers committed to a better living environment in M4H. They organize discussions on the transition of the area (KeileCollectief, n.d.). Lastly, local stakeholders join forces in the association of entrepreneurs, to have a status and engage a dialogue with the local government and the Port (Interviewee I2, June 2021). There are many entrepreneurs in the area thus the association coordinates actions for the entire district (Interviewee I4, June 2021).

This section highlighted the conditions of governance networks in the area, which answer the first abovementioned sub-question. Moreover, in addition to giving further insights on governance processes taking place in M4H, this section tackled the second sub-question posed in this study. The reader is informed on the channels through which democratic performance of governance networks is linked to process-based in M4H, based on the 3 sub-variables retrieved from literature.

## **II. Inclusion: challenges in M4H**

### **a. Situation in M4H**

M4H is surrounded by four neighborhoods: Bospolder and Tussendijken in the east, Spangen in the north-east and Oud-Mathenesse in the north-west (see figure 13).



Figure 13. Map of M4H and surrounding neighborhoods. Source: own construct (based on Google maps).

Those neighborhoods are historically working-class neighborhoods (Del Bono & Franco, 2020). They are considered as vulnerable areas concentrating many challenges such as low employment rates and income levels and deprived and poor-quality housing supply (Van der Zandt, 2018). Table 3 shows statements from neighborhoods profiles issued by the Municipality, on income, housing, employment and qualification levels.

Area	Low-income household (in %)	Demand pressure for social housing	Employed residents	Residents between 23 and 75 years old without basic qualification
Rotterdam	52	126	60	32

<b>Bospolder</b>	70	427	50	50
<b>Tussendijken</b>	72	329	50	48
<b>Spangen</b>	62	199	58	43
<b>Oud Mathenesse</b>	60	224	62	39

Table 3. Statements from neighborhood profiles used in the document review. Source: Own construct, based on Municipality of Rotterdam (2020).

However, those neighborhoods, and especially Bospolder and Tussendijken, are active and concentrate an intensive economic activity with numerous shops and restaurants (Del Bono & Franco, 2020). They are connected to M4H with the Dakpark, initiated by a community-based initiative in 2014.

The two main challenges emphasized by this table are pressure on social housing, thus related to income and wealth, and the level of qualification of residents, which is lower than the average of Rotterdam and related to education and skills. Those neighborhoods concentrate social vulnerabilities, turning social inclusion into a crucial challenge in the development of M4H (Van der Zandt, 2018).

According to the framework of the Municipality “Balance in the City<sup>2</sup>”, 20% of housing should be social housing, 30% should be middle-end, 30% upper-end and 30% high-end real estate (Interviewee I4, June 2021). In the case of M4H, this framework could be an issue because of the difference with surrounding neighborhoods (ter Avest, 2021). Indeed, their percentage of social rent is high, most houses are rented and the share of low-income households is high. Housing prices in M4H would attract different population groups, which have a higher income and wealth level. The arrival of new wealthy residents could result in the exclusion of residents of surrounding areas, due to their difference of purchasing power. The following quote from Deloitte’s (2015) position paper on the Rotterdam Makers District raises some concerns:

---

<sup>2</sup> *Balans in de stad* in Dutch.

*“This new thriving waterfront is rapidly emerging with still plenty of room for more yuccies (young urban creatives) to break existing boundaries”*

Indeed, it seems like a certain socio-economic group is targeted in this development and there is a risk that those who do not identify to this group are excluded. This statement builds upon the criticism of the creative class specified in the theoretical framework. However, the Municipality wishes to avoid the clustering of a startup community which would be very different from neighboring areas (Interviewee I1, May 2021).

The demographic analysis of surrounding neighborhoods can raise awareness on the local situation and initiate discussions on how the development of M4H could have a positive impact on surrounding areas (Del Bono & Franco, 2020). Indeed, the development of M4H could present opportunities to remove physical and social barriers through a more coordinated strategy of local urban renewal. In addition, it is a formulated goal of the Municipality and the Port (Interviewee I8, June 2021; Stadshavens Rotterdam, 2011). Hence, social inclusion is recognized as an important challenge but it is still questioned how it will be maintained amid different development stages.

#### **b. Income & wealth**

This section highlights the main concerns on inclusion on income and wealth in M4H and how it is related to the concept of innovation district.

Inclusion based on income and wealth appears to be influenced by the diversity of individuals visiting the area. Interviewee I5 pointed out that with the reopening of bars and restaurants following the relaxation of COVID-19 pandemic measures, more people will come to visit the neighborhood. In this matter, recreational places such as cafes and sport centers play an important role. They are inclusive because they invite a diversity of people to participate in the dynamics of the area. AVL Mundo, contemporary art center, is open to all and attracts individuals in M4H. Interviewee I9 (July 2021) explains that this is the role fulfilled by culture in the area, connecting M4H with surrounding neighborhoods. Nonetheless, it is not sure that visitors are people from surrounding areas.

In the area, social companies focus on connecting with and including residents of surrounding neighborhoods (Van der Zandt, 2018). Voedseltuinen is one of them. The primary purpose of the organization is to provide economically vulnerable individuals with fresh vegetables (Interviewee I2, June 2021). Voedseltuinen is also a place where residents can volunteer and interact with others when working in the garden. The organization relies on volunteers from various ages, cultures and backgrounds (Interviewee I2, June 2021). However, people who come to volunteer in the garden are mostly people who have time and another job on the side (Interviewees I2; I5, June 2021). Moreover, the inspiration behind the development of Voedseltuinen is a holistic conceptualization of public value, which is not only measured through economic value. The social value, which is linked to community living, individual value, through skills and learning, the cultural value and ecologic value are equally important (Voedseltuinen Rotterdam, 2019). The development of such public value could facilitate the inclusion of individuals, which is the goal of Voedseltuinen (Interviewee I2, June 2021).

For some businesses settled in the area, the increase of rent is problematic. It stood out as a concern for most interviewees (Interviewees I2, I3, I5, I7; June 2021). Contrasting with the strategy of the Municipality to attract creative entrepreneurs in the area, the rise of rent prices could also be a barrier for entrepreneurs who would want to start their business (Interviewee I3, June 2021). Nevertheless, some companies such as ICT firms and technology-oriented businesses would be more likely to stay in the area, notwithstanding the rise of prices (Interviewee I8, June 2021). This is illustrated by changing businesses in the area: from rehab functions of the government to more interior designers (Interviewee I3, June 2021).

Furthermore, as the area is developing, more plots are sold to developers for housing. Local businesses are given the opportunity to keep renting, for a higher price (Interviewee I5, June 2021). Consequently, this urban transformation poses an issue for inclusion: to allow the access to or participation in opportunities and activities offered by innovation district – which is defined as inclusion in the previously constructed theoretical framework -, there must be low-price housing options as well (Interviewee I3, June 2021). The Municipality has plans for new residential environments, targeting mainly middle- and high-income groups (Stadshavens Rotterdam, 2011). Housing would be created for groups that are not sufficiently satisfied with the regional housing market (Stadshavens Rotterdam, 2015).

Lastly, the Municipality provides financial support to some companies of the area through subsidies, to allow businesses to thrive (Interviewees I5; I6, June 2021). This ambition is part of the economic strategy for the area, which is well developed. In contrast, the social strategy is not as developed but is currently investigated by the Municipality (Interviewee I1, May 2021; Interviewees I4, I8; June 2021).

### **c. Education & skills**

Inclusion can be assessed at the level of education and skills in M4H, which is firmly linked to employment. It revolves in generating employment and giving locals the opportunity to benefit from economic growth. Historically, the connection between M4H and the surrounding areas was very strong, as residents of the surrounding neighborhoods were working in port industries of M4H (Interviewee I8, June 2021). When port activities were moved to other ports, a mismatch between local skills and new industries appeared. The ambition of the Port and the Municipality is to develop knowledge, creativity and skills among residents for them to find a job in the area (Rotterdam Makers District, 2018). The goal of the economic strategy is to develop innovative industries and a regional hub, made of research institutions, consultancy firms and training services which could attract creative and knowledge workers (Del Bono & Franco, 2020). This implies education requirements.

