Manifestations of the circular economy concept

An examination of practices in the Binckhorst

J.W.M.M. (Joep) van de Weijer

MSc Thesis - Spatial Planning

"Als de gemeente echt alles op alles zou zetten en het maximale uit haar mogelijkheden zou halen, dan kan er veel meer..."

"If the municipality would genuinely do everything within its ability and get the most out of its possibilities, then much more could be done"

- Interviewee 02

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J.W.W.M. (Joep) van de Weijer
MSc Spatial Planning
Wageningen University
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Wageningen University
Land Use Planning chair group
Gaia, building number 101
Mailbox 47
6700 AA Wageningen
The Netherlands

MSc Thesis Spatial Planning (LUP-80436)

Author:
J.W.W.M. (Joep) van de Weijer
921014948100
Joep.vandeweijer@gmail.com

Supervisor and assessor:
dr. I.M. (Marleen) Buizer

2nd assessor:
dr. I.V. (Iulian) Barba Lata MSc

Examiner:
dr. M.M. (Martha) Bakker

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Abstract

The circular economy concept has gained increasing attention among scholars and practitioners (Kirchherr, Reike, & Hekkert, 2017). The circular economy is perceived as a business model that leads to sustainable development (Ghisellini, Cialani, & Ulgiati, 2016). It is an alternative to the current linear economy and the negative effects on the stability of economies and integrity of natural ecosystems associated with this linear model. Governments have also recognised this and have started to integrate the circular economy concept in national, provincial, regional, and local policies. The Rijksoverheid (Dutch national government) aspires to reach a fully circular economy by 2050 (Rijksoverheid, 2016). The municipality of The Hague has also communicated its circular ambitions. Among other ambitions, it aspires to achieve a Binckhorst that is 50% circular by 2025 (Gemeente Den Haag, 2018).
However, numerous scholars have shown a broad diversity of understandings, interpretations, and implementations of the circular economy concept (see for example, Blomsma & Brennan, 2017; Ghisellini et al., 2016; Kirchherr et al., 2017). Kircherr, Reike, and Hekkert (2017) have analysed a total of 114 definitions of the circular economy concept and have shown a wide variety of understandings of the concept within these definitions. There is no agreement on a single comprehensive definition of the concept.

At the same time, The Hague is struggling with a shortage of housing. The municipality perceives the Binckhorst as an area to partially solve this shortage. The Binckhorst is an industrial area that is being transformed to a mixed living-working area. In the following years, 4,000 to 5,000 housing units are added to the Binckhorst. Consequently, the function living will be more prominent in the former industrial area. The existing (primarily practically oriented) practices in the Binckhorst could conflict with the future residential function of the area, due to nuisance for example. Meanwhile, the Netherlands introduces a new environmental law aimed at more careful consideration of local circumstances and stimulation of local initiatives.
The combination of the diverse understandings of the circular economy concept, the municipality's circular ambitions, the transformation of the Binckhorst, and the introduction of the new environmental law provided interesting circumstances to study local practices in the Binckhorst. This research aimed to answer the following research question: How is the circular economy concept manifested in higher and lower scale level practices in the Binckhorst?

The results from this study demonstrate a diversity of understandings of the circular economy concept by the carriers of the practices studied. Most understandings centre around the material aspect of the concept, which could be explained by the practically oriented nature of the practices studied. There are, however, also carriers that include social aspects in their understanding of the circular economy concept. This could be explained by their (career) histories, knowledge about, and expertise with the concept. Interestingly, (un)familiarity with and a particular understanding of the circular economy concept do not seem to matter for whether or not a practice could be perceived as circular. Importantly, the practice may not be recognised (by the carriers, municipality, and other actors) as such. In other words, practices may manifest the circular economy concept unintentionally. Additionally, the results demonstrate that elements of practices (materials, competences, and meanings) are often connected to one another, and that their specific configuration shapes a practice. Furthermore, the (bio)physical and social context of practices influences practices by contributing to circumstances that enable the emergence, change, and disappearance of practices. At the same time, these practices influence their context.
This illustrates the complex and dynamic processes of practices that should be taken into account in developments such as that of the Binckhorst. Policies aimed at the transformation of the Binckhorst to a mixed living-working area may have unintended consequences concerning the inclusiveness of the development, which is an important issue regarding the new environmental law.

Keywords:
Social practice theory | practice approach | practices | circular development | inclusive area development | Binckhorst

Samenvatting

Het circulaire economie concept heeft veel aandacht gekregen bij academici en mensen in de praktijk (Kirchherr, Reike, & Hekkert, 2017). De circulaire economie wordt gezien als een businessmodel dat kan leiden tot duurzame ontwikkeling (Ghisellini, Cialani, & Ulgiati, 2016). Het is een alternatief voor de huidige lineaire economie en de negatieve effecten op de stabiliteit van economieën en integriteit van natuurlijke ecosystemen die worden geassocieerd met dit lineaire model. Overheden hebben zich dit ook gerealiseerd en zijn begonnen aan het integreren van het circulaire economie concept in nationaal, provinciaal, regionaal, en lokaal beleid. De Rijksoverheid heeft de ambitie in 2050 een volledig circulaire economie te bereiken (Rijksoverheid, 2016). De gemeente Den Haag heeft ook circulaire ambities, waaronder een Binckhorst die voor tenminste 50% circulair is (Gemeente Den Haag, 2018).
Echter, tal van academici hebben een grote diversiteit aan begrippen, interpretaties en implementaties van het circulaire economie concept aangetoond (zie bijvoorbeeld, Blomsma & Brennan, 2017; Ghisellini et al., 2016; Kirchherr et al., 2017). Kircherr, Reike en Hekkert (2017) hebben maar liefst 114 definities van het circulaire economie concept geanalyseerd en toonden daarmee de grote variatie in definities van het concept aan. Kortom, er is niet één allesomvattende definitie waarmee iedereen het eens is.

Tegelijkertijd kampt de gemeente Den Haag met een woningtekort. De gemeente ziet de Binckhorst als een gebied waar ze dit tekort deels kan oplossen. De Binckhorst is een industrieel gebied dat wordt getransformeerd naar een gemengd woon-werk gebied. In de komende jaren worden er in de Binckhorst 4.000 tot 5.000 wooneenheden bijgebouwd. Zodoende krijgt de woonfunctie in het industriële gebied een steeds aanzienlijker aandeel. De bestaande praktijken in de Binckhorst, die voornamelijk praktisch georiënteerd zijn, zouden in conflict kunnen raken met de toekomstige woonfunctie van het gebied, door lucht- en geluidsoverlast bijvoorbeeld. Ondertussen wordt er in Nederland de 'Nieuwe Omgevingswet' geïntroduceerd welke onder andere als doel heeft projecten beter af te kunnen stemmen op de lokale omstandigheden en lokale initiatieven te stimuleren.
De combinatie van de diversiteit aan begrippen van het circulaire economie concept; de circulaire ambitie van de gemeente; de transformatie van de Binckhorst; en de introductie van de 'Nieuwe Omgevingswet' zorgt voor interessante omstandigheden voor het onderzoeken van lokale praktijken in de Binckhorst. Dit onderzoek is bedoelt om de volgende onderzoeksvraag te beantwoorden: Hoe wordt het circulaire economie concept gemanifesteerd in praktijken op het hoge en lage schaalniveau in de Binckhorst?

De resultaten van dit onderzoek tonen een diversiteit aan van hoe 'dragers' van de bestudeerde praktijken het circulaire economie concept begrijpen. De meesten verwijzen vooral naar de materiële aspecten van het concept. Dit kan verklaard worden door het praktische karakter van de praktijken. Er zijn echter ook 'dragers' die naast de materiële aspecten ook verwijzen naar sociale aspecten van het circulaire economie concept. Een verklaring hiervoor kan gezocht worden in de geschiedenis van deze 'dragers', gezien zij kennis over en ervaring met het concept hebben opgedaan bijvoorbeeld in hun carrière. Een interessant inzicht is dat (on)bekendheid met en een bepaald begrip van het circulaire economie concept zicht niet lijkt te uiten in of een praktijk als circulair kan worden gezien of niet. Dit geldt ook als een praktijk niet wordt benoemd of geïdentificeerd als circulair. In andere woorden, praktijken kunnen het circulaire economie concept onbedoeld manifesteren. Daarnaast tonen de resultaten aan dat de elementen van praktijken (materialen, competenties, en betekenissen) vaak aan elkaar verbonden zijn en dat de specifieke configuratie van deze elementen de praktijk vormgeeft. Verder zijn de (bio)fysieke en sociale context van belang voor praktijken gezien deze bijdragen aan de omstandigheden die het bestaan, veranderen, en verdwijnen van praktijken mogelijk maken. Tegelijkertijd beïnvloeden de praktijken hun context.
Dit onderzoek illustreert daarmee de complexe en dynamische processen die ten grondslag liggen aan praktijken. In gebiedsontwikkelingen zoals die van de Binckhorst zou men rekening moeten houden met deze processen. Beleid dat gericht is op de transformatie van de Binckhorst naar een gemengd woon-werk gebied kan namelijk onbedoelde gevolgen hebben voor de inclusiviteit van de gebiedsontwikkeling, wat een belangrijk thema is met het oog op de 'Nieuwe Omgevingswet'.

Trefwoorden:
Social practice theorie | praktijk benadering | praktijken | circulaire gebiedsontwikkeling | inclusieve gebiedsontwikkeling | Binckhorst

Preface

I started this research in September 2018, a little more than a year ago. Initially, I was not certain about a specific research topic. At that time, my supervisor dr. Marleen Buizer was already actively involved with circular development of the Binckhorst through ACCEZ. She proposed to me to study the circular development of the Binckhorst. Initially, I had a rather critical attitude towards this topic. I thought of the circular economy concept as another container concept, which could be used primarily as a buzzword by governments, businesses, and other organisations. However, I enjoy thinking thoroughly and critically about topics I do not yet know much about. Therefore, I decided on this research topic. As time went on, my interest in the topic grew, and my critical attitude towards the concept faded into the background. This is not to say that I am not critical anymore, if anything, I am more critical. However, under Marleen's supervision, I learned to translate my critical attitude into an analytical attitude.

Therefore, I would like to thank Marleen Buizer for her excellent supervision. Your enthusiasm and suggestions inspired me while conducting this research. Our discussions motivated me to think more thoroughly about the complicated topics, theories, and approaches that we discussed. These discussions and your feedback contributed to my research as well as my own development both as a person and researcher.
Also a big thank you to my girlfriend Sophie, who motivated me when I was discouraged and with whom I have had numerous interesting conversations about the research topic. These kind of conversations enabled me to put things into perspective, which helped me ´clear my mind´ and put text on paper.
Last but certainly not least, thank you to all interviewees for the delicious cups of coffee, and the interesting conversations we have had. The interviews inspired and encouraged me to think more critically about area development, concepts such as the circular economy concept, and the role of the municipality and local actors developments. Without you this interview would not have been possible, or at least far less interesting.
I have learnt a great deal in the past year and a bit, and you have all contributed to this, for which I am ever grateful.

Joep van de Weijer
Wageningen, November 2019

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2	December 5th 2018	I'M BINCK	PEP, The Hague
3	February 6th 2019	Introduction of the circular economy concept to the Binckhorst (O2)	Coffee Fellows, The Hague
4	May 28th 2019	ASN Autoschade Van Vreden – Binckhorst	ASN Autoschade Van Vreden – Binckhorst, The Hague
5	May 28th 2019	MOOOF	MOOOF, The Hague
6	May 31st 2019	Secrid	Secrid, The Hague
7	June 6th 2019	Werkproject Jupiter	Werkproject Jupiter, The Hague
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Chapter 1
Introduction

The image above is typical for the Binckhorst. In this image, you can spot the variety of activities that take place in the Binckhorst. There is a port, and an office building in the background. Next to that, there is an industrial building and a large crane that can be seen from all over the Binckhorst. Finally, this is one of the places where the Binckhorst was introduced to street art. Nowadays, the street art 'is simply there'. However, this image perfectly illustrates the work that goes into the street art. For me, it symbolises the work that goes into the development of the Binckhorst.

While the Binckhorst was introduced to street art, I introduce my research report in this chapter. I introduce the circular economy concept as one which is understood broadly by a variety of actors. Additionally, I describe the relevance for adopting a practice approach to this research. Next to that, I present an industrial area in transition to a circular and mixed living-working area in The Hague: the Binckhorst. Finally, I present the structure of this report.

1.1 Introduction

The number of inhabitants of The Hague is growing and will continue to do so in the future. In order to accommodate its future inhabitants, the municipality makes an effort to facilitate a sufficient amount of housing. A stone's throw away from the central train station and vibrant city centre of The Hague lies the industrial Binckhorst, known for its diversity, authenticity, and roughness. The municipality is aware of the unique qualities of the Binckhorst and perceives it as an outstanding area for mixing living and working functions.

Simultaneously, in recent years, individuals, organisations, and businesses realised their impact and that of the current economy. The circular economy – as an alternative to the linear economy – is perceived to contribute to reducing our impact on the environment and other related issues. The Dutch national government has expressed its ambition to achieve a circular economy by 2050. Correspondingly, the municipality of The Hague has conveyed their aspiration to achieve a Binckhorst that is 50% circular by 2025. In such a way, the Binckhorst is introduced to the circular economy and new functions such as living.

1.2 Circular economy

Recently, the circular economy concept has gained growing attention of both academics and practitioners (European Environment Agency EEA, 2016; Ghisellini, Cialani, & Ulgiati, 2016; Kirchherr, Reike, & Hekkert, 2017), influencing governments at the local, regional, national, and international scale level (Geissdoerfer, Savaget, Bocken, & Hultink, 2017). The concept is perceived to be an operationalisation for businesses to integrate the widely-discussed sustainable development concept, that has been called out for being too vague to be implementable, losing momentum accordingly (Kirchherr et al., 2017). The current dominant economic model is a linear one that is also known as the 'take, make, dispose economy'. This linear economy causes negative effects that threaten the stability of economies and natural ecosystems essential for humanity's survival (Ghisellini et al., 2016). The circular economy is perceived as an alternative to the linear economy.

Interestingly, there is no agreement on a definition of the circular economy concept. Some refer to the waste-as-food principle or waste and resource recycling (Blomsma & Brennan, 2017), whereas others view it as a restorative industrial system (Ellen MacArthur Foundation, 2013), or a model that maximises human wellbeing and ecosystem functioning (Murray, Skene, & Haynes, 2017). These three understandings of the circular economy concept do not come close to capturing the entire variety of how the concept is understood. Considering this wide variety of understandings and the fact that the concept is being used in practice across multiple scale levels, one might question how this concept is manifested in practices. This is the starting point of this research.

1.3 Attitudes, behaviour, and choice versus social practices

In the mid-1900s public environmental movements began to address the exploitation of the Earth by and for human activity. The movements demanded an end of this exploitation as it changed and endangered the Earth (Batel, Castro, Devine-Wright, & Howarth, 2016). Currently, climate change is perceived to be a threat to this planet. This has led to research that examines how to understand and change people's environmentally relevant actions (Batel et al., 2016). Such research has been mainly shaped by the idea of the 'anthropocene'. This idea endorses that humans are the prime cause for the destruction of our planet and its ecosystems (Batel et al., 2016). This idea relates to the ABC paradigm in policies that are aimed at climate change mitigation. In the ABC paradigm, A stands for attitude, B stands for behaviour, and C stands for choice. Elizabeth Shove notes that *"for the most part, social change is thought to depend upon values and attitudes (the A), which are believed to drive the kinds of behaviour (the B) that individuals choose (the C) to adopt"* (Shove, 2010, p. 1274). Within this ABC perspective, climate change and environmental damage are framed as consequences of individual actions. Additionally, the ABC paradigm asserts that providing better information or more appropriate incentives to people could lead damaging individuals to act more responsibly and consequently choose to endorse a behaviour that is pro-environmental (Shove, 2010). Thus, ABC is not merely a theory of social change. Rather, it is a template for intervention that locates individuals as consumers and decision makers, and governments as enablers whose role is to pursue those individuals to make pro-environmental decisions (Shove, 2010). Additionally, when interventions do not bring about the desired social change – i.e., when it does not lead to changed attitudes, behaviour, and choices of individuals – the tendency is to instruct additional research that fit the same mould – one that favours research that generates results that are concrete, achievable, and manageable (Shove, 2010). It is evident that this results in a self-sustaining model. This model

sustains an industry of research and advice that treats behaviour as something that is shaped by factors. The ABC paradigm emphasises causal factors and external drivers, and treats people as autonomous agents of choice and change (Shove, 2010). Since policies aimed at transitioning to a circular economy ultimately aim to reduce environmental damage and climate change, they may be seen as a type of policies that could be approached from an ABC perspective.

This research takes a radically different approach and starts from a social practice perspective. In contrast to the ABC paradigm, social theories of practice focus on endogenous and emergent dynamics (Shove, 2010). Social practice theory abandons the idea that external causal factors result in certain attitudes that promote certain behaviour which results in certain choices. Rather, social theories of practice endorse the 'Homo Practicus' idea that conceives people as carriers of practices, who carry and carry out (Nicolini, 2012). Practices are understood to consist of different types of elements: materials, competences, and meanings. These elements shape one another and can start and cease to exist. Dissecting practices into these elements allows for critical consideration of the dynamics and emergence of practices – i.e., what is it that sustains and changes practices? This research approaches the circular economy concept from this social practice perspective. This perspective could help uncover practices that are currently not identified as circular – but that could be seen as such – by highlighting the elements involved in such practices and identifying the dynamics of these elements. Additionally, it allows for critical consideration of the dynamics of such practices, which helps understanding how they survive, could change, and may disappear.

1.4 Binckhorst

As previously noted, the circular economy concept is increasingly used in practice. On a national level, the recent development of the Dutch national transition agenda – of which the circular economy concept is one of the main topics – is one such example. At the provincial level, the province of Zuid-Holland is currently developing a vision and policies with regard to this topic. At the regional level, the metropolitan region Rotterdam-The Hague has published 'Roadmap Next Economy' in which the circular economy concept features an important role. And finally at the local level, the municipality of The Hague has presented their ambition document 'Circulair Den Haag: Transitie naar een duurzame economie' in which it explains the wish to transition to a circular economy. Amongst other ambitions, this document sets out the goal of reaching a 50% circular economy in the Binckhorst by 2025 (Gemeente Den Haag, 2018).

At the same time, there is a change of environmental policy in the Netherlands. The introduction of the 'Nieuwe Omgevingswet' aims to bundle the rules that apply to spatial projects. The national government argues *"this makes it easier to start spatial projects. For example, construction of housing in former industrial areas…"* (Rijksoverheid, n.d.). Next to that, another expected outcome of the introduction of the new environmental law is more careful consideration of local circumstances of initiatives which would improve the living environment. Last but certainly not least, the new environmental law is expected to stimulate local initiatives due to a new approach to environmental permits ('yes, provided…' rather than 'no, unless…'). Considering the last point, it makes sense to study existing local practices in an area.

The Binckhorst is an area such as mentioned in the quote from the Rijksoverheid. It is an area of approximately 146 hectare in The Hague, the Netherlands. The Binckhorst is characterised by its convenient accessibility that is sustained by the proximity of a major highway as well as multiple train stations. Additionally, the Binckhorst is close to The Hague's city centre, which makes it an interesting area for housing. The municipality of The Hague recognised the qualities of the industrial area in the beginning of this century and expressed its ambition to transform the Binckhorst to a mixed living-working area. Due to the financial crisis that started in 2008, the project was put on hold. Several years later, after the financial crisis, other issues prevail. Currently, the Netherlands – as does The Hague – experiences a shortage of housing. Now, more than ever, the municipality aspires to transform the Binckhorst by allowing and facilitating the construction of residential buildings. Yet currently, the Binckhorst is still primarily an industrial area that is home to a variety of businesses such as car repair shops, a waste collection facility, hardware stores, and a paint factory.

Whereas the transformation of the area is itself an interesting research topic, the focus of this research is on the introduction of the circular economy concept in the Binckhorst. Considering the vast diversity of practices that take place in the Binckhorst, combined with the wide variety of possible understandings and manifestations of the circular economy concept, I asked myself: How does

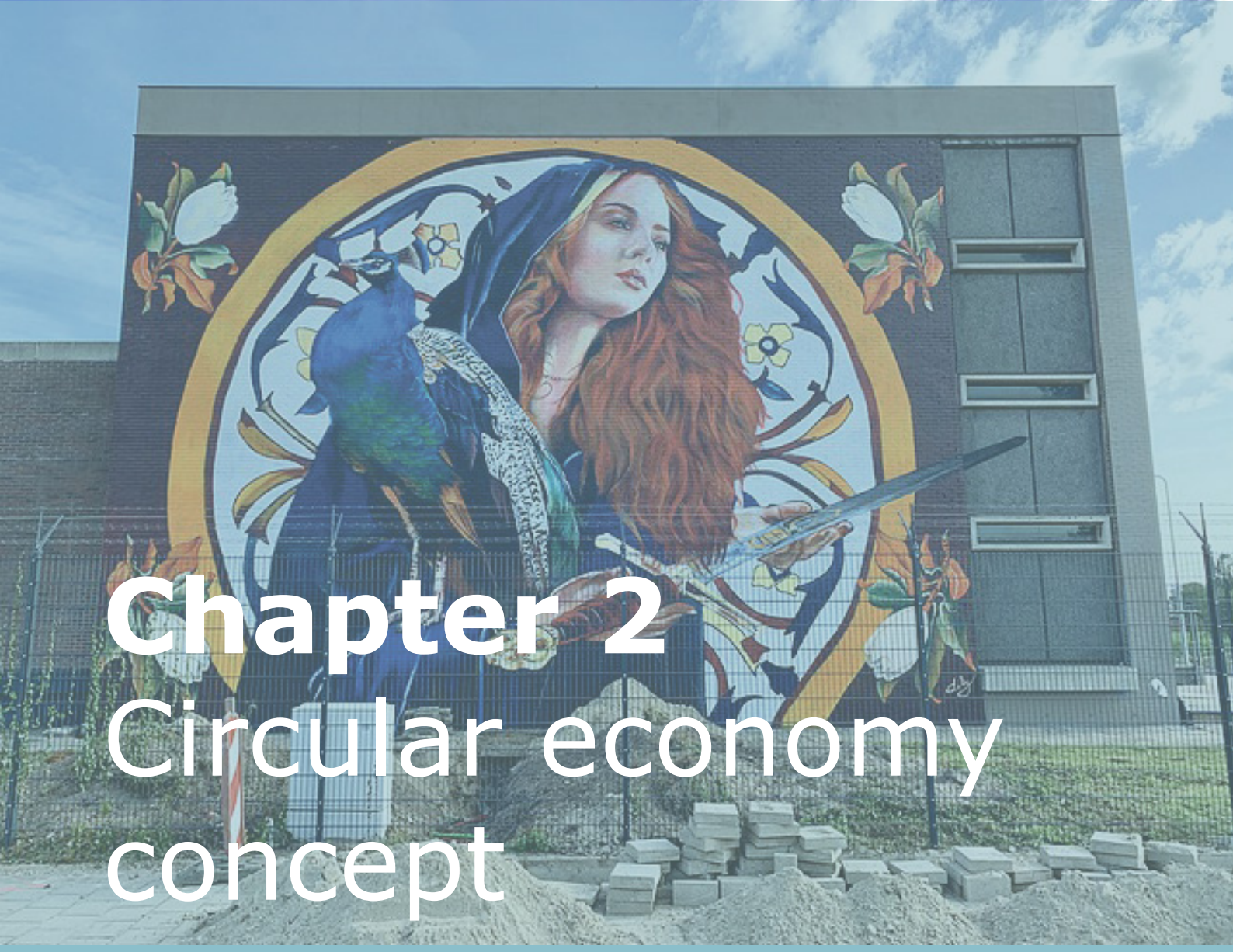
this play out? What does the circular economy look like in this area? Meanwhile, the (bio)physical as well as social context of these practices are changing due to the transformation of the Binckhorst to a mixed living-working area. In my opinion, the coming together of these circumstances provides an opportunity to study the dynamics of these practices.

In this research, I study practices on two scale levels. Firstly, the higher scale level at which 'the introduction of the circular economy concept to the Binckhorst' is primarily performed by the municipality. And secondly, the lower scale level at which the existing practices in the Binckhorst are carried out by car mechanics, real estate managers, and volunteers to name but a few. I distinguish practices based on two scale levels as it allows for examining the potential tension between the practices on these different scale levels. For example, the circular economy concept could be understood radically different in lower scale level practices compared to how it is understood in the higher scale level practice. In this hypothetical case, the ways in which lower scale level practices – existing 'on the ground' – employ the circular economy concept might be different than how a circular economy should be achieved as envisioned in the higher scale level practice (i.e., by the municipality of The Hague). I study how the carriers of such practices understand the circular economy concept, how the circular economy concept is manifested in these practices, and how the (bio)physical and social context influence these practices and simultaneously how the practices influence their context.

The municipality uses a variety of policies and other tools – such as subsidies – that are aimed at achieving its goal – in this case, transitioning to a circular economy. Considering this, this research opts for an approach that deliberately considers the existing practices, thereby providing an insight into the existing practices, their complexities and dynamics, and how they could be seen as circular. This insight – for the municipality – could possibly contribute to a more inclusive development of the Binckhorst. Therefore, the main-research question that I intend to answer through this research is 'how is the circular economy concept manifested in higher and lower scale level practices in the Binckhorst?'.

1.5 Structure of the report

To understand how the circular economy concept is understood and manifested in practices in the Binckhorst, chapter 2 first elaborates on the circular economy concept. Chapter 3 presents the theoretical framework used to examine this research topic. Additionally, it presents the theoretically informed research questions that this research aims to find an answer to. In chapter 4, I discuss the research design that includes the methods used to collect and analyse the data for this research. In chapter 5, I present the findings of this research. In chapter 6, I discuss and reflect on the theory and methods used. Finally in chapter 7, I synthesise this research report, discuss the answers to the research questions and offer practical recommendations.



Chapter 2
Circular economy concept

The image above portrays a piece of street art in the Binckhorst. This image may be interpreted differently by different people. Similarly, the circular economy concept is understood differently by different actors. In this chapter, I present a broad diversity of understandings of the circular economy concept. The circular economy concept has many origins and there is no agreement on a single definition of the concept. The aim of this chapter is not to develop a single comprehensive definition of the circular economy concept. On the contrary, it is to illustrate how broad the concept can be understood and to establish a rough understanding of the concept for this research. Therefore, I discuss the circular economy concept rather extensively.

It is important to note that I recognise that, with regard to the transformation of the Binckhorst, the circular economy concept could also be thought of as circular area development. Nevertheless, I use the term 'circular economy concept' in this research as respondents and interviewees might more easily be able to relate this to their practice (including the term 'area development' could have led them to think of it as purely development of public space). Additionally, since one of the objectives of this research is to explore the diversity of understandings of the circular economy concept, I adopted this term.

First, I shortly introduce the circular economy as an alternative to the linear economy. Second, I discuss several origins of the circular economy concept. Third, I examine multiple concepts related to the circular economy concept. And fourth, I present a variety of definitions and understandings of the circular economy concept.

2.1 Circular economy as alternative to linear economy

The circular economy is often described as a response or alternative to the current linear economy (see for example: European Environment Agency EEA, 2016; Van Buren, Demmers, Van Der Heijden, & Witlox, 2016; Van Der Leer, Van Timmeren, & Wandl, 2018), which is also known as the 'take-make-dispose economy' (Blomsma & Brennan, 2017; Ghisellini, Cialani, & Ulgiati, 2016). Therefore, I will first briefly describe the linear economy, before taking a closer look at the circular economy concept.

A linear economy may be defined as a system that converts natural resources into waste, through production (Murray, Skene, & Haynes, 2017). This leads to the decay of the environment in two manners: (1) removal of natural capital (i.e., resource extraction like mining and unsustainable harvesting) and (2) by reducing the value of natural capital which is caused by the pollution from waste (Murray et al., 2017). Others mention that a linear approach to production and consumption causes deterioration of ecosystems induced by climate change and environmental pollution (Fischer & Pascucci, 2017). The negative environmental effects of the current economic model, poses a threat to ecosystems, economies and ultimately humanity's survival (Ghisellini et al., 2016). The linear model is based on the assumptions that resources are abundantly available, easily extracted, and to be disposed of. Fundamentally however, the linear economy is not sustainable and exceeds planetary boundaries, in some cases (European Environment Agency EEA, 2016). Considering the environmental consequences of linear production and consumption, the circular economy is gaining momentum as both a concept and practice.

2.2 Origins of the circular economy concept

The origin of the circular economy is varied. Two centuries ago, the first president of the Royal Society of Chemistry August Wilhelm von Hofmann stated *"...in an ideal chemical factory there is, strictly speaking, no waste but only products. The better a real factory makes use of its waste, the closer it gets to its ideal, the bigger its profit."* (Lancaster, 2002, p. 27). This quote exemplifies that the fundamental ideas of the circular economy concept are not entirely new.

Ecological economist Kenneth Boulding (1966) introduced the concept of closed systems. Boulding's idea of a closed economy (i.e., a circular system) is seen as an essential condition for the conservation of the sustainability of humanity on Earth (Ghisellini et al., 2016; Rizos, Tuokko, & Behrens, 2017). Environmental economists Pearce and Turner were informed by the studies of Boulding. They were the first ones to use the term 'circular economy' in an economic model (Pearce & Turner, 1990). After taking a critical look at the linear economic model, the authors developed an alternative economic model called the circular economy. Pearce and Turner describe the shift from an open-ended system to a closed system as a result of the application of the principles of thermodynamics (Ghisellini et al., 2016; Rizos et al., 2017). The first law of thermodynamics describes that matter and energy cannot be created or destroyed and that, because of this, used natural resources will return to the environment as waste or emissions. The second law of thermodynamics describes that there are physical boundaries that prevent the creation of a system in which all waste is recycled and processed back into natural resources with 100% efficiency (Rizos et al., 2017). In the circular economy, as described by Pearce and Turner, the connection between the environment and the economy is recognised (Rizos et al., 2017).

However, there is also criticism on this notion. If an economy needs to grow – and if thermodynamics apply equally to human economic activity as it does to natural events – energy must be degraded to achieve growth. Additionally, energy also has to be degraded in order to maintain all of the previous growth (Skene, 2018).Therefore, over an extended period of time, energy use continues to rise since maintenance must increase if there is any growth. And even without growth or with decline, the previously establish growth requires maintenance (Skene, 2018). An example makes this abstract idea more concrete. Take a laundry service business with five washing machines and five dryers. If, at some point, all washing machines are used at all times, the company may wish to grow. It requires additional washing machines and dryers, each of which requires maintenance as well. If the company wishes neither to grow nor decline, the machines still require maintenance. The important point here is that maintenance costs energy (i.e., energetic waste). For that reason, the laws of thermodynamics that form the foundation of Pearce and Turner's circular economy are understood not to work in an economy.

2.3 Related concepts of the circular economy concept

It has been widely recognised that there are many concepts that are related to the circular economy (see for example: Blomsma & Brennan, 2017; Fischer & Pascucci, 2017; Geisendorf & Pietrulla, 2018; Ghisellini et al., 2016; Reike, Vermeulen, & Witjes, 2018; van Buren et al., 2016). The circular economy concept has been shown to endorse multiple aspects and notions of these related concepts. In this section, I take a closer look at eight of such concepts. Next to simply describing the related concepts of the circular economy concept, I also present criticisms on some of these concepts in relation to the circular economy concept. My aim is not to invalidate these concepts. Rather it is to demonstrate that these concepts are debated and that there is no widespread agreement on the potential and capabilities of all of these concepts. The concepts that I discuss are 'cradle-to-cradle', 'general systems theory', 'industrial ecology', 'blue economy', 'closed supply chains', 'regenerative design', 'performance economy', and 'R frameworks and imperatives'.

2.3.1 Cradle-to-cradle

Cradle-to-cradle is one of the concepts related to the circular economy concept. The cradle-to-cradle concept aims to minimise the environmental damage of products. This is achieved through more sustainable production processes, distribution, disposal practices and socially responsible products (Geisendorf & Pietrulla, 2018). Traditional sustainability concepts tend to focus on reducing the negative environmental impact of human practices. Cradle-to-cradle is different from these traditional sustainability concepts in that it attempts to maintain and enhance the value, quality and productivity of resource materials, aiming at a net positive environmental effect (Rizos et al., 2017). In addition to production and recycling, this concept emphasises design of products. The cradle-to-cradle concept asserts that products have to be (re)designed with a focus on increasing efficiency and minimising negative effects (Geisendorf & Pietrulla, 2018). The central assumption of cradle-to-cradle is that there are two types of materials: biological and technical ones. Biological materials are biodegradable and can, therefore, be harmlessly returned to the environment after its use. Technical materials are defined as durable materials that can be reprocessed after their use, they can continue to flow in a closed-loop system (Rizos et al., 2017). Hence, sometimes this concept is also referred to as closed-loop supply chains (Geisendorf & Pietrulla, 2018). In this situation, parts of products have to be designed in a way that allows circular recovery or reutilisation. The cradle-to-cradle is seen as the concept with the most resemblance with the circular economy concept, it is even used synonymously (Geisendorf & Pietrulla, 2018).

A criticism on this concept is that, thinking in this way, it seems that biological nutrients can be recycled freely. However, in reality, some of the greatest threats to ecosystems come from biological nutrients (e.g., fertilisers). If recycling of biological nutrients is not done carefully, at a pace that exceeds natural boundaries, it could disrupt Earth's ecosystems. Therefore, Skene (2018) argues that the consideration of biological nutrients as non-toxic is a troubling error.
Another criticism is that, in the current global market, few products are produced, consumed, disposed, and recycled in the same geographic location. Thus, the import and export of nutrients is required. An issue is that the biosphere consists of local metabolic ecosystems, and if materials are not returned to the same geographic location as where they were took from, there cannot be a form of localised metabolism (Skene, 2018). In addition, the rates of extraction and redeposition rarely match, which makes it difficult to use materials as resources for new products.

2.3.2 General systems theory

General systems theory is also related to the circular economy concept. The Ellen MacArthur Foundation – an organisations that aims to promote the circular economy – argues that systems-thinking is applied broadly in a circular economy, and that many elements in the world (e.g., people, plants, and businesses) are part of complex systems in which the different parts are closely linked to one another, leading to surprising results (Ellen MacArthur Foundation, 2015). This theory considers all organisms as systems, the principle characteristic being the relationship between components (Ghisellini et al., 2016). The main source of complexity and interdependence is argued to be the relationship between organisations and their environments. Consequently, the behaviour of agents or organisations should be analysed within systems of economic relationships of other economic agents (Ghisellini et al., 2016). General systems theory supports holism, systems thinking, organisational learning, complexity and human resource development. In other words, it endorses the notion that an economy should be analysed in a holistic, complex-systems thinking approach (Geisendorf & Pietrulla, 2018). All of these ideas can be considered important aspects of a circular economy (Ghisellini et al., 2016).