According to the Monitoring report of the Project office M4H for 2019, the increase of employment in the manufacturing industry was 45% between 2014 and 2018 (Program Office M4H, 2020). Those activities can be performed by lower and middle educated individuals, such as former harbor workers living in the surrounding areas (Van der Zandt, 2018). This argument is reflected by the vision of the local government and the port, stating that the transformation of M4H should benefit neighboring areas by offering employment opportunities (Stadshavens Rotterdam, 2011). To increase employment opportunities, more space will be offered to labour-intensive manufacturing and urban pioneers (Stadshavens Rotterdam, 2015).

In the vision set by the local government and the port authority in 2011, the social purpose in the area is highlighted: the development of M4H could support the training of a better-educated workforce, to increase their chances on the labor market (Stadshavens Rotterdam, 2011). There is an emphasis on internships and apprenticeship for young people of

the surrounding neighborhoods (Interviewee I8, June 2021). However, the level of education required is still significant. In his report, ter Avest (2021) explains that companies located in M4H ask exclusively workers with at least a degree from a university of applied sciences.

Efforts to train a workforce do not come only from the local government, but also from local companies. For instance, Groencollect has an open hiring system: the company does not require experience nor education, daily tasks are very simple and employees can be trained during their working hours (Interviewee I5, June 2021). Groencollect appears as a potential employer for residents with less education background in the surrounding areas. The company is in contact with local entities supporting individuals without a job (Interviewee I5, June 2021). However, the motivation of employees is paramount and this is one of the main selection criteria. Additionally, Buurman, contributes to skills building, especially of older people, who can themselves be excluded on the basis of their education and skills. Stedin and Give a Bike also contribute to the development of skills among individuals by respectively training people to become mechanical engineers and give cycling lessons (Interviewees I5; I6, June 2021). However, one should not overlook the fact that most people hired in M4H are coming from other parts of the city or the region, as M4H is easily accessible by car (Interviewee I5, June 2021).

This section has informed the reader on concerns connected to inclusion in M4H which partly answers the third sub-question guiding this study. Moreover, it also explained how those concerns are linked to the context of innovation districts through the lenses of income & wealth and education & skills. Inclusion can be problematic from the perspective of income & wealth as housing prices rise but is tackled by organizations with a social purpose in the area and by the diversity of visitors of recreational infrastructures such as cafes and sport centers. As for education and skills, the ambition of the Municipality and the Port is to develop innovative industries and manufacturing. This development should also offer opportunities to residents of surrounding areas. To do so, the government wishes to train a better-educated workforce, through internships for instance. Companies also participate in the training.

#### **IV. Democratic performance: a sufficient condition?**

**a. Democratic performance and income & wealth**

*i. Meta-governance and income & wealth*

The investigation showed an organic development strategy (Peek, 2020) and a close connection between education & training and business community daily (Rotterdam Makers District, 2018). Also, the development framework of the neighborhood is the result of a collaboration process and there are many discussions among local actors as well in the entrepreneurs' association (Stadshavens Rotterdam, 2019). However, the outcome of this collaboration, which is the development of the neighborhood is not necessarily inclusive. Housing prices are rising due to the sale of land to developers and to the will of the Municipality to attract investments. On the one hand, economic growth and profit are aimed in the area (Interviewee I4, June 2021) and on the other hand, some individuals are left behind, leading to the production of an exclusionary neighborhood.

Most tenants can remain in the area for a couple of years only, they have short contracts which are re-negotiated every 2 to 5 years (Interviewees I2; I7, June 2021). Most of the land cannot be sold to real estate developers because the ground must be cleaned, which would explain why some activities are still allowed in the neighborhood (Interviewee I5, June 2021). Some interviewees explain that the Municipality has plans to transform the area and which will make the ground more expensive and push small businesses away (Interviewees I2; I3; I5; I7, June 2021). The makers district would then be a “transitional state” to middle- to high-end urban development in M4H.

Generally, this issue is linked to the systemic discrepancy between real estate development on the one hand, as the Municipality wishes to develop housing and give space to developers, and on the other hand, the value of those creative entrepreneurs organized in collaborative networks (Interviewee I8, June 2021). Economic value seems to be important which could be due to the advanced economic strategy in contrast with the social strategy, still in progress (Interviewees I4; I8, June 2021).

*ii. Accountability and income & wealth*



Despite the organic development strategy for M4H, the Municipality and the Port are still responsible for social strategy in the area, which implies a degree of accountability towards inclusive outcomes (Interviewee I4, June 2021). Proofs of the actions of the network are available to the public and for free (see document review). Hence, it is not excluding anyone on the basis of their income and wealth. In fact, it does not seem to either exclusive nor inclusive because those documents are established at a meta level and not specifically triggering inclusion mechanisms for local populations. This could be verified through a survey issued to future residents in further research.

The study has shown that the existence of dialogue tools such as the platform Inside to give feedback to the Municipality and the Port has a limited impact on inclusion. Indeed, the platform is used only by entrepreneurs of the area (Interviewee I4, June 2021). However, the Municipality and the Port have an office dedicated to M4H and its development, in the neighborhood so easily accessible to residents (Interviewee I4, June 2021). Before the COVID-19 pandemic, this office was a dialogue tool with the local authority and gave the opportunity to individuals of all income and wealth levels to express their opinion about the development of the area.

### *iii. Representativeness and income & wealth*

Local stakeholders collaboratively organize tours in M4H, under the impulse of an association located in Oud-Mathenesse (Interviewee I5, June 2021). Those tours are held to bring new people in the area and allow them to engage in the neighborhood (Interviewee I2, June 2021). For instance, some individuals might volunteer at Voedseltuif after the tour. These kinds of social events are a versatile way to reinforce social connections between M4H and the surrounding neighborhoods. Even though those tours contribute to inclusion by raising awareness and creating a link between on the one hand local collaborators and residents; on the other hand, participants are mostly highly educated and white, which is not quite representative of the population living in the area (Interviewee I5, June 2021).

The entrepreneurs' association created in M4H seems to play a role in inclusion. This initiative displays efforts of inclusion of active business owners' of the area, who are trying to

align to think of complex issues occurring locally (Interviewee I4, June 2021). With this association, local stakeholders have a status and a stronger voice to discuss with the government and the Port (Interviewee I2, June 2021). This representation contributes to the inclusion of actors, as no matter what their income or wealth levels are, they are given a voice and can represent their interest to the Municipality and the Port. In the case of Voedselstuin, one of their goals is inclusion: they want all individuals, regardless of their socio-economic status, to enjoy freshly grown food (Interviewee I2, June 2021). Hence, through the entrepreneurs' associations, Voedelstuin can stand by their goals, participating to inclusion.

**b. Democratic performance and education & skills**

*i. Meta-governance and representativeness in relation to education & skills*

The ability of neighboring residents to enjoy the benefits of developments in M4H is the starting point of the social strategy of the local government (Stadshavens Rotterdam, 2015). This can be facilitated by promoting the cooperation between knowledge institutions, businesses and the local government (Stadshavens Rotterdam, 2011). Through this collaboration, the local government wants to reinforce a labor market geared towards the innovative economy, also in terms of education level of the workforce. This statement raises the question of education and skills. What is a suitable education level for innovation jobs? There are different types of innovative and creative industries in the area: craft & hand-manufacturers and high-tech companies. Those two categories require different types of education (Interviewee I8, June 2021). The current developments seem to aim towards the diffusion of the second type of innovative industries, hence a concern on the mismatch of education and skills of individuals living in the area, and ultimately the exclusion of those people.

The collaboration of local stakeholders facilitated by the local government, which is considered as a meta-governor, seems to contribute to the development of skills of local individuals. This is the case with partners such as Voedselstuin or Buurman. The government considers the garden as a serious partner, by granting it ground for free for five years and then with shorter-term renting contracts (Interviewee I2, June 2021). This agreement with Voedselstuin enables the organization to train residents to gardening and gain skills in this

matter. Additionally, the Give a Bike foundation, Joep van Lieshout atelier and PlusPunt work together to build a working environment for people who are distanced from the labour market in M4H (Interviewee I6, June 2021; Interviewee I9, July 2021; PlusPunt, n.d.). For instance, Interviewee 6 explains that citizens participating in PlusPunt workshops come to M4H once per week to be trained on how to fix bikes (June 2021). Thus, they can gain knowledge and develop skills in the neighborhood.