2.3.3 Industrial ecology

Industrial ecology is another concept that is related to the circular economy concept. Industrial ecology rejects the idea that environmental impacts of industrial systems should be analysed by separating the source 'industrial system' and the receiver of the impacts 'the environment' (Ghisellini et al., 2016). The central conception of industrial ecology is that natural systems and man-made industrial systems operate in similar ways, in that they are both characterised by flows of material, energy and information (Ghisellini et al., 2016; Rizos et al., 2017), as well as provision of resources and services from the biosphere (Ghisellini et al., 2016). Hence, the importance of the examination of usage and flow of materials and energy during the life cycle of a product, with the aim of reducing the environmental damage (Geisendorf & Pietrulla, 2018). Waste management plays an important role in the industrial ecology concept. Industrial ecology argues that waste should be used as a material source or energy. The circular economy builds on the concepts of industrial ecology for the analysis of industrial system operation – also known as industrial metabolism – and optimisation. The circular economy scales these concepts up to an economy-wide system, thereby establishing a new model of economy, distribution, production and recovery of products (Ghisellini et al., 2016).

A criticism on this concept is that the nature's economy does not function like this. Modern ecological research, for example, recognises that the Earth is not a closed system but an open system (Skene, 2018).The sun is continuously transmitting radiation towards the earth, and a small percentage of this is converted into chemical energy. Next to that, the earth is still cooling down and its core is emitting small amounts of radiation as well, released through volcanic activity. Thus, earth is not a closed system. Skene (2018) argues that if we were to adopt an economy based on a natural model, we would have to imagine that billions of tons of gold were consistently sent down to earth on a daily basis. Additionally, modern ecology recognises that nature is dynamic and emergent and that Earth cannot be restored to an equilibrium state (Skene, 2018).

2.3.4 Blue economy

Another related concept of the circular economy concept is the blue economy. The blue economy addresses business cases for resource efficiency and sustainability (Rizos et al., 2017). Innovation is regarded as an essential lever in guiding businesses towards a change of practices. This innovation is influenced by the functions and design of natural ecosystems (Rizos et al., 2017). The blue economy focuses on sustainable solutions that are being determined by their local environment and physical characteristics (Ellen MacArthur Foundation, n.d.; Geisendorf & Pietrulla, 2018). The blue economy concept describes that processes found in nature should be used to have plenty resources (Geisendorf & Pietrulla, 2018). An example is using the waste of one product as the input in another production process to create a new cashflow (Ellen MacArthur Foundation, n.d.; Rizos et al., 2017).
Similar to other concepts informing the circular economy – as well as the circular economy itself – the blue economy perceives 'waste as food'. The aim of the blue economy is to protect the global system while generating new employment opportunities at the same time (Geisendorf & Pietrulla, 2018). Therefore, the blue economy addresses environmental as well as societal issues (Geisendorf & Pietrulla, 2018).

2.3.5 Closed supply chains

The closed supply chains concept is also related to the circular economy concept. The central idea of the closed supply chains concept is rather close to the circular economy concept. In closed supply chains concept – also known as the closed-loop supply chains – the two factors that 'close the loop' are product reuse and recycling (Geisendorf & Pietrulla, 2018). In practice, closed-loop supply chains concentrates on collecting products back from customers and recovering the added value through reuse of the entire product and/or its parts (Guide & Van Wassenhove, 2009). The closed supply chains approach means that the producers employ a mix of reuse options. The exact design of this mix depends on the most profitable option (Geisendorf & Pietrulla, 2018).Therefore, the concept has an explicit focus on profit. Next to the focus on different types of returns and their characteristics, the closed supply chains concept emphasises the possibility of modularity in products (Geisendorf & Pietrulla, 2018). In the closed supply chains concept, the reuse and recovery of products are the core principles for the development of industrial systems that are economically as well as environmentally sustainable (Guide & Van Wassenhove, 2009).

2.3.6 Regenerative design

Another concept that is related to the circular economy concept is regenerative design. The regenerative design concept is based on systems theory and intended to aid in the design phase of products and services (Geisendorf & Pietrulla, 2018). The term 'regenerative' in the concept

refers the process of renewing and revitalising the energy and materials that are used for the design of products (Geisendorf & Pietrulla, 2018). The main conception of the regenerative design concept is that all materials and waste should return into the system or should be transformed into new valuable resources at the end of a product's life (Geisendorf & Pietrulla, 2018). This process is aimed at creating a completely waste free system. Additionally, the regenerative design concept considers ecosystem services as a foundation to design consumption in a way that promotes purchasing services rather than goods (Geisendorf & Pietrulla, 2018).

However, a criticism on the idea of creating a waste free system is that in a recycling process, materials are degraded and it requires energy to restore them. It is also crucial to recognise that recycling creates more waste. Wear and tear are unavoidable consequences of the use of a material. Prevention of degradation generally requires the use of less recyclable materials, which results in an increased energetic cost when recycled. Therefore, maintenance is needed just to stand still (Skene, 2018).

2.3.7 Performance economy

The performance economy is another related concept of the circular economy concept. The performance economy concept has roots in the functional service economy. The functional service economy emphasises the performance of goods and services, and it regards the utilisation value as the central idea of economic value (Stahel, 2010). This concept focuses on selling services rather than products with an emphasis on the environmental benefits. This, consequently, generates new employment opportunities (Geisendorf & Pietrulla, 2018). A product-service economy relies on product-service systems for it to reduce environmental damage, through the related production and consumption (Geisendorf & Pietrulla, 2018). The performance economy aims to maximise the use value of products. Accordingly, both the material and energetic input for a service are decreased (Geisendorf & Pietrulla, 2018). Thus, it is evident that the objective of the performance economy concept is to improve sustainability by creating a more 'dematerialised' system in which services prevail. In short, the performance economy has three main goals: creating new employment opportunities, increasing wealth, and reducing resource consumption (Geisendorf & Pietrulla, 2018).

Something that is troublesome with this increased service sector – that would establish economic growth – is that is becomes problematic when the products of which the value is maximised are from a different region than where they are consumed. If European nations reduce the demand for goods and increases the service sector (because of and for extended lifetimes) the economic benefits will be in Europe and the costs (decline of sales) will be in Asia (Skene, 2018). Additionally, it is questionable whether the environment will benefit from an extended lifetime of products. Because if products are used for a longer time, rather than replacing them with a model that is more energy-efficient, the environmental benefit may be less than it would be when the product was to be replaced (Skene, 2018).

2.3.8 'R' frameworks and imperatives

The circular economy concept is often misinterpreted to be merely *"an approach to more appropriate waste management"* (Ghisellini et al., 2016, p. 12). According to Geisendorf and Pietrulla (2018) this understanding is exacerbated through principles such as the 3Rs. There is no agreement about what these 3Rs exactly are. 3R can refer to 'reduce, reuse, and recycle', which is primarily known as a waste management principle. However, it may also refer to 'reuse, remanufacture, and recycle', 'reuse, recycle, and return', 'recycling, reuse, and revenue', and 'reuse, recycle, and reduce' (Reike et al., 2018). The 3Rs can be seen as an R framework. Different R frameworks have been used in both academia and practice for many years (Blomsma & Brennan, 2017). Reike et al. (2018) analysed 69 articles on their conceptualisation of R imperatives. They found that there are not only different numbers of R imperatives that are reported, there are also different understandings of these R imperatives. There are frameworks that include up to 10 R imperatives. There are many authors that perceive the various R frameworks as the 'how-to' of the circular economy concept, and therefore a core principle of it (Kirchherr, Reike, & Hekkert, 2017). All varieties of R frameworks share the hierarchy of the R principles as an essential feature, in which the first R is seen as a priority to the second R and so on (Kirchherr et al., 2017). Chapter 4 'Research design' elaborates on R frameworks and imperatives.

2.4 Definitions of the circular economy concept

The circular economy concept has been gaining momentum in both academics and practice (Ellen MacArthur Foundation, 2013; Kirchherr et al., 2017; Moreau, Sahakian, van Griethuysen, & Vuille, 2017). In both academics as well as practice, it is widely acknowledged that there is not one single definition of the circular economy concept. The aim of this section is not to provide an exhaustive definition, rather it is to illustrate that there is no widespread agreement on a definition of the circular economy concept. In other words, there is a wide variety of understandings of the circular economy concept. These differences in understandings of the concept may have implications for how an actor integrates the circular economy concept in its practice. Table 2.1 displays several definitions that have been mentioned by both academics, governments, and other organisations.

Table 2.1 illustrates the variety of different understandings of the circular economy concept. In each of the understandings, at least one of the related concepts – discussed in the previous section – can be distinguished. Having analysed 114 definitions of the circular economy concept, Kircherr et al. (2017) define it as:

"An economic system that replaces the 'end-of-life' concept with reducing, alternatively reusing, recycling and recovering materials in production/distribution and consumption processes. It operates at the micro level (products, companies, consumers), meso level (eco-industrial parks) and macro level (city, region, nation and beyond), with the aim to accomplish sustainable development, thus simultaneously creating environmental quality, economic prosperity and social equity, to the benefit of current and future generations. It is enabled by novel business models and responsible consumers." (Kirchherr et al., 2017, p. 229)

Table 2.1 Schematic overview of several definitions of the circular economy concept

Source	Definition of the circular economy concept
(Ghisellini et al., 2016, p. 15)	*"In CE, products and processes are redesigned to maximise the value of resources through the economy with the ambition to decouple economic growth and use."*
(Murray et al., 2017, p. 377)	*"An economic model wherein planning, resourcing, procurement, production and reprocessing are designed and managed, as both process and output, to maximise ecosystem functioning and human wellbeing."*
(Van Der Leer et al., 2018, p. 298)	*"A CE accommodates resources flowing through mane-made and natural systems in renewable ways, creating or retaining value through slowed, closed or narrowed loops, rather than rapidly destructing value through the creation of waste."*
(Fischer & Pascucci, 2017, p. 18)	*"In CE, the concept of waste is eliminated by carefully designing products and industrial processes in such a way that materials are perpetually flowing nutrients and managed in closed loops. These loops are also defined as industrial metabolisms."*
(Geissdoerfer et al., 2017, p. 759)	*"A regenerative system in which resource input and waste emission, and energy leakage are minimised by slowing, closing, and narrowing material and energy loops. This can be achieved through long-lasting design, maintenance, repair, reuse, remanufacturing, refurbishing, and recycling."*
(Blomsma & Brennan, 2017, p. 603)	*"An emergent framing around waste and resource management that aims to offer an alternative to prevalent linear take-make-dispose practices by promoting the notion of waste and resource cycling."*
(UNEP, 2006, p. 1)	*"A Circular Economy is an economy which balances economic development with environmental and resources protection. It puts emphasis on the most efficient use of and recycling of its resources and environmental protection. A Circular Economy features low consumption of energy, low emission of pollutants and high efficiency . It involves applying Cleaner Production in companies, eco-industrial park development and in integrated resource-based planning for development in industry, agriculture and urban areas."*

Source	Definition of the circular economy concept
(Ellen MacArthur Foundation, n.d.)	*"A circular economy aims to redefine growth, focusing on positive society-wide benefits. It entails gradually decoupling economic activity from the consumption of finite resources, and designing waste out of the system. Underpinned by a transition to renewable energy sources, the circular model builds economic, natural, and social capital. It is based on three principles:* • *Design out waste and pollution* • *Keep products and materials in use* • *Regenerate natural systems''*
(Ellen MacArthur Foundation, 2013b, p. 7)	*"A circular economy is an industrial system that is restorative or regenerative by intention and design."*
(European Environment Agency EEA, 2016, p. 6)	*"Unlike the traditional linear take-make-consume-dispose approach, a circular economy seeks to respect planetary boundaries through increasing the share of renewable or recyclable resources while reducing the consumption of raw materials and energy and at the same time cutting emissions and material losses.''*
(Gemeente Den Haag, 2018, p. 5)	*"But in short, it is an economic system that is meant to maximise the reusability of products and materials and minimise the destruction of value."*

Despite their respectable effort of developing perhaps one of the, if not the, most comprehensive definition of the circular economy concept, this research does not adopt this definition. Endorsing any definition of the concept would – in a way – preclude interviewees of this research to establish their own understanding and definition of the concept. It could also render their definition useless if it would not correspond to the definition embraced in this research. Additionally, adopting a definition could limit the researcher in thinking broadly about the circular economy concept and the practices in the Binckhorst, while analysing the variety of practices and manifestations of the circular economy concept is one of the aims of this research. Therefore, I will not favour any definition of the circular economy concept in this research.

The term 'circular economy' has a linguistic meaning as well as a descriptive one. Approached linguistically, the term is an antonym of a 'linear economy' (Murray et al., 2017). Descriptively, the term relates to the concept of cycles. The latter point is a descriptive feature of almost all definitions of the circular economy concept (see table 2.1). Blomsma and Brennan (2017) provide an overview of the different visual interpretations of the circular economy concept (see figure 2.1). They analysed the visual interpretations by different actors (of different fields). They included actors' interpretations from seminal thinkers/frameworks, think tanks, the legislative and advisory field, academia, business. There is a clear resemblance between the interpretations, almost all illustrations display some kind of cycle.

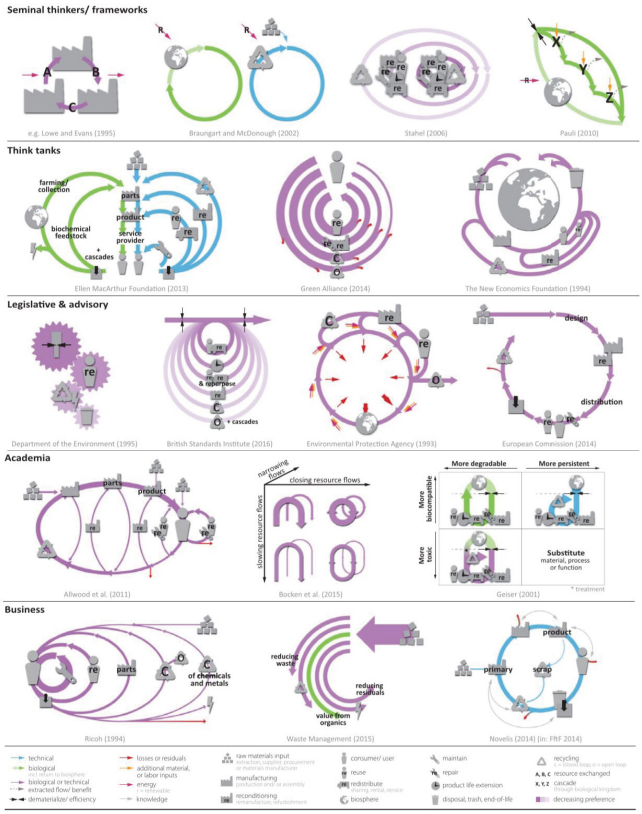


Figure 2.1 Visual representations of the circular economy concept (Blomsma & Brennan, 2017)

In addition, it is evident that the underlying understandings of these illustrations include resource life-extending strategies (Blomsma & Brennan, 2017).

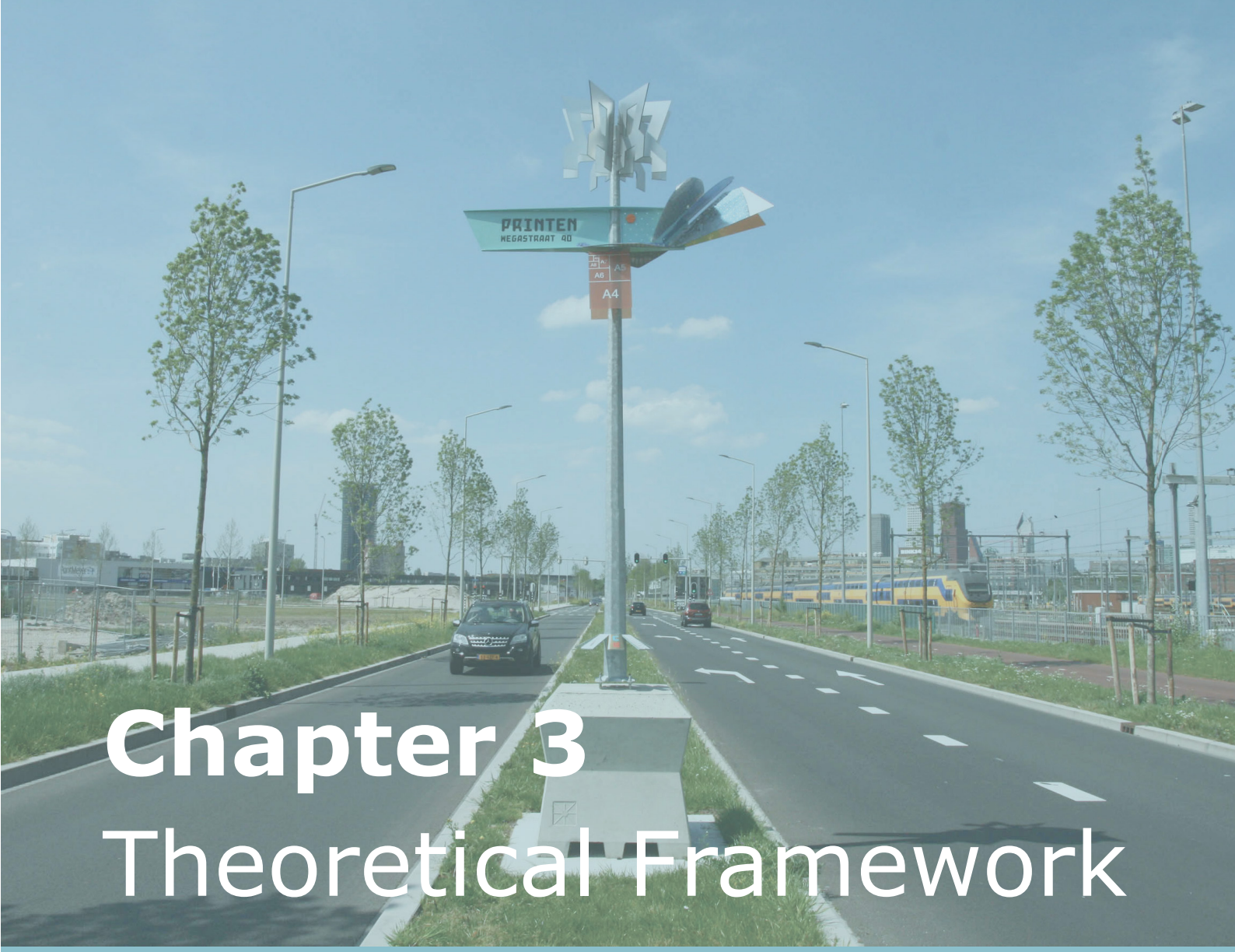
In his critical account of the effectiveness of a circular economy, Skene (2018) mentions several core foundations of the circular economy concept: recycling, restauration, renewable energy use, elimination of waste, elimination of toxic chemicals,

eco-efficiency, biological nutrient return, extended product life, and economic growth. Having a quick glance at these core foundations, it is not difficult to see that they are not new by themselves. This is echoed by Blomsma and Brennan who assert that:

''... the various resource strategies grouped under the CE's banner are not new individually...'' (Blomsma & Brennan, 2017, p. 603)

Thus, although the circular economy concept may occasionally be portrayed as something innovative or new (Ellen MacArthur Foundation, 2013b; Reike et al., 2018; UNEP, 2006), at least some of its core foundations are already well known.

In short, there is a wide variety of definitions and understandings of the circular economy concept. Although there are differences, there are also clear resemblances between these understandings as there is often a focus on materials and cycles (e.g., 'closing the loop'). Furthermore, this section outlined the relevance, and variety of origins and related concepts of the circular economy concept. Considering the wide variety of understandings of the circular economy concept, I find it interesting to study whether this wide variety of understandings is 'reflected' in the manifestations of the concept in the practices in the Binckhorst. Therefore, studying the understandings of the circular economy concept of the carriers of practices is important. However, it is also essential to analyse the practices themselves to discover how the circular economy concept is employed in these practices. In the next chapter, I delve into practices by presenting my theoretical framework.



Chapter 3
Theoretical Framework

The signpost on the image above is a ‘Binckhorst Being’. Binckhorst Beings are signposts that express and enhance the industrial character of the Binckhorst. The Binckhorst Beings are constructed from materials provided by organisations and businesses located in the Binckhorst. Therefore, these remarkable landmarks are also a way for the inhabitants of the Binckhorst to signal their presence.

Comparable to the Binckhorst Beings signposts, constructed from different components, this theoretical framework provides a guide to approaching the case studied. In this chapter, I describe the theoretical framework used for this research. I introduce social practice theory as a type of cultural theory and I touch upon the different types of cultural theory against which social practice theory gains its profile. Additionally, I explain social practice theory and what it is used for. Finally, I specify the research objective and research questions that form the basis of this research.

3.1 Social practice theory

Social practice theory is a type of cultural theory. Therefore, I first briefly discuss cultural theory in general, followed by an examination of three other types of cultural theory against which social practice theory gains its profile. Hereafter, I set out what social practice theory is and I take a closer look at the concepts that are important in this theory.

3.1.1 Cultural theory

Cultural theories are social theories that attempt to explain or understand action and social order. They do so by referring to symbolic and cognitive structures and they recognise that the 'social construction of reality' is complex (Reckwitz, 2002). In 'Toward a Theory of Social Practices' Andreas Reckwitz (2002) recognizes four types of cultural theory: mentalism, textualism, intersubjectivism and social practice theory. The theory used in this research – social practice theory – gains its profile against the first three modes of thinking. The essential difference between these types of cultural theory is the realm in which the theories 'place' the social. Accordingly, the unit of analysis of social theory and social analysis is conceptualised differently within these modes of thought (Reckwitz, 2002). Classical social theory offered two answers to the question of 'where is the social localised?'. On the one hand, the model of 'homo economicus' places the social on the level of the intended or unintended product of subjective interests (i.e., a common will or distribution of values on markets). In this thinking, people are seen as (semi) rational decision makers (Nicolini, 2012). On the other hand, the model of 'homo sociologicus' places the social in a consensus of norms and roles (Reckwitz, 2002). In this thinking, people are conceived as a norm-following and role-playing individuals (Nicolini, 2012). In the former case, the smallest unit of analysis are single actions, while in the latter the smallest unit of analysis are normative structures (Reckwitz, 2002). The 'smallest unit of analysis' in social sciences refers to the micro-level of analysis. However, there is another answer to 'where is the social localised?'. The 'homo practicus' idea treats people as carriers of practices, they are a body/mind who carry and carry out social practices (Nicolini, 2012). In this last case, social practices are the smallest unit of analysis.

In the next sections, I discuss the different types of cultural theory including social practice theory. I conclude this chapter by defining the research objective and theoretically informed (sub-)research questions.

3.1.2 Mentalism

The first type of cultural theory that I discuss is mentalism, the longest tradition within cultural theories. Mentalism locates the social in the human mind. It assumes that the mind is the place of knowledge and meaning structures (Reckwitz, 2002). Accordingly, the smallest unit of analysis is mental structures. It is important to mention that there are two types of mentalism, objectivist and subjectivist. The objectivist approach understands human behaviour as an effect of symbolic structures in an unconscious mind (Reckwitz, 2002). In this approach, the social is the mental and the social and psychological level are identical. The subjectivist approach is related to social phenomenology and understands the main aim of social analysis to be the reconstruction of the sequence of mental acts of consciousness. In this approach, the social is located in the mind, even if the mind turns out to be something different, for example the sequence of intentional acts in consciousness (Reckwitz, 2002). Despite the differences between these approaches, they both deal with mental structures and activities as the centre of the social-theoretical language. Using theories of mentalism to answer the question 'what do people think about the circular economy?', the analysis would consist of examining and understanding people's feelings, beliefs, and knowledge about the circular economy. Even though, I do ask interviewees about their understanding, my focus is on the understanding itself rather them on the mental structures. Knowledge about how interviewees understand the circular economy concept could help uncover tension between the higher and lower scale level practices. Mentalism is the first mode of thinking against which social practice theory situates itself.

3.1.3 Textualism

The second type of cultural theory that I discuss is textualism. Textualism locates symbolic structures 'outside' in chains of signs, discourse, symbols, communication, or texts, rather than 'inside' as mentalism does (Reckwitz, 2002). According to textualism, explaining the structurality of the social world involves staying on the level of signs and texts, since that is where symbolic structures are supposed to be located. Within textualism, three theoretical contexts can be recognised. Firstly, post-structuralism and semiotics that have decentred the subject and define the social at the level of discourses or sign-systems. Michel Foucault has defined a theoretical formulation of this approach. Foucault discusses that discourses should not be treated as a document of mental activities behind it. Rather, discourses should be treated as

sequences of events in which symbolic structures are manifested (Reckwitz, 2002). Secondly, radical hermeneutics can be regarded as the anti-mentalist heir of phenomenology. In this approach, culture is seen as text, a thick description of the cultural refers to the symbolic quality of material objects, including behaviour, it is thus not in people's heads (Reckwitz, 2002). Thirdly, constructivist theory of social systems – influenced by semiotics and phenomenology. This branch of textualism ascribes the quality of observing the world to communication itself. The sequence of communication is the place of knowledge, codes, and interpretation. Therefore, acts of communication are seen as the place of the social (Reckwitz, 2002). Using theories of textualism to answer the question 'what do people think about the circular economy?', the analysis would consist of examining texts, signs, and symbols. Textualism is the second school of thought within cultural theory against which practice theory gains its profile.

3.1.4 Intersubjectivism

The third type of cultural theory that I discuss is intersubjectivism. This mode of thought places the social in interactions, more specifically in the use of ordinary language. Intersubjectivism assumes that, in speech, actors refer to a non-subjective realm of semantic propositions and of pragmatic rules regarding the use of signs. Therefore, the social has the structure of intersubjectivity (Reckwitz, 2002). Intersubjectivism recognises that agents are endowed with minds and interact with each other. Those agents internalise and utilise the contents and patters of the oversubjective realm of meanings in speech acts (Reckwitz, 2002). Consequently, interaction is understood as the transference of meanings that have been internalised in the mind. Using theories of intersubjectivism to answer the question 'what do people think about the circular economy?', the analysis would consist of examining how people interact with each other. It is not about the individual, rather it is about the interaction between people. Intersubjectivism represents the third mode of thinking that provides the background for social practice theory.

3.1.5 Social practice theory

Reckwitz describes social practice theory as a heuristic device for empirical research, and mentions that it allows for a certain way of seeing and studying social phenomena (Reckwitz, 2002). It is important to mention that practice theory is not true (in the sense that it corresponds to the 'facts'), nor are other types of cultural and social theory false. Rather, social practice theory is a vocabulary that is *"necessarily underdetermined by empirical facts"* (Reckwitz, 2002, p. 257). That is, rather than offering 'true reality', it offers a system of interpretation which enables people to make empirical statements. In contrast to the three previously discussed theories mentalism, textualism, and intersubjectivism, practice theory does not place the social in mental qualities, discourse or interaction. Rather, it situates the social in practices and therefore recognises that practices are the 'smallest unit' of social analysis.

3.1.6 Roots of practice theory

Social practice theory has roots in Heidegger's work, who recognises practices as a source of meaning. Heidegger's explanation of 'dasein' (i.e., existence) and its connection to human action and equipment is echoed in the ontological grounding of practice theories, emphasising that human activity is always already in the world (Shove, Pantzar, & Watson, 2012d). Additionally, social practice theory has roots in the work of Charles Taylor. In the 20th century, Taylor (1971) developed the idea of practice as a way to contest behaviourism, endorsing practices as the main unit of analysis (Shove et al., 2012d). Taylor sets out that meanings and norms implicit in practices are not just in the minds of actors, but also in the practices themselves. These practices should be understood, not as merely individual activities, but as modes of social relation and mutual action (Taylor, 1971). Taylor's example of negotiation exemplifies this: individuals may have certain ideas that they may subscribe to a certain goal. These individuals bring these ideas to negotiations, but they do not bring *"the set of ideas and norms constitutive of negotiation themselves"* (Taylor, 1971, p. 36). The set of ideas and norms have to be property of the society of those individuals before questioning whether or not someone enters into negotiation. Therefore, the set of ideas and norms are not subjective meanings that are the property of individuals. Rather, they are intersubjective meanings, that are constitutive of the social situation in which individuals are situated (Taylor, 1971). In the following section, I present the practice approach used for this research.

3.2 practice approach

Currently, the human race is experiencing the challenges of climate change. It is widely agreed that many ways of life and patterns of consumption that are associated with them are unsustainable (Shove, 2010). An effective response requires a change of such ways of life and patterns of consumption, which need to take place at all sectors of society. The problem is often framed as one of human behaviour. Shove (2010) argues that this framing marginalises and excludes deliberate engagement with other analyses, including analyses grounded in social theories of practice. Currently, policies are configured in a way that sustains the ABC framework – in which A stands for attitude, B for behaviour, and C for choice. Shove asserts: *"The popularity of the ABC framework is an indication of the extent to which responsibility for responding to climate change is thought to lie with individuals whose behavioural choices will make the difference."* (Shove, 2010, p. 1274)

In other words, in ABC thinking, social change depends on values and attitudes (the A), which drive certain kinds of behaviour (the B) that individuals choose (the C) to adopt (Shove, 2010). Policies are aimed at changing the choice of individuals. Intervening strategies assume that climate change is a consequence of individual damage. Therefore, if more appropriate incentives are provided, such individuals could choose to act more responsible and adopt a pro-environmental behaviour (Shove, 2010). When the policies do not bring forth the desired behavioural change, the habit is to perform studies in the same mould (i.e., studies that are aimed to analysing how the behaviour can be changed in any other way). It is easy to see that this is then a self-sustaining paradigm, in which behaviour is routinely perceived as something that is shaped by factors (Shove, 2010). Quoting David Uzell (2008), Shove (2010) argues that strategies that are aimed at changing individuals' behaviour do not address the larger and more significant problems regarding the conditions under which people think they need to live and consume. Social practice theory is conceived to address the latter issues better, or at least to a greater or more appropriate extent than the ABC framework.

3.2.1 Description of practice approach

A practice approach can be demarcated as an analysis that either "*develops an account of practices, either the field of practices or some subdomain thereof (e.g., science), or treats the field of practices as the place to study the nature and transformation of their subject matter.*" (Schatzki, Knorr Cetina, & von Savigny, 2001, p. 2). The social practice approach used in this research develops an account of practices since it studies specific practices in the Binckhorst. My social practice approach is informed by two additional traditions. Firstly, it is informed by the posthumanist tradition, which is known for attributing agency to objects and things (Behagel, Arts, & Turnhout, 2017). The posthumanist tradition treats material agency as symmetric with human agency. Additionally, it perceives material and human agency as temporally emergent in practice, and also constitutive of one another (Behagel et al., 2017). Therefore, this tradition decentres agency and includes material objects. Secondly, the practice approach of this research is informed by a pragmatist tradition, which applies a notion of situated agency that highlights the local context of practices (Behagel et al., 2017). Additionally, scholars of the pragmatist tradition apply the notion of performativity to emphasise that reality emerges from the practical engagement with it (Behagel et al., 2017). Considering these concepts, performances are *"shaped in social relationships and material contexts, thus including affects, bodily dispositions, tacit knowledges, and skills"* (Behagel et al., 2017, p. 4). Thus, in studying practices I take into account objects (i.e., materials) and the contexts of practices that may influence practices or be influenced by them.

Shove (2010) discusses there is a weaker and stronger version of social practice theory. The weaker approach enumerates practices and takes them at face-value, it is primarily descriptive and a-theoretical (Nicolini, 2012). It considers domains of daily life, such as 'food', as the sites in which systems and behaviour interact (Shove & Walker, 2010). Additionally, it often builds on the idea that practices are self-explanatory (Nicolini, 2012) and places behaviour in a social and institutional context (Shove, 2010). However, it does not consider social practices themselves as dynamic entities (Shove, 2010). Both the weak and strong approach are interested in the mundane and often anonymous specifics of organisational life. The strong approach, however, aims to explain these organisational matters in terms of practices, rather than merely identifying them (Nicolini, 2012). The more radical

stronger approach to practices perceives social practices as dynamic, orchestrating, and ordering entities in their own right (Shove, 2010; Shove & Walker, 2010). Additionally, the latter approach treats practices as being central to the extent that individuals adopt an inferior role as the carrier of a practice (Shove, 2010). Reckwitz (Reckwitz, 2002) argues that practices consist of elements – materials, competences, and meanings – that are interconnected to one another. These elements may be seen as the ingredients of a practice that, when integrated, form a practice (more about this in chapter 3.2.4 'Elements'). From this stonger perspective, understanding organisational life and social change requires understanding how practices evolve, how complexes of practices form and fragment (Shove, 2010) and operate in different contexts and over time (Nicolini, 2012). As one of the objectives of this research is to gain a deeper understanding of the complexity and dynamics of practices, I adopt the stronger approach to social practices. Thus, I identify individuals as carriers of practices and distinguish elements (materials, competences, and meanings) as the ingredients of practices and address the relationship between the practices studied and their contexts.

Nicolini suggests that *"practice theories depict the world in relational terms as being composed by, and transpiring through, a bundle or network of practices"* (2012, p. 8). Thus, social theories of practice can be used to uncover and examine the relations between practices. These relations can be of influence on the trajectories of the defining elements of individual practices, as well as on the trajectories of the practices themselves which are part of more extensive complexes of practices (Shove, Pantzar, & Watson, 2012b). This research is primarily concerned with the relationships between the defining elements of an individual practice, rather than between individual practices within a network of practices. The reason for this is that the main objective of this research is to examine how the circular economy concept is manifested in practices, and not necessarily examining the dynamics between practices, although this would be an interesting topic for further research.

3.2.2 Description of practices

Practices are the main unit of analysis of this research. It is therefore important to define what practices might entail. First, it is important to note that different theorists define practices differently. Most people that theorise practices conceive of them as arrays of activity. Other theorists define practices as the skills, and presuppositions that underpin activities. Most theorists in traditional social sciences define practices as arrays of human activity. Posthumanists generally also include activities of nonhumans, such as machines and objects. Despite this variety in understandings of practices, most practice theorists would agree that *"activities are embodied and that nexuses of practices are mediated by artefacts, hybrids, and natural objects."* (Swidler, 2001, p. 11). In other – more simple – words, practices are things that are done (i.e., activities in the broadest sense), in which humans as well as objects play a role.

Social practice theorists, such as Shove, Pantzar, Watson, and Walker, primarily analyse 'ordinary' practices. These practices are often daily routines such as cycling, car-driving, showering, and Nordic walking (Shove, Pantzar, & Watson, 2012c; Shove & Walker, 2010). This research, on the other hand, studies more complex practices. That is not to say that the practices studied by the aforementioned scholars are not complex. On the contrary, these scholars have shown the complexity of such practices, how elements are integrated when such practices are enacted, and how stability and change may occur. However, the practices studied in this research are not 'simple' acts such as cooking or cycling. Rather, the practices studied in this research can be perceived as an assemblage of different practices. Sleutelen met Jongeren, for example, is a car repair shop that simultaneously educates and guides problematic youngsters. Next to repairing motor vehicles, the youngsters are helped out and guided in different ways which may all be seen as single separate practices. However, for the sake of this research, I do not differentiate between these practices. Rather, I treat them as a part of the 'larger' practice, which may be called a 'practice-as-entity' (e.g., the practice Sleutelen met Jongeren). Despite the fact that I take a slightly different approach to practices, it is meaningful to note that this approach nonetheless fits a social practice perspective since there is *"…a consensus that practices are molar units; that is, they are complex wholes composed of 'smaller' elements – for example, bodily motions and simpler actions"* (Nicolini, 2012, p. 10).

3.2.3 Practice-as-performance and entity

There is an analytic difference between two 'kinds' of practices: practices-as-performance and practices-as-entity. Firstly, practices-as-performance are practices as enacted in specific moments and places. Secondly, practices-as-entity are the emergent outcomes of such performances (Shove, 2010). Practices-as-performance may be seen as

single actions (i.e., performances) that consist of elements that are integrated when the practice(-as-performance) is enacted. As these practices are routinely enacted, they are kept alive and kept in circulation. As such, they reproduce the practice in a specific fashion – which is seen as a practice-as-entity. I find the practice of playing football useful to exemplify this. Kicking a ball repeatedly, passing it to other people, and kicking it between two posts and a crossbar are multiple single actions (i.e., practice-as-performance) in a pattern that represents the practice of playing football (i.e., practice-as-entity). It is important to note that I do not explicitly refer to this analytic difference between practice-as-performance and practice-as-entity. As the practices studied for this research are more complex than Nordic walking and showering for example, the practices studied are not as easily distinguished as either 'performance' or 'entity'. Nonetheless, it is important to note that this research is primarily concerned with practices-as-entity. The practices studied (such as car repairing), have been studied as a practice-as-entity. In this example, practices such as loosening a bolt, replacing a tire, and refreshing oil may be seen as practices-as-performance. In chapter 6 'Discussion', however, I discuss this topic in more detail.

3.2.4 Elements

Reckwitz notes that *"A practice is a routinised type of behaviour which consists of several elements, interconnect to one other: forms of bodily activities, forms of mental activities, 'things' and their use, a background knowledge in the form of understanding, know-how, states of emotion, and motivational knowledge."* (Reckwitz, 2002, p. 249). This quote includes short descriptions of the elements of which practices consist. Practices consist of three different types of elements: materials, competences and meanings. Materials encompass objects, infrastructures, tools, hardware, and the body itself. Competences include multiple forms of understanding and practical knowledgeability (i.e., skills). Meanings encompass mental activities, emotion, motivational knowledge, ideas, symbolic meanings and aspirations (Shove, Pantzar, & Watson, 2012a; Shove et al., 2012d). Shove et al. put forward two propositions: first, "*social practices consist of elements that are integrated when practices are enacted"* (Shove et al., 2012a, p. 21). And second, *"practices emerge, persist, and disappear as links between their defining elements are made and broken"* (Shove et al., 2012a, p. 21). In this research, I endorse both of these propositions. This allows for a 'dissection' of practices into elements for accurate analysis. Additionally, it allows for critical engagement with the elements and the 'role' these elements play in a practice.

The configuration of elements and their interdependent relations define practices. If specific configurations are to remain effective – i.e., if the practice is to be sustained – the connections between the defining elements need to be renewed continuously (Shove et al., 2012a). Routinised integration of the elements of a practice results in stability, the practice is sustained and remains the same. Therefore, stability should not be understood as a dead-end of a linear process of normalisation. Rather, it should be understood as an ongoing achievement in which similar elements are repeatedly linked together (Shove et al., 2012a). I use my example of playing football again to exemplify this. For playing football, required materials are a football, a goal, a (football) field, and people. The competences involved with playing football are knowledge about and experience with how to kick and aim the ball, and knowledge of the rules of playing football. Finally, the meanings involved with playing football include the ambition to score goals and win. In other words there needs to be a sense of competition. Simultaneously, it is seen as a recreational activity which is associated with being healthy. If these elements are repeatedly integrated in a similar way, the practice of playing football is sustained. If (one of) the elements are not integrated in a similar way, the practice changes or ceases to exist. For example, if there were no goals or if there was not a football, the practice of playing football would change radically or disappear. This example also demonstrates that the elements are configured in a specific way that defines the

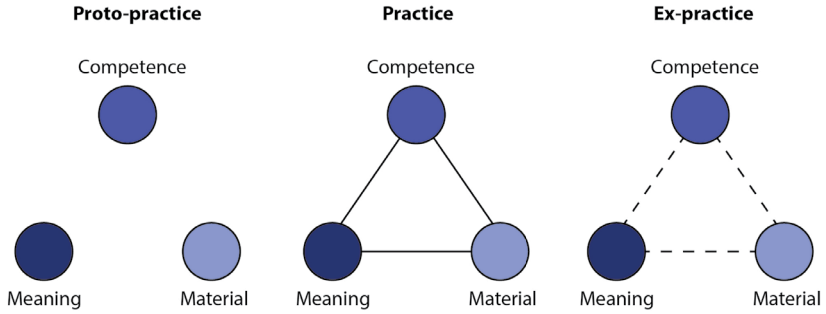


Figure 3.1 Schematic overview of proto-practice, practice, and ex-practice (Shove et al., 2012a, modified by the author)

practice of playing football. If the meaning of a sense of competition would be absent, for example, the goals could be absent as well, since the number of goals is no longer relevant for the practice of playing football, which could also influence the competences involved. This example illustrates that the elements of practices are closely tied together and that their configuration determines 'what the practice looks like'.

The idea that a practice is an effective configuration of elements suggests that these elements are 'out there' in the world, waiting to be linked together to form a practice (Shove et al., 2012a). If practices exist when elements are integrated, it is important to recognise that elements also exist without being integrated, this is called proto-practice. Next to that, an important recognition is that practices fall apart when the links are no longer sustained, it becomes an ex-practice (Shove et al., 2012a). Figure 3.1 schematically illustrates proto-practice, practice, and ex-practice.

Practices spread when enacted by more people. Shove et al. (Shove et al., 2012a) illustrate this with the example of car-driving. They demonstrate that throughout history the practice of car-driving has changed because its elements changed. One example of this is how the competences of car-driving changed. In the early 1900's, people who owned a car were required to be either mechanically experienced or knowledgeable, or wealthy enough to hire someone who was, since engines (materials) of the cars in that period would easily break down. Therefore, there were also images of risk and adventure associated with car-driving. As the car engines became more reliable (change of material element), car-driving became less mechanically demanding and also less associated with risk and adventure. Thus, it became more accessible for a broader public (Shove et al., 2012a). Whereas in the late 19th and early 20th century, car-driving was primarily carried out by wealthy people that were adventurous and mechanically minded, nowadays a lot more people carry out this practice (i.e., the practice has spread). Thus, the rate at which a certain practice spreads depends on the configuration of the defining elements (Shove et al., 2012a). In the example of car-driving, the change of the material element was accompanied by a reduced mechanical expertise requirement. This combination made the practice of car-driving more accessible to more people. The example of car-driving also illustrates how the defining elements of a practice can co-evolve and are mutually shaping. The change of the material element resulted in a change of the required competences. Next to that, the meaning that was associated with car-driving transformed from an image of risk and adventure to an image of a necessary mode of transport (Shove et al., 2012a). Another important topic that I recognise is that the defining elements of a specific practice may not necessarily be part of that single practice. Rather, the elements of one practice may be shared with another practice or multiple other practices (Shove et al., 2012a). With regard to car-driving, for example, roads can be considered to be an element of car-driving as well as cycling and walking. A road may therefore be integrated in configurations of multiple different practices at once. Because of this, a change within an element of one practice may impact upon multiple practices at the same time. This is, however, not the focus of this research as there are other interesting topics that should be addressed first – such as a critical consideration of the practices and their constitutive elements themselves, and how the context influences the practices, and vice versa. These are, for now, more interesting as one of the objectives of this research is to examine how the circular economy concept is understood by carriers of a practice, and how this concept is manifested in such practices. In chapter 6 'Discussion', however, I discuss how this could be a research topic for further research.

3.2.5 Carriers

The role that people play in practices is those of bodily and mental agents who carry and carry out social practices (Reckwitz, 2002). These carriers may be seen as a host of the practice. An individual is often the carrier of many different practices, that are not necessarily coordinated with one another (Reckwitz, 2002). As there are diverse social practices, and since every carrier carries out a multitude of different social practices, the individual is the crossing point of practices (Reckwitz, 2002). A carrier of a practice is neither autonomous nor judgemental who conforms to norms. Rather, a carrier understands the world, and uses know-how and motivational knowledge, according to the particular practice. He or she is, therefore, also a carrier of understanding, know-how, and desiring (Reckwitz, 2002). These mental activities of understanding, knowing-how, and desiring are elements and qualities of a practice in which the individual (i.e., carrier) participates, not qualities of the individual. Practices may not only be understood by the carrier, rather they are also understandable to observers within the same 'culture' – i.e., those who are familiar with the common language (Reckwitz, 2002).

3.2.6 Context

Nicolini (2012, p. 9) cites Wenger's definition of a practice as *"practice is doing, but not just doing in and of itself. It is doing in a historical and social context that gives structure and meaning to what people do. In this sense, practice is always social practice"* (Wenger, 1998, p. 47). Shove echoes this and emphasises that attitudes and behaviours are always grounded in specific contexts and also have a particular history which is embedded in certain structures and institutions (Batel et al., 2016). Additionally, theories of practice consider the state and other institutions to configure the fabric and texture of daily life, accordingly, social practices are considered to be *"socially, institutionally, and infrastructurally configured"* (Batel et al., 2016; Shove, 2010, p. 1281).

Thus, understanding practices involves understanding the context in which they take place. In this research, I distinguish the (bio)physical and social context. The (bio)physical context relates to the physical (i.e., material) characteristics of the situation in which a practice takes place. The social context relates to the social, socioeconomic, political, and institutional characteristics of the situation in which a practice takes place. Figure 3.2 abstractly displays social practices in a context. This is a highly simplified image and does not do justice to the complexities and dynamics of practices. In reality, there would be multiple contexts, elements would be shared between practices, and one carrier would perform multiple practices. The image does, however, provide a simple schematic overview of how I have conceptualised practices, elements, contexts, and carriers in this research.

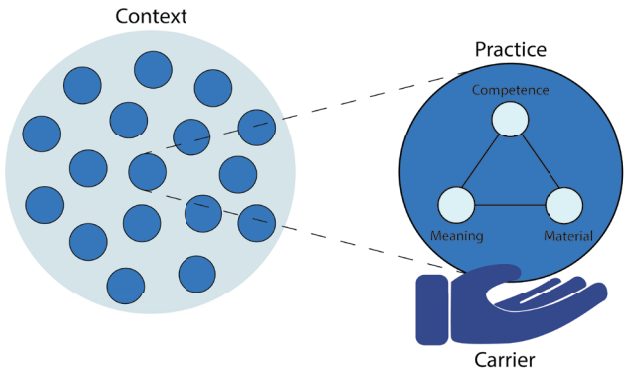


Figure 3.2 Abstract visual representation of practices, elements, context, and carriers (Shove et al., 2012a, modified by the author)

3.3 Research objective and research questions

In this section, I present the research objective and theoretically informed research questions that I attempt to answer in this research. In order to better understand the research objective I describe the process of how I came to this objective, since I perceive this important for understanding where this research 'comes from'. After that, I present the main and sub-research questions.

3.3.1 Research objective

As already mentioned, I take a slightly different approach to practices than other social practice theorists. Whereas the practices analysed by Shove, Pantzar, Watson, and Walker, for example, are rather 'simple' practices such as cycling and showering, the practices analysed in this research are more complex. While it is likely that everyone will agree on an understanding of what showering or cycling is, this is not the case regarding practices that may be seen as circular. In the Binckhorst – as well as in other places – there may be practices that are involved in activities that have been recognised as circular, while these practices are not acknowledged as such. One of the objectives of this research is to highlight these marginalised practices. This may help uncover tensions between the higher and lower scale level practices and their understandings of the circular economy concept.

Initially, I started this research with the following idea: I suggested that the circular economy concept could be a concept that was being advertised as an innovative concept that could considerably change our current way of living. However, I proposed that the circular economy concept might be grounded on existing long-established principles, in addition to possibly being a 'container concept'. This initial perspective is rather critical of the circular economy concept. From this perspective, it makes sense to study how the circular economy concept is understood and manifested in practices (i.e., how do carriers of practices understand the circular economy concept and how do they integrate this in the practices). Additionally, with that perspective, the circular economy concept and practices are seen as separate. If I would have continued with

this critical perspective, I would have still studied practices. However, the aim was then to 'check' whether the practices that employed the circular economy concept indeed included long-established principles, indicating that the circular economy is nothing new and not necessarily innovative.

However, exploratory site visits and acquaintance with social practice theory made me realise that it was not that straightforward. I quickly recognised that many actors do not incorporate the circular economy concept (deliberately) in their practice in the Binckhorst. Next to that, many actors seemed not to be familiar with the concept. As I became more familiar with social practice theory as well as with the wide variety of possible understandings of the circular economy concept, I realised that it does not necessarily matter whether or not the circular economy concept would possibly be a 'container concept' or would be informed by 'old' principles. What did matter, was the wide variety of understandings of the circular economy concept and the way in which the concept is introduced to the Binckhorst. I wanted to better understand how the materials, competences, and meanings of the identified practices are integrated in these practices. This is helpful since several practices may be perceived as being circular, but are currently not identified as such. A thorough understanding of such a practice, and how it could be perceived as being circular, could help others – such as the municipality – to recognise that those practices might be part of what a circular Binckhorst might be like. In the light of the new environmental law – that aims to stimulate local initiatives – this research could contribute to a more inclusive outcome of the development (i.e., transformation) of the Binckhorst.

3.3.2 Research questions

As previously discussed, the main aim of this research is to understand how the circular economy concept is manifested in practices, in the Binckhorst. In order to better understand the practices in the Binckhorst – using social practice theory – it is necessary to identify the defining elements of practices, and examine how these elements are configured within those practices. Additionally, it is important to identify the context in which these practices take place since these are essential to understanding the practices. With this in mind, I answer the following research questions in this research:

Main research question:

How is the circular economy concept manifested in higher and lower scale level practices in the Binckhorst?

Sub-research questions:

1. What are the higher and lower scale level practices, that may be seen as circular, in the Binckhorst?

2. How is the circular economy concept understood by the carriers of the higher and lower scale level practices?

3. What materials, competences, and meanings constitute the higher scale level practice and lower scale level practices that could be perceived as circular?

4. How are the materials, competences, and meanings configured to constitute the higher scale level practice and lower scale level practices that could be seen as circular?

5. How does the context of the higher and lower scale level practices influence the practices, and vice versa?

The first sub-research question is about a basic understanding of the practices that may be seen as circular. In answering this sub-research question, I provide a description of what the practices entail. The second sub-research question is about how the actors in the Binckhorst understand the circular economy concept. In academics, as well as in practice and policy, there is a wide variety of understandings of the concept. As the municipality desires to develop the Binckhorst in a circular fashion, and because the circular economy is one of the main concepts of this research, it is crucial to recognise how the concept is perceived by actors in the Binckhorst. In the third sub-research question the central concept is elements of practices. It answers of which elements – that is, of which materials, competences, and meanings – the practices studied consist. The fourth sub-research question examines how these elements are configured and integrated in the practices. It provides an understanding of how the elements are linked to one another to form a practice. The fifth and final sub-research question focuses on the context in which the practices (and therefore the integrated elements) are situated. I examine how specific contexts may impact upon specific practices (or elements of practices), and vice versa. The following chapter sets out the methodology that I used to collect and analyse the data that was used for answering these questions.

Chapter 4
Research design

The image above displays the Capriole café located at the Fokkerhaven in the Binckhorst. Capriole is one of the many hidden treasures of the Binckhorst. In a somewhat difficult to find location, the café serves one of the best coffees in the Netherlands, provides a fascinating conference room, and offers workshops related to coffee(beans). The, in my opinion, beautifully designed café combines the industrial character of the former paint factory building and the modern, chic, and homely style used in the development of the Binckhorst. From the outside, it could have easily been an industrial building still, while the inside is modern and minimalistic.

In this chapter I present the design of my research. First, I go over the methodology that is the foundation of this research design. Second, I discuss the research methods – both data collection and analysis – used for this research. Third, I present the case that I have studied. Fourth, I present and explain the validity strategies adopted. And fifth, I discuss the methodological and practical limitations of this research.

4.1 Methodology

Considering the qualitative nature and background of the research objectives and research questions, I adopted social theory for the analysis. More specifically, I adopted an interpretive approach. Whereas the natural sciences are concerned with consistencies in data in order to deduce universal laws, the social sciences more often concern themselves with the actions of the individual. Interpretivists have a critical attitude towards the positivist attempt to define universal laws that would apply to everyone, as people with different cultural backgrounds – that may be under different circumstances – create different meanings, and thus experience different social realities. According to an interpretivist, a rich insight into humanity is lost if the complexity is reduced to a few generalisations (Saunders, 2009). The objective of research undertaken from an interpretivist perspective is to create a better understanding and interpretation of social worlds and contexts (Saunders, 2009). Interpretivism is explicitly subjectivist, as its focus is on multiple interpretations, richness, and meaning-making. An implication of adopting an interpretivist approach is that the researcher needs to recognise that his or her interpretation of the research materials and data play an essential role in the research process (Saunders, 2009). I discuss this in more detail in chapter 4.4 'Trustworthiness and validity strategies'.

A typical logic of inquiry for interpretivist research is abduction (Schwartz-Shea & Yanow, 2012). An abductive way of reasoning starts with a puzzle, surprise, or tension. It then tries to clarify it by identifying the conditions that could make the puzzle less complicated. In doing this, the researcher adopts an iterative process between the puzzle and possible explanations for it (Schwartz-Shea & Yanow, 2012). With regard to this research, the puzzle is how different actors involved in different practices, understand and employ the circular economy concept. In the following section, I explain the use of a single case in this research, after which I discuss the methods used for solving the puzzle.

4.1.1 Case study

For researching the topic under study, I use a single case. Applying a case study in this research is useful as this research aims develop a thorough understanding of something little is known about (Kumar, 2014). A case could be a variety of different 'things', it could be an individual, a group, an instance, an event, or a city for example (Kumar, 2014).

Kumar (2014) notes that the focus of attention in a case study is that specific case in its idiosyncratic complexity, and not on the entire population of cases. Therefore, the selection of the case is based on judgemental and information oriented techniques. The advantage of selecting a single case is that I could study it in a more in-depth way than if I selected multiple cases. However, a disadvantage is that the results from this single case are not easily generalisable. Nevertheless, the aim of practice theory – and therefore of this research – is not to explain causal relationships or provide general laws (Nicolini, 2017). Rather, the aim is to develop a thorough understanding of understandings and manifestations of the circular economy concept in a specific context. Still, since there are currently numerous other projects that aim to stimulate the circular economy, lessons can be drawn from this research.

4.2 Research methods

In interpretive research, data collection and analysis are often intertwined. The reason for this is that an interpretive approach focuses on learning, while working in the field with limited control over the research settings, material as well as over actors (Schwartz-Shea & Yanow, 2012). Therefore, this interpretive research is intentionally flexible. This flexibility applies to specific required responses to things said (during an interview for example), but also to the research process (Schwartz-Shea & Yanow, 2012). Unexpected primary findings have led to changing the initial research design and questions. In this section, I present the data collection and analysis methods used for this research.

4.2.1 Data collection methods

In the this section, I explain the data collection methods used for this research. However, since an iterative process provides the basis for this research, I first explain this process shortly in the following paragraph.

In 'Circulair Den Haag: transitie naar een duurzame economie', the municipality explicitly wishes to transition to a circular economy (Gemeente Den Haag, 2018). This sparked my interest since there are many different activities that take place in the Binckhorst. Thus, in order to achieve a 50% circular Binckhorst, these activities (i.e., entrepreneurs, businesses, organisations, etc.) need to be involved. Considering that there is a wide variety of understandings of the circular economy concept, I was eager to examine how actors in the Binckhorst understood and integrated the concept

into their activities. In order to do this, I wanted first to establish a basic understanding and overview of the different practices in the Binckhorst that understand and integrate the circular economy concept. I did this through a questionnaire which I sent to entrepreneurs, businesses, organisations, etc. However, I received little response (eight out of approximately 50). In addition, several respondents were not open to a follow-up interview, which was essential since I wanted to develop a thorough understanding of how actors in the Binckhorst perceive and integrate the circular economy concept. Because of this insufficient amount of responses, I decided to adopt a slightly different approach. I decided to carry out several site visits. During these site visits, I visited a multitude of businesses and organisations to ask – mostly managers or owners, but occasionally employees – about their familiarity with the circular economy concept, how they understood it, and how they integrated it into their activities. During these site visits, I was able to collect data from more than 40 actors. I found out that there are many practices in the Binckhorst that, despite their rather ordinary/mundane nature, (in some cases unknowingly) incorporate strategies in their activities that are regularly considered as being circular. Based on the answers to the questions, I identified relevant actors for my research. Since my objective is to develop a broad, yet thorough, understanding, I classified the different practices in accordance with the 10R framework (see figure 4.1).

This enabled me to identify what 'kind' of circular activities (i.e., R strategies) the practices include, which enabled me to select a broad variety of practices for semi-structured in-depth interviews.
It is important to note that I make the distinction between two 'types' of practices. I distinguish these practices based on their scale level. I make this distinction since the level at which the different types of practices are enacted differs. Therefore, these practices are enacted in a different way. I make the distinction between a higher scale level practice and lower scale level practices. The higher scale level practice works in a kind of top-down fashion. Whereas the lower scale level practices are (simply) the existing practices in the Binckhorst that take place 'on the ground'. The higher scale level practice is the introduction of the circular economy concept to the Binckhorst. This practice is primarily carried out by the municipality of The Hague, but the cooperatives 'Stadmakers' and 'Cirkelstad' also play a role in this practice. The lower scale level practices are the existing practices in the Binckhorst, such as 'MOOOF', 'Sleutelen met Jongeren', and 'Gered Gereedschap'.

For the higher scale level practice, the analysis consisted of semi-structured in-depth interviews with two employees of the municipality, someone involved in the Cirkelstad network, as well as a qualitative document analysis of documents specifying the ambition and or actions aimed at introducing the circular economy to the Binckhorst. For the lower scale level practices, the analysis consisted of semi-structured in-depth interviews.

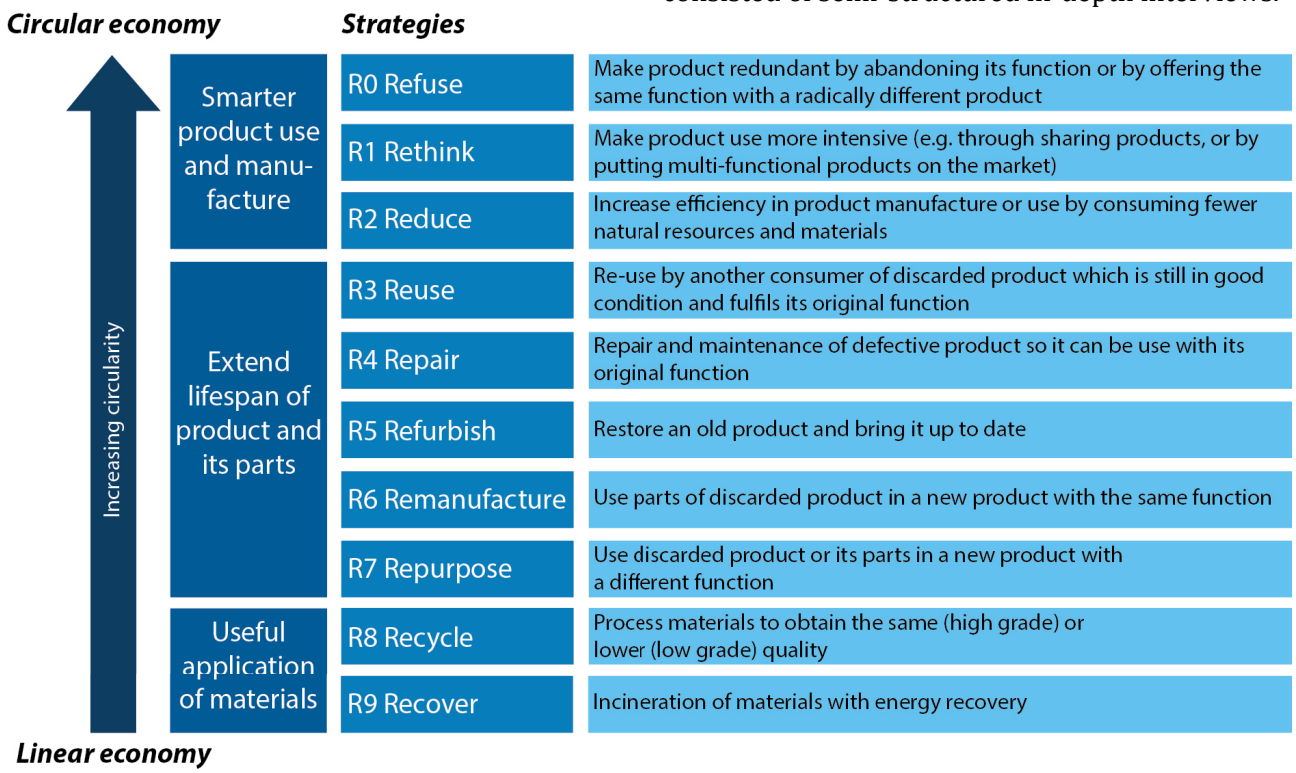


Figure 4.1 The 10R framework (Potting, Hekkert, Worrell, & Hanemaaijer, 2017, modified by the author)

4.2.1.1 Interviews

I use semi-structured in-depth interviews as a data collection method for both types of practices for this research. Interviews, in general, allow researchers to gain more detailed information and more focused insights into how individuals interpret a research topic (Silverman, 2016). In order to gain a deeper insight into the practices studied, it is useful to interview the actors (i.e., the carriers) that enact the practices.

The use of semi-structured interviews as a data collection method combines the advantages of both structured and unstructured interviewing methods. On the one hand, a semi-structured approach allows for some degree of flexibility and freedom in terms of its structure, question wording, contents and order (Kumar, 2014). This is particularly useful for extensively exploring and digging deeper into a phenomenon. It enables the interviewer to ask the interviewee to elaborate on a certain topic, explain a statement, or provide an example to better understand the phenomenon. At the same time, I used an interview guide (see Appendix A) as a back-up to ensure collection of data that sufficiently touches upon the research topic (Boeije, Hart, & Hox, 2009). The interview guide contains a set of loosely defined questions and topics that I deemed necessary to address. These questions are largely based on the same concepts present in the social practice theory used as the research questions are based on (concepts such as practice's elements – materials, competences, and meanings – and contexts).

The interviews took place in a face-to-face situation and the interviews were audio-recorded. Based on the audio-recordings of the interviews, I made 'spoken-to-written language' transcriptions. This type of transcription method is appropriate for this research, since other types of transcription methods were deemed less suitable. Word-by-word transcriptions, for example, describe the responses to an extent that is overly detailed and would not provide additional value to this research. Summary transcriptions, on the other hand, would not yield enough detail, potentially resulting in a loss of data (that in hindsight could have been important). In addition to spoken-to-written language transcripts, I made one to two page summaries based on the transcripts. These summaries were sent to the respective interviewee, as a way to confirm whether or not I interpreted his or her response correctly, according to the interviewee (Schwartz-Shea & Yanow, 2012). The interviews took place in Dutch, since all interviewees' native language is Dutch, as is the researcher's. Additionally, in speaking their native language, the interviewees were enabled to express themselves more easily than they would be in English or any other language.

4.2.1.2 Document analysis

In addition to semi-structured interviews, I used qualitative document analysis as a method for studying the higher scale level practice. The municipality has produced several policy and vision reports and documents that express the ambition to introduce the circular economy concept to the Binckhorst. Therefore, it makes sense to study these, in addition to the interviews.

I selected the documents used for this research on the basis of three criteria. First, the document was required to be accessible for analysis. Second, the document was required to relate to the introduction of the circular economy to the Binckhorst (i.e., it had to note an explicit ambition or action with regard to this topic). Third, the document was required to be produced or commissioned by the municipality or the 'Stadmakers'. Table 4.1 lists the documents that met these criteria and were used for this research.

Table 4.1 Schematic overview of the documents analysed for this research

	Document	**Produced/commissioned by**
1	Circulair Den Haag: transitie naar een duurzame economie	Gemeente Den Haag (Gemeente Den Haag, 2018)
2	Omgevingsplan Binckhorst	Gemeente Den Haag (Gemeente Den Haag, 2019a)
3	Factsheet Klimaat en Energie en Circulariteit	Gemeente Den Haag (Gemeente Den Haag, 2019b)
4	Den Haag Duurzaam, Agenda 2015-2020	Gemeente Den Haag (Gemeente Den Haag, 2015)
5	Metabolische Analyse Binckhorst	Superuse Studios – commissioned by gemeente Den Haag (Jongert & Dirkx, 2016)
6	10 Ontwikkelprincipes van de Stadmakers	Stadmakers – We Think Binck (Stadmakers Den Haag, 2019)

4.2.2 Data analysis methods

In this section, I discuss the methods used, for the analysis of the data, for this research. I used interpretive content and thematic analysis for both the interview transcripts and the documents. It is important to note that the analysis of the transcripts as well as the documents involved skimming, reading, and interpretation. Skimming can be described as the superficial examination of data, whereas reading is a more thorough examination (Bowen, 2009). The process of skimming, reading, and interpretation is iterative and combines elements of content and thematic analysis (Bowen, 2009). In the following section, I first present interpretive content analysis followed by thematic analysis, and finalise by presenting coding.

4.2.2.1 Interpretive content analysis

Traditional content analysis is especially useful for counting interpretations of certain content (Ahuvia, 2001). Interpretive content analysis, however, is particularly useful for capturing and understanding the (latent) meanings of the content (Ahuvia, 2001; Baxter, 1991), which is why I used it as a data analysis method for this research. Through interpretive content analysis I organised the information gathered into categories related to the central concepts and questions of my research – the circular economy concept and (related concepts of) practices. The analysis entailed an initial transcript/document review, in which I identified meaningful and relevant paragraphs and sentences. Using interpretive content analysis, I identified data that related to my topics of interest. These topics of interest include understandings and manifestations of the circular economy concept, defining elements of practices, (bio)physical contexts, and social contexts. Additionally, I identified topics that initially were not of specific interest to me, but that were expressed by multiple interviewees and documents. Such topics are for example power relations between practices and actors, conflicts, and (financial) dependencies. However, an interpretive content analysis alone is not sufficient for this research. In the following section I present another data analysis method used: thematic analysis.

4.2.2.2 Thematic analysis

With thematic analysis I recognised themes within the data. Emerging themes (patterns) became the categories for the analysis (Bowen, 2009). The process of thematic analysis requires more careful and more focused re-reading and review of the data (Bowen, 2009). The data identified through interpretive content analysis of the interview transcripts and documents provided the basis for the thematic analysis. Based on the data's characteristics I uncovered themes that were coded (see chapter 4.2.2.3 'Coding'). I used predefined codes – derived from the research concepts and research questions. However, I also added codes to meaningful data that did not 'match' the predefined codes. Bowen (2009) discusses that – using content and thematic analysis – the researcher should demonstrate objectivity and sensitivity in selecting and analysing the data. In an effort to demonstrate objectivity, I have reviewed the data critically and within its context. As much as possible, rather than quoting a single sentence and situating it out of its context, I have quoted larger fragments of text so as to include the context in which it was said or documented. With regard to sensitivity, I have tried to identify even the subtlest cues to meaning. Naturally, I have not assigned such data unreasonable importance. However, if data in an interview transcript or document slightly indicated something meaningful that could add to this research, I would include it either directly (i.e., quoting or referring) or indirectly (i.e., taking it into account in my interpretation and writings). In the following section, I present coding as a data processing method.

4.2.2.3 Coding

Coding can be used as a method for processing data into categories for further use (Silverman, 2016). It allows researchers to assign codes to data, which allows them to recall it later. Coded data allows the researcher to more easily gather specific data collected under a specific code (Silverman, 2016). I exclusively used coding for processing the data from the interview transcripts. The reason for not coding the documents is that the data relevant for this research in those documents was relatively limited. Hence, I analysed the documents through content and thematic analysis without coding them. The interview transcripts were coded as follows.

I derived the initial codes used for processing the data from the theoretical foundations of this research (see chapter 3 'Theoretical framework'). Table 4.2 displays the coding guide that was used for these initial codes. The codes used for analysis are not displayed here, since I developed a total of 50 codes and presenting all of these is not useful for understanding the thought process behind it. I should note, however, that – during the content and thematic analysis – I realised that there were a few topics that were addressed regularly by respondents and in documents but that were not included in the coding guide. One of these topics was the specific understandings of the circular economy concept (references to concepts such as 'energy',

'demountable', 'extending lifetimes', 'ownership', 'sharing' and 'waste' to name but a few). Another such topic was the transformation of the Binckhorst to a mixed living-working area (references to 'transformation', 'development', and 'uncertainty' are examples of this). Data collected under such codes is not present in the coding guide, since it either not derived from the theoretical foundations (as is the case with the transformation of the Binckhorst topic) or too broad to assign a meaningful category to it (as is the case with the various understandings of the circular economy concept). Nevertheless, I have included the data under different codes (such as 'energy', 'demountable', 'extending lifetimes', and 'uncertainty') in the analysis and in my interpretation. Thus – like the codes derived from the coding guide – these codes are reflected in the results.

I used the qualitative data analysis and research software AtlasTi for coding the data. First, as part of the interpretive content analysis, I used the 'Create Free Quotation' tool to identify data relevant for this research. Next, I used the tools 'Open Coding' and 'List Coding' for coding the earlier identified data. If I came across data that I had not yet identified, I directly assigned a code to it. Next to that, if I noticed data that did not match any of the previously created codes, I assigned a new code to it. Finally, I categorised the created codes according to the coding guide. If the guide was not applicable I included the code in a separate category, as previously discussed. The categories and codes constituted the foundations of the interpretations and therefore of the results.

4.3 Case description

The case studied is 'practices in the Binckhorst' and more specifically, the understandings and manifestations of the circular economy concept of these practices. The Binckhorst is an approximately 146 hectare industrial area in The Hague, the Netherlands. In the north, west, and east, the Binckhorst is surrounded by a railway that sustains the connections between The Hague and Gouda, Amsterdam, and Rotterdam. In the north and east, the highway A12 forms a physical boundary that runs from The Hague to the German border in the west of the Netherlands. In the west, the Binckhorst is demarcated by the Trekvliet, a historical canal that connects the Vliet to the canal system in the centre of The Hague. Figure 4.2 shows a map of the Binckhorst with a line that indicates the border of the Binckhorst.