Moreover, the Municipality collaborates with the local network through programs to tackle the issue of employment and inclusion in M4H. The local government and the Port launched the program “Stadshavens Rotterdam Works<sup>3</sup>” from 2014 until 2017. Under the banner of the Social Strategy Stadshavens, a group of 200 job seekers from Feijenoord and Delfshaven participated in the project. It took the form of a network of subcontractors from construction and logistics under the coordination of the Municipality and the Port. They were responsible for matching individuals with available positions. A personal development plan was outlined for each participant: they would follow a training and put in contact with other candidates, companies and other social partners to promote collaboration (WestPractice, 2017). This program started because port businesses were not able to reach out to the surrounding community and vice versa. The collaboration between companies of the port and the Municipality can be seen as a form of meta-governance and reinforces the inclusion on the basis of education and skills, as they are supporting unemployed residents to be trained and find a job.

However, if the government tries to facilitate this connection between companies and local residents, they cannot force businesses to hire individuals. Their influence is limited (Interviewees I5; I10, June 2021). Businesses want their own take on who comes here. Meta-governors then do not have a word to say, even though they can facilitate (Interviewee I8, June 2021).

The collaboration of actors in a Quadruple Helix model offers opportunities to establish a link between M4H and the surrounding areas. It differs from the Triple Helix model because it includes the participation of citizens. In this model, Citizens and entrepreneurs can reach out to established companies, local government, research institutions and investors through this

---

<sup>3</sup> *Stadshavens Rotterdam Werkt Echt* in Dutch.

model to concretize their projects and innovate (Peek, 2020). As pointed out in the theoretical framework, structural inequalities greatly influence inclusion. The access to or participation in opportunities and activities offered by innovation districts is highly dependent on one's capabilities which are themselves influenced by socio-economic factors. This suggests that even though governance networks enable individuals to participate, they are not sufficient conditions to inclusive outcomes.

*ii. Accountability and education & skills*

The Monitoring document 2019 on employment published online by the Municipality and the Port stresses the influence of accountability in relation to inclusion on the basis of education and skills (Program Office M4H, 2020). This document informs local stakeholders on the status of the area development, with a focus on employment and the manufacturing industry. It serves an important purpose in terms of accountability as it reminds the reader the goals and ambitions set by the network in the Strategy established for the area (Program Office M4H, 2020). Such a tool indicates the will of the Municipality and the Port to monitor the achievement of their pre-established goals. It could contribute to inclusion as it would pinpoint where more efforts are necessary to enhance the access to employment opportunities to individuals from diverse professional backgrounds in M4H.

However, this finding must be nuanced. The ambition of the local government is to foster economic growth with a focus on the manufacturing industry (Program Office M4H, 2020; Rotterdam Makers District, 2018) but not explicitly to hire individuals without education and/or skills. Accountability can have an influence on inclusion when the latter is clearly stated as a priority. Moreover, as highlighted in the Monitoring document, this information is especially relevant to uncover multi-year trends (Program Office M4H, 2020). Hence, this tool has a great potential for inclusion but still must prove its effectiveness.

**c. Beyond democratic performance: necessary conditions for inclusive outcomes**

By asking if the democratic performance of governance networks is a sufficient condition for inclusive outcomes in innovation districts, the researcher investigates the sufficiency/necessary relationship between the two variables. During this study, three other conditions came forth as necessary to influence inclusion.

First, it seems like housing prices have an important influence on who is included or excluded on the basis of their income and wealth. The transformation of the area has an impact on real estate prices, as new buildings are built in M4H. Prices increase, which results in the arrival of new inhabitants in the neighborhood, then impacting the prices of recreational activities (Interviewees I2; I3; I5, June 2021). Consequently, control over housing prices is essential to maintain diversity and inclusion. It should be noted that quotas on housing types exist in Rotterdam (Interviewee I4, June 2021). Such quotas are suitable tools for inclusive outcomes.

Furthermore, to create a connection between M4H and the surrounding areas, the governance network can enable the use of new urban amenities (Interviewee I8, June 2021). Benefits of the new development of M4H for the surrounding neighborhoods can revolve in the creation of green areas and high-quality public space. The Dakpark is an accurate example of those benefits: local residents have access to this park, born from a community-based project and bordering Tussendijken and M4H. The park was developed in a collaboration of local stakeholders, involving the Municipality, an association of citizens, businesses located underneath... If the park does not generate any employment opportunity or skill development, it plays a role of a socio-spatial link between surrounding areas. Interviewee I8 (June 2021) suggests that urban amenities and especially public space can play a role in reinventing the relationship between M4H and surrounding neighborhoods.

Recreational activities seem to have an important role to play in inclusion in the area. Interviewee 9 explains that arts and culture can contribute to the connection between M4H and Bospolder-Tussendijken (July 2021). Also, the organization of events such as Cape Verdean music festival or art exhibitions at AVL Mundo make M4H more welcoming for all (non)-residents with different cultural and socio-economic backgrounds (Interviewee I7, June 2021; Interviewee I9, July 2021). It relates to the creation of social value and the idea that we must

look not only at financial benefits but also at the societal contribution (Interviewee I8, June 2021). One challenge remains measuring this societal impact and giving it as much value as financial benefits. This argument can also be connected to the network assets referred to in the innovation ecosystem diagram (figure 1): through recreational spaces, individuals meet and network. Interviewee I7 (June 2021) explained that he met a person at the Keilecafe and introduced him to workers of the Keilewerf, who gave him an internship later.

## **V. Wrap-up: findings in short**

All sub-questions have been answered. First, the study established the characteristics and conditions of governance networks in M4H, following the Quadruple Helix model involving research institutes, businesses, government and civil organizations. The study shows that cultural actors played an important role in the development and branding of the area. More than an urban transformation project, M4H serves a platform for creative entrepreneurs, multinationals and research institutes: local stakeholders are invited to collaborate organically, as the neighborhood develops. Diverse types of collaboration are witnessed in M4H, enhancing physical, networking and economic assets (figure 12).

Second, this study examined through which channels democratic performance of governance networks is linked to process-based inclusion. The study has revealed the existence of a strategy of meta-governance, in which the Port and the Municipality determine the network design, framing and participation. A shared vision for area development is determined by local stakeholders, initiated by governmental bodies. Accountability seem to be linked to process-based inclusion through the availability of information about activities of the network, tools of dialogue both online and offline. Interactions and negotiations in the context of democratic performance of governance networks are certainly essential for inclusive process. Lastly, on the one hand, representativeness turned out to be impacted by the reduced number of inhabitants. On the other hand, actors are organized in sub-networks: landowners associations, thematic networks around professional fields and associations of entrepreneurs to have a status in the dialogue with the government.

Third, concerns regarding inclusion in M4H were tackled. This study found that surrounding areas concentrate social challenges such as high unemployment and high pressure

on social housing, and the need to include residents in the development of M4H. Recreational and art venues seem to play an important role in inclusion, as well as social organizations with a focus on connecting with residents of surrounding areas. Overall, the increase of rent prices due to the development of the area came out as problematic for already-settled businesses as well as for potential newcomers. The study showed a mismatch of skills between historical workers from surrounding areas and innovative industries meant to develop in the area; However, there is still a strong focus on manufacturing industries, which softens this divergence. The Municipality also supports local companies through subsidies. In addition, the Municipality and local companies make efforts to train a local workforce, thanks to internships or simplified hiring processes.

Lastly, there is evidence of the collaboration of actors in an inclusive process, but it does not seem to be a sufficient condition for inclusive outcomes for several reasons. First, the rise of land prices due to the redevelopment of the area leads to the exclusion of population groups and businesses. The common will to reinforce a knowledge-based labour market in the area leads to the exclusion of less educated and skilled workers. In M4H, this issue is taken into consideration, as local stakeholders self-organize to give trainings. The Municipality also participates by developing employment programs. However, the influence of the meta-governor is limited. Second, accountability appears to have a limited impact on inclusion, but transparency and the existence of dialogue tools could be used to expose failing inclusion strategies for instance. Third, representativeness is important because local actors can represent their interest and be active in the area. However, as expected, the pitfall of representativeness is that those who participate are usual suspects. Overall, the main obstacle of democratic performance of governance networks to be a sufficient condition for inclusive outcomes seems to be the presence of structural inequalities. As the sufficiency/necessity relationship between two variables was questioned in the last research question, this study showed other necessary conditions for inclusive outcomes such as control over housing prices, enabling the use of new urban amenities to guarantee a socio-spatial link with surrounding areas and the presence of art and culture facilities.