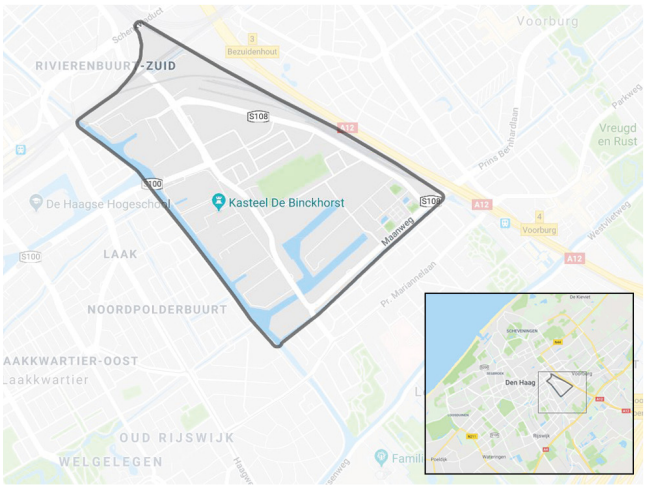


Figure 4.2 Map of the Binckhorst and its location (Google Maps images modified by the author)

Table 4.2 Coding guide used for this research

Concept	Category	Indicators
Circular economy	R principles	Words, word groups or sentences referring to an 'R principle'
	Components	Words, word groups or sentences referring to a component of circular economy (material, social, spatial)
	Networks/collaboration	Words, word groups or sentences referring to collaboration and networks or the lack thereof
Practices	Elements of practices	Words, word groups or sentences referring to (one of) the elements of a practice (materials, competences and meaning)
	Context of practices	Words, word groups or sentences referring to the context of a practice ([bio]physical, social, institutional)
	Power/dependencies	Words, word groups or sentences referring to a dependency of a practice on something or someone, or to power being exercised over or by a practice

Currently, the Binckhorst is a somewhat outdated industrial area, containing a variety of old warehouses, a former gasfactory, a waste collection facility, car repair shops, and workshops to name but a few of it's 'inhabitants'. In 2005, the municipality of The Hague expressed the ambition to transform the Binckhorst to a mixed living-working area. Binckhorst's proximity to the city centre of The Hague, great accessibility, and the presence of three docks makes it an area with a lot of potential (Gemeente Den Haag, 2019a). However, due to the financial crisis that started in 2008, the start of this transformation was delayed. Meanwhile, several trends took hold of the development. Firstly, the self-organisation of the citizens and entrepreneurs played a more important role. This relates to the introduction of the 'nieuwe omgevingswet' (new environmental law). Secondly, urban experiments provided a way to experiment with different roles, authorisations, and collaborations that could produce solutions to complex problems. Lastly, the development of a national transition agenda in which the circular economy is one of the main topics amongst other concepts aimed at transitioning to a more sustainable future (van Bueren, Meijs, Sprecher, Dittrich, & Buizer, n.d.). These developments – that took place between the financial crisis and the initial ambition of the municipality – are integrated into the plans for the transformation. Thus, although the financial crisis delayed it, the transformation of the Binckhorst to a mixed living-working area currently takes place.

The national transition agenda, hinted at in the previous paragraph, includes the national programme 'Nederland circulair in 2050' (Rijksoverheid, 2016). This programme sets out the national government's ambition for The Netherlands to transition to a circular economy. In line with this programme, the municipality of The Hague published the document 'Circulair Den Haag: een transitie naar een duurzame economie', which describes the municipality's ambition to transition to a circular economy (Gemeente Den Haag, 2018). The municipality envisions a Binckhorst that is for 50% circular by 2025. There are three circumstances that make the Binckhorst an interesting case for this research. First, there is a wide variety of practices that take place in the area. Second, considering this and the fact that there is also a wide variety of understandings of the circular economy concept, the ways in which these different practices understand and employ the concept is interesting. And third, the transformation of the Binckhorst is impacting upon and will be impacting further upon these practices. The combination of these circumstances provides a case that allowed me to study the dynamic nature of practices, and the understandings (by carriers) and manifestations of the circular economy concept in practices.

4.4 Trustworthiness and validity strategies

In interpretative research, the researcher is the major instrument for data collection and analysis (Schwartz-Shea & Yanow, 2012). The process of collecting the data and analysing it was subjective to my involvement and interpretation. Therefore, it is important that I reflect on my involvement in the research, and how this involvement has affected the findings. Thus – as previously discussed – this research does not describe a universal law that is true, rather it present my interpretation of the studied phenomenon by applying social practice theory. The following section delves into the process of intrepretation and discusses the strategies that I used to improve the trustworthiness of this research.

4.4.1 Reflexivity

Reflexivity refers to the consideration of and engagement with the manners in which my sense-making and the circumstances in which it took place might have affected it (Schwartz-Shea & Yanow, 2012). It is therefore, important to consider what it means that I – the researcher – has been the main research instrument.

Firstly, my presence during the interviews may have affected responses from interviewees. I have interviewed a variety of people, from a car mechanic to a civil servant. I noticed that my position – as a Master student from Wageningen University – affected the interviews slightly. Interviewees that did not go to (applied) university seemed to think of me as an expert on the research topic. Whereas interviewees that themselves were an expert on the circular economy concept or went to (applied) university seemed to occasionally 'correct' me where they thought I misinterpreted something. It is important to acknowledge this since the level of education, and the accompanied perceived superiority or inferiority, has been shown to influence interactions between people (Yu & Yang, 2008). A first minor action that I undertook was dressing for the occasion. Depending on the 'type' of interviewee, I would dress accordingly. When interviewing a car mechanic, I would wear ordinary clothing (such as jeans, a sweater, and sneakers). When interviewing an 'expert', I would wear slightly more sophisticated clothing (such as neat trousers,

a dress shirt, and leather lace-up shoes). In both cases, I tried to somewhat match my interviewees. I did this in an attempt to promote the practically-skilled people to think and talk more freely, and to reduce their potential questioning of whether or not they are right. With regard to the 'experts', I did this in an attempt to gather as much in-depth information as possible, and to prevent such interviewees from having the idea that they need to explain everything. Additionally, I made notes if I felt as though I influenced someone's response. When interpreting the data, I took these notes into account.

A similar point can be made for my own understanding of the circular economy concept. During all interviews, I did not initially specify a definition of the circular economy concept. Rather, I asked interviewees what they understood the circular economy concept to be. However, in several cases, the interviewee responded that he or she was not familiar with the concept. In such a situation, I had to provide the interviewee with enough 'food for thought' to fill in what he or she understood it to be about. At the same time, I was wary of providing a definition since it could limit their understanding of the concept. Therefore, if necessary, I provided a rough explanation of the concept with the comment that there are many different definitions and that no definition is wrong. Additionally, when making sense of the data, I took into account to what extent an interviewee was (un)familiar with the circular economy concept.

4.4.2 Intertextuality

In interpretive research, data collection and analysis may be affected by researchers' biases (Schwartz-Shea & Yanow, 2012). A confirmation bias could induce researchers to only select data that confirms a belief for or against an argument (Schwartz-Shea & Yanow, 2012). Different strategies have been developed to mitigate such biases and improve data collection and analysis, in which interpretive researchers *"...are looking to articulate various experiences or viewpoints on the topic under investigation, in order to be able to understand its nuances more fully"* (Schwartz-Shea & Yanow, 2012, p. 105). Triangulation – the use of multiple methods – is one such strategy. Triangulation can be used to corroborate the findings of a research. However, Schwartz-Shea and Yanow (2012) note that the use of the term 'triangulation' induces the idea that a convergence across multiple points of information reveals the 'truth'. Since interpretive researchers are not concerned with finding the 'truth', they argue for the use of the term 'intertextuality'. Fundamentally, the two terms are the same. The latter, however abandons the realist implications of the former, which is why intertextuality is a more appropriate term to use for this research.

In an effort to reduce the effect of potential biases, I analysed the data for this research intertextually. Consequently, when possible, I 'checked' my data across different evidentiary sources such as policy documents and websites. I should mention, however, that this was not possible with all interviews. Not all data could be analysed intertextually since a relevant alternative source was not available. Nonetheless, when possible, I attempted to prevent myself from settling too quickly on a certain interpretation.

4.4.3 Member-checking

There is always the possibility that the researcher interprets an interviewee in a different way than that interviewee intended. Member-checking refers to communicating written material – that involves the respective person studied – back to the person (Schwartz-Shea & Yanow, 2012). This can be done as a way to see whether the researcher has 'got it right' according to the person that is studied in a specific situation (Schwartz-Shea & Yanow, 2012). For this research, I used member-checking to ensure that I interpreted the answers to important questions well. In addition, it was a useful way to make sure that I covered important topics and did not neglect parts that were perceived to be important by the interviewee. Member-checking went as follows: first, I transcribed the interviews with a spoken-to-written language approach. Second, I summarised these transcriptions and included the most important topics discussed. Topics included are for example the understanding of the circular economy concept, a description of the practice he or she carries out and his or her role, the defining elements of the practice, and the history and context of the practice. Most interviewees confirmed that my interpretation was correct, sometimes with minor comments with regard to formulation.

4.4.4 Ethical considerations

Before the start of the recording of the interviews, I informed interviewees about the procedures during and after the interview (see Appendix A). Interviews were only recorded with informed consent, which was the case in all interviews. Additionally, I informed interviewees that I would reach out to them if I could not keep confidentiality with regard to sensitive issues. Next to that, interviewees were not forced to answer all questions. If they did not feel like answering a question – for whatever reason – they could refuse to do so.

At the end of each interview, I shared my contact details in case the interviewee felt the need to approach me about anything. Since there are no sensitive issues that are used for this research, there were no issues of keeping confidentiality and all interviewees answered all questions asked to the best of their knowledge.

4.5 Limitations

Despite my efforts and employed validity strategies to ensure meaningful and credible research, there are some limitations to this research. There are both practical and methodological limitations that I address in the following section.

4.5.1 Methodological limitations

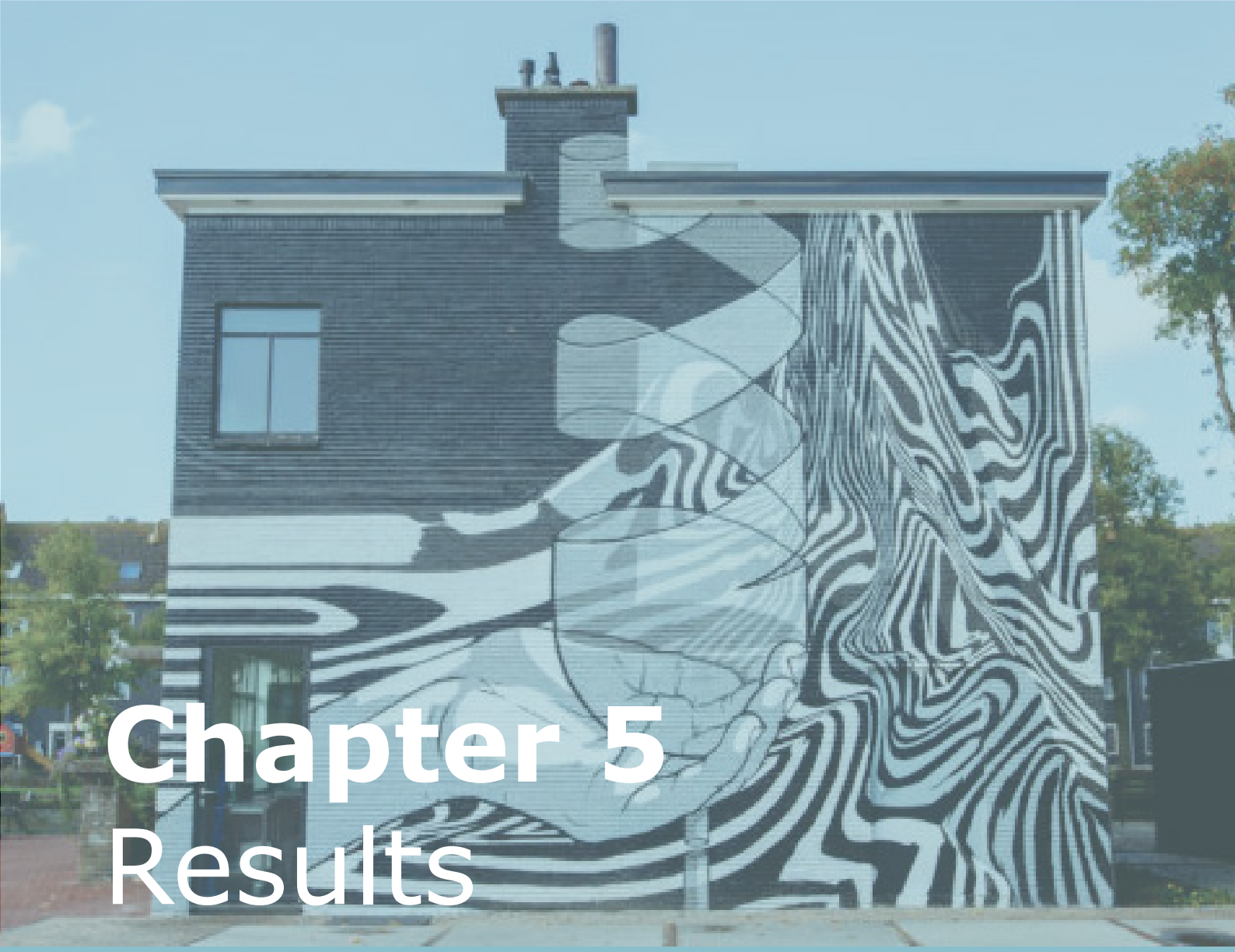
One methodological limitation relates to one of the validity strategies, namely intertextuality. As previously discussed in chapter 4.4.2 'Intertextuality', through intertextuality, I have attempted to confirm interpretations from the data. However, not all practices studied had documents or a website available and/or relevant for this research. Consequently, not all data allowed for intertextual analysis. Thus, I could not, in every case, confirm the responses of interviewees to the interview questions. Due to the lack of this additional information, the analysis of the topic is potentially slightly less extensive than it would be with access to such information.

4.5.2 Practical limitations

There are three practical limitations to this research. One limitation is that I have not interviewed a representative of the Stadmakers cooperative, or some other project developer. Although I analysed the ten core development principles that the Stadmakers published, I could have yielded more interesting relevant data from this cooperative or other project developers. With the transformation of the Binckhorst to a mixed living-working area in mind, and the desire of the municipality and project developers to promote circular area development and circular buildings, interviewing project developers could have been a valuable addition to this research.

Another limitation is that one of the interviewees (O3) was – in his own and my opinion – not familiar enough with the Binckhorst. Although he has been involved with projects in the Binckhorst in the past, at the time of the interview quite some time had passed. He did have a lot of interesting things to say about the circular economy concept with regard to area development and construction, which are happening in the Binckhorst. Cirkelstad – a cooperative of which the interviewee is part of – is also involved in the Binckhorst. However, the interviewee himself was not actively involved with the Binckhorst. Despite the fact that the interviewee provided valuable data concerning the introduction of the circular economy concept (in a broad sense), it is not entirely clear to what extent the data from this interviewee is applicable to the Binckhorst.

A final limitation of this research is the limited amount of practices studied and interviews carried out. It is true that the aim of this research is to develop a thorough understanding of how the circular economy concept is understood and manifested in practices in the Binckhorst, and that this does not necessarily require a vast amount of interviews. However, as is clear from the first paragraph of these practical limitations, there is relevant data that could have added quality to this research. There are two explanations for this perceived lack of interviews. First, there were quite a few actors that – during the site visits – indicated that they were open to a follow-up in-depth interview, with whom I did not have an interview. The reason for this is that they did not respond to my interview request. Second, time constraints limited the amount of interviews carried out. Additional interviews – for example with project developers – could have potentially improved this research, if time would have allowed for it.



Chapter 5
Results

The image above is street art on the Glaswerk building, a restaurant in the Binckhorst. In my opinion, this street art displays a diverse and dynamic landscape. You can easily imagine the dynamic nature of the landscape and see how the landscape changes shapes and moves. In front of the landscape is a glass of wine that can be seen as both emerging and disappearing. The glass spiral is still connected to the stem. For me this symbolises the practices that emerge, change, and disappear. Rather than emerging, changing, or disappearing 'out of nowhere', they are processes in development.
I see this image as a symbol for the Binckhorst and the practices that take place in the Binckhorst. The Binckhorst is a diverse area that is currently changing completely as are the practices located in the area. There are practices in the Binckhorst that emerge, practices that change, and practices that disappear. This is evident from the results that I present in this chapter.

In this chapter I present the findings of this research. However, it is first important to note that, although not conventional in practice theory, I distinguish two different scale levels of practices. On the higher scale level, I distinguish the 'introduction of the circular economy concept to the Binckhorst' as a practice. This practice may be perceived as a top-down practice that is carried by the municipality. On the lower scale level, I distinguish practices that happen 'on the ground', such as 'Gered Gereedschap', 'MOOOF' and 'Sleutelen met Jongeren'. These practices may be perceived as an existing practice that are carried by entrepreneurs, initiators, volunteers and employees. For the lower scale level practices, one in-depth interview for each practice was analysed. Whereas for the practice on the higher scale level, three in-depth interviews as well as six documents were analysed. Practices on both scale levels were analysed in the same way by studying: what they are exactly, how the circular economy concept is understood by carriers of the practices, what the elements are that constitute a practice, what the (bio)physical and social context of a practice are and how this influences the practice and vice versa. The aim of this chapter is to provide answers to the theoretically informed (sub)research questions that I have formulated in chapter 3 'Theoretical framework'.

5.1 Description of the practices studied

This section takes a closer look at what exactly the practices are. First, it sets out what the introduction of the circular economy concept to the Binckhorst is. It then turns to the lower scale level practices and starts with an overview of what these practices are outlined in a table. Three of these practices are discussed more extensively to establish an improved understanding of the lower scale level practices that take place in the Binckhorst.

5.1.1 Description of the higher scale level practice

The practice 'introduction of the circular economy concept to the Binckhorst' is mainly carried out by the municipality of The Hague. The municipality specifies – in a variety of documents – the importance of a circular economy and the need to transition to it. Additionally, two of my interviewees (O1 and O2) are employees of the municipality that are involved with the circular economy in the Binckhorst. O1 is a civil servant who is involved with promoting the circular economy in The Hague. O2 is a resource manager that is hired by the municipality. The aim of the resource manager is to connect material flows, entrepreneurs, and organisations to promote the circular economy in the Binckhorst. Next to the municipality, the 'Stadmakers – We Think Binck' (see figure 5.1) – a collaboration between market parties (mainly project developers, see figure 5.2) involved with the transformation of the Binckhorst – have defined ten development principles, one of which concerns the circularity of the Binckhorst. Concerning circularity, this cooperation mentions sustainable energy extraction, innovative mobility systems, reuse, waste processing, and climate adaption, double use, local production, and the sharing economy as key terms for the Binckhorst (Stadmakers Den Haag, 2019).

Figure 5.1 The 'We Think Binck' logo from the Stadmakers

Other than that, there are no documents that describe how the Stadmakers desire to make the Binckhorst circular. Next to the Stadmakers, the 'Cirkelstad' network, of which one of my interviewees (O3) is part, attempts to stimulate circularity in the construction sector. O3 is a consultant who helps and supports areas with reaching ambitions aimed at circular development. Due to the transformation of the Binckhorst to a mixed living-working area, construction could form an important aspect of the circular economy in the Binckhorst.

The introduction of the circular economy concept to the Binckhorst involves multiple different actions that are described in different documents by the municipality. These actions take place in many different sectors of the municipality. In most of these actions, there is a clear focus on materials. A study by bureau 'Metabolic' (Metabolic, 2016) carried out for the Rotterdam-The Hague region concluded: *"construction materials, biomass, and critical metals as most promising for a circular approach"* (Gemeente Den Haag, 2018, p. 18). Additionally, the municipality asserts that the construction sector – as well as households, trade, and public administration – are promising with regard to the circular economy (Gemeente Den Haag, 2018). The construction sector is interesting with regard to the Binckhorst as well because of the transformation of the area to a mixed living-working area. Concerning the circular economy, the municipality mentions the following about construction and area development:

"Oftentimes, for each area or project the possibilities for reuse of construction materials, working with material passports, and high quality reuse of concrete are considered. In the 'Omgevingsplan Binckhorst' circularity is promoted, for example. Among other things, this is done through stimulating businesses to register their residual flows (i.e., waste) in an online tool designed for supply and demand. Additionally, locations are made available for bottom-up circular activities." (Gemeente Den Haag, 2018, p. 13)

This quote illustrates that even in only one sector there is a variety of measures that are perceived to stimulate the circular economy. With regard to other sectors, households, for example, the

Figure 5.2 The parties involved in the Stadmakers cooperative

municipality aims at stimulating the separation of household waste to improve the reusability of materials. Additionally, they stimulate reuse through thrift shops (Gemeente Den Haag, 2018). Also, the municipality would like to use waste as a raw material and keep the separated waste streams inside the city to allow for processing and upcycling (Gemeente Den Haag, 2018). Concerning social affairs, the municipality stimulates entrepreneurs to make the economy more circular, because it requires a lot of low-skilled labour. And in mobility, the municipality directs towards more communal car use (Gemeente Den Haag, 2018). Next to materials, (innovative) start-ups seem to have an important position in the municipality's ambition to transition to a circular economy:

''Besides activities for specific areas or projects, start-ups that are involved in the circular economy are actively attracted. They are then linked to businesses that can work circularly (together).'' (Gemeente Den Haag, 2018, p. 13)

''Through bringing together large and small companies with start-ups, masterclasses can be organised. Companies take a closer look at their business-processes and -design and search with innovation (start-ups) for a more circular manner of production… By helping circular start-ups with finding housing, ensuring a structural supply of materials and helping them with funds, they can spend all their energy into the development and marketing of their innovative product. Such an environment also attracts successful circular start-ups from outside The Hague.'' (Gemeente Den Haag, 2018, p. 25)

With these statements, the municipality implies that the start-ups are innovative, can help existing businesses, will attract circular start-ups, and most importantly aid in the transition to a circular economy. Next to that, considering the importance of waste in the circular economy concept, it is interesting to mention that the municipality contends that the proximity of the waste processor (Haagse Milieu Services) is beneficial for stimulating the circular economy in the Binckhorst:

''Considering the proximity of waste processing and the desired transformation of the area on the long term, this is the designated area for stimulating activities in the circular economy.'' (Gemeente Den Haag, 2019a, p. 21)

The municipality has stated this in the 'Omgevingsplan Binckhorst' with regard to a specific area within the Binckhorst. Furthermore, the municipality mentions that if the waste processing facility moves from the area, or when the environmental impact decreases, the area will transform to a mixed living-working area (Gemeente Den Haag, 2019a). In this light, an interesting development is the potential rehousing of the HMS. Considering the importance of waste in the circular economy concept (see for example Ghisellini, Cialani, & Ulgiati, 2016), the rehousing of a facility that collects the waste of The Hague is perhaps not a logical development.

During one of my site visits, it became evident that there are advanced plans for the rehousing of the waste processing facility. The intended future function would be housing. A representative from the province of Zuid-Holland argued that the plans have not (yet) been established, but he did not deny the plans either. According to people who are well acquainted with the development of the Binckhorst, those plans (i.e., the rehousing of the HMS) will continue to be realised. Considering the importance of waste in a circular economy – according to the municipality – this development could influence the transition to a circular economy in the Binckhorst to a large extent, in the sense that the HMS is a facility that accounts for a large amount of the material flows in the Binckhorst. This is the case since a greatly reduced amount of waste likely results in less potential 'waste-as-food' projects, which is a contradictory development considering the municipality's ambitions. Another such situation is seen regarding the 'bouwstoffen recyclepunt' (building materials recycle location) that was supposed to be realised in the Binckhorst. 'Den Haag Duurzaam, Agenda 2015-2020' is a document that functions as municipality's conformance to the current policy programmes aimed at sustainability and simultaneously shapes a framework for new plans (Gemeente Den Haag, 2015). This 'sustainability agenda' argues:

''We propose a strategy concerning the circular economy. We pay attention to accelerating the circular economy, Cradle to Cradle and the economic effects that accompany this. This issue is particularly influenceable at a higher scale level, because of that we mainly reinforce current national policy programs. This could lead to a substantial expansion of the supply of sustainable building materials and -techniques that support desired neighbourhood initiatives. At the same time, we review where, in our city, local opportunities present themselves. Think, for example, of the building materials recycle location in the Binckhorst that could become the leading recycle centre in the province of Zuid-Holland. This could help with sustainably transforming the current

offices market. This strategy will be aligned with the new Household Waste Plan." (Gemeente Den Haag, 2015, p. 6)

The document's preface is written by Joris Wijsmuller – the previous alderman who had sustainability in his portfolio – on behalf of the municipal board. At the moment that I am writing this, the 'bouwstoffen recyclepunt' has not been realised. Upon doing research as to why it has not materialised, a civil servant involved with the circular economy in The Hague acknowledged that the project did not take place after all. According to him and the resource manager, the reason for this was the installation of the new municipal board that prioritised the energy transition over this recycling facility.

This section has reviewed the different ways in which mainly the municipality introduces the circular economy concept to the Binckhorst. Generally, there is a focus on materials and construction, and start-ups are seen as important and promising for the circular economy. Additionally, not everything that is proposed by the municipality is realised due to different developments. This section has explained what the practice 'introduction of the circular economy concept to the Binckhorst' is like. This has developed a thorough understanding of the practice that helps understanding the following sections that relate to this practice about the understanding of the circular economy concept (chapter 5.2.1 'Carriers' understandings – higher scale level practice'), about the elements that constitute this practice (chapter 5.3.1 'Elements higher scale level practice'), and about the contexts of this practice (chapter 5.4.1 'Context higher scale level practice').

5.1.2 Description of the lower scale level practices

Beside the practice on the higher scale level, I identified more than 40 lower scale level practices for this study. I have contacted an interviewee of each of these practices, and was able to collect data from 28 of them. Figure 5.5 shows that the practices studied are scattered throughout the Binckhorst. I'M BINCK (P2) is not located in one place, which is why it is not on the map. Rather, it is a practice that takes place throughout the Binckhorst with activities such as network meetings and the I'M BINCK Festival (see figure 5.6). The wide variety of activities in the Binckhorst is reflected by the diversity within the practices that were identified. Car garages, a furniture workshop, a beer brewery, workshops for thrift stores, a wallet producer, restaurants, community buildings, a bicycle workshop, hardware stores and social reintegration projects are but a few of the numerous practices identified in the Binckhorst. From all identified practices, I have selected eight for in-depth semi-structured interviews for the lower scale level practices. Selection of these practices is based on a categorisation of the practices into the 10R framework, as discussed in chapter 4 'Research design'. The following section presents what these practices entail to establish a basic understanding of the activities with which the practices are involved. Table 5.1 lists a description of the lower scale level practices studied. After table 5.1, I present two practices that are exemplary for the practices in the Binckhorst.

As is evident from table 5.1 on the next page and figure 5.3 and 5.4, the Binckhorst accommodates a multitude of practices. The practices are involved with different activities, and could be regarded as circular in similarly various ways. Next to that, they may be carried out either intentionally (i.e., with a circular ambition) or not. In the following paragraphs, I discuss two of these lower scale level practices more extensively.

Figure 5.3 Aerial picture that demonstrates the Binckhorst's diversity a

Figure 5.4 Aerial picture that demonstrates the Binckhorst's diversity b

Table 5.1 Schematic overview of the descriptions of the lower scale level practices

	Description of the lower scale level practice studied
P1	MOOOF is a community in 16,000 m^2 building that is reused. The building that was formerly used by a governmental organisation was vacant and there were no parties interested in buying it. MOTUS – a company that manages vacant buildings – was asked to develop a temporary alternative use for the building and established a community in it. According to the interviewee the building had no value, which allowed the company to use it to establish a community. This community includes over 200 small businesses in sports, dance and music. The building is scheduled to be demolished in 2020, which means that the community has to move somewhere else. Elsewhere in the Binckhorst there is a location where MOTUS wishes to circularly develop a temporary (five to ten years) establishment for the community.
P2	I'M BINCK is a network platform for entrepreneurs, inhabitants and organisations from the Binckhorst that discuss the development of the Binckhorst and help each other with a variety of things. The network platform organises several events to display what the Binckhorst has to offer. The mission of I'M BINCK is an authentic, circular, and inclusive Binckhorst. I'M BINCK incorporates a circular aspect as they perceive it as important to exchange materials as well as knowledge. Together with 'Binckse Krach' – a collaboration between residents, entrepreneurs, developers, and users of the Binckhorst – I'M BINCK has published the five core values of the Binckhorst: (1) Authentic, artisanal living-working area, (2) rough, exciting fringes of the city, (3) large diversity, that leads to meetings and innovation, (4) dynamic space for experiments, always in motion, and (5) the surprising waterfront of The Hague.
P3	'Sleutelen met Jongeren' is juridically foundations and practically a car repair shop that provides daytime activities for a specific target audience. The targeted audience is youth that should be in school but are not because of complicated problems such as youth detention or a difficult home-situation. The youth are placed at the car repair shop for approximately three months. The aim of the 'Sleutelen met Jongeren' is to stimulate the audience to go to school, find another form of education or start working. This is done by keeping them off the streets (and in the car repair shop) during the day, and by educating them about motor vehicle technique (i.e., repairing motor vehicles).
P4	'Gered Gereedschap Den Haag' is a voluntary organisation that collects tools and sowing machines, repairs them and send them to third world countries. This organisation is part of a national network of 'Gered Gereedschap' that work together to send these tools and sowing machines to these countries. The tools and sowing machines are sent on request to people and organisations that wish to establish a school of some sort. All people that work at 'Gered Gereedschap' are volunteers, some of them are incapacitated.
P5	ASN Autschade Van Vreden – Binckhorst is a car repair shop that is part of a network of over 70 car damage repair companies. They mainly work for lease- and insurance companies. The car repair shop has a certificate for 'Duurzaam Repareren' also known as 'Groen Gedaan'. This certificate is an official recognition that describes that the company repairs cars sustainably.
P6	'Werkproject Jupiter' is a project that provides daytime activities mainly for homeless people. These homeless people often have a history of drug addiction and/or imprisonment. The daily activities are various and range from indoor production activities to outdoor cleaning. These activities are requested by different companies and organisations. In return, this project provides relatively cheap labour for these companies and organisations.
P7	'Stichting Zorgkringloop & Zorg-Discounter' are two separate businesses that collect, resell and rent out mainly second-hand healthcare products. The location in the Binckhorst is the warehouse and workshop of the company. Products that are broken or are not functioning well are repaired and sold or rented out. Next to healthcare products, the company resells other products such as furniture and art from homes people that have offered it the company. Products that have been collected and are not usable for sale or rent are sent to less affluent communities in countries such as Romania. Lastly, the employees of the business mostly work in 'stipbanen', which is a type of subsidised work aimed to reintegrating people into the job market.
P8	Secrid is a company that designs and produces wallets focused on the storage of cards. The location in the Binckhorst is the office where everything except production of the wallets takes place. The company desires to create a sustainable product and attempts to accomplish this through different strategies (life cycle assessments, compensating for CO_2 emission, working with social workshops)

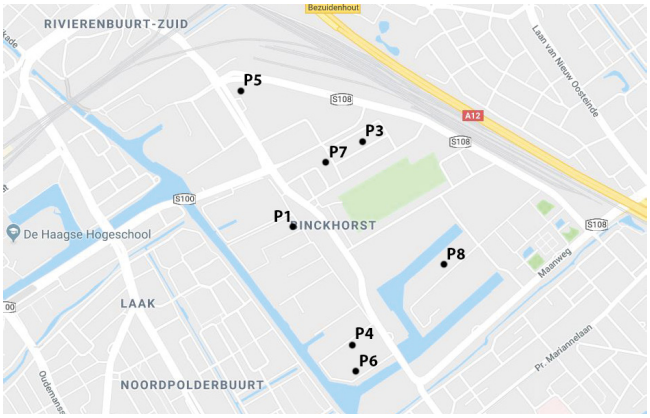


Figure 5.5 Location of the practices studied

Figure 5.7 MOOOF (P1)

Figure 5.6 I'M BINCK Festival (P2)

Figure 5.8 Workshop Zorgkringloop and Zorg-Discounter (P7)

One of the practices that I discuss in more detail is MOOOF, which is a community inside a 16,000 m^2 building. After having been used by a governmental organisation, the building was vacant for some time. The government owned the building and was unable to sell it due to the financial crisis. MOTUS – a company that manages properties – proposed to use the building:

"... during the financial crisis, the building was unsalable. We proposed to manage the property, using a concept that would generate a cashflow for the building and vitalise the surrounding environment as a consequence of the large amount of visitors. The concept is a community for small businesses in sports, dance and music." (Quote 5.1.2.1: P1)

In 2005, the municipality of The Hague expressed the desire to transform the Binckhorst to a mixed living-working area. With this in mind, it was well known that the building would – at some point in the future – be demolished to make room for the proposed developments. The financial crisis – that delayed the demolition of the building – allowed MOTUS to use it relatively cheaply. However, the building is scheduled to be demolished in 2020. Therefore, the property manager wishes to circularly develop a temporary home for the community elsewhere in the Binckhorst. Figure 5.9 shows MOOOF's pamphlet that describes the plan to develop the community in another location.

The pamphlet asks its community members to publicise this plan so as to sustain the community. This is one of the practices in the Binckhorst that is integrating principles that could be perceived as being circular rather consciously, namely reuse of a building and partially its interior, sharing spaces, and circularly (demountable) developing a new location.

Figure 5.9 A Pamphlet from MOOOF that describes the plan to develop another location in the Binckhorst

Figure 5.10 ASN Autoschade van Vreden-Binckhorst (P5)

Figure 5.11 Secrid (P8)

There are, however, also practices that do not incorporate such principles intentionally. An example of such a practice is 'ASN Autoschade Van Vreden-Binckhorst':

"... a car damage repair company. We work for insurance- and lease companies. This company is part of ASN Group, that has approximately 70 franchise locations throughout The Netherlands." (Quote 5.1.2.2: P5)

This is a rather ordinary practice, it is simply a car repair shop. At first glance, this may not seem circular. Studying the practice more carefully, however, uncovers a wide variety of activities that could be perceived as a circular activity, such preferring repairing over renewing, and renewing with second-hand parts rather than new parts. Additionally, it became clear that something that could be seen as a circular activity, might not be carried out with a circular ambition in mind:

"If I am working on a green car, and a silver-coloured door is delivered, I first have to disassemble or tape off the vehicle. Consequently, there is some extra labour in it, but you save money since that part is cheaper. So you can invest more labour into it. For example, a door for a Volvo xc90 costs approximately €900,-. This new door needs to be spray painted and converted. If you buy a second-hand door, it costs approximately €350-

Figure 5.12 Sleutlen met Jongeren (P3)

Figure 5.13 Gered Gereedschap (P4)

Figure 5.14 Werkproject Jupiter (P6)

€400,-. If it is the right colour, it would be even better. It just really saves 50% of costs." (Quote 5.1.2.3: P5)

"For the insurance companies it is mainly about doing it as cheaply as possible. The idea of sustainability is something that conveniently accompanies that. But it is mostly economically driven." (Quote 5.1.2.4: P5)

These quotes illustrate that practices that could be seen as a circular practice are not necessarily undertaken primarily with this in mind. Rather, there may be economic motives that makes such activities appealing to companies in a competitive market. In that case, the activity that could be perceived as circular is primarily carried out for economic reasons, the idea of that activity being circular or environmental friendly is perceived as merely an additional benefit.

This section outlined what the identified lower scale level practices in the Binckhorst are. I illustrated that those practices in the Binckhorst are diverse. Most practices studied are primarily practically oriented, while there are some that also incorporate social aspects. Additionally, I reviewed MOOOF and ASN Autoschade Van Vreden-Binckhorst practices in some more detail to establish a deeper understanding of the activities of the studied practices. Lastly, I described that some practices may be involved with activities that could be perceived as being circular, despite their seemingly ordinary nature. In the following section, I describe how the circular economy concept is understood in the practices studied.

5.2 Carriers' understandings of the circular economy concept

As previously discussed in chapter 2 'Circular economy concept', there is not one single definition of the circular economy concept that is agreed upon in academics nor in practice. Considering that different businesses, organisations and institutions interpret the concept differently, one might expect different interpretations of the concept in the Binckhorst as well. This section discusses how the carriers of the practices studied understand the circular economy concept. First, I will explain how the municipality – as a carrier of the higher scale level practice – understands the circular economy concept. Second, I turn to the lower scale level practices and present a table that provides an overview of the understandings within these practices. Then, I discuss five exemplary and contrasting understandings in a more in-depth way to demonstrate the wide variety of the concept's understandings.

5.2.1 Carriers' understandings – higher scale level practice

Table 5.2 presents a brief overview of how the interviewees that represent the higher scale level practice (and carry it [out]) understand the circular economy concept. In the paragraphs following this table, I discuss understandings of the concept that were found in the documents analysed (see table 4.1 in chapter 4.2.1.2 'Document analysis').

The information in table 5.2 indicates that the interviewees have a broad understanding of the circular economy concept, a topic to which I return at the end of this chapter.

Since the municipality introduces the circular economy concept to the Binckhorst, it is essential to examine how the municipality understands the concept. In 'Circulair Den Haag: transitie naar een duurzame economie' – a municipal agenda aimed at transitioning to a circular economy – the municipality argues that there is not a single definition (Gemeente Den Haag, 2018). And goes on to note:

"But in short, it is an economic system that is meant to maximise the reusability of products and materials and minimise the destruction of value." (Gemeente Den Haag, 2018, p. 5)

Table 5.2 Schematic overview of understandings of the circular economy concept expressed by interviewees from the higher scale level practice

	Understanding of the circular economy concept
O1	Every definition is right, there are no wrong definitions because there are choices integrated in it. It is possible to reduce it to doing smart things with materials. But you can also upgrade it and view it as a new economic system. I mostly use the notion of 10Rs, circular economy is basically about those steps. All steps are right, but every step has a different (amount of) impact.
O2	Concerning materials, it is about not using harmful materials and components, as well as separating the biological and technical cycles of materials and products. Next to that it is about producing high quality products to improve how much or how often a product can be used. Additionally, it is about making products demountable to promote reuse of parts for other products. I often refer to the 9R's: refuse, rethink, reduce, reuse, repair, refurbish, remanufacture, repurpose, and recycle. With regard to energy it is about renewable energy. Something else that is circular is a shift from ownership to use. But circular economy also has a social component. This relates to the inclusive society, socially responsible entrepreneurship, and including people with a distance to the job market.
O3	With regard to the construction sector, circular economy is about making evident which materials are available, when the materials are released and what the quality of those materials is. Therefore it is about flows of materials. But it is also about making products and processes modifiable, with the future in mind. For example, buildings- or products-as-a-service, changing the ownership of buildings and products. Additionally it is about renewable energy and maintaining a product's quality at a level that is as high as possible.

Although the municipality asserts there is not a single definition, a short description indicates an understanding of the circular economy concept that concentrates on materials. This focus on materials is reiterated in the municipality's successive discussion of the concept:

''The economy is able to remain within the carrying capacity of the natural system if products, components and materials can be reused at a high quality as often as possible. This retains the value of raw materials and ensures that less raw materials have to be extracted. The design of the product takes into account possibilities for repair, high-quality reuse, and recycling. Consequently, the product maintains its value as long as possible. Additionally, new business models emerge, especially in cities. Simultaneously, shared use ensures that less is produced.'' (Gemeente Den Haag, 2018, p. 5)

This quote illustrates the municipality's understanding of the circular economy concept with a focus on materials. This description touches upon the higher levels of R-strategies (rethink and reduce) aimed at transitioning to a circular economy. However, it does not address the social component that academic sources and other organisations refer to besides the material one (see for example Ellen MacArthur Foundation, n.d.; Kirchherr, Reike, & Hekkert, 2017). A reference, in 'Circulair Den Haag', to five core principles of a circular economy, according to the Ellen MacArthur Foundation, indicates that the municipality is aware of different definitions. However, this reference includes merely principles that are of a material nature: designing to reduce waste; working on resilience through diversity; making use of renewable resources; thinking in systems; and using waste as a raw material (Gemeente Den Haag, 2018). In the 'Omgevingsplan Binckhorst', raw material use and circular economy are mentioned in the same breath. The document goes on to define 'raw material use/ circular economy' as:

''The use of raw materials/circular economy means the retention of building materials during maintenance, renovation or demolition, and using it in a valuable way. In the circular economy, the term 'waste' hardly exists or does not exist at all, people think in terms of materials. Products are reused fully as much as possible, components are used in other products, or components are used as a raw material. The circular economy is also about the use and access to products: ownership of products is less important. This is also known as the sharing economy: products and services are shared or traded with others.'' (Gemeente Den Haag, 2019a, p. 19)

On the one hand, I recognise that the municipality includes the concepts of 'ownership' and 'sharing' – of products as well as services – in their discussion of these terms. On the other hand, this quote illustrates that the municipality explains use of raw materials and circular economy in one and the same breath. Next to that, it is evident that the description of the terms centres around products and materials. I should mention, however, that the municipality also adopt the People Planet Prosperity (PPP) approach, in 'Den Haag Duurzaam, agenda 2015-2020' (Gemeente Den Haag, 2015). The municipality describes people as the social aspect, planet as the environmental aspect, and prosperity as the welfare aspect. Despite the fact that the municipality does not see these social and environmental aspects in relation to the circular economy concept – at least not in the documents studied – I notice that the municipality is evidently informed with these aspects.

The 'Omgevingsplan Binckhorst' is accompanied by several appendices, including a factsheet for climate, energy, and circularity (Gemeente Den Haag, 2019b). This factsheet sets out the different legislations, policies and visions that apply to the 'Omgevingsplan Binckhorst'. Additionally, it reviews to what extent the 'Omgevingsplan Binckhorst' is in line with or in conflict with these legislations, policies and visions. The sectoral ambition for climate, energy, and circularity in the factsheet describes the municipality's ambition concerning this specific topic.

A surprisingly simplistic quote, considering the broadness of the circular economy concept made by the municipality in the 'Omgevingsplan Binckhorst' is:

''The municipal ambition regarding circularity is to transition to a circular economy.'' (Gemeente Den Haag, 2019b, p. 38)

Although this quote seems simplistic, it is important to acknowledge that two employees from the municipality (see table 5.2) that I interviewed had a much broader understanding of the concept. O1 mentioned:

''Every definition is right, there are no wrong definitions because there are choices integrated in it. It is possible to reduce it to doing smart things with materials. But you can also upgrade it and view it as a new economic system... I mostly use the notion of the 10Rs… Circular economy is basically about those steps. All steps are right, but every step has a different (amount of) impact.'' (quote 5.2.1.1: O1)

This quote illustrates that this civil servant of the municipality has a somewhat broader understanding of the circular economy concept. However, the main focus of this understanding is primarily on materials. Nevertheless, the resource manager of the municipality has an even broader understanding of the circular economy concept. Next to referring to separating the biological and technical cycles of materials and products, improving the quality of products to allow for longer use, and the 9Rs, the resource manager asserts:

"Those are kind of core principles, in which – in the broad definitions of the circular economy – other things are involved, such as the sustainable development goals. For example, socially responsible tasks, including people with a distance to the job market. Beside the story about materials, you could understand it much broader and think about the inclusive society idea." (quote 5.2.1.2: O2)

This quote, as well as the one from the civil servant, demonstrate that there are people within the municipality that have a broad understanding of the circular economy concept, that is at least more inclusive than the understanding of the concept expressed in the documents from the municipality. The understanding of the circular economy concept of the employees of the municipality could result in actions that reflect this broader understanding. A final interesting statement was made by the person involved in Cirkelstad – a network aimed at stimulating circularity in the construction sector:

"If an economic benefit is missing in transitions, it becomes particularly difficult since it would become a hobby in that instance." (Quote 5.2.1.3: O3)

With this statement, the interviewee indicates that he asserts that people, businesses, and organisations are not likely to integrate activities that could be seen as circular in a practice if it is not financially interesting. This is an interesting thought, considering the higher scale level practice of the introduction of the circular economy concept to the Binckhorst. It could mean that the carrier of that practice (primarily the municipality) needs to demonstrate that integrating activities that could be seen as circular is financially beneficial. Alternatively, the municipality could (initially) help others with making the integration of such activities profitable.

5.2.2 Carriers' understandings – lower scale level practices

In this section, I describe how the circular economy concept is understood by carriers of the lower scale level practices studied. First, I present a table 5.3 that provides an overview of the understandings of the circular economy concept. Then, I take a closer look at the understandings of four practices that are exemplary for the lower scale level practices in the Binckhorst.

Table 5.3 demonstrates that there is quite some diversity with regard to the understandings of the circular economy concept by carriers of the lower scale level practices studied. In general, most understandings centre around materials and the reuse(ability) of them. However, there are also exceptions in which there is a broader interpretation of the concept to be recognised. In the next paragraphs, I discuss several understandings, both exemplary ones and exceptions.

As is evident from table 5.3, not everyone is familiar with the circular economy concept.
From all identified practices, approximately half of the carriers were not familiar with the concept. The majority of them indicated that the concept seems difficult to understand or use. Others were simply unsure about whether or not they know what it is:

"What I understand it to be about is that things return. Things are made, utensils for example, but they get a second life or it has to circulate in the economy. At least, that is what I think. That we take a look at how we can reuse existing things for new things. Right? Or?... Am I right?" (Quote 5.2.2.1: P3)

This interviewee literally asked whether the answer to the question was correct or not. This is perhaps unsurprising since it was made clear at the beginning of the interview that one of the concepts of this research is the circular economy. The interviewee could have seen the interviewer as an expert, which could have impacted the upon the confidence with regard to the knowledge of the former.

Again, others simply indicated that they are not familiar with the circular economy concept. The circular economy concept seems not to be embedded in the minds of most entrepreneurs (i.e., carriers of practices) of businesses and organisations that have been situated in the Binckhorst for several years

Table 5.3 Schematic overview of understandings of the circular economy concept expressed by interviewees from the lower scale level practices

	Understanding of the circular economy concept
P1	It is about the reuse of all products that you require, materials and energy. Next to that, it is about efficient handling of products and materials. Making products demountable and adaptable is important for facilitating reuse of products in their second or third life. With regard to humans, it is about allowing them to be useful in multiple functions. Circularity can make things stronger, more stable, and more sustainable. The circular economy is also about collaboration: trading materials, sharing spaces, establishing a community. Lastly, for something to be truly circular everything needs to be circular, not merely some components or parts.
P2	Question not asked, but prefers not to use the term 'circular economy' with respect to the Binckhorst. This is the case because others (i.e., entrepreneurs in the Binckhorst) have negative associations with it, thinking: there is another pretentious person.
P3	It is about that things return and keep circling in the economy. It is about products getting a second life and about (re)using existing materials for the production of new products. This could also apply to Sleutelen met Jongeren, maybe this project could be copied and pasted into another city.
P4	It is about things returning to the producer, who can use the materials for the production of new products. It is also a bit about extending the life time of a product by not disposing it after its first use, but providing it with a second or third life. Sharing or renting can also be seen as circular. And lastly, it is also about being conscious about the waste that you produce and separating waste.
P5	Not familiar with the circular economy concept. After a short explanation of the concept, the interviewee referred primarily to repairing, reusing and recycling of materials with regard to the circular economy concept.
P6	Not familiar with the circular economy concept. Nevertheless, the interviewee guessed that it has to do with 'business' returning into the economy. After a short explanation, the interviewee also mentioned repairing and refurbishing of materials with regard to the circular economy concept.
P7	I understand it to be about reuse of goods in the broadest sense of the word. Everything that can be reused should be reused, even if it has a different function that it originally had.
P8	In practice it is mainly about the 3R's: Reduce, reuse and recycle. In the short term, it is about extending the lifetime of a product, the classic long-life idea. On the long term, it is also about completely rethinking the (design of the) product, service and ownership. Next tot that it is about repair, remanufacture and demountable products, as well as about the residual value of the product when it is disposed. But it also has to do with preventing waste. Additionally there is a social aspect, about letting everyone in society participate and improving people's lives in less affluent countries.

(or the 'original' businesses of the Binckhorst). Nevertheless, this is not to say that those not familiar with the concept are not a carrier of a practice that could be seen as a circular practice. A telling example of this is that one person said he did not know the concept since he did not go to college. Despite not being familiar with the circular economy concept, his practice could certainly be understood as a circular practice:

"We restore a lot just to reduce our amount of waste. We will restore something if it is possible to restore, keeping in mind the amount of labour that is required. This allows us to reuse it." (Quote 5.2.2.2: P5)

The interviewee said this after a short explanation of the circular economy concept. Upon asking the same interviewee the question whether new parts would not be easier to install rather than a second-hand part, the interviewee responded:

"Funnily enough, the opposite is true. A used part is usually delivered complete, with every nut and bold included. Whereas a new part would have to be modified. The used part actually works more quickly." (Quote 5.2.2.3: P5)

These quotes reveal that there may be pragmatic considerations that are the prime reason for activities that, coincidentally, also could be considered circular. This illustrates that a practice does not necessarily need to be perceived as something that is circular by the carrier of that practice, while the same practice could undoubtedly be perceived as circular, in one way or another.

On the contrary, there are also carriers that were somewhat familiar with the circular economy concept. These people have a somewhat limited view of circular economy concept and mainly emphasise the material component of the circular economy concept:

"It is a concept that we are generally not concerned with. We restore tools and sowing machines for third world countries. According to the circular economy concept it should be a circle. It should return to the supplier who is able to do something with it. But that is not the case at Gered Gereedschap. We delay the disposal of tools and send them to third world countries..." (Quote 5.2.2.4: P4)

The interviewee asserted that the circular economy concept describes that something needs to be circular in the literal sense (i.e., the product has to return from where it came from). Consequently, he addresses that the practice he is involved with does not fit this understanding of circular economy. He suggested that the particular practice he carries out (Gered Gereedschap) is not circular, while the practice is involved with multiple strategies that could be seen as circular, such as reuse, repair and remanufacture. This example demonstrates that while a practice might not be perceived as being circular, it might very well incorporate strategies that have been recognised to contribute to the circular economy. In this case, that holds true even when the carrier of that particular practice is familiar with the circular economy concept.

On the one hand, there are carriers of practices in the Binckhorst that were either not or merely somewhat familiar with the circular concept. On the other hand, there are carriers that were well familiar with the concept. Such people perceive the circular economy concept to be about not merely materials, but also about other components such as a social and spatial one:

"It is about more than just reuse of materials. It is about reuse of energy and basically all commodities you require. With regard to this building or the new building, it is about reusing everything that can be reused and using it mindfully. And that also relates to people, the human factor. Our receptionists do not only sit behind the desk, rather we let them do other kinds of tasks as well. In this manner, they are multifunctional. Besides that, if the job of receptionist would be abolished, they are better suited to find another job. That is circularity as well, in my eyes." (Quote 5.2.2.5: P1)

Figure 5.15 shows the receptionists – that are promoted to be multifunction – that the interviewee refers to. Next to that, this interviewee argued that circularity is capable of achieving a more sustainable and robust situation. As well as contending that his practice of building a community; allowing the members to progress and potentially moving the entire community somewhere else, is circularity as well. This last idea relates to the spatial component of the circular economy concept. The notion that transitioning to a circular economy also requires society to think about temporality and spaces, asking questions such as 'where is something taking place and for how long?' and 'Is something also capable of functioning in another location?'.

Figure 5.15 The receptionists of MOOOF

An explanation for the fact that this interviewee has a broader understanding of the circular economy concept is the current or historic occupation. The interviewee that represented MOOOF is a property manager and has been an architect for several years, incorporating circular principles in his activities. The same goes for the interviewee that represented Secrid, an intern that aims to develop a plan to make Secrid's products more sustainable. The interviewee was theoretically informed about the concept, which he demonstrated by referring to a wide variety of theoretical concepts and approaches related to the circular economy concept. Similar to the interviewee from MOOOF, his education about (sustainable) product chains may be seen as an explanation for the broader understanding of the

circular economy concept. These interviewees have (long) been involved with and informed by the circular economy concept, in contrast to carriers that had a more limited understanding of the concept.

There is a notable emphasis on the material component to be recognised from the understandings of the concept. Every person familiar with the concept understood it to be about materials. However, some interviewees included a social and spatial component in addition to the material one in their understanding of the concept. Whether or not someone is familiar with the concept can – to some extent – be attributed to that person's current and/or previous occupations. Something else important to take away from this is that a (seemingly) ordinary practice – that is not explicitly recognised as a circular practice – could actually be considered as circular.

5.3 Elements of the practices studied

As described in chapter 3 'Theoretical framework', practices consist of elements that come together when a practice is enacted (Shove et al., 2012a). There are three different types of elements. First, materials which includes objects, infrastructures, tools, hardware and the body itself. Second, competences which encompasses multiple forms of understanding and practical knowledge. And third, meanings which includes mental activities, emotion, motivational knowledge, ideas and aspirations (Shove et al., 2012a). This section discusses the elements that were identified in both the higher- and lower scale level practices. Since the coming together of the specific elements is fundamental for the understanding of practices, several practices are discussed and 'dissected' to illustrate how and which elements constitute a particular practice. Examining which materials, competences, and meanings constitute a practice – and how these are configured within the practice – helps understanding how practices are stabilised, changed, and disappear. It provides a way of considering which elements are necessary for a practice's existence. Consequently, it allows for understanding what practices – that could be seen as circular – require to continue to be performed.

5.3.1 Elements higher scale level practice

In this section, I describe several elements – materials, competences, and meanings – that constitute the introduction of the circular economy concept to the Binckhorst. First, I present a table (table 5.4) that provides an overview of the elements. Second, I examine several elements more extensively that are exemplary for this practice.

As can be seen in table 5.4, there is a variety of materials, competences and meanings that constitute the higher scale level practice. The element 'materials' includes different kind of tools and measures that help the municipality with introducing the circular economy to the Binckhorst.

Table 5.4 Schematic overview of elements involved in the higher scale level practice

Elements		
Materials	**Competences**	**Meanings**
Research team 'ACCEZ'	Raw material flows research	Climate
Civil servant with a focus on circular economy	Knowledge and expertise of civil servant and resource manager	Materials
Resource manager	Mini-survey for circular entrepreneurs in The Hague	Waste
Legislation/rules/permits/policies	Knowledge from institutions such as the Leiden University, TU Delft, Erasmus University, The Hague University, and TNO	Sustainability
Spaces for start-ups		Energy (efficiency)
Circular soil remediation		Maintaining standard of living
Subsidies		Reduction of traffic and emission
Waste processing facility (HMS)		Additional economic value and jobs
		Locality
		Issue of higher scale levels

As for competences, the municipality lacks sufficient knowledge and expertise, which it tries to gain in a few manners. The meanings include a variety of aspirations and ideas that are linked to the introduction of the circular economy concept to the Binckhorst. In the following paragraphs, I take a closer look at some of these materials, competences, and meanings.

One of the materials that is involved in the introduction of the circular economy concept to the Binckhorst is the research team ACCEZ. ACCEZ (Accelerating Circular Economy Zuid-Holland) is a team of universities (Erasmus, Delft, Leiden, and Wageningen), VNO NCW West, and the province of Zuid-Holland. ACCEZ has recently opened 'kenniswerkplaats KIP (Kennis In Productie)' which could be seen as a workplace where knowledge is produced. The team studies the topic of circular economy with a focus on accelerating the circular economy in the province. The municipality of The Hague suggests research questions centred around the energy transition, climate, use of raw materials, and resilience (Gemeente Den Haag, 2018). ACCEZ may be seen as a material of this practice. However, it is also closely related to one of the competences of this practice. The knowledge and expertise that results from the research is valuable for the municipality and other stakeholders to have an understanding of how to actually introduce the circular economy concept.

In 2016, a metabolic analysis of the Binckhorst was carried out by Superuse Studios (Jongert & Dirkx, 2016). One of the recommendations of this study was to appoint someone who manages the material and energy flows in the area. The municipality has seized this recommendation and appointed a resource manager. The knowledge and expertise of this person may be seen as a competence of the practice:

"Next to that, the ambitions concerning the circular economy are not (yet) sufficiently specific to translate into rules for the 'Omgevingsplan Binckhorst'. The appointment of the resource manager is the first step towards stimulating the circular economy." (Gemeente Den Haag, 2019b, p. 44)

"The municipality of The Hague has appointed a resource manager that functions as a mediator to link businesses to one another, and thereby create synergy. This resource manager will stimulate circular developments in the Binckhorst for a year." (Gemeente Den Haag, 2019b, p. 43)

This quote illustrates that the resource manager is one of the materials that is part of the practice. Additionally, his knowledge and expertise are competences that are required for the introduction of the circular economy concept. Additionally, as the quote suggests, the competences (i.e., knowledge and expertise) and material (resource manager) could help with specifying the ambitions (i.e., meaning) concerning the circular economy. The specific aspirations of the municipality still have to be formulated. In other words, the meanings of the practice 'the introduction of the circular economy concept to the Binckhorst' are not yet fully developed. As the municipality itself acknowledges, there is currently an insufficient understanding about and experience (competences) with the circular economy and how to achieve it. These competences are, according to the municipality, required to adequately introduce or achieve the circular economy. This is so because the municipality aspires to introduce or achieve the circular economy – among other ways – via policies, legislations, rules, and permits. In order to create suitable policies, legislations, rules, and permits, the municipality argues it requires additional knowledge. These policies, legislations, rules, and permits are the materials that – along with the competences and meanings – comprise the practice.

Although the municipality asserts that their aspirations are not specific enough, there are clear generic ambitions to be identified. As previously discussed in chapter 2 'Circular economy concept', the circular economy is often seen as a concept that helps us to achieve a more sustainable way of life and reduce our environmental impact. The municipality of The Hague echoes this:

"The current economic system assumes an unlimited availability of raw materials and an unlimited resilience of the environment. In the meantime, however, it is recognised that both preconditions are both not realistic and maintainable. A future-proof economy takes into consideration the finitude of raw materials and the impact of it on the environment." (Gemeente Den Haag, 2018, p. 5)

This quote illustrates the municipality's awareness of the impact of the current economic system. Additionally, the municipality acknowledges the need for a new economic system – a circular one. The awareness of this problem and the belief that the circular economy provides a solution to this problem is one of the meanings of this practice. The municipality believes that the circular economy is better for the environment – compared to the

linear economy – since it respects the boundaries of the natural system (Gemeente Den Haag, 2018). Additionally, the idea of maintaining our standard of living is a meaning of this practice:

''The development that meets the needs of the current generation without compromising the ability of future generations to meet their needs.'' (Gemeente Den Haag, 2019b, p. 33)

''Energy saving refers to all energy saving measures that reduce the consumption of fuels. That can be achieved through using energy more efficiently: doing the same with less energy. People can also save energy by making less use of a service that uses energy.'' (Gemeente Den Haag, 2019b, p. 34)

The first quote is something stated in relation to the term 'sustainability' in the factsheet climate, energy, and circularity. The second quote is a description of 'energy saving' in the same factsheet. Both of these quotes indicate the primary desire to maintain our current standard of living by mentioning that we need to meet our needs, and the future generation needs to be able to meet their needs. Naturally, it is arguable that a certain standard of living is not the same as meeting one's needs. However, at the outset, the second quote suggests that 'we' would like to do the same (i.e., maintain our standard of living), while using less energy. Then, the seemingly less important alternative is brought up: making less use of a service that uses energy (i.e., lowering our standard of living). Therefore, another meaning that is present in this practice is (maintaining the) standard of living. The final meaning that I discuss is (added) economic value. The municipality asserts that the circular economy could generate €470 million added market value just in construction, trade and the government (Gemeente Den Haag, 2018). The municipality itself explains how this added value would come to be:

''In a fully circular economy, the value of a raw material is used for longer and multiple times. This is the case because the material is not incinerated. Rather, in the design of the product, reuse, repair and recycling is taken into account.'' (Gemeente Den Haag, 2018, p. 7).

This quote illustrates that the municipality maintains that materials are used more times and for a longer period of time in a circular economy. Consequently, this would lead to an added economic value of millions, in just The Hague. Additionally, the municipality contends that the circular economy could add 3,500 jobs in The Hague. The line of reasoning concerning the added jobs is that reusing valuable materials and products requires more actions than the incineration of these materials and products. Therefore, actions such as repairing, distributing, and selling these products create employment opportunities, especially for the low-skilled population (Gemeente Den Haag, 2018).
Thus, next to reducing the impact on the environment and maintaining the current standard of living, the idea of a positive economic effect (i.e., added economic value, in other words making money) is another meaning of the practice introduction of the circular economy concept to the Binckhorst.

Rather than 'real' materials, the materials in this higher scale level practice are primarily measures, tools and people (i.e., rules, policies, legislations, research teams, and employees). The competences of this practice include knowledge about the circular economy and how to introduce the concept to the Binckhorst. And finally, the meanings in this practice are ideas and aspirations about how to introduce the circular economy concept to the Binckhorst and about the significance or use of the concept. As will become evident from the following section, the 'types' of materials, competences and meanings that constitute the introduction of the circular economy concept to the Binckhorst are different from those that constitute the lower scale level practices. This is so because the lower scale level practices are perhaps best described as being more practical or pragmatic. As described in chapter 5.1.2 'Description of lower scale level practices', those practices are concrete things that people do 'on the ground', such as repairing cars, selling second-hand healthcare products, and housing a community in a formerly vacant building. The practice on the higher scale level is something that currently is carried out mainly by the municipality. Additionally, it may be seen as a 'broader' practice since it includes a variety of relatively indirect actions that are aimed at generating further desired actions (that stimulate the circular economy). In the following section, I take a closer look at the elements of other types of practices, namely the lower scale level practices.

5.3.2 Elements of the lower scale level practices

In this section, I describe the elements that constitute the lower scale level practices studied. First, I present a table (table 5.5) that provides an overview of the identified elements for each of the practices. Second, I examine three practices and their constituent elements more extensively, as examples of the elements that constitute a practice and how they are configured.

Table 5.5 displays the identified elements of the lower scale level practices. This table illustrates that the materials for each of the practices vary. This is unsurprising considering the variety of practices in the Binckhorst. However, there are similarities that can be recognised between the materials of the practices. Every practice included people. It is indeed true that these are not the same people for each practice. However, in practice theory people are often 'reduced' to bodies, since the body of carriers of a practice is a material of that practice. And typically, most bodies are quite similar. Another similarity between the practices' materials is a physical place of some sort. All lower scale level practices studied take place in a building (to large extent). Therefore, it is logical that this is another resemblance between the materials of the practices. The competences of the practices, on the other hand, are rather different in the practices. This is unsurprising when taking into account the variety of practices studied. This variety of practices is reflected by the variety of competences which is logical considering each practice requires

Table 5.5 Schematic overview of elements involved in the lower scale level practices

	Elements		
	Materials	**Competences**	**Meanings**
P1	The building itself, the interior that is reused, sea containers, construction site offices, the people of the community.	Knowing how to build a community, knowing how to manage a building, knowledge about how to circularly develop a new location.	Building a community that can vitalise the neighbourhood, caring for the community, preventing loss of money (through demountable constructions).
P2	Festivals, documents and presentations that describe the core values of the Binckhorst, the network of entrepreneurs and inhabitants.	Knowledge about the Binckhorst its entrepreneurs and the activities that take place, experience with hosting festivals and network meetings.	Contributing to the development of the Binckhorst, enabling the Binckhorst to stay and become 'authentic', 'artisanal', 'rough', 'diverse', 'dynamic', and 'surprising'.
P3	youth with issues, tutors, other employees, tools for repairing cars, workshop and office, fitness equipment, furniture, baby clothing.	Knowledge about repairing cars, about using the tools required, about handling, coaching, and educating youth, being an expert-by-experience with the kinds of problems the youth deal with, networking skills.	Feeling the need to help the youth, the feeling that the project helps solving a problem in the municipality, the stigma of the youth about them being criminal and a nuisance, the youth's feelings about the project and its location.
P4	Tools, restored tools, (parts of) sowing machines, sea containers, workshop, electric tools, crates, safety equipment, computer, van, advertisement board, volunteers.	Having a somewhat technical background to work with (electric) tools, being enthusiastic, having a organisational or business background.	Aspiration to help people in less affluent countries with education (of volunteers as well as donators).
P5	Cars, car parts (headlights, bumpers, paint etc.), tools (hand tools, sandpaper, lift bridge, spray booth, straightener, plasma cutter, welding machine etc.), employees.	Special educations, skills and completed courses that are aimed at specificities of modern cars (aluminium rather than metal, knowledge about ABS and air-conditioners etc.)	It is perceived as a craft. A preference of customers for sustainable repair and an awareness of the environment. But also the importance of money, the cheaper the better.

	Elements		
	Materials	**Competences**	**Meanings**
P6	In general: the clients (homeless) themselves, a kitchen. In the production department: caps, wood, pallets, flasks, cards, elastic bands, sticks, paper, cardboard, pots etc. In the service department: Broom, leaf blower, rake, cleaning detergent, window cleaner etc.	Knowledge about guidance of clients. This requires specific characteristics and respect for the clients and their circumstances. Also entrepreneurship to a certain extent.	The stigma associated with the clients (homeless). Idea of society that once someone is mentally ill he/she can (nowadays or cannot (20-30 years ago) function and contribute to society. In general, people's attitude towards the clients (acceptation or not). Idea that asking for help with psychiatric problems is no longer a disqualification of oneself.
P7	First hand and second-hand healthcare items (such as crutches, wheelchairs, mobility scooters, high-low beds, walkers, and lift chair recliners) furniture (such as couches, regular chairs, tables, wardrobes, and paintings) clothing, computers, tools, workbench, workshop, stores, van, people in the stores (for selling the products), people in the workshop (for collecting and refurbishing the products).	Technical background, knowledge about healthcare, being able to get along with people, being able to advise people, basic practical knowledge about selling items on 'Marktplaats.nl' and 'Catawiki.nl'. Ability to be flexible with regard to employees (stipbanen).	Willingness to work with 'stipbanen' (i.e., helping other people), aspiration to provide a cheap alternative to the expensive healthcare items to prevent them from being transported to other countries and to provide them to less affluent people that are not covered by health insurance, idea that a second-hand product could function (almost) as well as a new product.
P8	People who design the product, people who manufacture the product, the owners, interns, metal, aluminium, felt, plastic, different types of leather, machines used for tanning the leather, and processing the plastics, metal and aluminium, tools for putting the parts together, computers, trees, salmon skins, office, social workplaces.	Knowledge about and experience with fashion and product design, knowledge about the lifecycle of the product, being able to work with social workplaces, knowledge about product chains and circularity within them.	Aspiration to make a sustainable product, belief that everyone in society is able to contribute to something, industrial yet fashionable product, paying cashless, masculinity (because of leather).

different knowledge and experience. A similar point can be made with regard to the meanings of the practices studied. The ideas, emotions, motivational knowledge and aspirations are different for each of the practices. In the following paragraphs, I take a closer look at three practices, their elements and how these elements are configured.

The 'Stichting Zorgkringloop & Zorg-Discounter' collects and resells second-hand healthcare items as well as furniture and other household items collected from emptying homes. The materials that are involved in this practice thus include items such as crutches, wheelchairs, mobility scooters, high-low beds, walkers, lift chair recliners, clothing, couches, regular chairs, desks, tables, wardrobes, paintings, and other decorations. All of these items are second-hand and collected by the business. For the collection of the items, the company uses a van to drive to the location of collection and back to the workshop in the Binckhorst, both the van and the workshop are materials of the practice. The business sells their furniture mostly via websites such as 'Marktplaats.nl' and 'Catawiki.nl', for which they

need a computer. Their healthcare items are sold in their stores, of which they own two. An important characteristic of all items is that they are second-hand. Consequently, some items require (minor) repairs to make them appropriate for sale. With regard to competences, the interviewee needs to be able to use a computer to sell the items on websites. Additionally, repairing healthcare items (such as mobility scooters) and restoring furniture requires a slightly technical background. Also, employees in the stores (see figure 5.16) of the business are required to have basic knowledge about healthcare, so as to adequately advise customers:

"Well in our stores, there are employees which need to know quite a lot about healthcare. Besides that, they need to be able to get along well with other people and to advise them. I do not know much about that, but it is their speciality." (Quote 5.3.2.1: P7)

Although, employees are involved with the same materials, they may require different competences, based on the task that they carry out. In this case, the location also plays a role since personnel in the workshop does not necessarily need to get along with customers well (since customers visit the stores, not the workshop), while they do need some technical skills to restore or repair products.

Concerning meanings, the corporate culture needs to allow for employees working in 'stipbanen'. The interviewee explained that a company needs to be able to work with and support such people. People working in 'stipbanen' have often taken a forced lengthy break from work, due to personal circumstances (such as a burn-out). An organisation that employs such people needs to be patient to a certain extent, as these people are just getting back into work.

Another meaning is the aspiration of the owner of the business. He desired to provide a cheap alternative to the expensive healthcare items that are favoured by health insurance companies. Firstly, the second-hand products are often still reusable. In some cases, the product has only been used for a few months, since its owner passed away. Additionally, selling these second-hand healthcare items prevents such products to be disposed of or to be transported to other countries – which is done by large companies that sell healthcare products to artificially keep the price of products high, according to the interviewee. Secondly, the business aspires to provide a cheap product for people that are not covered (sufficiently) by health insurance. The owner saw this opportunity in the market and harnessed it. The coming together of the available healthcare products (materials), the aspirations of the owner (meanings), and the employees' skills and expertise (competence) form this practice.

Figure 5.16 One of the stores of the Zorg-Discounter

The practice 'Sleutelen met Jongeren' demonstrates that the materials of a practice can be diverse. Obvious materials that are involved in the practice are the tools, cars, workshop, tutors and youth themselves. However, examples of less obvious materials are a fitness equipment, furniture and baby-clothing. It is relatively straightforward to see how the tools are used by youth to work on the cars that are brought to the workshop by customers. It is also clear that these are necessities for a business that repairs cars. In such a situation, you might not expect fitness equipment, furniture and baby-clothing to be involved in the practice as well. Nevertheless, these form an important component of the practice. The youth are often in a problematic situation. Some teens have committed a murder, some have lost their parents and have no place to go, and others have a child at the age of seventeen. These are issues that the youth often find hard to deal with. This project helps them with dealing with these problems. The fitness equipment helps them to relax and lose any aggression if they need to. Furniture might be donated to youth if they find a place to live but have no funds to furnish it. Baby-clothing could help a teen dad with bringing up their child. It is exactly those materials that makes the practice the way it is. Those materials are what distinguishes this practice from other 'ordinary' car repair shops. This is also represented in the competences that constitute the practice:

"The knowledge that is required is about repairing cars, and about working with, coaching and educating youth. I expect that my employees are empathic towards the youth and their circumstances." (Quote 5.3.2.2: P3)

"I also think that you need to be an expert-by-experience, in some situations." (Quote 5.3.2.3: P3)

"You know what it is like to sit on the other side of the table. You know what it feels like to deal with a certain kind of authority, and how the youth would like to be addressed." (Quote 5.3.2.4: P3)

This practice requires tutors to be able to work with, coach and educate difficult youth. Next to the know-how about motor vehicles, they need to know how to guide youth that struggle with severe problems. Next to that, the competences of this practice relate to the materials as employees need to know how to use the tools and repair the cars.