## Chapter 5: Conclusion and recommendations

This chapter answers the main research question of this study in a first section. Then, the contribution of this research to the field and current debates is presented. This is followed by a discussion and recommendations for practitioners.

### I. Research question

While cities concentrate complex issues such as poverty, climate change and segregation, urban governance policies are crucial to protect the well-being and flourishing of its inhabitants. This study attempts to highlight the influence of governance arrangements on inclusion. Specifically, this study aims at understanding how the three dimensions of democratic performance of governance networks influences inclusion in M4H. The sub-questions have been answered in the findings chapter. This chapter answers the main research question which is: “*How does the democratic performance of governance networks influence inclusive outcomes in Merwe-Vierhavens (M4H)?*”.

First, the research has shown that the network is democratically performant but the biggest player in the game is still the local government. The spatial framework *Ontwikkel mee in M4H* presents open urban development and governance approaches for the area. This can be associated to meta-governance but operates in the shadow of hierarchy (Nederhand et al., 2016). If the absence of government control characterizes governance networks, the government still influences processes. Local stakeholders are encouraged to take initiatives and shape the area but within a framework created by the Municipality and the Port. In relation with the organic development presented in official document, the dichotomy between organic and planned is rather unclear. The term organic implies that human and social capital are important in the development of the area. However, planning is crucial in decision-making: it enables steering towards collective goals a single actor could not achieve on its own. This is especially important for inclusion, as weaker players would then be represented and supported.



Overall, planned and organic elements should interact and not be considered in isolation from one another.

Moreover, the collaboration of the Municipality and local companies in educational programs seem to be valuable to enhance inclusion on the basis of education and skills. While companies' goals are to generate profit, the public sector handles political and social tasks. If inclusion is not necessarily a goal for local businesses, they have something to gain from hiring employees. Government can act as a "connector" as in the "Stadshavens Rotterdam Works" program, in which they find and train suitable candidates to work in manufacturing and port businesses. The intervention of the government, as a meta-governor, contributes to inclusion in the area as it provides a trained labour pool to local companies. This study has shown that even though actors of M4H have divergent goals, they can gain from this collaboration: they have common interests. As the coordination of goals and interests do not occur naturally in governance networks, it is necessary to steer interactions to reach the desired outcome – inclusion – (Klijn & Koppenjan, 2016). Nonetheless, the influence of the government is limited as they cannot coordinate employment through hierarchical processes. This study highlighted that to deal with the complex and multi-dimensional issue that is inclusion, actors must collaborate in a network as standard operating procedures are not sufficient (Koppenjan & Klijn, 2004). The meta-governor role of the local government is especially important because it is bounded by the obligation to promote social and democratic tasks.

In addition, there is an important role for active communities and networking in inclusion in M4H. Within the multiple multi-company buildings - Keilewerf, Soundport, Science Tower - personal contact is created and mutual support and informal exchange facilitated. Those strongly influence inclusion, especially on education and skills. With the innovation ecosystem diagram in mind, networking assets are central in the relation between governance networks and inclusion in this research. Nevertheless, even though this study showed the strong links between some creative entrepreneurs in the area, it was underlined that they might not be aware of the contribution they might have on the surrounding neighborhoods. The economic value of collaboration is preferred over its societal value. This challenge is due to the nature of innovation districts, focusing mainly on financial and economic benefits. Social benefits and inclusion are increasingly considered in literature on innovation districts, in the work of the *Global Institute on Innovation Districts*. Moreover, diversity appears to be essential to more inclusion, through recreational activities but also different types of manufacturing

companies, bringing in individuals with different skills, educational level and socio-economic status. By striving for diversity in their activities, stakeholders of the area can be more inclusive. To ensure inclusion, the right balance must be found between technology-oriented businesses and ICT firms and manufacturing activities.

Overall, this research has shown that the democratic performance of governance networks partly influences inclusion in the area through the collaboration of the local government and companies to generate employment, create societal benefits thanks to collaboration with companies with social goals and giving space to local stakeholders to shape the neighborhood. However, the democratic performance of those networks seems to be a necessary condition but not a sufficient one, as highlighted in the final section of the fourth chapter. There are other paramount conditions in this regard, such as housing prices, structural inequalities and socio-spatial connections with surrounding neighborhoods. This argument is strongly related to the debate on state intervention and the economic development of inner cities (Blakely & Small, 1996; Dymski, 1996; Fainstein & Gray, 1996; Porter, 1995).

The ongoing phenomenon of urban transformation results in the rise of housing prices. Consequently, there is an uncertainty on whether businesses can remain in the next ten years. According to the respondents, the Makers paradigm seems to be a “transitional” step more than a long-term vision. The neighborhood is not yet inhabited but it is occupied by many companies. The phenomenon of gentrification impacts companies, which might be obliged to leave the neighborhood, because of the increase of prices.

Those conclusions must be considered with caution. The democratic performance of governance networks influences inclusion in M4H but other conditions are necessary to achieve inclusion. Inclusive outcomes can emerge from a mix of inclusive programs and decision-making processes, organic and informal collaborative structures and improvement of public space and networking assets.

## **II. Contribution to the field and future research**

This research contributes to the field by investigating the issue of inclusion at the intersection of urban economics and public administration. The current debate emphasizes economic benefits of innovation districts and collaboration rather than social value, which seems suitable to tackle inclusion. The results confirm that inclusion in innovation districts is a complex issue, involving more than one necessary condition. Governance networks is one of them but it seems to go beyond social inclusion (see figure 1). Economic and physical aspects should also be considered.

In future research, it might be interesting to formulate a framework to further understand inclusion in the context of innovation districts. This could encompass other dimensions of inclusion such as gender-based inclusion. Additionally, it could be interesting to look at the way social value can be measured in relation with inclusion instead of the consideration of economic benefits. This research would bring a new perspective to growing analyses on the social aspect of innovation districts. Finally, another question that has been briefly discussed in this research is the influence of SI on inclusion in innovation districts. It would be interesting to explore whether SI can contribute to socio-economic justice by challenging, altering or replacing dominant socio-institutional framework in innovation districts.

### **III. Discussion**

This section clarifies the limitations encountered during this study. Those characteristics should be considered because they influenced the interpretation of the findings of this research.

This research has been greatly impacted by COVID-19 mitigations measures aiming at reducing social interactions. First, it turned out difficult to arrange interviews face-to-face, making it more difficult to interpret answers because body language and emotions could not easily be captured, but also due to internet issues and more. Second, the relaxation of sanitary measures in May 2021 resulted in an intense workload for local companies and especially recreational places, which made it more difficult to schedule interviews. It strongly impacted this research because data collection took place in May. Owners of cultural organizations have been interviewed in this study but the author would have wanted to give them a greater share

in the gathered data. Indeed, the social effect of recreational areas in cities appears to have an important role in inclusion.

Moreover, the research design chosen caused limitations. It would have been interesting to give more space to surrounding neighborhoods in this study. There are not many residents in M4H, which made it more difficult to capture inclusion, apart from the inclusion of workers in the area. In addition, on top of interviews, this study could have benefited from the use of a survey, which would help to collect information from a broader target group. Citizens of surrounding areas would have been a relevant group of actors to further understand the influence of governance arrangements on inclusion in innovation districts. However, this method was pragmatically discarded due to a time constraint. In addition, out of the three variables studied for democratic performance of governance networks, it seems like meta-governance was dominant over the others in the findings of this research. For future research, it would be valuable to focus solely on meta-governance, as it would give more insights into the functioning of self-governing networks and inclusion. The four meta-governance tools of Sørensen (2006) would be suitable variables to investigate.

Lastly, this research has been impacted by the inevitable researcher bias. This bias is characterized by the tendency to encourage one outcome over another based on the researcher's perception. In research, biases are not dichotomous but rather considered in the degree to which a bias is present. Confirmation bias has been the most important one in this study: the researcher formed hypotheses and used respondents' input to confirm those. This also means that evidence which was not in line with those hypotheses could be ignored. Researcher-confirmation bias has been tackled by reevaluating perceptions of respondents. Also, potential hypotheses have been generated once all data had been collected and the information set was complete.