The same applies to dealing with the youth. Working at this project is not simple, according to the interviewee. Employees are payed a minimum

Figure 5.17 The team and clients of Sleutelen met Jongeren in their workshop

wage, are not always paid on time, have not yet received a raise since the existence of the project, and need a specific set of skills and experiences. The interviewee explains that other jobs would generate a higher income, be simpler and would provide more certainties. This relates to the meanings of this practice. The employees and managers of the project feel the need to help 'their youth'. This is also the vision from which the project started. The interviewee and her partner aspired to help young people that live in harsh circumstances, while simultaneously solving a problem in the municipality.

The thoughts of others about the project is also a meaning that is important to the project. Not every youngster that takes part is a criminal. Consequently, they do not like to be perceived as a criminal. The location in the Binckhorst – rather than their former location in the city centre – aids in this respect. The location in the Binckhorst is somewhat secluded, which allows the youth to be 'invisible'. Other people cannot see the youth entering the building, thinking: 'that is probably a criminal'. Hence, the youth experiences a potential stigma to a lesser extent. Therefore, the location in the Binckhorst provides a suitable location for the targeted group. This practice depends on the specific interconnectedness of these elements. This is perhaps best exemplified by the anecdote the interviewee told me about how the project started:

"This project exists 14 years now, 14 years ago we came up with the idea for it. My husband worked on the other side of the road at a car scrap yard. I worked at a library in a disadvantaged neighbourhood where we would have liked the young men to be removed from the library. But we did want them to be involved with some positive. Hence, I told them to go to my husband to ask if he possibly had something to do for them. They followed my advice and the progress that they made or went through was incredible, as was the way school and parents responded. Their enthusiasm

sparked my and my husband's enthusiasm, and we said to each other that we should make this our work, since we enjoyed it so much. That is how it all started.'' (Quote 5.3.2.5: P3)

This anecdote illustrates that the emergence of this practice depended on the coming together of different elements – the youth that were a considered a nuisance (material and meaning), a husband with knowledge of motor vehicles (material and competence), another place the youth could go to (material), and the positive energy to name but a few (meaning).

Secrid is the third and final practice that I discuss more extensively. First and foremost, an important feature that I should mention is the past of Secrid's owners. The owners (husband and wife) have a past in fashion and product design. Due to the financial crisis in 2008 they no longer received assignments from large companies and decided to take a leap into to unknown and start a business that designs and produces wallets for cards. Why this is important to mention is made evident later in this section.

The materials that are used for the production of the wallets (see figure 5.18) are mainly metal, aluminium, felt, plastic and different types of leather. These are the materials that are used purely for the production of the wallets. However, trees are also a material that is involved with this practice since they are used to compensate for CO_2 that is emitted due to the production of the wallet. Another material is, of course, the machines and computers that are used for the production process.

The company desires to make their product more sustainable in different ways. The interviewee explained that this is currently mainly done by trying to better understand the impact of the product, which is done through a Life Cycle Analysis (LCA). This is one of the main competences according to the interviewee. He asserts that if the product is to be made more sustainable, the product and its parts (i.e., materials) need to be better understood. For example, the company had a product that was made with recycled leather. However, it quickly became apparent that this type of leather did not last long, especially if it became wet. Since the company cares about the quality of their products and want them to last long, they do not sell the wallets made with recycled leather anymore. The same counts for compensating for CO_2 emission by planting trees (in other countries). This is being done after they became knowledgeable about the amount of CO_2 emitted by the production of the wallets. This know-how and expertise are part of the practice. The following quote illustrates this well:

''I know that we are developing with regard to the product. We are exploring the waste of the fishing industry of salmon. Salmon skins that remain from the production of salmon can be worked up to salmon leather, we are currently developing that. Whether or not we will ever produce wallets made with salmon leather is unknown, but we are exploring the possibilities.'' (Quote 5.3.2.6: P8)

This example demonstrates how the company's aspiration (a meaning) to develop a sustainable product translates into specific know-how.

A similar example within the same practice is the use of social workplaces for the construction of the wallets. The components of the wallet (plastic parts, felt, metal, leather etc.) are put together in social workplaces (see figure 5.19). Despite the fact that working with such organisations is not always as easy as working with 'regular' workplaces' because the employees require additional guidance and cannot perform every task, the owners chose work with a social workplace. The interviewee explained that because of the owners' pasts (of being close to bankruptcy), they aspire that everyone is able to work and contribute to something. This has an implication on the practice, according to the interviewee.Another competence that shapes this practice is the education, expertise and knowledge of the owners and the interviewee. The owners have been involved in fashion and product design and envisioned to combine this into a product that is fashionable yet functional. They combined the industrial look of metal with the fashionable look of leather. According to the interviewee, leather is perceived as a manly material.

Figure 5.18 An example of the types of wallets that Secrid produces

Figure 5.19 The social workplace Secrid works with

Consequently, as a way to appeal to women as well, the company is trying to integrate the use of textiles, which simultaneously allows for more creative expressions. The interviewee himself is a student that does his internship at Secrid. The aim of his internship is to develop a plan to make Secrid's products more sustainable. The interviewee's education provides him with knowledge about and expertise with making product chains more sustainable and circular. These are, again, examples of how the combination and integration of specific elements shapes a practice.

This section has set out the various elements that the lower scale level practices studied 'consists of' and the various ways in which these elements are configured to form a practice. Despite the variety of practices, there are similarities especially regarding materials. Each practice has a specific set of materials, competences, and meanings that are configured in distinct ways to constitute a specific practice.

5.4 Context of the practices studied

As discussed in chapter 3 'Theoretical framework', practices and their contexts are conceived as being interdependent, mutually constitutive, and transformative. This section discusses how the studied practices and their contexts relate to each other in a way that will contribute to a more in-depth understanding of how the context influences practices, and vice versa. I distinguish two types of contexts: (bio)physical and social. The (bio) physical context includes the material conditions of a practice. It is about how the physical environment of a practice (such as proximity to other practices) influences a practice, and vice versa. The social context includes socio-economic, political, and institutional aspects. It is about how the social circumstances in which a practice is performed (such as a financial crisis) influences a practice, and vice versa.

5.4.1 Context higher scale level practice

In this section, I present several (bio)physical and social contexts of the higher scale level practice of the introduction of the circular economy concept to the Binckhorst. First, I present the (bio)physical context, how it influences the practice, and how the practice may influence the (bio)physical context. Second, I present the social context, how it influences the practice, and how the practice may influence the social context.

5.4.1.1 (Bio)physical context higher scale level practice

The (bio)physical context of the higher scale level practice relates to the Binckhorst, since the practice is the introduction of the circular economy concept to that specific area. Since the businesses in the Binckhorst have historically been focused on practical skills – rather than financial, managerial, healthcare, etc. – it is perhaps logical that the municipality primarily focuses on the materials side of the circular economy concept. The civil servant notes:

"The Binckhorst is an extremely interesting area, from the municipality's point of view. It has always been an industrial area with a 'rough' edge. But also because

it does not house the standard business such as retail, rather it houses especially manufacturing industry kind of businesses. That is awesome, it is a mixed area, also with a mix of housing and business. That is interesting from a circular perspective, because those are the desired kind of mixes." (Quote 5.4.1.1: O1)

This quote illustrates that the types of activities that take place in the Binckhorst – that are mainly related to production and manufacturing – may have influenced the practice of the introduction of the circular economy concept to the Binckhorst. At the same time, the civil servant addresses that mixing living and working in an area is in itself difficult. And that if you would simultaneously aim to do this circularly, it becomes increasingly difficult. He goes as far as to suggest that:

"So I always exclaim: the official policy of the municipality is not to circularly develop the Binckhorst." (Quote 5.4.1.2: O1)

The keyword in this quote is 'official'. The interviewee goes on to note that the 'Circulair Den Haag' document is not an official policy document about the development of the Binckhorst. This is indeed true, this document is merely a report that describes the ambition of the municipality. Nonetheless, it should be noted that this ambition document describes a clear ambition to establish an economy that is 50% circular in the Binckhorst, by 2025 (Gemeente Den Haag, 2018). Additionally it broadly sets out how this could be achieved by referring to opportunities that should be harnessed. However, the 'Omgevingsplan Binckhorst' and the annexed factsheet about climate, energy, and circularity are official policy documents. From these official documents it is evident that the municipality does not specify concrete plans aimed at achieving a 50% circular Binckhorst by 2025. As previously discussed in this chapter, it does discuss the circular economy concept, mainly in relation to materials and material flows. The (bio)physical context (i.e., the Binckhorst) may have contributed to this. This is probably best seen in the 'Omgevingsplan Binckhorst', where the municipality points to a specific location where circular activities could be stimulated (Gemeente Den Haag, 2019a). This location is nearby the waste processing facility, which is why – according to the municipality – it is suitable for circular activities.

At the same time, the municipality shapes the (bio)physical context. The municipality desires to transform the Binckhorst to a mixed living-working area. In the near future, the function 'living' will gain a larger share in the Binckhorst. Figures 5.20 and 5.21 display what this could mean for the Binckhorst in terms of (bio)physical characteristics. The image on the left shows the current Binckhorst that primarily contains manufacturing businesses and their accompanied warehouses. Whereas the image on the right shows an impression of the possible future of the same area. It looks rather different and has a different primary function as well (i.e., living rather than manufacturing).

Another such situation relates to the BAM asphalt plant, which is one of the most visible industrial businesses in the Binckhorst. During one of the site visits, a manager of this firm revealed that the company could recycle even more used asphalt than they currently do. Additionally, they could produce different types of asphalt that are of a better quality and could be recycled to a greater extent. However, in order for the company to be able to achieve this, it requires a different chimney. This chimney could increase nuisance (smell) experienced by inhabitants that live in high-rise buildings. Because of this, high-rise in certain areas in the Binckhorst would not be favourable, since the BAM would not be able to adopt methods that could be perceived as being more circular. As the municipality is responsible for approving (through permits) or

Figure 5.20 The current situation

Figure 5.21 The potential future situation

disapproving the construction of buildings, they shape the (bio)physical context of the practice of the introduction of the circular economy concept to the Binckhorst in one way or another.

Similarly, this is a way in which the higher scale level practice may influence its (bio)physical context. Ideas, policies, visions, rules, etc. aimed at introducing the circular economy concept to the Binckhorst may result in specific functions being favoured over others. For example, buildings for innovative start-ups may be favoured over car repair shops. Hence, the introduction of the circular economy concept to the Binckhorst may also influence its (bio)physical context. However, it is unclear in which ways exactly it will influence this context, since the ambitions (and therefore policies, rules, permits, etc.) are not yet specific enough.

5.4.1.2 Social context higher scale level practice

The social context of the higher scale level practice is varied. The most straightforward context that should be considered is the current economic system. The civil servant notes:

"There is an existing dominant system, let us call it the linear economy in the absence of a better term. That system is prevailing in all gradations, organisational, in the culture of people, in processes, products, services, and business cases." (Quote 5.4.1.3: O1)

Through this remark, the interviewee wants to express that a circular economy is not easily achieved. He goes on to mention that it takes years, if not generations, to transition to a different (economic) system. One of the examples the interviewee provided relates to the construction contracts that are allocated by the municipality. He suggests that integrating different requirements in these contracts is difficult, since the primary way of thinking has always been: the cheapest contractor is the winner, rather than the one that manages to generate the highest economic value for example. At the same time, however, the municipality shapes this specific context. In different ways (through policies), the municipality attempts to integrate principles that have been perceived as being circular in their activities. Hence, the introduction of the circular economy concept to the Binckhorst is not only influenced by its social context, but also vice versa.

Another way in which the current economic system, in which competition is an important aspect, influences this practice is explained by one of the interviewees. He is involved with promoting circularity in the construction sector and mentions that many businesses still work in their old ways:

"Even the frontrunners in the sector still work in old-fashioned ways, because there is a lot of suspicion. They regularly think: if I sit at the table with people beforehand, I lose my competitive position, which costs too much money…" (Quote 5.4.1.4: O3)

This quote illustrates that, in this case, the competitive nature of project development influences how eager those project developers are to collaborate with one another. The interviewee suggests that the project developers are afraid to lose their competitive position and consequently lose money. According to this interviewee, this is one of the reasons why project developers are hesitant to collaborate. Contrastingly, there are multiple project developers that have united in the Stadmakers cooperative. The Stadmakers have included a vision on circular development of the Binckhorst in their development principles for the Binckhorst. Therefore, this possibly refutes the point made by the interviewee. It possibly – and not certainly – refutes it, since the cooperative could also be a kind of lobby club of project developers that try to persuade the municipality with the ultimate goal of making money, according to the interviewee. However, that is unsure. Next to that, the municipality could very well collaborate with the Stadmakers to introduce the circular economy concept to the Binckhorst.

Another aspect of the social context that influences the higher scale practice relates to institutional elements of the municipality. The resource manager discusses that the municipality has direct and indirect policies. He describes direct policies as a tool that the municipality can use since it has authorisation over a particular activity. An example of this is the waste policy of the municipality, in which the municipality is able to directly intervene. Indirect policies, on the other hand, are policies that cannot directly intervene on particular activities. Such policies are aimed at communication, and facilitating, and stimulating certain activities. The resource manager provides an interesting example of this:

"Thus, I can do things in an indirect manner. Such as with subsidies, or facilitating living labs for example in which experimental circular projects take place. Another option is stimulation of ReSourceCity kind of things. That can be done by including requirements in land allocation policies, such as requiring that

business in a certain location are involved with the circular economy." (Quote 5.4.1.5: O2)

Since the municipality does not have 'full authority' over everything that happens in the municipality, it cannot directly achieve certain goals. This institutional aspect – grounded in national laws – influences the extent to which the municipality can intervene or oblige certain actors to operate in a certain way. Consequently, it influences the introduction of the circular economy concept to the Binckhorst in that it limits the influence of the municipality on the lower scale level practices in the Binckhorst.

As shortly touched upon in chapter 5.1.1 'Description of the higher scale level practice', the political context of the higher scale level practice has also been shown to influence the practice. The document 'Den Haag Duurzaam, Agenda 2015-2020' (the sustainability agenda of the municipality) indicates advanced plans for realising a 'bouwstoffen recyclepunt' (i.e., construction materials recycling facility) in the Binckhorst. However, the installation of a new municipal board eliminated these plans, since their political focus was on the energy transition rather than the circular economy. The political context – and associated decision making – of this practice influenced the practice in a way that led to the rejection of a plan that could have contributed to the introduction of the circular economy concept in the Binckhorst.

A final aspect of the social context that I would like to present is that of housing shortage in the Netherlands. The municipality of The Hague is also suffering a shortage of housing, and the municipality expects its number of inhabitants to grow by 4,000 to 5,000 yearly (Gemeente Den Haag, 2019c). Because of this shortage of housing there are both societal and political incentives that pressure the municipality to solve this issue. Societal incentives relate to providing sufficient affordable houses to the public. With regard to political incentives, the current municipal council (that is formed by political parties) has a reason to solve the issue of housing shortage if it (or they, when thinking in terms of political parties) wants to be re-elected in the next period. Thus, the municipality has ample reasons to resolve the housing shortage, with a certain degree of urgency. Therefore, the municipality might more easily approve construction of housing than it would without the current context of housing shortage. During one of the municipal council meetings, a plan to include a requirement of circular activities for construction contracts was turned down because such a criterion could result in a lack of applicants for the construction contracts. Thus, it makes sense for the municipality not to incorporate requirements aimed at the introduction of the circular economy concept into the allocation of construction contracts. Simultaneously, the municipality can influence this context by resolving the issue of housing shortage in one way or another. The aforementioned examples illustrate that the higher scale level practice may not only be influenced by its social context. Rather, the practice simultaneously influences its social context as well.

5.4.2 Context lower scale level practices

In this section, I take a closer look at the (bio) physical and social context of the lower scale level practices. First, I present several examples of how a particular (bio)physical context influences a lower scale level practice, and vice versa. And second, I present several examples of how a particular social context influences a lower scale level practice, and vice versa.

5.4.2.1 (Bio)physical context lower scale level practices

With regard to the (bio)physical context in which a lower scale level practice is located, there are mainly three topics that are addressed by interviewees. Firstly, the Binckhorst is an industrial area. Secondly, the abundance of space that is available for the practices, in the Binckhorst. And thirdly, the accessibility of the Binckhorst and proximity of it to the highway, train stations and the city centre of The Hague. With regard to the first topic, interviewees explain that being in an industrial can have benefits for certain activities. For the practice 'Werkproject Jupiter' for example, there is sufficient parking space:

"The advantage of a business location is that you can park a van here. Additionally, you create a work environment for clients here, since people work in this area. Living is now starting to become a part of the area as well, but that has not been the case originally." (Quote 5.4.2.1: P6)

The van that the interviewee refers to is the main form of transport for their clients. From the location in the Binckhorst, clients are brought to a location where they carry out work and afterwards they are returned to the Binckhorst with this van. Next to the advantage of having sufficient space for parking, a perceived advantage is the work environment that the Binckhorst provides. You can see the practical

work that is done in the Binckhorst. Therefore, the clients of Werkproject Jupiter are stimulated to work as well. With regard to the second topic, interviewees explain that the amount space that is currently used by a practice is a welcome luxury:

''In my opinion, we have got the space to do what we do here. Luckily, we have got space for our workshop. But at the same time, I enjoy looking outside and seeing green. That is extremely important for our functioning, not only for our employees but also for our target group.'' (Quote 5.4.2.2: P3)

''This is a sea of space. If we would get half of this, we would have to think how to do this differently to sustain our activities with a smaller space.'' (Quote 5.4.2.3: P4)

Sleutelen met Jongeren and Gered Gereedschap are both practices that have more than sufficient space for carrying out the activities. The last quote suggests that this might change because of the transformation of the Binckhorst to a mixed living-working area. I discuss this in chapter 5.4.2.2 'Social context lower scale level practices'.

The third topic addressed by interviewees is the accessibility of the Binckhorst and its proximity to other activities. The two nearby train stations, and direct connection to the highway A12 provide a great accessibility for most practices. This is beneficial since – in this manner – the practices are easily accessible for customers as well as for employees that use either public transport or the highway to get there. Next to that, the proximity of the Binckhorst to the city centre of The Hague provides additional accessibility for those coming from the city centre. With regard to the first point being made, interviewees mention:

''In our opinion this is a suitable place with regard to the accessibility for the youth that come here by public transport.'' (Quote 5.4.2.4: P3)

''Strategically, it is well located, close to the train station and highway.'' (Quote 5.4.2.5: P7)

''Occasionally, customers – that bought a product via Marktplaats or Catawiki – fetch their product here, that is not a problem since we are simply close to the highway.'' (Quote 5.4.2.6: P7)

These quotes illustrate the importance of the accessibility of the Binckhorst as a beneficial feature for the lower scale level practices. In contrast to these quotes, the interviewee from Gered Gereedschap suggests the Binckhorst is not that accessible at all:

''It could be disadvantageous that we are in an industrial area, that is not easily accessible… Can people easily get here? Public transport is not active during the weekend. The bus drives from Monday until Friday, but not during weekends since nobody is working here in the weekends, so why would you provide a bus service then? In that case, people depend on their own mode of transport, a bicycle or car if they feel like it.'' (Quote 5.4.2.7: P4)

It is during weekends when 'Gered Gereedschap' hosts events such as a 'repair café'. Such an event is aimed at helping people repair their electric machines. Participants of such events are required to go to a specific location where the event is hosted, in this case in the Binckhorst (whereas it is often hosted in residential areas). This event is mainly aimed at attracting people that are close to the location of the event, since they need to carry their machines. Hence, the closeness of the train station (since it is still 20-25 minutes' walk to the location) and highway (since it is unlikely that participants will come from other cities) do not provide benefits – that others have pointed out – for such an event. However, that is mainly the case for that specific event. I should note, however, that currently, there is a bus service during weekends which is partially the result of the arrival of housing in the Binckhorst. Therefore, the issue brought to my attention by the interviewee is no longer an issue to the extent described by the interviewee. This demonstrates that the context of lower scale level practices (in this case the transformation of the Binckhorst) could influence the practices in complex and indirect manners. In the light of the accessibility of the Binckhorst, the following quote from the interviewee of Werkproject Jupiter stands out:

''Rather than this central point – where our clients come to and are transported from – we would like permanent routes through the city. This route would run along sites where homeless people are, and shelters for homeless. Then, from those locations we could bring our clients to their workplace. That way, they would not have to come here first and we could reach more clients, which means there are more possibilities.'' (Quote 5.4.2.8: P6)

In contrast to the former examples, this interviewee indicated that rather than having one fixed location where the clients are welcomed, he would prefer a kind of mobile practice. Despite the fact that the Binckhorst is easily accessible by different modes

of transport, 'Werkproject Jupiter' would become more efficient if they did not work from their fixed location in the Binckhorst. This is interesting since other interviewees from other practices asserted that the accessibility of the Binckhorst – thus of the practice – as being a (meaningful) factor of the practice. Thus, depending on the specific practice, accessibility plays either an important or less important role for a practice.

Another (bio)physical feature that interviewees mention with regard to a practice is the proximity of other activities or locations. The lower scale level practices studied show that the proximity of various different activities may influence a practice. The following quote illustrates how the proximity of people can influence a practice:

''We are located here for eight years. Before, we were located in a residential area for some time. That has advantages, since you are more involved with the neighbourhood. People easily walk by to donate something. Our current location is rather distant. People need to know that we are here, luckily people find us.'' (Quote 5.4.2.9: P4)

When the practice 'Gered Gereedschap' was located inside a residential neighbourhood, rather than an industrial area, people would more easily come by and donate tools or machines. Whereas the current location is not (yet) in a residential area, which makes the Gered Gereedschap less visible for other people. The proximity of people that potentially donate tools or sowing machines influences the practice, since it is more likely people will do so compared to in the current situation. In the near future, the Binckhorst will house much more residents that now. However, it is unlikely that 'Gered Gereedschap' will benefit from this, since they may have to move as a consequence of this development.

Some interviewees point out that the proximity of someone else helps (potential) collaboration with them:

''If there was another franchise of ASN in the area, I would get into contact with them, since it is better for the both of us to help each other.'' (Quote 5.4.2.10: P5)

''Across the street, there is a man that sells pellet stoves. In return for the use of his parking place, we saw his wood.'' (Quote 5.4.2.11: P7)

Despite the fact that it might be logical that such collaborations work since the people or organisations are close to each other. It is meaningful to identify that the proximity of others can influence a practice. Also, it is important to recognise that proximity is relative:

''We produce locally in order to be able to quickly solve problems at suppliers. Next to that, it allows us to have a satisfactory view on how the products are produced, the circumstances of the employees, and the impact on the environment.'' (Quote 5.4.2.12: P8)

In this case, the interviewee explains that the company has consciously chosen to produce their products in the Netherlands and to work with Dutch suppliers. In this instance, local refers to the country of The Netherlands. It is easy to understand that that is a different scale than a residential neighbourhood, for example. Proximity of or closeness to something or someone is thus different to different practices.

Several examples of how the (bio)physical context may influence a practice have been discussed. However, as discussed in chapter 3 'Theoretical framework', at the same time it may be the other way around. In other words, a practice may also influence its (bio)physical context. The interviewee from MOOOF explicitly explained how his practice vitalised the surrounding environment:

''We proposed to manage the property, using a concept that would generate a cashflow for the building and vitalise the surrounding environment as a consequence of the large amount of visitors.'' (Quote 5.4.2.13: P1)

''We have been an enormous catalysator for the development of business here. We were already quite active, and after that the neighbouring hotel opened.'' (Quote 5.4.2.14: P1)

Despite the fact that it is not certain that this practice singlehandedly caused the opening of the adjacent hotel (see figure 5.22), it did vitalise the area. During the period in which the building was vacant, there were hardly any people in this area. Whereas nowadays, there are over 200 entrepreneurs located in this building that attract an average of 650 people on a daily basis. Near the building, there are loads of parked bicycles owned by the building's visitors. Next to that, more people roam in the surroundings of the building. Thus, the additional parked bicycles and increased amount of visitors visibly influence the (bio)physical context of the practice.

Sleutlen met Jongeren influences the (bio)physical context in a similar way. With regard to parked cars, the interviewee from Sleutelen met Jongeren mentions:

"No, these are not all ours. In the evening, we always collect the cars that belong to us (i.e., our customers' cars) and drive them inside the workshop, since there is no control of the area at night. If all goes well, the street is empty at night." (Quote 5.4.2.15: P3)

In this case, it is clear how this practice shapes its (bio) physical context. Customers Sleutelen met Jongeren bring their motorcycle or car to the workshop in the Binckhorst. These cars are outside if the employees of the garage are not working on them. Figure 5.23 shows the street in which Sleutelen met Jongeren is located during daytime, when it is filled with parked cars. When work is being done on the cars, they are inside the workshop. Consequently, throughout the day there are several cars parked outside the workshop, on the street. Since there is no one that is present in the area at night, the cars are driven inside to secure them.

Another such example is how one of the practices observed shapes the (bio)physical environment through placing used barrels beer- benches and tables outside. This practice involves brewing beer and selling it at the bar that is located in- and outside the brewery. The neighbouring practice stores materials required for the practice outside (figure 5.24). Here, furniture is made mostly from wood. The carriers of this practice put aside the timber for which there is not sufficient space inside the workshop.

Next to that, most practices advertise their business in one way or another. Some spray paint the name of their business or organisation on the front of their building, others mount it on there, while again

Figure 5.22 MOOOF's neighbouring hotel

Figure 5.24 A situation in which materials used for a practice are stored outside

Figure 5.23 During daytime, the street is filled with parked cars

others mount a large canvas displaying the name on the side of the building. Figure 5.25, on the left, shows a canvas advertisement and on the right the garage door is painted advertisement as well, in the front the trash from this practice is clearly visible. These are all examples of how practices shape the (bio)physical context.

Concluding, the (bio)physical context shapes a practice, while at the same time, that particular practice shapes its (bio)physical context. The (bio) physical context may encourage or hamper certain activities. It is important to recognise that his happens in various ways and that not all practices shape or are shaped by its (bio)physical context to the same extent. At the same time, this (bio)physical context will likely change in the upcoming years, due to the transformation of the Binckhorst to a mixed living-working area. This is part of the social context of the lower scale level practices. In the next section, I take a closer look at how the social context may influence lower scale level practices, and vice versa.

5.4.2.2 Social context lower scale level practices

Similar as the (bio)physical context, the social context of lower scale level practices can influence those practices, and vice versa. The social context can, ultimately, lead to the emergence, change, or disappearance of such practices in the Binckhorst. The 'birth' of the practice of 'MOOOF' provides a telling example of how the social context could lead to the emergence of a lower scale level practice. The building in which MOOOF is situated was vacant for some period of time during the financial crisis that started in 2008. The interviewee from MOOOF stated:

"Well, they were not able to sell the building. Vacancy is never a good thing, and anti-squatting does not add any value, while we wanted to add value. For this, we choose a community that was begging for space. This community consisted of sports people, musicians, and especially dancers. Almost all dance schools lost their subsidies due to the financial crisis. Therefore, I said: move into this building, because together we stand strong. They pay little here, and collaborating with others allows them to survive." (Quote 5.4.2.16: P1)

This quote illustrates that the financial crisis influenced the situation in at least two ways. Firstly, the financial crisis contributed to the impossibility to sell the building. Secondly – according to the interviewee – due to financial cuts, most dance schools did not have subsidies that supported them financially. In that context, the vacant building presented an opportunity for MOTUS to provide affordable spaces for their targeted community. The interviewee confirms this:

"The financial crisis makes initiatives such as this one possible." (Quote 5.4.2.17: P1)

In other words, it was unlikely that this practice would exist in a different social context. It is the specific social context of the financial crisis that enables the practice of MOOOF to 'come to life'.
It may, however, also be the other way around – when a practice influences its social context.

Figure 5.25 An example of how a practice may influenceits (bio)physical context

The best example of this is seen in the practice of 'I'M BINCK'. 'Binckse Krach' – a collaboration between residents, entrepreneurs, developers, and users of the Binckhorst – has defined five core values of the Binckhorst (see figure 5.26). I'M BINCK and Binckse Krach assert that these core values aim to contribute to the development of the Binckhorst (I'M BINCK & Binckse Krach, 2017). Shortly after the publication of the report, the municipal council passed a vote that proposed to include the core values into the 'Omgevingsplan Binckhorst'. This development plan for the Binckhorst notes:

"Additionally, there are five important (area) qualities that provide guidance and give direction to new initiatives. However, these qualities are not a blueprint." (Gemeente Den Haag, 2019a, p. 16)

In the spirit of future the new environmental law, the core values of the Binckhorst are not strict requirements. Rather, they provide guidance and give direction to the development of the Binckhorst. This quote illustrates that a lower scale level practice can influence a social context as well. Though, I should note that it remains to be seen to what extent these core values impact upon the development.

Another way in which the social context can influence a lower scale level practice is through certain institutions. The car repair shop ASN Autoschade Van Vreden – Binckhorst is a member of an overarching organisation of over 70 car repair shops throughout the Netherlands. Members of ASN have to conform to certain requirements. The overarching organisation monitors its members on a yearly basis to ensure they meet the requirements. One of these requirements is 'duurzaam repareren':

"If you want to be affiliated with an organisations as ASN, you have to meet certain criteria. 'Duurzaam repareren' is one of such requirements." (Quote 5.4.2.18: P5)

Thus, sustainably repairing motor vehicles is – to a certain extent – imposed by the overarching organisation. The social context of this practice of being part of an overarching organisation, thus has an impact on the practice itself. Being part of such organisations has (financial) advantages, which is why car repair shops are often affiliated to them. Another advantage is that members of such overarching organisations help each other out, for example with tools:

"... I have got a plasma cutter for example. If ASN Nootdorp needs it, we share it with each other. I also have an aluminium welding machine, if something needs to be repaired we share the machine. If someone from another ASN location calls us: we naturally help each other out. However with Verweij we would not do that." (Quote 5.4.2.19: P5)

Figure 5.26 The iconic frontpage of the document that describes the Binckhorst's core values

This quote illustrates that companies within the overarching ASN organisation help each other out, for example by sharing tools. However, this car repair shop will not easily share its tools with another car repair shop in the Binckhorst that is not part of this organisation (Verweij, for example). The interviewee notes that most other car repair shops in the Binckhorst have their own overarching organisation and therefore arrange such things within these organisations. It is clear that, because of this competition, such car repair shops will not commonly collaborate with other car repair shops, despite the fact that they are nearby (i.e., in the Binckhorst). Rather they collaborate with car repair shops that are affiliated to the same organisation, but that are located in another location (often in a different city). Thus, the institutional aspect of the social context of a practice may connect certain practices that are in different locations and at the same time restrict connections with practices in closer proximity.

The social context that applies to (almost) all lower scale level practices studied is that of the transformation of the Binckhorst to a mixed living-working area. As discussed in chapter 5.4.1.2 'Social context higher scale level practice', this transformation is itself partially a result of the housing shortage. Almost all interviewees from the lower scale level practices argued that the transformation leads to uncertainty about the future of the practice:

"We were, of course, afraid that this building would be demolished because there are planned a lot of houses in the Binckhorst." (Quote 5.4.2.20: P3)

"Currently the only limitation is the workshop. I fear that we have leave here one day." (Quote 5.4.2.21: P4)

With regard to the first quote, the interviewee – later in the interview – mentioned that the building is likely to be protected as a historic building. However, she was still uncertain about the exact plans. Additionally, the building was sold to a project developer which adds to the uncertainty about whether or not the practice will be able to be sustained, according to the interviewee. With regard to the second quote, the interviewee indicated that the disappearance of the practice might already be in progress. Gered Gereedschap used to rent the building. However, due to declining subsidies, the organisation could no longer pay for the rent. Therefore, they switched from renting the property to 'Bewaakt en Bewoond' – an organisation that combats vacancy. Nevertheless, if this organisation orders Gered Geredschap to leave – for example because the building is sold and/or will be demolished – Gered Gereedschap has to leave within six weeks. This sword of Damocles hangs over the practice of Gered Gereedschap and has led the organisation to explore the possibility to move somewhere else. Another lower scale level practice that is physically close to Gered Gereedschap is Werkproject Jupiter. This practice is located one street away from Gered Gereedschap (both in number 1 of figure 5.27) and across from the housing project 'Binckeiland' (number 2 in figure 5.27).

During the interview, the interviewee from Werkproject Jupiter noted that the rent was cancelled a week earlier and that the organisation is already looking at properties in other locations. Upon asking whether this had to do with the transformation of the Binckhorst, the interviewee said:

"Why do you think we have to leave here? There will be houses worth €800,000 here, across the water." (Quote 5.4.2.22: P6)

This quote illustrates the pressure put on (some of) the lower scale level practices in the Binckhorst. It is important to recognise that it may not be the case that practices have to move because they need to make room for living. This is indeed the case in some situations. However, pressure may also come from a conflict between the different functions of living and working. In the case of Werkproject Jupiter, a daily activities location for former drug addicts and former prisoners would not go hand in hand with the expensive houses across the water. A similar situation applies to Gered Gereedschap, where noise caused by machines may be perceived as a nuisance by future residents. Thus, even if the locations of Werkproject Jupiter and Gered Gereedschap would not be used for housing, the practices could still be put under pressure due to the closeness of the houses.

These examples have illustrated how the social context of the lower scale level practices studied may influence such practices, and vice versa. Additionally, this section has shown how the historic social context (such as a financial crisis) and a future social context (such as potential construction of housing) can influence the emergence, change, and disappearance of lower scale level practices in the Binckhorst.

Figure 5.27 Map of location of Gered Gereedschap and Werkproject Jupiter relative to Binckeiland

Chapter 6
Discussion

In the image above, I see two authentic inhabitants of the Binckhorst that are changing a gear while discussing whether it is the right gear. Simultaneously they are conscious of the transformation of their Binckhorst. In the background, the contours of this transformation are clearly visible. The future high-rise buildings are already noticeable, as is the crane located at the Bam asphalt plant, in the heart of the Binckhorst.

In this chapter, in a similar way as the two people in the image, I discuss this research. The people in the street art could have chosen any other gear at their disposal. Similarly, I recognise that I could have adopted other approaches or methods for my research. This discussion reflects on the theory and methodology used for this research. Additionally, I position the findings of this research in the context of the academic debate concerning social practices. I, thereby, also offer a start for further research to develop a more thorough understanding of social practices.

6.1 Reflection on theory

Since there are different ways of studying the topic of this research, it is important to make clear what the consequences are of adopting a practice perspective. In the following paragraphs, I discuss how I have treated practices in this research. Next to that, I discuss practice theory as an alternative (or addition) to discourse theory, with respect to policy processes.

6.1.1 Practice-as-performance and practice-as-entity

As previously discussed, there is an analytic difference between practice-as-performance and practice-as-entity. Practices-as-performance are enacted in specific moments, and practices-as-entity are the emergent outcomes of such performances. This research was primarily concerned with practices-as-entity. The practices studied (such as car repairing), have been studied as practices-as-entity. In this example, practices such as loosening a bolt, replacing a tire, and refreshing oil are recognised as practices-as-performance that – when routinely reproduced – shape the practice-as-entity. In this research, analysing practices in this way was useful, as it allowed for consideration of the dynamics of practices that could be seen as circular in the Binckhorst.

However, I could have also chosen a different approach. In this other approach, I would perceive specific individual actions that could be perceived as circular as practices-as-performance, that – when routinely performed – shape the practice-as-entity 'circular economy'. In that case, I could recognise actions – carried out within the practices studied – such as reusing a building or materials, repairing a car, remanufacturing sowing machines, and reintegrating former drug addicts and prisoners as practices-as-performance. When those practices are performed consistently, they could be recognised as the practice-as-entity ('doing') circular economy. Adopting this approach would have yielded different findings as it would involve studying other practices more specifically than I have done in this research. It would involve studying specifically practices such as repairing a car, refurbishing a sowing machine, and reusing materials. I would see such practices as performances that together would constitute the circular economy as a practice-as-entity.

In this research, I emphasised the lower scale level practices that may perhaps be seen as marginalised in the light of the transformation of the Binckhorst to a mixed living-working area. In addition, I have shown how such ordinary practices could be seen as (partially) circular. With the other approach, I would have been concerned with how practices such as repairing, reusing, and remanufacturing are carried out to sustain the practice of circular economy. Specifically for issues such as the transition to a circular economy, such an approach could be highly useful as it could uncover the dynamics, complexities, and relationships between the practices and their materials, competences, and meanings. This could contribute to a better understanding of the circular economy and the potential possibilities for transitioning to such an economy. In the next section, I elaborate on a different approach that I could have adopted for this research.

6.1.2 Discourse theory

The belief that language profoundly shapes how people view the world leads researchers to use meaning as a research focus to understand policy processes (Behagel et al., 2017). Behagel et al. (2017) note that interpretation is a part of governing as a practice. Therefore, discourse analysis – focusing on language – gains access to empirical reality and is a strategy to study this reality (Behagel et al., 2017). Thus, it makes sense to study policy processes (in other words, the practice of governing) through discourse analysis. In my case, the introduction of the circular economy concept to the Binckhorst could also be seen as a policy process – being employed primarily by the municipality. However, in this research, I have analysed the introduction of the circular economy concept to the Binckhorst with practice theory. This is an unconventional way of analysing this phenomenon, as it would most of the time be studied through discourse analysis.

In this research, I have studied a policy process with a practice approach. Behagel et al. argue that *"knowledge and discourse are 'performative': rather than merely representing reality, they are also constitutive of reality as they are aspects of practice themselves"* (2017, p. 482). Moreover, Nicolini (2012) suggests that discourses themselves can be seen as practices. For that reason, despite being unconventional, it makes sense to study the introduction of the circular economy concept with a practice approach. In this research, knowledge and discourse are primarily present in the elements competences and meanings, since those elements are the multiple forms of understanding, practical knowledgeability, motivational knowledge, ideas, symbolic meanings, and aspirations. Knowledge does not necessarily show itself only in the form of discourse. Rather, practices can also be seen as

tacit forms of knowledge (Behagel et al., 2017). Therefore, a practice approach – as an alternative or addition to discourse analysis – to studying policy processes could be appropriate.

A practice approach can be seen as an alternative method of studying policy phenomena. From my perspective, the added value of a practice approach to studying policy phenomena lies in its ability to highlight the close connection between meanings and materiality. Next to that, its added value lies in its ability to examine and uncover the dynamics and complexities of emergent practices by paying attention to the interconnectedness of the defining elements of practices, the relationships between practices, and the influence of practices and their contexts on each other. Thus, I suggest that researchers consider a practice approach – as an alternative or addition to discourse analysis – when studying policy processes.

6.2 Reflection on methodology

This section reflects on the methodology and methods used in this research. First, I briefly discuss how I dealt with interviewees' unfamiliarity with the circular economy concept during the semi-structured in-depth interviews. Second, I reflect on how the limited interaction with the practices may have influenced the research findings. Third, I reflect on the use of the 10R framework in this research. And fourth, I discuss the analysis of the context of the practices studied.

6.2.1 Interviewees' unfamiliarity with the circular economy concept

During the semi-structured in-depth interviews, interviewees occasionally were not familiar with the circular economy concept. In this case, I briefly explained the concept by mentioning several key concepts – such as reuse, repair, extending lifetimes, and inclusive society. I thought it was essential to provide a rough understanding of the circular economy concept, to allow my interviewees to interpret the concept for themselves as well. Nevertheless, I may have thereby influenced interviewees' understanding of the circular economy concept, which – in turn – may have influenced subsequent answers to interview questions. It is highly unlikely that I have limited their understanding of the circular economy concept, since they had acknowledged they were unfamiliar with the concept. However, I may have steered their perception of what could be seen as circular and what not. Although it cannot be measured to what extent this has influenced the research findings, I find it important to note this issue.

6.2.2 Participant observation

Practice theory favours ethnographic and participant observant research methods to establish an in-depth understanding of practices (Huizing & Cavanagh, 2011). My research methods included semi-structured in-depth interviews – i.e., interaction with participants. However, this interaction only took place for approximately 30-90 minutes. Despite my best attempts at developing an in-depth understanding of the practices studied, another research method could have contributed to an even more in-depth understanding. A more immersive experience – that is, participant observation for a longer period of time – could have facilitated a more detailed and more in-depth understanding of the practices studied. Participant observation could have enabled me to identify additional materials, competences, and meanings and how they are configured in the practices studied. Next to that, it could have provided additional insights into the influence of context on practices and vice versa. Experiencing the practices 'at work' by immersing myself in these practices could have contributed to a more extensive and in-depth understanding of the practices studied. Unfortunately, I have not used participant observation as a research method – two of the limiting factors being financial and time constraints. However, for the abovementioned reasons, I would highly advise other researchers that study practices to include participant observation or another research method that immerses the researcher in the practice.

6.2.3 10R framework

In this research, I used the 10R framework to identify the different types of R strategies – aimed at improving circularity – that were integrated in the practices identified. This has contributed to a selection that covers a broad range of types of actions that relate to circularity. Although many authors observe the 10R framework as the 'how-to' of circular economy, it is most often considered to relate to products and production cycles. Therefore, a social component – compared to a material component – of the circular economy concept might inherently be less represented in this research. I should note, however, that I have taken a slightly alternative approach to this 10R framework. I perceived the 10R's as strategies aimed at circularity in general, rather than merely limited to products. Reuse or reduce, for example, can also apply to reintegrating people in society or the job market. In this case, those people have a chance at adding value to society, whereas they would otherwise possibly be neglected. I could go as far as to suggest that people are also materials or products. In that

case, repurpose could be perceived as employing a 'discarded' person in a different (more simple) function; refurbish could be re-educating or renewing a person's knowledge (e.g., keeping up with rapid developments in ICT); and reuse could be employing a person in his or her same function after a longer period of unemployment. Despite my attempt at including a social component, in addition to a material component, it is important to recognise that the 10R used in this research is principally used for products which may have influenced the research findings.

6.2.4 Context

In this research, the context of the practices studied was essential to understanding the dynamics and complexities of these practices. I tried my best to thoroughly examine the contexts of the practices, and how these contexts and practices influence each other. This is, however, a rather complicated phenomenon, and not all contexts may be equally identifiable. In other words, there are most likely contexts – (bio)physical as well as social – that I have not addressed. A possible explanation for this is that I might have identified the context, but that I might not have been aware of the relationship between the practice and the context. MOOOF's nearby fast food restaurant may, for instance, very well influence the practice of MOOOF, and vice versa. MOOOF's community members may regularly jointly visit the fast food restaurant and perceive this visit as an important part of the community. In that case, I was aware of the proximity of the fast food restaurant – being a (bio)physical context – but I might not have been aware of its relation to the practice MOOOF.

Another explanation is that I was not aware of the context altogether. In that case, there might have been a context that I did not identify at all. In the example of MOOOF's nearby fast food restaurant, I could have been unaware of the fast food restaurant's presence. Consequently, I would have been unable to examine the relationship between MOOOF and the fast food restaurant. In short, it is essential to recognise that there are certainly (bio)physical as well as social contexts that I have not identified and/or analysed, while they might influence a practice studied, and vice versa.

Additionally, the case of this research – the practices in the Binckhorst and their contexts – is rather complicated as well. The reason for this is that I perceived the transformation of the Binckhorst as a (bio)physical and social context, while this transformation could also be perceived as a practice in its own right. As a practice, the transformation of the Binckhorst is similar to the higher scale level practice of the introduction of the circular economy concept to the Binckhorst. Identifying it as either a context or practice has implications for the findings of this research, as the analysis of a practice differs from that of a context. I have not examined the defining elements and their configurations within this transformation, since I did not perceive it as a practice. Identifying the transformation of the Binckhorst as a practice would result in a more thorough examination of it. Consequently, such an examination could provide interesting insights into the dynamics and complexities of this practice that has a profound impact on the Binckhorst, and therefore on its practices and their contexts.

6.3 Further research

In this section, I recognise two topics that I have not addressed sufficiently, in my opinion, but that could have yielded interesting results. Accordingly, I discuss why further research into these topics could be of interest for both practice scholars and practitioners. First, I discuss the relationship between practices. Second, I discuss the complexities of elements that may be shared between multiple practices. And third, I recommend one specific interesting practice for further research.

6.3.1 Relationships between practices

Social practice theories are well equipped to address the dynamics, complexities, and relationships of practices. I have addressed the relationships between the defining elements of practices, by examining how the materials, competences, and meanings are connected to one another and influence each other. However, I have not extensively addressed relations between practices. Relations between practices matter for the trajectories of the defining elements, as well as for the individual practices that constitute bundles and complexes of practices. Considering the variety of practices in the Binckhorst, studying the relationship between different practices could have resulted in interesting insights regarding the trajectories of the elements of practices and practices themselves. Therefore, this could be an interesting topic for further research, especially when taking into account the transformation of the Binckhorst as a practice.

6.3.2 Elements change and affect multiple practices at the same time

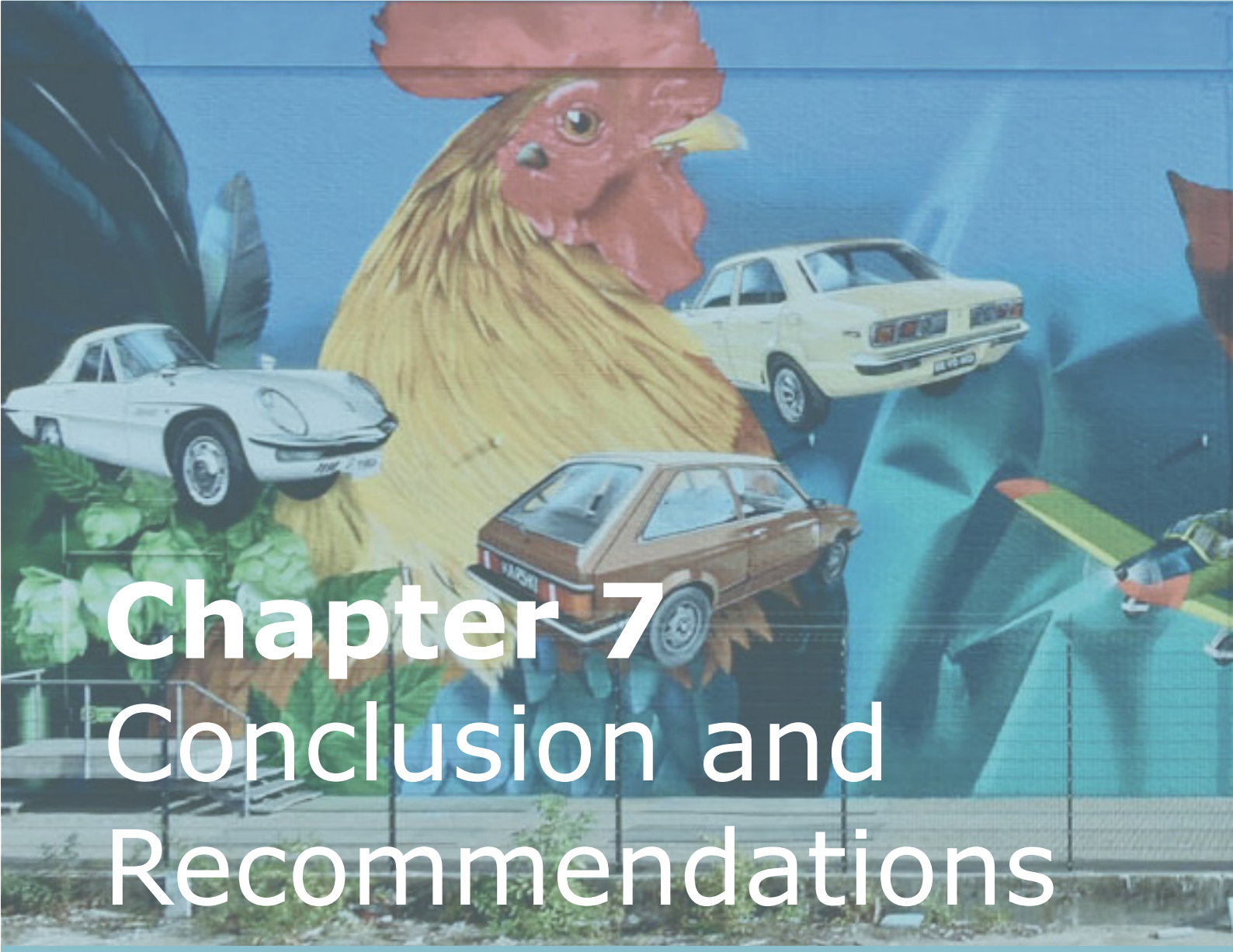
Social practice theory understands that elements of practices may be shared among multiple practices. Therefore, when an element in one practice changes, it might affect multiple practices at the same time. A road, for example, is shared by pedestrians, cyclists, and drivers. At some point in time, the pedestrians may be separated from cyclists and drivers through creating a footpath. This simultaneously influences the practices of cycling and driving, as these now need to stay off of the footpath. From that moment onwards, cycling and driving are also involved with the competence of knowing where not to cycle and drive. As previously noted, I did not study the relationship between practices, likewise, I did not study elements shared between practices. This is, however, an interesting topic since a change of one element of a practice may produce a change in several other practices as well. Thus, knowledge and awareness about the elements shared between practices could contribute to an improved understanding of the emergence, dynamics, and disappearance of practices.

This research has touched upon the broad understanding of the circular economy concept. Included in this understanding is the idea that products and materials should retain their value for as long as possible, for example through extending the lifetime of products and materials. Thus, a product may be used for longer with the same function. When the product can no longer be used in its original function, it could be repaired or refurbished to sustain its original function. When repair and refurbish are no longer viable, the product may be taken apart for remanufacture and repurpose. Every time the product goes down another step of the R ladder, it may be used in a different practice. Consequently, in a circular economy, a product may be involved in multiple practices to retain a value as high as possible. Therefore, an understanding about the shared elements of practices could be particularly useful with regard to practices that are concerned – both intentional and unintentional – with the circular economy. Accordingly, this more thorough understanding of shared elements of such practices requires additional research, which could perhaps simultaneously take into account the relations between practices.

Considering elements may be shared between practices, and relationships may be present between practices, I recommend further research into one specific lower scale level practice in the Binckhorst. Rather than studying the wide variety of practices, further research should – in my opinion – aim to uncover and explain the dynamics and complexities of one practice by paying attention and taking into account the relationship of the practice studied to other practices and the elements of the practice studied that are shared with other practices.

6.3.3 Further research into one specific practice

More specifically, I recommend further research into the practice MOOOF. MOOOF has shown to include both material and social aspects of the circular economy concept. Next to that, it is involved with a vast amount of people (from the communities). Additionally, an interesting combination of the (bio)physical and social context led to MOOOF's emergence. In contrast to when MOOOF emerged, there are now plans for what to do with the building, and the social context – especially the economic context – provides an opportunity for realising these plans. Thus, interestingly, it is exactly the contexts that allowed for MOOOF to emerge (or rather the opposite of those contexts), that are currently profoundly influencing the practice, to the extent of potential disappearance. Finally, MOOF occupies a rather large building that is planned to be demolished in 2020, as a result of the transformation of the Binckhorst. Accordingly, MOOOF plans to circularly develop another location in the Binckhorst. For those reasons, MOOOF is – in my opinion – one of the most interesting practices for further research into one specific practice. Through ethnographic and participant observation research methods, the researcher could immerse himself or herself in the practice studied. Thereby, the researcher would also be enabled to more extensively examine the future oriented history of the practice and identify and examine the contexts of a practice and how they influence one another. Ultimately, such further research could contribute to a more inclusive development of the Binckhorst – and possibly other areas as well – by improving our understanding of the dynamics and complexities of practices.



Chapter 7
Conclusion and Recommendations

The image above displays one of the largest and most colourful pieces of street art in the Binckhorst. Close to the St. Barbara cemetery, is one of the Binckhorst's most iconic pieces of street art. It portrays the locally famous chickens, the cars that refer to the Binckhorst's history, the hops that used to be farmed in the area for brewing a local beer, and Fokker airplanes that used to be manufactured in the nearby Fokker Terminal. The wall of this street art is the place where you can witness multiple characteristic features of the Binckhorst in one location.

In this chapter, I answer the main and sub-research questions by concluding my most characteristic findings. Additionally, I provide several practical recommendations aimed at contributing to a circular and more inclusive development of the Binckhorst.

7.1 Research questions

In this section, I answer the main and sub-research questions presented at the end of chapter 3 'Theoretical framework'. I based the answers to these research questions on the results described in chapter 5 'Results'. First, I answer the sub-research questions. Second, based on the answers to the sub-research questions, I formulate an answer to the main research question:

How is the circular economy concept manifested in higher and lower scale level practices in the Binckhorst?

7.1.1 Sub-research question 1

The first sub-research question is:
What are the higher and lower scale level practices, that may be seen as circular, in the Binckhorst?

The primary aim of this sub-research question was to discover what the practices in the Binckhorst, that could be seen as circular, 'look like'. It is important to note that I distinguish between two kinds of practices, based on scale level. I distinguish the higher scale level practice of the introduction of the circular economy concept to the Binckhorst, and the lower scale level practices which are local practices that 'happen on the ground'. First, I answer the first sub-research question for the higher scale level practice, then for the lower scale level practices.

7.1.1.1 Higher scale level practice

The higher scale level practice of the introduction of the circular economy concept to the Binckhorst is primarily carried and carried out by the municipality of The Hague. In addition to the municipality, the Stadmakers cooperative, the Cirkelstad network, and ACCEZ play a less important role in this practice, or at least a role that is less publicly noticeable. It is clearly evident that this practice is relatively broad, in the sense that it includes a wide variety of ideas, policies, and tools to introduce the circular economy concept to the Binckhorst. In general, the municipality mainly concerns itself with opportunities for circularity within the construction, and household (separation of waste) sectors.

Nevertheless, the municipality also has specific ideas for the Binckhorst with regard to introducing the circular economy concept. Firstly, it emphasises that the waste processing facility in the Binckhorst provides opportunities for promoting circular activities in its proximity. Secondly, the municipality has expressed the ambition to realise a building materials recycle location in the Binckhorst, which could have become the leading recycle location in the province of Zuid-Holland. However, due to the installation of a new municipal board and therefore changed priorities, the construction of the building materials recycle location in the Binckhorst was cancelled. Finally, the municipality notes that start-ups – that should be linked to businesses that can work circularly together – should be stimulated and that the Binckhorst offers space for these start-ups. Thus, the municipality applies a wide variety of ideas, policies, and tools to reproduce this practice. Some of these ideas were found to be favourable, whereas others were not (i.e., they were not or will not be realised).

7.1.1.2 Lower scale level practices

The eight lower scale level practices studied are varied in terms of what they entail. They primarily include practically oriented practices, in addition to practices that incorporate social aspects as well. Similarly, the activities that could be seen as circular are diverse too. These activities include different R strategies, such as reusing, repairing, refurbishing, and remanufacturing of different products. Additionally, some lower scale level practices studied include activities that could be perceived as a social aspect of the circular economy concept. These may be seen as (re)integration of people with a distance to society or the job market, as well as social entrepreneurship concerning societies in both the Netherlands and less affluent countries. Thus, there is a wide variety of lower scale level practices in the Binckhorst that are involved in a diversity of activities that could be perceived as circular.

7.1.2 Sub-research question 2

The second sub-research question is:
How is the circular economy concept understood by the carriers of the higher and lower scale level practices?

There is a wide variety of possible understandings of the circular economy concept. Therefore, it is important to grasp how the circular economy concept is understood by carriers of the practices studied in the Binckhorst. First, I answer the second sub-research question for the higher scale level practice. Second, I answer the second sub-research question for the lower scale level practices.

7.1.2.1 Higher scale level practice

In the higher scale level practice of the introduction of the circular economy concept to the Binckhorst, the municipality has a broad understanding of the circular economy concept. The documents published by the municipality of The Hague mention several R strategies – that have been recognised as strategies aimed at transitioning to a circular economy – such as rethink, reduce, reuse, and recycle. In direct relation to the circular economy concept, the documents address primarily material aspects. Less directly related to the circular economy concept, a document addresses the People, Planet, Prosperity approach, which includes social, environmental, and economic aspects respectively. The civil servant and resource manager – both employed by the municipality of The Hague – contribute to a broader understanding of the circular economy concept in the higher scale level practice. Both indicated that the circular economy is a broad concept that does not have one definition. In their description of the concept, they included the 9R and 10R strategies. Additionally, they referred to the social component of the circular economy concept by addressing topics such as the inclusive society. Finally, the person involved in Cirkelstad mentioned that there should be an economic benefit to circular activities for them to be feasible. This point was also made by the civil servant and is addressed implicitly in the municipality's documents. Collectively, the municipal documents, municipality's employees, and the person involved in the Cirkelstad network, contribute to a broad understanding of the circular economy concept in the higher scale level practice of the introduction of the circular economy concept to the Binckhorst.

7.1.2.2 Lower scale level practices

Between the lower scale level practices there are both similarities and differences in terms of understandings of the circular economy concept. An important insight is that (un)familiarity with and a certain understanding of the circular economy concept are not necessarily related to whether or not a practice could be perceived as circular. Most interviewees that were familiar with the circular economy concept implicitly referred to a few R strategies. They primarily referred to strategies within the 'extending the lifespan of products and their parts' section of the 10R framework. Next to that, the principle 'reduce' – within the 'smarter product use and manufacture' section of the 10R framework – was addressed mainly with respect to the waste. Interviewees that had a distinctively broader and more detailed understanding of the circular economy concept included topics such as efficient energy use, rethink, short and long term employment of the concept, 3R's, and the inclusive society. A reason for the broader and more detailed understanding of the concept may be sought in the interviewees' careers and education, since they were or have both been involved with the circular economy concept for years.

There are certainly similarities between the understandings of the circular economy concept by carriers of the higher scale level practice and the lower scale level practices. In both kind of practices, the circular economy concept is understood to be about several R strategies. Additionally, both kind of practices primarily emphasise the material component of the circular economy concept. At the same time, however, in the lower scale level practices the circular economy concept is understood more specific to a particular practice and is more practically approached. Whereas in the higher scale level practice, the circular economy concept is mainly treated as a concept that could guide the development of the Binckhorst. The municipality primarily describes its ambition with regard to the circular economy, without proposing concrete realisable ideas. Thus, the wide variety of understandings of the circular economy concept identified in chapter 2 'Circular economy concept', is largely reflected in the diversity of understandings of the concept in the higher as well as lower scale level practices studied in the Binckhorst.

7.1.3 Sub-research questions 3 and 4

The third sub-research question is:
What materials, competences, and meanings constitute the higher scale level practice and lower scale level practices that could be perceived as circular?

The fourth sub-research question is:
How are the materials, competences, and meanings configured to constitute the higher scale level practice and lower scale level practices that could be seen as circular?

Examining the elements involved and their configuration in practices is essential for understanding practices. Based on social practice theory, I identified three types of elements: materials, competences, and meanings. Merely a description of what elements constitute a practice is in itself not particularly meaningful. Therefore I simultaneously discuss how these elements are configured to constitute a practice. An understanding of how and which elements are configured in a practice

contributes to understanding the dynamics of practices. First, I discuss what elements constitute the higher scale level practice of the introduction of the circular economy concept to the Binckhorst and how they are configured in this practice. Second, I discuss what elements constitute the lower scale level practices and how they are configured in those practices.

7.1.3.1 Higher scale level practice

Upon first inspection, the elements involved in the higher scale level practice of the introduction of the circular economy concept to the Binckhorst seemed not to be closely connected to each other. Some of the materials involved in the higher scale level practice are legislation, policies, rules, permits, subsidies, and (groups of) people. Next to that, the waste processing facility and spaces for start-ups are examples of more specific materials involved in the practice. With regard to competences, the (groups of) people carry knowledge and expertise with respect to the circular economy concept. The municipality asserts that its ambition (a meaning) is not yet sufficiently specific to translate it into rules for the 'Omgevingsplan Binckhorst', which is the development plan for the area. For this ambition to become more specific, the municipality requires additional competences. According to the municipality, the appointment of the resource manager is a first step towards this. The municipality describes the primary aim of the resource manager as connecting businesses to one another, thereby creating the synergy required for a circular economy. Thus, synergy amongst businesses in the Binckhorst is another meaning of this practice. A more specific ambition with regard to the introduction of the circular economy concept enables the municipality to develop and realise more appropriate interventions (i.e., legislation, policies, rules, permits, and subsidies) aimed at this introduction. The idea of the municipality that the circular economy is a solution to the problematic impact of the current economic system is perhaps the most important meaning, since it is at the heart of this practice as it is the main reason for transitioning to a different economic system. Based on knowledge (competences) acquired through research, the municipality includes meanings such as maintaining a standard of living, creation of additional jobs, additional economic value, and reduction of traffic and emissions. These are perceived outcomes of introducing the circular economy and thereby provide the incentive for the municipality to carry out this practice.

Thus, upon further inspection, the elements of the higher scale level practice are connected to each other rather closely. The knowledge and expertise – being competences – required to develop a specific ambition with regard to the introduction of the circular economy concept to the Binckhorst – being meanings – are collectively carried by ACCEZ, the Stadmakers cooperative, Cirkelstad, the resource manager, the civil servant, and legislation, policies, and rules – all being materials.

7.1.3.2 Lower scale level practices

In the lower scale level practices studied, the elements involved are closely tied together by each of the defining elements themselves. The materials, competences, and meanings of each of the lower scale level practices vary. This is unsurprising considering the diversity of lower scale level practices in the Binckhorst. However, the specific type of element 'materials' of these practices may, be identical or comparable to materials in other lower scale level practices. This is, again, unsurprising, since specific materials such as tools may be used in a variety of practices that have a variety of ambitions they pursue (i.e., a hammer may be used by both a carpenter and a car mechanic). Different practices are carried out with different ambitions that require different competences and possibly different materials (i.e., the ambition to make a table is different and requires different competences than the ambition to repair a car, while some materials in these practices are the same). Therefore, particular materials, competences, and meanings are connected and configured in a specific way that define the practices.

Concluding, in the higher scale level practice of the introduction of the circular economy concept to the Binckhorst, the elements are configured in a less noticeable way than the elements in the lower scale level practices. Nonetheless, the elements of the higher scale level practice are closely connected to one another and the practice depends on the specific configuration of them for its continuation. The diversity of the elements involved in the lower scale level practices reflects the diversity of the practices themselves, although elements – especially materials – may be similar between practices. The examination of the configuration of the elements in the higher and lower scale level practices, exemplifies the dynamic nature of practices. The specific configuration of elements is what defines the practices as, it is evident that, if one element within a configuration changes, the other elements are likely to change as well, thereby influencing the practice – i.e., the practice's existence, change, and disappearance.

7.1.4 Sub-research question 5

The fifth sub-research question is:
How does the context of the higher and lower scale level practices influence the practices, and vice versa?

Social practice theorists conceive of practices and their context as being interdependent, mutually constitutive, and transformative. This section discusses how the practices studied and their contexts relate to each other in a way that will contribute to a more in-depth understanding of how the context influences practices, and vice versa.

7.1.4.1 Higher scale level practice

The (bio)physical context of the higher scale level practice relates to the Binckhorst, as the practice is the introduction of the circular economy concept to that specific area. Practices influence their context, for example, by attracting specific people that travel by different modes of transport. A car repair shop attracts a lot of cars, which are part of the (bio) physical context. Next to car repair shops, there is a variety of other practically oriented practices that take place in the Binckhorst. Considering this (bio)physical context, the emphasis on materials in the introduction of the circular economy concept to this area is a perhaps a logical choice. Though, I should also note that this focus on materials may also (partly) stem from how the circular economy concept is understood in the practice. Another way in which the (bio)physical context of this higher scale level practice influences the practice is the characteristics of specific locations in the Binckhorst. For example, the municipality perceives the proximity of the waste processing facility as an opportunity to stimulate circular activities in this specific area. The fact that this facility is situated in this location, contributed to the municipality's idea that the surrounding area is promising for circular initiatives.

The higher scale level practice may also influence its (bio)physical context, as certain ambitions (resulting in certain policies, rules, permits etc.) may favour certain functions – and therefore certain buildings and infrastructures, for example. However, since the municipality's ambition regarding the circular economy in the Binckhorst is not yet specific enough, it is difficult to know how the higher scale level practice may exactly influence its (bio)physical context. Finally, the transformation of the Binckhorst to a mixed living-working area (itself part of the social context) likely results in an area where different functions are increasingly present, compared to the current situation. If, or rather when, in the future, other lower scale level practices take place in the Binckhorst, the (bio)physical context may change. This future (bio)physical context has to be taken into account in the introduction of the circular economy concept to the Binckhorst, as it may influence (i.e., enable or hinder) specific ideas aimed at this introduction. The following paragraph delves deeper into transformation of the Binckhorst and its potential influence on the higher scale level practice. The social context influences the higher scale level practice in various ways.

First, the current economic system – which is present in all gradations of business and life (organisational, cultural, financial, etc.) – influences the way we, as humans, and organisations such as the municipality think about issues. The municipality perceives it difficult to integrate circular principles that do not match this system. Introducing circular requirements in building contracts, for example, is perceived as problematic because the municipality fears contractors will not enrol for such contracts, because of the additional requirement – which could cost project developers more money.

Second, institutional elements within the municipality may influence the introduction of the circular economy concept to the Binckhorst. The municipality can employ both direct and indirect policies to achieve certain ambitions. Next to that, the municipality does not have full authority over everything that happens in its administrative area. Such an institutional context often limits the municipality's 'power' to stimulating and facilitating, rather than obliging.

Third, politics may influence the introduction of the circular economy concept to the Binckhorst. The municipal board determines the municipality's course of direction. Thus, if the municipal board changes, the municipality's course of direction could change as well resulting in different ambitions and policies – as was seen with the cancellation of the 'bouwstoffen recyclepunt'.

Finally, the housing shortage in The Hague and the transformation of the Binckhorst to a mixed living-working area influence the higher scale level practice. The housing shortage creates the necessity for additional housing. The municipality views the Binckhorst as a promising area to contribute to a solution to this shortage. The municipality perceives the transformation of the Binckhorst itself as an already difficult task. Therefore, adding another ambition to this (i.e., introducing the circular economy concept), makes this task even more complicated. This might be the reason that the official policy of the municipality is not to develop the Binckhorst circularly.

7.1.4.2 Lower scale level practices

As was the case with the higher scale level practice, the (bio)physical context of the lower scale level practices relates to the Binckhorst, since it is the area where the practices take place. A variety of (bio)physical aspects influence the lower scale level practices. First, the fact that the Binckhorst is an industrial area is of importance to these practices. As an industrial area, the Binckhorst provides sufficient space for the practices located there (that is, parking space as well as location space). Additionally, it provides a stimulating working environment for problematic youth and former prisoners and drug addicts.

Second, the accessibility of the Binckhorst allows employees, customers, and clients to easily get to and from the practices. Two nearby train stations, the proximity of the highway A12, and the presence of bus stops contributes to the easily accessible nature of the Binckhorst. At the same time, not all practices require this accessibility. Therefore, accessibility as a (bio)physical context does not play an equally important role in all lower scale level practices.

And third, the proximity of other practices influences the lower scale level practices in the Binckhorst. The proximity of other practices allows for collaboration between them. The proximity of suppliers and manufacturers located in the Netherlands, rather than in China for example, allows Secrid to more easily check up on things or solve issues. Therefore, the scale of proximity is an important aspect to take into account. Contrastingly, the proximity of an abundance of similar practices (such as car repair shops) could also influence a practice. However, due to the institutional characteristics of the practices, they might be less likely to collaborate with other practices in the Binckhorst, since they are seen as competitors. Thus, proximity does not always result in collaborations.

The (bio)physical context may influence lower scale level practices, but lower scale level practices may simultaneously influence its (bio)physical context in various ways since each practice is different. The presence of a practice could vitalise the surrounding area by attracting people. Next to that, a practice may result in empty streets at night-time and cars being parked in the same streets during daytime. A practice may similarly result in materials outside a building (e.g., benches, tables, or waste). Another example of how lower scale level practices could influence their (bio)physical context is advertisement placed outside or on their buildings.

The social context of a practice may also influence the practice, and vice versa. For example, a certain social context may provide the circumstances for a lower scale level practices to emerge and exist. The financial crisis provided opportunities for practices that would not have been present in the current economic situation.

An institutional aspect of the social context may also influence a practice. Through requirements, determined by institutions of which a lower scale level practice may be part of, a practice could be obligated to undertake specific activities or include specific materials if the carrier of the practice desires to remain part of the institution. Overarching institutions, such as ASN, may provide an economic benefit, which is an incentive to be affiliated with such institutions.

Almost all of the lower scale level practices are influenced by one specific social context, namely the transformation of the Binckhorst to a mixed living-working area. For a lot of the lower scale level practices, this transformation creates uncertainty about the future of the practice. Some practice possibly have to move somewhere else, since they could be in conflict with the new living functions of the Binckhorst, or they might need to make room for housing. Other lower scale level practices already know they need to leave the Binckhorst, as a result of the transformation. Thus, the transformation of the Binckhorst to a mixed living-working area is already influencing the lower scale level practices, and will continue to do so in the upcoming years.

At the same time, lower scale level practices may also influence their social context. The best example of this is the combined effort of I'M BINCK and Binckse Krach to have a say in the transformation of the Binckhorst. Together, I'M BINCK and Binckse Krach developed five characteristic core values of the Binckhorst that were included in the 'Omgevingsplan Binckhorst'. Thereby, the practices influence the context of the transformation of the Binckhorst.

Concluding, the (bio)physical and social context both influence and are influenced by the higher and lower scale level practices, often in intricate ways. Examination how the practices and contexts influence one another has provided an insight into the dynamics and complexities of practices. It has demonstrated that the lower scale level practices in the Binckhorst are dynamic, they emerge, change, and disappear.

7.1.5 Main research question

Collectively, the answers to the five sub-research questions contribute to the formulation of an answer to the main research question:
How is the circular economy concept manifested in higher and lower scale level practices in the Binckhorst?