#### **IV. Recommendations**

What can be learned from this research when discussing inclusion in innovation districts in relation to governance? Inclusion is a complex and multi-dimensional issue and the only democratic performance of its governance networks is not a sufficient condition to achieve it. This section presents recommendations for practitioners based on the results of this research.

The tension between economic growth/innovation and social goals can be lessened by involving residents of surrounding areas, tackling structural inequalities and introducing inclusive placemaking in the area.

Recommendation 1: Involve committees/residents from Delfshaven and Oud Mathenesse to the conversation on M4H, to soften the contrast between the neighborhoods. This recommendation is specifically essential for housing plans. In addition, boundary spanners are important: there is a need for initiatives bridging the different helixes with socially inclusive aims. For instance, initiatives like the association Wijkcollectie behind the Verhalen tour are making connections and look for ways to make the city better benefit from the manufacturing industry for a more inclusive and circular economy. The M4H project office should give a greater role to citizens of neighboring areas in the development of M4H and not only to local companies.

Recommendation 2: Tackle structural inequalities through inclusion and SI strategies. If this study showed that the democratic performance of governance networks influences inclusion in innovation districts, pitfalls of this relation stem from structural inequalities in society. For example, the collaboration of actors in a governance network allows the creation of employment programs, but some individuals could not feel welcome in those programs or have language difficulties to follow trainings. The author recommends the local government to tackle structural inequalities by identifying the main difficulties in the area and using tailor-made solutions.

Recommendation 3: Make use of inclusive placemaking in the area, in collaboration with actors of the area (Joep van Lieshout, Weelde, Keilecafe, Keilewerf...). Previous research highlighted the important role of placemaking in fostering a fertile ground for innovation, because this is a way for researchers, entrepreneurs and residents to meet and network. However, this study on M4H emphasizes the importance of making placemaking inclusive. The Municipality could take advantage of the physical transformation of the neighborhood and the presence of associations such as Voedseltuin to investigate and set up public space all residents could enjoy. The Dakpark is a proper example of community-initiated public space which is connecting neighborhoods.

## References

- Anttiroiko, A. V., & de Jong, M. (2020). *The Inclusive City* (Palgrave Pivot, Cham).
- Atkinson R. (2004) The evidence on the impact of gentrification: new lessons for the urban renaissance?, *European Journal of Housing Policy*, 4:1, 107-131, DOI: 10.1080/1461671042000215479
- Avelino, F., Wittmayer, J., Pel, B., Weaver, P., Dumitru, A., Haxeltine, A., Kemp, R., Jørgensen, M., Bauler, T., Ruijsink, S., & O'Riordan, T.. (2019). Transformative social innovation and (dis)empowerment. *Technological Forecasting and Social Change*. 145. 195-206. 10.1016/j.techfore.2017.05.002.
- Bekkers, V. and Edwards, A. (2007). Legitimacy and Democracy: A Conceptual Framework for Assessing Governance Practices. In: V. Bekkers, G. Dijkstra, A. Edwards and M. Fenger (eds). *Governance and the Democratic Deficit*. Ashgate: Aldershot, pp. 35-60.
- Bingham, L. B., Nabatchi, T., & O'Leary, R. (2005). The new governance: Practices and processes for stakeholder and citizen participation in the work of government. *Public Administration Review*, 65(5), 547–558.
- Blakely, E, & Small, L, (1996): “Michael Porter: new gilder of ghetto’s”. *The Review of Black Political Economy*, vol. 24, issue 2/3, pp. 161-183
- Bogason, P., & Musso, J. A. (2006). The Democratic Prospects of Network Governance. *The American Review of Public Administration*, 36(1), 3–18. <https://doi.org/10.1177/0275074005282581>
- Borkowska, K., and Osborne, M. (2018) Locating the fourth helix: Rethinking the role of civil society in developing smart learning cities. *Int Rev Educ* 64, 355–372. <https://doi.org/10.1007/s11159-018-9723-0>

Boterman, W., Manting, D. & Musterd S. (2017). Understanding the social geographies of urban regions through the socio-economic and cultural dimension of class. *Population Space and Place*. 24. 10.1002/psp.2130.

Bryman, A. (2016). *Social research methods*. Oxford university press.

Carayannis, E. G., & Campbell, D. F. (2009). 'Mode 3' and 'Quadruple Helix': toward a 21st century fractal innovation ecosystem. *International Journal of Technology Management*, 46(3/4), 201. <https://doi.org/10.1504/ijtm.2009.023374>

Carrillo, F.J. Knowledge-based development as a new economic culture. *J. open innov.* 1, 15 (2015). <https://doi.org/10.1186/s40852-015-0017-5>

Cosgrave, E., Arbuthnot, K. and Tryfonas, T. 2013. Living Labs, Innovation Districts and Information Marketplaces: A Systems Approach for Smart Cities. *Procedia Computer Science*, 16 pp. 668-677. Available at: <http://www.sciencedirect.com/science/article/pii/S1877050913000719>

Del Bono, D. & Franco, M., (2020) M4H – Merwevierhaven, Rotterdam: the 21<sup>st</sup> century Port-City interface (Master thesis, Politecnico di Torino, Italy). Retrieved from <https://webthesis.biblio.polito.it/15012/> on 26-07-2021.

Duranton, G., & Puga, D. (2004). Chapter 48 Micro-foundations of urban agglomeration economies. *Handbook of Regional and Urban Economics*. 2063-2117.

Esmailpoorarabi, N., Yigitcanlar, T., Kamruzzaman, M., & Guaralda, M. (2020). How does the public engage with innovation districts? societal impact assessment of australian innovation districts. *Sustainable Cities and Society*, 52. <https://doi.org/10.1016/j.scs.2019.101813>

European Agency for Special Needs and Inclusive Education (EASNIE), 2018. Evidence of the Link Between Inclusive Education and Social Inclusion: A Review of the Literature. (S. Symeonidou, ed.). Odense, Denmark

European 15 (2019) Activating Urban Commons in the Productive City. Retrieved from [https://www.european-europe.eu/media/default/0001/17/e15\\_nl\\_rot\\_vierhavensblok\\_t\\_en\\_pdf.pdf](https://www.european-europe.eu/media/default/0001/17/e15_nl_rot_vierhavensblok_t_en_pdf.pdf) on 26-07-2021.

Deloitte (2015) Position paper Rotterdam Innovation District. Retrieved from [https://issuu.com/stadshavensrotterdam/docs/15659\\_opmaak\\_position\\_paper\\_hr\\_spr](https://issuu.com/stadshavensrotterdam/docs/15659_opmaak_position_paper_hr_spr) on 31-01-2021

Dikeç, M. (2001). Justice and the spatial imagination. *Environment and Planning A: Economy and Space*, 33(10), 1785–1805. <https://doi.org/10.1068/a3467>

Dymski, G. (1996): “Business strategy and access to capital in inner city revitalization”. *The Review of Black Political Economy*, vol. 24, issue 2/3, pp. 51-65

Fainstein, S, & Gray, M, (1996): “Economic development strategies for the inner city: the need for governmental intervention”. *The Review of Black Political Economy*, vol. 24, issue 2/3, pp. 29-38.

Fainstein S. (2014) The just city, *International Journal of Urban Sciences*, 18:1, 1-18, DOI: 10.1080/12265934.2013.834643

Florida, R. (2014). The Creative Class and Economic Development. *Economic Development Quarterly*, 28(3), 196–205. <https://doi.org/10.1177/0891242414541693>

Florida, R. (2017) *The New Urban Crisis: gentrification, housing bubbles, growing inequality. And what we can do about it.* Oneworld Publications.

Gemeente Rotterdam. (2020a). *Wijkprofiel Rotterdam 2020*. Retrieved from <https://wijkprofiel.rotterdam.nl/nl/2020/rotterdam> on 06-06-2021

Glaeser, E. (2011) *Triumph of the City*. London: Pan Macmillan.

Kaminski, J. (2011). Diffusion of Innovation Theory *Canadian Journal of Nursing Informatics*, 6(2). Theory in Nursing Informatics Column. <https://cjni.net/journal/?p=1444>

Kapucu, N. (2014). Complexity, Governance and Networks: Perspectives from Public Administration. *Complexity, Governance & Networks* (2014) 29–38



Katz B. & Wagner J. (2014) The rise of innovation districts: A new geography of innovation in America. Retrieved from <https://www.brookings.edu/wp-content/uploads/2016/07/InnovationDistricts1.pdf>

KeileCollectief (no date) Website. Retrieved from <https://www.keilecollectief.nl/> on 24-06-2021

Kickert, W. J. M., Klijn E. H., & Koppenjan J. F. M. (1997). *Managing Complex Networks: Strategies for the Public Sector* (London: Sage).

Klijn, E.H., Steijn, B. & Edelenbos, J., (2010). The Impact Of Network Management On Outcomes In Governance Networks. *Public Administration*. 88. 1063 - 1082. 10.1111/j.1467-9299.2010.01826.x.

Klijn, E.H. & Koppenjan, J.F.M. (2016). *Governance Networks in the Public Sector*. London, England: Routledge.

Koppenjan, J. F. M., & Klijn, E. H., (2004). *Managing Incertainties in Networks: A Network Approach to Problem Solving and Decision Making* (London: Routledge).

Lawrence, S., Hogan, M., & Brown, E. (2019). *Planning for an Innovation District: Questions for Practitioners to Consider*. RTI Press Publication No. OP-0059-1902. Research Triangle Park, NC: RTI Press. <https://doi.org/10.3768/rtipress.2018.op.0059.1902>

Lawton, P., Murphy, E. & Redmond, D. (2014). Neoliberalising the City ‘Creative-Class’ Style. 10.1057/9781137377050\_12.

Lees, L. (2008). Gentrification and social mixing: towards an inclusive urban renaissance?. *Urban studies*,45 (12), 2449-2470.  
<https://doiorg.eur.idm.oclc.org/10.1177/0042098008097099>

Lindberg, S. I. (2013). Mapping accountability: core concept and subtypes. *International Review of Administrative Sciences*, 79(2), 202–226.  
<https://doi.org/10.1177/0020852313477761>

Lund, D., (2018). *Co-creation in Urban Governance: From Inclusion to Innovation*.

Meijer, M. & Peek, G.-J., 2017. "[Networking for innovation, The role of iconic occupiers in the development of the Rotterdam Innovation District](#)," *ERES* eres2017\_104, European Real Estate Society (ERES).

Menocal, A.. (2020). Why does inclusion matter? Assessing the links between inclusive processes and inclusive outcomes. ECD DEVELOPMENT CO-OPERATION WORKING PAPER 71.

Molin, M.D., & Masella, C. (2016) From Fragmentation to Comprehensiveness in Network Governance. *Public Organiz Rev* **16**, 493–508 (2016). <https://doi.org/10.1007/s11115-015-0320-4>

Morisson A. & Bevilacqua C. (2019) Balancing gentrification in the knowledge economy: the case of Chattanooga's innovation district, *Urban Research & Practice*, 12:4, 472-492, DOI: [10.1080/17535069.2018.1472799](https://doi.org/10.1080/17535069.2018.1472799)

M4H Rotterdam (no date). 21 september: lancering community platform Inside. Retrieved on 21.06.2021 from <https://m4hrotterdam.nl/inside/>

Peck, J. (2005), Struggling with the Creative Class. *International Journal of Urban and Regional Research*, 29: 740-770. <https://doi.org/10.1111/j.1468-2427.2005.00620.x>

Peek, G.-J. & Stam, K. (2016). Building the Innovation Economy City-Level Strategies for Planning, Placemaking, and Promotion. Case study: Rotterdam. 10.13140/RG.2.2.14632.98562.

Pel, B., & Bauler, T., (2015). The Institutionalization of Social Innovation: between Transformation and Capture.

Pennink, C.B., (2017). [The Trust Cycle : The process of trust building, and the influence of trust on risk and outcomes in Public-Private Partnerships](#). *Opens external* EUR (427 pag.) Prom./coprom.: prof.dr. E.H. Klijn & J.F.M. Koppejan.

PlusPunt (no date) Aanpak: aan de slag. Retrieved from <https://www.pluspuntrotterdam.info/> on 16-06-2021

PlusPunt (no date) Eerlijk werk in M4H. Retrieved from <https://www.pluspuntrotterdam.info/eerlijk-werk-in-m4h/> on 16-06-2021

Porter, M. (1995), “The competitive advantage of the inner city”. Harvard Business Review, may-june, pp.55-71. Download at: [http://www.uc.edu/cdc/urban\\_database/food\\_resources/competitive-advantage-of-inner-city.pdf](http://www.uc.edu/cdc/urban_database/food_resources/competitive-advantage-of-inner-city.pdf)

Program Office M4H (2020) M4H in cijfers: Monitor 2019. Retrieved from [https://m4hrotterdam.nl/wp-content/uploads/2020/02/200204\\_M4H\\_monitor\\_2019\\_def\\_digitaal.pdf](https://m4hrotterdam.nl/wp-content/uploads/2020/02/200204_M4H_monitor_2019_def_digitaal.pdf) on 26-07-2021.

Purcell, M. (2014) Possible Worlds: Henri Lefebvre and the Right to the City, Journal of Urban Affairs, 36:1, 141-154, DOI: [10.1111/juaf.12034](https://doi.org/10.1111/juaf.12034)

Roiseland, A. and Vabo, S.I. (2016). Interactive –or counteractive –governance? Lessons learned about citizen participation and political leadership. In: J. Edelenbos and I. van Meerkerk (eds). Critical Reflections on Interactive Governance, pp. 120-144.

Schienstock, G. (2001). Social Exclusion in the Learning Economy. 10.1093/0199258171.003.0010.

Sørensen, E. & Torfing, J.. (2005). The Democratic Anchorage of Governance Networks. Scandinavian Political Studies. 28. 195 - 218. 10.1111/j.1467-9477.2005.00129.x.

Sørensen, E. (2006). Metagovernance: The Changing Role of Politicians in Processes of Democratic Governance. *The American Review of Public Administration*, 36(1), 98–114. <https://doi.org/10.1177/0275074005282584>

Stadshavens Rotterdam (2011) Structuurvisie Stadshavens. Retrieved from <https://www.commissiemer.nl/docs/mer/p22/p2251/2251-088structuurvisie.pdf> on 26-07-2021.

Stadshavens Rotterdam (2014) Ontwikkel mee in M4H. Retrieved from [https://issuu.com/stadshavensrotterdam/docs/ows\\_m4h\\_tbv\\_issuu\\_18\\_11\\_14](https://issuu.com/stadshavensrotterdam/docs/ows_m4h_tbv_issuu_18_11_14) on 26-07-2021.

Stadshavens Rotterdam (2015) Stadshavens Rotterdam: the Innovation District. Retrieved from [https://issuu.com/stadshavensrotterdam/docs/15505\\_glossy\\_stadshavens\\_eng\\_hr\\_spr\\_on\\_26-07-2021](https://issuu.com/stadshavensrotterdam/docs/15505_glossy_stadshavens_eng_hr_spr_on_26-07-2021).

Stadshavens Rotterdam (2018) Vision: Rotterdam Makers District. Retrieved from [https://m4hrotterdam.nl/wp-content/uploads/2019/11/LOWRES\\_DM\\_makersdictriect\\_brochure\\_Visie\\_ENG.pdf](https://m4hrotterdam.nl/wp-content/uploads/2019/11/LOWRES_DM_makersdictriect_brochure_Visie_ENG.pdf) on 26-07-2021

Stadshavens Rotterdam (2019) Spatial framework Merwe-Vierhavens Rotterdam: Future in the Making. Retrieved from [https://m4hrotterdam.nl/wp-content/uploads/2019/11/M4H\\_brochure\\_spreadsdigitaal\\_Engels.pdf](https://m4hrotterdam.nl/wp-content/uploads/2019/11/M4H_brochure_spreadsdigitaal_Engels.pdf) on 26-07-2021.

Stam K. (2016) Rotterdam Innovation District: de optimale relatie tussen M4H en RDM. Retrieved from [https://hbo-kennisbank.nl/details/sharekit\\_hr:oai:surfsharekit.nl:6c6dec7c-e863-48a2-ad5e-7b1f699236e5](https://hbo-kennisbank.nl/details/sharekit_hr:oai:surfsharekit.nl:6c6dec7c-e863-48a2-ad5e-7b1f699236e5) on 26-07-2021.

Tach, L. (2014). Diversity, Inequality, and Microsegregation: Dynamics of Inclusion and Exclusion in a Racially and Economically Diverse Community. *Cityscape*, 16(3), 13-46. Retrieved January 31, 2021, from <http://www.jstor.org/stable/26326904>

Ter Avest D. (2021) Toegang tot M4H: Naar een Sociaal Raamwerk voor een nieuwe stadswijk. Hogeschool Rotterdam, Kenniscentrum Duurzame HavenStad. Retrieved from <https://www.hogeschoolrotterdam.nl/contentassets/758225738dae4c05aa3b3b0b67bd2560/da-vid-ter-avest-2021-toegang-tot-m4h.-naar-een-sociaal-raamwerk-voor-een-nieuwe-stadswijk-1.pdf> on 06-06-2021.

Torfining, J., Peters, B.G., Pierre, J. and Sorensen, E. (2012). Assessing and improving the democratic quality of interactive governance. In: J. Torfining, J., B.G. Peters, J. Pierre, and E. Sorensen (eds.). *Interactive Governance: Advancing the Paradigm*. Oxford: Oxford University Press, pp. 186-207.

United Nations (2016) Leaving no one behind: the imperative of inclusive development. Report on the World Social Situation 2016. Chapter 1. Retrieved from <https://www.un.org/esa/socdev/rwss/2016/full-report.pdf> on 31-01-2021.

Van der Zandt, B., (2018) Attraction and retention of users in Urban Innovation Districts: An advice for the Merwe-Vierhavens based on the lessons learned at Strijp-S (Master's thesis, TU Delft, the Netherlands). Retrieved from <http://resolver.tudelft.nl/uuid:245b7319-038a-4ef5-9eba-954da06fd620> on 26-07-2021.

Van Meerkerk, I., Edelenbos, J., & Klijn, E. H. (2015). Connective management and governance network performance: the mediating role of throughput legitimacy. Findings from survey research on complex water projects in the Netherlands. *Environment and Planning C: government and Policy*, 33(4), 746-764.

Verschuren, P. and H. Doorewaard (2010). *Designing a Research Project*. Eleven International Publishing. Excellent book, especially on problem statement and research design.

Voedseltuin Rotterdam (2019). Voedseltuin Rotterdam.

Voorberg, W. H., & Bekkers, V. J. J. M., & L. G. Tummers, L. G., (2014): A Systematic Review of Co-Creation and Co-Production: Embarking on the social innovation journey, *Public Management Review*, DOI: 10.1080/14719037.2014.930505

Wagner, J., Andes, S., Davies, S., Storrington, N. and Vey J.S.. (2017) 12 principles guiding innovation districts. Brookings Institute. Retrieved from <https://www.brookings.edu/blog/metropolitan-revolution/2017/09/08/12-principles-guiding-innovation-districts-2/> on 07-02-2021.

Wagner, J. (2019, July 19). *New insights on how innovation districts are challenging economic and social divides*. Brookings. Retrieved from <https://www.brookings.edu/blog/the-avenue/2019/07/19/new-insights-on-how-innovation-districts-are-challenging-economic-and-social-divides/> on 26-07-2021.

WestPractice (2017, March 13). *Stadshavens Rotterdam Werkt Echt!* WestPractice. Retrieved from <https://westpractice.squarespace.com/blog/2017/10/24/stadshavens-rotterdam-werkt-echt> on 26-07-2021.

Yin, R. K. (1994). *Case Study Research: Design and Methods*. NewburyPark, CA: Sage.

## Appendices

### Appendix 1: Code tree

This codetree shows how the codes used to analyse the data collected in this study.

<b>1. Neighborhood information</b>
1.1 History of M4H
1.2 Relevant actors
1.3 Strategy of the Municipality
1.4 Surrounding areas
<b>2. Democratic performance of governance networks</b>
2.1 Meta-governance
2.2 Accountability
2.3 Representativeness
2.4 Network
<b>3. Inclusion</b>
3.1 Income and wealth
3.2 Education and skills

### Appendix 2: Informed consent form

**Information sheet for thesis research Governance arrangements and inclusiveness in MerweVierhavens.**

Under the supervision of Dr. Alberto Gianoli, Clara Glachant is examining the influence of network governance arrangements on inclusiveness in Merwe-Vierhavens. This research can be realized with the help of your participation. Clara is curious about your opinion on governance networks and inclusiveness. There are no right or wrong answers.

<b>Why this research?</b>	The purpose of this research is to understand the influence of governance networks on inclusiveness in Merwe-Vierhavens. This can give insights to policy-makers and other stakeholders on how to design governance in order to make an area more inclusive. This research is being conducted from the Erasmus University Rotterdam.
<b>Process</b>	You will participate in a study in which we will gather information through: <ul style="list-style-type: none"> <li>- Interviewing you and recording your answers via audio or video recording. A transcript of the interview will be produced</li> <li>- The transcript of the interview will be analyzed and used for the purpose of this research.</li> </ul>
<b>Confidentiality</b>	We will do everything we can to protect your privacy as well as possible. In addition to the student, only the thesis supervisor and second reader will have access to all information you provide. <p>No confidential information or personal data from or about you will be released so that someone will be able to identify you.</p> <p>In the research you are referred to by a made-up name (pseudonym), unless you have given permission to use your name for quotes.</p>
<b>Voluntary participation</b>	You do not have to answer any questions that you do not want to answer. If you do not want to say something in a group, but would like to in private, you can e-mail or call Clara Glachant afterwards. Your participation is voluntary and you can stop whenever you want.

	<p>If, during the research, you decide to terminate your participation, the information that you have already provided will be used until the moment that consent is withdrawn.</p> <p>Do you want to stop participating in this research? Then contact Clara Glachant via clara.glachant@gmail.com or +33642063129.</p>
<b>Data storage</b>	<p>Anonymous data or pseudonyms will be used in the thesis. The audio recordings, forms and/or other documents that are created or collected in the context of this thesis will be stored securely.</p> <p>The research data is stored for a period of ten years. Data will be deleted or made anonymous so that they can no longer be traced to a person at the end of this period, at the latest.</p>
<b>Submitting a question or complaint</b>	<p>If you have specific questions about how your personal data is handled, you can direct your question to Clara Glachant via clara.glachant@gmail.com or +33642063129. You can also submit a complaint to the Dutch Data Protection Authority if you suspect that your data has been processed incorrectly.</p>

**By signing this consent form I acknowledge the following:**

- |  | YES                      | NO                       |
|--|--------------------------|--------------------------|
| <p>1 I am sufficiently informed about the research. I have read the information sheet and have had the opportunity to ask questions. These questions have been answered sufficiently and I have had sufficient time to decide on my participation.</p> | <input type="checkbox"/> | <input type="checkbox"/> |
| <p>2 I volunteer to participate in this study. It is clear to me that I can terminate participation in the study at any time, without providing a reason. I don't have to answer a question if I do not want to.</p>                                   | <input type="checkbox"/> | <input type="checkbox"/> |

In order to participate in the study, it is also necessary that you give



specific permission for various elements. Note that if you are younger than eighteen, a parent/guardian must also sign this form.

- 3 I give permission to process the data collected about me during this research as explained in this information sheet.
- 4 I give permission for audio and/or video recordings to be made during discussions and a transcript of my answers to be produced.
- 5 I give permission for use my answers as quotes in the student's thesis.

Name participant

Name student

Clara Glachant

Signature

Signature:

*With digital signatures, your name and date are sufficient*

*With digital signatures, your name and date are sufficient*

Date:

Date:

## **Appendix 3: Interview guide**

### *Introduction*

My name is Clara Glachant and I am currently following the MSc Urban Governance at Erasmus University. In this program, I learn about urban development and related societal challenges such as sustainability, poverty, health and social justice.

My research consists in a study on innovation districts, which are neighborhoods where public and private actors work to attract businesses, research institutes and civil society to work towards technology-based services and innovation in general. The primary goal of those areas is to generate economic growth, attract creative individuals and participate to urban transformation (often of former industrial areas). However, in theory, these kinds of industries attract highly skilled individuals and could lead to the clustering of certain social groups. The phenomenon of urban transformation and the establishment of certain amenities in the area could result in the rise of housing prices/living expenses for certain inhabitants, which would lead to gentrification. Moreover, the requirements to work in creative businesses of innovation districts can cause the exclusion of individuals with limited skills, network and academic experience.

The governance arrangements associated with those neighborhoods is generally a networked governance, which means that actors with different interests collaborate to make the neighborhood thrive, mostly without a strict hierarchy. This collaboration could be considered as inclusive because it involves many actors.

In my Master thesis, I want to see if this collaboration of actors of different sectors (government, business, research institutes and groups of citizens) influences the inclusiveness in the area, meaning that all individuals can live, work and study in M4H, no matter their levels of income and education & skills.

The case of M4H is especially interesting for two reasons. First, it is located at the border of Spangen and Tussendijken, two lower-income areas of the city, with very diverse social groups. For this reason, the link between M4H and those areas must be strong, to avoid the exclusion of populations. Second, not only M4H gives space to public actors, private actors, research

institutes and civil society to co-create, but the typical port identity of the area also has an impact of its governance, as the urban development is handled by the Port and the Municipality.

***Questions/themes of the interview***

*Note: some questions could be skipped if not relevant.*

- Background information:

Introduction of the participant and the organization

Role of the organization in M4H

Description of the collaboration between actors in M4H

- Governance arrangements in M4H

- On the network:

- What are the guidelines on the governance of M4H?
- To what extent was a shared vision defined?
- What is the extent of the participation of politicians in the network?

- On accountability:

- Do you think that the information on the governance model of M4H are easily accessible?
- Is there a (sufficient) dialogue with inhabitants/workers of the area or surrounding areas?

- On representativeness:

- Does M4H involve four sectors in a quadruple helix model?
- How would you say that the 4 sectors are represented? Who do you think has the biggest role to play?

- On inclusion

- Income & wealth

- What is the state of inclusion in the area?
- How are the connections with surrounding neighborhoods?

- Education & skills
  - What is the level of education of individuals working/living in the area?
  - Are there some programs to train individuals to work in M4H/enhance their skills?
  
- Relation between governance arrangement and inclusiveness

*Note: the definition of inclusiveness I used is the following: opportunity to live, work, study, have access to facilities in the area, no matter the individuals' income, nor their level of education and skills.*

- What would you say is the impact of the collaboration of actors in M4H?
- What kind of actions are carried out to improve inclusiveness in M4H?
- Does it provide opportunities for inhabitants of the area? If so, how?
  - Did it encourage individuals/workers of different levels of income and wealth to engage in the neighborhood?
  - Did you notice that the area offered jobs to individuals from all educational levels?
  - How would you describe the educational/professional background of inhabitants/workers in M4H? Would you say it is diverse? Different than the rest of the city?
- Do you think that this area is more inclusive than a non-innovation district? If it is the case, why do you think so?
- Do you think that the collaboration between the four sectors could be the reason why the area is more inclusive? If so, why?

### ***Closing***

Thank you for your answers and for your time. The data will be transcribed and analyzed in my Master's thesis, due in August 2021. In case you change your mind on your participation to this study, you can contact me via email on [clara.glachant@gmail.com](mailto:clara.glachant@gmail.com). I will inform you as soon as I am done with this thesis and will send you the final document in August.

## Appendix 4: Additional findings

- Document review

Author	Title	Type of document	Main finding
Stam C. (2016)	« Rotterdam Innovation District: de optimale relatie tussen M4H en RDM »	Student thesis	Used to write about the hisstory of RDM and M4H. This article have insights on the variety of actors present in the area and the type of development (more organic than in RDM)
van der Zandt B. (2018)	« Attraction and retention of users in Urban Innovation Districts: An advice for the Merwe-Vierhavens based on the lessons learned at Strijp-S. »	Master thesis	Used to introduce the area. This research provides information on the development of M4H, its demographics and tackles briefly inclusion challenges in the area.
Del Bono D. & Franco M. (2020)	« M4H - Merwevierhaven, Rotterdam: the 21st century Port-City interface »	Master thesis	This research gives insights on Port-City developments and the development strategy in M4H. It is also used for its graphics.
Meijer M. & Peek G-J. (2017)	« Networking for innovation, The role of iconic occupiers in the development of the Rotterdam Innovation District «	Presentation	The authors explain that while RDM is planned in a triple-helix of university-industry-govenrment relationships to foster innovation, M4H is less preplanned and follows a quadruple helix model, with the perspective of civil society in knowledge production and innovation. It highlights the role

			of Studio Roosegaarde and Atelier van Lieshout in the shaping of the image of the neighborhood: those "iconic" occupiers are crucial to inspire, enhance the area and activate a network of relationships.
Stadshavens Rotterdam (2019)	« Spatial framework Merwe-Vierhavens Rotterdam: Future in the Making »	Report	This report provides an outline of what M4H will look like in the future. It gives information on the process of spatial development in the area and background elements on the strategies for the different sub-areas of M4H.
Deloitte (2015)	« Position paper Rotterdam Innovation District »	Consultancy report	
Stadshavens Rotterdam (2014)	« Ontwikkel mee in M4H »	Development strategy	The report summarizes the development strategy for M4H: from port to makers district. Innovation is at the core of the strategy. This document was crucial to highlight the transparency of the collaboration process between the local government, the port and local initiatives (businesses and associations).
Stadshavens Rotterdam (2015)	« Stadshavens Rotterdam: the Innovation District »	Report	This document provides general information on the Rotterdam Innovation District. It gives insights on the social strategy for

			the area and presents an employment program organized by the Municipality and the Port aiming at connecting employers of the area with unemployed individuals of surrounding areas. This programme also contains an "empowerment" training, to secure participants skills and abilities on the labour market.
Peek G-J. & Stam K. (2016)	« Building the Innovation Economy City-Leel Strategies for Planning, Placemaking and Promotion. Case Study: Rotterdam »	Case study report	This case study report informs on the innovative ecosystem growing in M4H.
Rotterdam Makers District (2018)	« Vision: Rotterdam Makers District »	Vision document	This document gives information on the history of M4H and RDM and the vision of the two areas, mostly from the economic and innovation point of view. This informed mostly the first section of the first section in the findings chapter.
Stadshavens Rotterdam (2011)	« Stuctuurvisie Stadshavens »	Vision document	This document presents the vision for the Stadshavens area (made of 6 different areas around the Maas in Rotterdam) and associated urban development. M4H and its innovative purpose is further detailed, as well as the importance of social inclusion in the area, to link the

			neighborhood to surrounding Spangen, Oud Mathenesse, Bospolder.
European 15 (2019)	« Activating the Urban Commons in the Productive City »	Case study report	This document gives an introduction on M4H and its urban context. It focuses mainly on circular urban development where working and living meet. The study zooms in on the Vierhavensblok especially, which represents a small part of the area.
ter Avest (2021)	« Toegang tot M4H : Naar een Sociaal Raamwerk voor een nieuwe stadswijk »	Research essay	This essay explores the social aspects and connections between M4H and surrounding areas. The review of this document mostly informed the researcher on the state of inclusion in M4H.
Voedseltuin Rotterdam (2019)	« Voedseltuin Rotterdam »	Brochure	This document informs the researcher with an introduction of the organization, their goals, missions and values. The booklet contains testimonies of volunteers at the Voedseltuin.
Program Office M4H (2020)	« M4H in cijfers: Monitor 2019 »	Report	This document gives information on businesses and economic activities in M4H for the year 2019. The report zooms in on the type of businesses, workers and activities in the area. It informed the report on accountability and inclusion.



- Desk research: M4H and RDM

M4H and RDM were developed jointly as part of the transition to the Next Economy, which encompasses accessibility, technology advanced and proposes a mixed-use of living, working and retail (Deloitte, 2015). This new paradigm encompasses the preparation of the city to environmental, economic and social challenges (Del Bono & Franco, 2020). Moreover, RDM and M4H have different development purposes: RDM is more linked to port activities and prototyping while M4H is a space where entrepreneurs can innovate and citizens live. (Van der Zandt, 2018; Interviewee I1, May 2021). While this study focuses on Merwe-Vierhanvens, the following table highlights the main characteristics of the two areas for the sake of contrast.

	<b>RDM campus</b>	<b>M4H</b>
<b>Location</b>	South bank	North bank
<b>Land volume</b>	30 hectares	100 hectares
<b>Properties</b>	Industrial heritage	All sorts
<b>Ownership</b>	Port of Rotterdam	Port of Rotterdam and City of Rotterdam

Table 4. Attributes of RDM campus and M4H. Source: Peek & Stam, 2016.