The answers to the sub-research questions uncovered that the lower scale level practices in the Binckhorst are various. This variety is reflected in the understandings of the circular economy concept by the carriers of these practices. The circular economy concept is understood differently in different practices. An explanation for this lies in several aspects of the practices. First, what the practice entails, seems to play a role in how the circular economy concept is understood. Second, related to what practices entail, the elements involved in the practices seem to play a role in how the circular economy concept is understood. In practically oriented practices the circular economy concept is often understood to be primarily about materials. Whereas in less practically oriented practices the circular economy concept is understood to also concern social aspects. Another explanation is that the carriers of a specific practice may have a particular history that provides them with a particular understanding of the circular economy concept. Another important insight is that a certain understanding of the circular economy concept is not necessarily related to whether or not a practice could be perceived as circular.
Furthermore, the (bio)physical and social context of the higher as well as lower scale level practices influence the practices in different ways. Ideas and policies, aimed at solving the housing shortage and the transformation of the Binckhorst, may have unintended effects on (elements of) practices that – eventually – could possibly lead to a less inclusive development of the Binckhorst.

The circular economy concept is manifested differently in the higher scale level practice of the introduction of the circular economy concept to the Binckhorst compared to how it is manifested in the lower scale level practices. The specific actions (i.e., policies, rules, permits, etc.) do not reflect the broad understanding of the circular economy concept in the higher scale level practice. An important insight is that the official policy of the municipality is not to circularly develop the Binckhorst. Next to that, the municipality's ambitions regarding this topic are not yet specific enough to be translated into specific policies that could be aimed at circular development of the Binckhorst.
Additionally, the current social context, including the shortage of houses and the transformation of the Binckhorst to a mixed living working area, in which this practice is situated, is a complex development in itself.
Nevertheless, the circular economy concept is manifested in the higher scale level in different ways. Although the municipality's ambitions are not yet established policies, they do manifest the circular economy concept in certain ways. In the higher scale level practice, the circular economy concept is primarily manifested in terms of materials and creating synergy in the Binckhorst through linking businesses to each other by stimulating innovative start-ups.

In the lower scale level practices, the circular economy concept is primarily manifested in material aspects as well. However, a social aspect is also present in manifestations of the circular economy concept in these practices – though to a lesser extent than the material aspect. It is, however, important to note that in most lower scale level practices, the circular economy concept is not intentionally incorporated in the practices. Therefore, manifestations of the circular economy concept by these practices are often limitedly noticeable. Consequently, strategies – that could be perceived as circular – integrated in lower scale level practices are often not recognised as being circular.

Concluding, this research has shown that both the higher and lower scale level practices studied are the outcomes of complex and dynamic processes. These complexities and dynamics are especially noticeable in the defining elements that constitute practices, since they may change, as may their configurations. Additionally, lower scale level practices could very well manifest the circular economy concept in a variety of ways, despite that such practices may not be recognised as circular. This is an important understanding with regard to the development of the Binckhorst. Awareness of and understanding the local lower scale level practices and their manifestations of the circular economy concept could contribute to a more inclusive development of the Binckhorst, through understanding the things that are already happening locally. These are important insights for the following section, 7.2 'practical recommendations'.

7.2 Practical recommendations

During this research, I discovered that the municipality often perceives its task as mainly helping, encouraging, and enabling other practices to integrate strategies that contribute to – what the municipality perceives as – the circular economy. This is seen, by the municipality, as an intervention from the outside through providing information, removing hindrances, and by providing resources that could help practices with becoming circular. However, this research has shown that practices are dynamic and the outcomes of complex processes that a single actor does not fully control. Despite the fact that one single actor does not have full control over the processes involved with practices, policy does influence these complex processes. Generally, policy makers have a role in influencing the elements available; the manners in which practices relate to one another; the future practices that emerge; and the carriers of those practices. Next to that, this research has shown that practices could be seen as circular, while they are not recognised as such.

Despite them not being official policy, the municipality's circular ambitions are straightforward: among others, achieving a Binckhorst that is 50% circular by 2025. Therefore, I deem it important for the municipality to devote effort to considering and examining what is already happening locally regarding these circular ambitions.

Furthermore, it is important for policy makers – and the institutions for which they work – to recognise that they do not intervene from the outside. Rather, they are themselves part of the practices and contexts they attempt to govern. Additionally, it is important for them to recognise that their interventions (i.e., policies) do not have an effect in isolation. Rather, these interventions have intended as well as unintended effects on and as part of dynamic practices. This is an important insight for the municipality concerning the transformation of the Binckhorst to a mixed living-working area.

Considering the ambitious unofficial policy of the municipality to develop a Binckhorst that is 50% circular by 2025, it is remarkable that almost all interviewees that represented lower scale level practices were unaware and unfamiliar with the municipality's circular ambitions for the Binckhorst. At the same time, the municipality does not seem to be fully aware of the local practices and initiatives that could be seen as circular.

I propose three steps to be taken that could contribute to achieving both a circular and inclusive Binckhorst.

1. Communication - explicit & specific

Firstly, in the light of the new environmental law – aimed at stimulating local initiatives and more careful consideration of the local circumstances of such initiatives – I recognise communication as a first step towards an inclusive development of the Binckhorst. The municipality needs to create awareness about its circular ambition amongst the lower scale level practices in the Binckhorst. In doing so, it is important that the municipality is explicit about its ambition and addresses the material component but also takes into account the social component of the circular economy concept.

2. Demonstration - general & communal

Secondly, I recommend the municipality to demonstrate what the circular economy concept could mean for the practices in the Binckhorst in general. In doing so, the municipality should focus on the practical employment and application of the circular economy concept. Rather than noting that innovative start-ups are going to create connections between businesses, the municipality should demonstrate what the circular economy concept could offer for and how it could be employed by the practices in the Binckhorst. In my opinion, this is best done by providing specific examples of circular initiatives. Such examples do not necessarily need to be perfect, new, or revolutionary. Rather, they should be ordinary practices that could already be seen as circular while illustrating that there is still room for improvement in terms of circularity of that practice.

3. Realisation - specific & individual

Thirdly, when the carriers of practices are aware of the municipality's ambitions and what the circular economy entails, I recommend that the municipality assists carriers of practices with realising more circular practices by helping them recognise what could be done or improved in their specific practice. This 'recognising what is, exploring what could be' should be done in close collaboration with the carriers of specific practices, since they are the 'experts' of that practice. Consequently, practices that succeed in incorporating (additional) circular strategies could be used to form an example for other practices in and outside the Binckhorst.

In my opinion, these three steps could help the municipality with recognising the existing 'richness' of the Binckhorst. Thereby, these three steps could contribute to an inclusive development of the Binckhorst that includes existing practices, as well as future practices – such as living – and simultaneously incorporates the circular economy concept.

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Figure 4.2 Map of the Binckhorst and its location	Google Maps. (2019). No Title. Retrieved February 14, 2019, from https://www.google.nl/maps/@52.0702074,4.3371655,14.31z (modified by author)
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Front page	Dijkstra, R. (2018). Horecainterieur: Glaswerk in Den Haag. Retrieved October 2, 2019, from https://www.missethoreca.nl/restaurant/fotoreportage/2018/10/horecainterieur-glaswerk-den-haag-101310983?_ga=2.253738892.445094092.1570017782-700235511.1570017782
Figure 5.1 'We Think Binck' logo from the Stadmakers	Stadmakers Den Haag. (n.d.). WE THINK BINCK. Retrieved from https://wethinkbinck.nl/
Figure 5.2 The parties involved in the Stadmakers cooperative	Stadmakers Den Haag. (n.d.). WE THINK BINCK. Retrieved from https://wethinkbinck.nl/
Figure 5.3 Aerial picture that demonstrates the Binckhorst's diversity a	Gemeente Den Haag. (2018b). Fotoalbum Binckhorst in ontwikkeling - Luchtfoto Binckhorst richting binnenstad. Retrieved November 1, 2019, from https://www.denhaag.nl/nl/in-de-stad/wonen-en-bouwen/bouwprojecten/gebiedsontwikkeling-binckhorst/fotoalbum-binckhorst-in-ontwikkeling.htm

Figure 5.4 Aerial picture that demonstrates the Binckhorst's diversity b

Gemeente Den Haag. (2018d). Fotoalbum Binckhorst in ontwikkeling - Luchtfoto Binckhorst vanuit Voorburg. Retrieved October 5, 2019, from https://www.denhaag.nl/nl/in-de-stad/wonen-en-bouwen/bouwprojecten/gebiedsontwikkeling-binckhorst/fotoalbum-binckhorst-in-ontwikkeling.htm

Figure 5.5 Location of the practices studied

Google Maps. (2019). No Title. Retrieved February 14, 2019, from https://www.google.nl/maps/@52.0702074,4.3371655,14.31z (modified by author)

Figure 5.6 I'M BINCK Festival

Gemeente Den Haag. (2018a). Fotoalbum Binckhorst in ontwikkeling - I'M BINCK Festival. Retrieved November 1, 2019, from https://www.denhaag.nl/nl/in-de-stad/wonen-en-bouwen/bouwprojecten/gebiedsontwikkeling-binckhorst/fotoalbum-binckhorst-in-ontwikkeling.htm

Figure 5.7 MOOOF

Google Streetview. (2016). Den Haag, Zuid-Holland. Retrieved November 2, 2019, from https://www.google.nl/maps/@52.0682328,4.3381093,3a,75y,223.48h,105.2t/data=!3m6!1e1!3m4!1sqHxXmV6gh0fm1LoTM4-ZZQ!2e0!7i13312!8i6656

Figure 5.8 Workshop Zorgkringloop and Zorg-Discounter

Google Streetview. (2019g). Siriusstraat Den Haag, Zuid-Holland. Retrieved November 2, 2019, from https://www.google.nl/maps/@52.0695577,4.3401001,3a,75y,214.72h,88.46t/data=!3m6!1e1!3m4!1sYCRg56aUTVBQl_cRNmUE_Q!2e0!7i13312!8i6656

Figure 5.9 A Pamphlet from MOOOF that describes the plan to develop another location in the Binckhorst

MOOOF Den Haag. (2019). Wat zijn we trots op al onze MOOOF'ers! Help jij mee aan de toekomst van MOOOF? Retrieved June 25, 2019, from https://www.facebook.com/mooof.denhaag/photos/a.1547713365508527/2296845783928611/?type=3&theater

Figure 5.10 ASN Autoschade van Vreden-Binckhorst

Google Streetview. (2019f). S108, Den Haag, Zuid-Holland. Retrieved November 2, 2019, from https://www.google.nl/maps/@52.0723338,4.3354355,3a,75y,148.68h,91.92t/data=!3m6!1e1!3m4!1sd1dXrt7XykCa0opzMxoRow!2e0!7i13312!8i6656

Figure 5.11 Secrid

Binckhaven. (2018b). SECRID: VAN STARTUP NAAR SCALE-UP - BINCKHAVEN. Retrieved November 2, 2019, from https://binckhaven.nl/verhalen/secrid-van-startup-naar-scale-up/

Figure 5.12 Sleutlen met Jongeren

Google Streetview. (2019b). 10 Orionstraat Den Haag, Zuid-Holland. Retrieved November 2, 2019, from https://www.google.nl/maps/@52.0701328,4.3415595,3a,75y,315.3h,90.45t/data=!3m6!1e1!3m4!1sF0kFnPG4J7_XuL4rBY4gBw!2e0!7i13312!8i6656

Figure 5.13 Gered Gereedschap

Google Streetview. (2019e). 8 Junostraat Den Haag, Zuid-Holland. Retrieved November 2, 2019, from https://www.google.nl/maps/@52.0641909,4.3411486,3a,59y,196.5h,92.78t/data=!3m6!1e1!3m4!1s1wNn__w158b4Hb4SF8iSDw!2e0!7i13312!8i6656

Figure 5.14 Werkproject Jupiter

Google Streetview. (2019a). 10 Jupiterkade Den Haag, Zuid-Holland. Retrieved November 2, 2019, from https://www.google.nl/maps/@52.0629409,4.3415217,3a,75y,304.76h,97t/data=!3m6!1e1!3m4!1sB8oM0bxEmgYDisG0hXXchw!2e0!7i13312!8i6656

Figure 5.15 The receptionists of MOOOF

MOOOF Den Haag. (2017). Onze receptie staat ook vandaag voor u klaar! Retrieved November 1, 2019, from https://www.facebook.com/mooof.denhaag/photos/a.1547713365508527/1974588446154348/?type=3&theater

Figure 5.16 One of the stores of the Zorg-Discounter

Zorg-Discounter. (n.d.). Franchise. Retrieved November 2, 2019, from https://www.zorgdiscounter.com/franchise/

Figure 5.17 The team and clients of Sleutelen met Jongeren in their workshop

Sleutelen met Jongeren. (n.d.). Gallery. Retrieved November 1, 2019, from http://www.sleutelenmet-jongeren.nl/online/smj-gallery/

Figure 5.18 An example of the types of wallets that Secrid produces

Secrid. (n.d.-b). Slimwallet Original Cognac-Brown. Retrieved November 2, 2019, from https://secrid.com/nl-nl/slimwallet-original-cognac-brown

Figure 5.19 The social workplace Secrid works with

Secrid. (n.d.-a). MADE IN HOLLAND Een betere wereld begint in je broekzak. Retrieved November 2, 2019, from https://secrid.com/nl-nl/about/made-in-holland/

Figure 5.20 The current situation.

Gemeente Den Haag. (2018c). Fotoalbum Binckhorst in ontwikkeling - Luchtfoto Binckhorst Trekvlietzone. Retrieved October 3, 2019, from https://www.denhaag.nl/nl/in-de-stad/wonen-en-bouwen/bouwprojecten/gebiedsontwikkeling-binckhorst/fotoalbum-binckhorst-in-ontwikkeling.htm

Figure 5.21 The potential future situation

B-PROUD. (n.d.). B-PROUD VERTICAL NEIGHBOURHOOD HAAGSE TROTS. Retrieved September 28, 2019, from http://b-proud.nl/

Figure 5.22 MOOOF's neighbouring hotel

Hotelspecials. (n.d.). The Hague Teleport Hotel. Retrieved November 8, 2019, from https://www.hotelspecials.nl/the-hague-teleport-hotel

Figure 5.23 During daytime, the street is filled with parked cars

Google Streetview. (2019c). 18 Orionstraat Den Haag, Zuid-Holland. Retrieved November 5, 2019, from https://www.google.nl/maps/@52.0703861,4.3423084,3a,75y,241.75h,91.55t/

data=!3m6!1e1!3m4!1srPbEQUTpdSMxZCow-faThWA!2e0!7i13312!8i6656

Figure 5.24 A situation in which materials used for a practice are stored outside

Author

Figure 5.25 An example of how a practice may influence its (bio)physical context

Google Streetview. (2019d). 55 Saturnusstraat, Den Haag, Zuid-Holland. Retrieved July 5, 2019, from https://www.google.nl/maps/@52.066702,4.346846,3a,33.8y,274.19h,89.69t/data=!3m6!1e1!3m4!1sGzNEITucMormUyn0Q2Nn-4Q!2e0!7i13312!8i6656

Figure 5.26 The iconic frontpage of the document that describes the Binckhorst's core values

I'M BINCK, & Binckse Krach. (2017). Kernwaarden Binckhorst 2017-2030. Retrieved from http://im-binckfestival.nl/wp-content/uploads/2017/09/Publicatie-Kernwaarden-def.pdf

Jongeren, S. met. (n.d.). Gallery. Retrieved November 1, 2019, from http://www.sleutelenmetjongeren.nl/online/smj-gallery/

Figure 5.27 Map of location of Gered Gereedschap and Werkproject Jupiter relative to Binckeiland

Google Maps. (2019). No Title. Retrieved February 14, 2019, from https://www.google.nl/maps/@52.0702074,4.3371655,14.31z (modified by author)

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Appendices

A. Interview guide

Datum: ……
Locatie: ……
Naam geïnterviewde: ……
Praktijk: ……

- Lengte van het interview: ongeveer 30 tot 60 minuten;
- Het interview wordt opgenomen door middel van een voicerecorder, enkel met uw toe stemming;
- Dit interview wordt enkel gebruikt voor analytische dooleinden van dit onderzoek;
- Het rapport van dit onderzoek wordt gepubliceerd op de online database van Wageningen University Library;
- Anonimiteit wordt gewaarborgd in de publicatie, wanneer dit niet mogelijk blijkt neemt ik contact met u op;
- Als u het antwoord op een van mijn vragen niet weet of geen antwoord wilt geven, dan is dat geen probleem;
- Er worden notities gemaakt van informatie die ik interessant acht;

Introductie
Ik ben Joep van de Weijer, student Ruimtelijke Planning aan Wageningen University. Ik wil u graag interviewen in het kader van mijn onderzoek naar de circulaire economie in de Binckhorst. Mijn doel is om in kaart te brengen wat er allemaal gebeurd op het gebied van circulaire economie in de Binckhorst; hoe betrokkenen te circulaire economie interpreteren; hoe zij hieraan bijdragen; waaruit deze bijdrage bestaat; hoe de praktijk tot stand is gekomen; en hoe de context zich verhoudt tot de praktijk.

Doordat de circulaire economie een zeer breed begrip is, verwacht ik ook een grote variëteit aan praktijken die bijdragen aan de circulaire economie. Met dit onderzoek tracht ik te achterhalen wat de gemene deler is in de praktijken, hoe de relatie tussen de context en de praktijk zich manifesteert en ten slotte wat de gevolgen zijn van de praktijken.

Algemene vragen
- Wie bent u en wat is uw functie?
- Kunt u toelichten waar u zich zoal mee bezig houdt?
- Kunt u uw praktijk in de Binckhort kort toelichten?

Vragen over circulaire economie
- Wat verstaat u onder de circulaire economie/circulariteit?
- Wat doet u waarvan u denkt dat het bijdraagt aan de circulaire economie?
- Werkt u samen met andere organisaties/bedrijven/ondernemers (in de Binckhorst)?
- Zou u (nog) meer willen samenwerken? Zo ja, met wie en waarom?

Vragen over het ontstaan en bestaan van de praktijk
- Hoe is volgens u het idee van een circulaire economie (en de transitie daarnaartoe) in de Binckhorst ontstaan?
- Hoe is uw praktijk tot stand gekomen?/Wat is de geschiedenis van uw praktijk?
- Hoe ontwikkelt de praktijk zich? Waar gaat het heen? Hoe zit u de toekomst?

Vragen over (bio)fysieke en sociale context
- Welke rol speelt de locatie van uw praktijk? (in de Binckhorst, denk o.a. bereikbaarheid, nabijheid van andere praktijken)
- Hoe beïnvloedt de context de praktijk en vice versa?
- Denkt u dat het voor uw praktijk uitmaakt dat deze nu plaatsvindt, en niet bijvoorbeeld 10 jaar geleden?

Vragen over elementen van praktijken
- Welke materialen zijn nodig voor uw praktijk? (materialen)
- Welke kennis en expertise is nodig voor uw praktijk? (competenties)
- Hoe bent u aan die kennis en expertise gekomen?
- Hoe wordt deze kennis volgens u gedeeld?
- Wat betekent de praktijk voor u? (betekenis/ideeën)

Vragen over management, 'power', conflicten en politiek
- Wat is het beleid van gemeente Den Haag ten aanzien van de circulaire economie (in de Binckhorst)?
- Wat is uw rol in uw praktijk?
- Wie heeft u nodig voor het uitvoeren van uw praktijk?
- Wat zou het uitvoeren van uw praktijk makkelijker of juist moeilijker maken?

Vragen over ontwikkelingen en beleid van de gemeente Den Haag
- Ziet u bepaald beleid dat invloed heeft op uw praktijk die bijdraagt aan de circulaire economie?
- Ziet u bepaalde ontwikkelingen die invloed hebben op uw praktijk?
- Bent u bekend met het beleid van de gemeente Den Haag ten aanzien van de circulaire economie?
- Denkt u dat het beleid van de gemeente Den Haag een circulaire economie faciliteert of juist belemmert?

Afsluitende vragen
- Heeft u nog tips voor mensen waarmee ik wellicht ook kan spreken in het kader van mijn onderzoek?
- Heeft u nog vragen of tips voor mij?

Afsluiting
Hartelijk dank voor uw tijd en het goede gesprek. Ik zet de voicerecorder nu uit. Als u nog vragen of opmerkingen heeft, kan u mij bereiken via mijn e-mailadres [contact details]. Ik stuur u een dezer dagen een samenvatting van het interview zodat u kan controleren of ik u goed heb begrepen. Als ik niets op die e-mail hoor, ga ik er vanuit dat het in orde is. Ten slotte, Zou u – wanneer ik het af heb – mijn thesis willen ontvangen? Zo ja, op welk e-mailadres zou u dat willen ontvangen?
Nogmaals hartelijk dank!

B. Quote translations

5.1 Description of the practices studied

5.1.1 Description of the higher scale level practice

Gemeente Den Haag, 2018, p.13
"Oftentimes, for each area or project the possibilities for reuse of construction materials, working with material passports, and high quality reuse of concrete are considered. In the 'Omgevingsplan Binckhorst' circularity is promoted, for example. Among other things, this is done through stimulating businesses to register their residual flows (i.e. waste) in an online tool designed for supply and demand. Additionally, locations are made available for bottom-up circular activities."

"Veelal wordt per gebied of project nagedacht over de mogelijkheden voor het hergebruik van bouwmaterialen, het werken met materiaalpaspoorten en het hoogwaardig hergebruiken van beton. In het omgevingsplan Binckhorst wordt bijvoorbeeld circulariteit gestimuleerd. Onder andere door bedrijven aan te moedigen hun reststromen te registreren in een online tool voor vraag en aanbod zoals bijvoorbeeld de oogstkaart of marktplaats. Ook worden locaties beschikbaar gesteld voor circulaire activiteiten van onderop."

Gemeente Den Haag, 2018, p. 13
"Besides activities for specific areas or projects, startups that are involved in the circular economy are actively attracted. They are then linked to businesses that can work circularly (together)."

"Naast de activiteiten per gebied of project wordt actief ingezet op het aantrekken van startups rondom circulaire economie (impact economy). Die worden gekoppeld aan bedrijven die (samen) circulair kunnen werken."

Gemeente Den Haag, 2018, p. 25
"Through bringing together large and small companies with start-ups, masterclasses can be organised. Companies take a closer look at their business-processes and -design and search with innovation (start-ups) for a more circular manner of production… By helping circular start-ups with finding housing, ensuring a structural supply of materials and helping them with funds, they can spend all their energy into the development and marketing of their innovative product. Such an environment also attracts successful circular start-ups from outside The Hague."

"Door grote en kleine bedrijven samen met startups bij elkaar te brengen kunnen kennistrajecten en masterclasses georganiseerd worden. Daarbij nemen bedrijven hun eigen bedrijfsprocessen en ontwerp onder de loep en gaan ze met innovatie (startups) op zoek naar een meer circulaire manier van produceren... Door circulaire startups te helpen met het vinden van huisvesting, te zorgen dat ze structureler aan grondstoffen kunnen komen en te helpen richting fondsen, kunnen zij al hun energie steken in het ontwikkelen en in de markt zetten van hun innovatieve product. Een dergelijke omgeving trekt ook succesvolle circulaire startups van buiten Den Haag aan (impact economy)."

Gemeente Den Haag, 2019a, p. 21
"Considering the proximity of waste processing and the desired transformation of the area on the long term, this is the designated area for stimulating activities in the circular economy."

"Gezien de nabijheid van de afvalverwerking en de gewenste transformatie van het gebied op de lange termijn is dit ook het aangewezen gebied voor het stimuleren van activiteiten in de circulaire economie."

Gemeente Den Haag, 2015, p. 6
"We propose a strategy concerning the circular economy. We pay attention to accelerating the circular economy, Cradle to Cradle and the economic effects that accompany this. This issue is particularly influenceable at a higher scale level, because of that we mainly reinforce current national policy programs. This could lead to a substantial expansion of the supply of sustainable building materials and -techniques that support

desired neighbourhood initiatives. At the same time, we review where, in our city, local opportunities present themselves. Think, for example, of the building materials recycle location in the Binckhorst that could become the leading recycle centre in the province of Zuid-Holland. This could help with sustainably transforming the current offices market. This strategy will be aligned with the new Household Waste Plan.''

''Wij stellen een strategie op over Circulaire Economie. Daarin besteden we aandacht aan het versnellen van de circulaire economie, Cradle to Cradle en de economische effecten die hiermee gepaard gaan. Omdat deze problematiek vooral beïnvloedbaar is op grotere schaalniveaus, versterken wij zoveel mogelijk de lopende landelijke programma's. Dit zou bijv. kunnen leiden tot een forse uitbreiding van het aanbod aan duurzame bouwprodukten en bouwtechnieken ter ondersteunening van de gewenste buurtinitiatieven. Tegelijk kijken we in de stad waar zich lokaal kansen voordoen (ook op gebied van werkgelegenheid). Te denken valt aan het bouwstoffen recyclepunt op de Binckhorst dat kan uitgroeien tot hèt recycle-centrum in heel Zuid-Holland. Dit kan helpen bij het duurzaam transformeren van de bestaande kantorenmarkt. Deze strategie wordt afgestemd met het nieuwe Huishoudelijk Afval Plan.''

Chapter 5.1.2 Description of the lower scale level practices

Quote 5.1.2.1: P1
''... during the financial crisis, the building was unsalable. We proposed to manage the property, using a concept that would generate a cashflow for the building and vitalise the surrounding environment as a consequence of the large amount of visitors. The concept is a community for small businesses in sports, dance and music.''

''... het was op dat moment crisis en onverkoopbaar. Toen hebben we een voorstel gedaan het pand te beheren middels een concept wat een enorme cashflow aan het gebouw zou laten hangen en de omgeving zou vitaliseren. Puur omdat heel veel mensen er op af zouden komen. Het concept heet x het is een community op het gebied van sport, dansen en muziek.''

Quote 5.1.2.2: P5
''... a car damage repair company. We work for insurance- and lease companies. This company is part of ASN Group, that has approximately 70 franchise locations throughout The Netherlands.''

''...een autoschadeherstelbedrijf. We werken voor verzekerings- en leasemaatschappijen. We zijn onderdeel van de ASN Groep met zo'n 70 vestigingen in Nederland, is allemaal franchise uiteraard.''

Quote 5.1.2.3: P5
''If I am working on a green car, and a silver-coloured door is delivered, I first have to disassemble or tape off the vehicle. Consequently, there is some extra labour in it, but you save money since that part is cheaper. So you can invest more labour into it. For example, a door for a Volvo xc90 costs approximately €900,-. This new door needs to be spray painted and converted. If you buy a second-hand door, it costs approximately €350-€400,-. If it is the right colour, it would be even better. It just really saves 50% of costs.''

''Ja, dat ligt er ook aan of het deel in de juiste kleur wordt geleverd. Als ik een groene auto heb, en er wordt een zilveren deur geleverd, dan moet ik eerst gaan demonteren of afplakken. Dus daar zit wat extra werk in, maar dat haal je terug doordat het onderdeel goedkoper is. Je kan er dan meer arbeid in steken. Bijvoorbeeld: een Volvo xc90 deur kost gewoon €900,- en dan heb je niets. Dan moet hij nog gespoten worden in de kleur, omgebouwd worden. Dan praat je over één deurtje. Als je die deur tweedehands koopt betaal je misschien €350-€400 voor dat deel. En als hij gelijk in de juiste kleur is, is het helemaal mooi natuurlijk. Het scheelt gewoon echt de helft.''

Quote 5.1.2.4: P5
''For the insurance companies it is mainly about doing it as cheaply as possible. The idea of sustainability is something that conveniently accompanies that. But it is mostly economically driven.''

''Maar dat heeft voor de verzekering meer te maken met zo goedkoop mogelijk. Dat duurzaam komt heel mooi in het plaatje erbij, maar de hoofdmoot is meer goedkoop.''

Chapter 5.2 Carriers' understandings of the circular economy concept

Chapter 5.2.1 Carriers' understandings – higher scale level practice

Gemeente Den Haag, 2018, p. 5
"But in short, it is an economic system that is meant to maximise the reusability of products and materials and minimise the destruction of value."

"Maar kortgezegd is het een economisch systeem dat bedoeld is om herbruikbaarheid van producten en grondstoffen te maximaliseren en waarde vernietiging te minimaliseren."

Gemeente Den Haag, 2018, p. 5
"The economy is able to remain within the carrying capacity of the natural system if products, components and materials can be reused at a high quality as often as possible. This retains the value of raw materials and ensures that less raw materials have to be extracted. The design of the product takes into account possibilities for repair, high-quality reuse, and recycling. Consequently, the product maintains its value as long as possible. Additionally, new business models emerge, especially in cities. Simultaneously, shared use ensures that less is produced."

"De economie kan binnen de draagkracht van het natuurlijke systeem blijven als producten, onderdelen en materialen zo hoogwaardige en zo vaak mogelijk opnieuw kunnen worden ingezet. Daarmee wordt de waarde van de grondstoffen behouden en hoeven er minder grondstoffen gewonnen te worden. In het ontwerp van het product wordt rekening gehouden met de mogelijkheden voor reparatie, zo hoogwaardig mogelijk hergebruik en recycling. Daardoor behoudt het product zo lang mogelijk zijn waarde en ontstaan, vooral in steden, nieuwe verdienmodellen. Tegelijk zorgt deelgebruik ervoor dat er minder geproduceerd wordt."

Gemeente Den Haag, 2019a, p. 19
"The use of raw materials/circular economy means the retention of building materials during maintenance, renovation or demolition, and using it in a valuable way. In the circular economy, the term 'waste' hardly exists or does not exist at all, people think in terms of materials. Products are reused fully as much as possible, components are used in other products, or components are used as a raw material. The circular economy is also about the use and access to products: ownership of products is less important. This is also known as the sharing economy: products and services are shared or traded with others." (Gemeente Den Haag, 2019a, p. 19)

"Onder grondstoffengebruik/circulaire economie wordt het behouden van bouwmaterialen bij onderhoud, renovatie of sloop en het waardevol hergebruiken bedoeld. In de Circulaire Economie bestaat het begrip afval niet of nauwelijks meer, er wordt gedacht in termen van grondstoffen. Producten worden zoveel als mogelijk in zijn geheel hergebruikt, onderdelen ervan worden gebruikt in andere producten, of de delen daarvan worden weer gebruikt als grondstof. In de Circulaire Economie draait het ook om het gebruik van en de toegang tot producten: het bezitten ervan is minder belangrijk. Dit onderdeel van de Circulaire Economie wordt ook wel aangeduid als de Deel-economie: producten en diensten worden gedeeld of geruild met anderen."

Gemeente Den Haag, 2019b, p. 38
"The municipal ambition regarding circularity is to transition to a circular economy." (Gemeente Den Haag, 2019b, p. 38)

"De gemeentelijke ambitie voor circulariteit is om over te schakelen op een circulaire economie."

Quote 5.2.1.1: O1
"Every definition is right, there are no wrong definitions because there are choices integrated in it. It is possible to reduce it to doing smart things with materials. But you can also upgrade it and view it as a new

economic system... I mostly use the notion of the 10Rs… Circular economy is basically about those steps. All steps are right, but every step has a different (amount of) impact."

"Elke definitie is goed, er is niet een foute definitie, er zitten keuzes in. Je kan circulariteit platsaan tot slimme dingen met grondstoffen doen, is waar. Je kan hem ook upgraden naar een nieuw economisch systeem. Het zijn keuzes van: waar wil je op gaan inzetten… Ikzelf hanteer niet echt een definitie maar meer het tien R'en verhaal… In feite gaat het om die gradaties, en alles is waar. Het is niet zo dat eentje het beste is, of eentje klopt niet, je kan ze alle tien toepassen. Alleen de impact maakt nogal uit. Bij de een heb je vooral veel invloed op, en op een andere helemaal niet."

Quote 5.2.1.2: O2
"Those are kind of core principles, in which – in the broad definitions of the circular economy – other things are involved, such as the sustainable development goals. For example, socially responsible tasks, including people with a distance to the job market. Beside the story about materials, you could understand it much broader and think about the inclusive society idea."

"Dat zijn een soort basisprincipes waarbij in de brede definities van circulaire economie nog dingen bij komen kijken zoals de sustainable development goals, bijvoorbeeld je maatschappelijk verantwoordelijke taken, het betrekken van mensen met een afstand tot de arbeidsmarkt, dat soort dingen allemaal. Behalve het hele grondstoffenverhaal kan je het nog wat breder trekken, de inclusieve samenleving zeg maar."

Quote 5.2.1.3: O3
"If an economic benefit is absent in transitions, it becomes particularly difficult since it would become a hobby in that instance."

"Als er geen economische waardigheid zit aan transities, wordt het wel heel erg lastig, want dan wordt het hobby."

Chapter 5.2.2 Carriers' understandings – lower scale level practices

Quote 5.2.2.1: P3
"What I understand it to be about is that things return. Things are made, utensils for example, but they get a second life or it has to circulate in the economy. At least, that is what I think. That we take a look at how we can reuse existing things for new things. Right? Or?... Am I right?"

"Wat ik er dan onder versta is dat dingen weer terugkomen, dingen worden gemaakt, gebruiksvoorwerpen bijvoorbeeld, maar die krijgen bijvoorbeeld weer een tweede leven of het moet blijven circuleren in de economie. Tenminste dat is wat ik daarvan bedenk dat we gaan kijken, hoe kunnen we bestaande dingen gewoon weer voor nieuwe dingen gebruiken. Toch of? … Heb ik het goed?"

Quote 5.2.2.2: P5
"We restore a lot just to reduce our amount of waste. We will restore something if it is possible to restore, keeping in mind the amount of labour that is required. This allows us to reuse it."

"Wij herstellen ook gewoon heel veel zodat we zo min mogelijk afval hebben. Als het mogelijk is om te herstellen wat betreft de tijd die erin gestoken moet worden, dat we het ook weer kunnen hergebruiken."

Quote 5.2.2.3: P5
"Funnily enough, the opposite is true. A used part is usually delivered complete, with every nut and bold included. Whereas a new part would have to be modified. The used part actually works more quickly."

"Het grappige is dat het andersom is. Het gebruikte onderdeel wordt vaak geleverd met alle dingen die erop zitten. Met het nieuwe onderdeel moet je alles ombouwen, het gebruikte onderdeel werkt ook sneller eigenlijk."

Quote 5.2.2.4: P4
"It is a concept that we are generally not concerned with. We restore tools and sowing machines for third world countries. According to the circular economy concept it should be a circle. It should return to the supplier who is able to do something with it. But that is not the case at Gered Gereedschap. We delay the disposal of tools and send them to third world countries…"

"Het is natuurlijk een begrip waar wij over het algemeen hier niet zo veel mee bezig zijn. het systeem is eigenlijk: wij knappen gereedschappen en naaimachines op voor derdewereld landen. Dat dat uiteindelijk een cirkeltje zou moeten zijn waar circulaire economie eigenlijk een beetje vanuit gaat. Dat het weer terug komt bij de leverancier die er wat mee kan doen, dat is hier bij Gered Gereedschap niet aan de orde. We stellen de dood van de gereedschappen uit en sturen het naar derdewereld landen…"

Quote 5.2.2.5: P1
"It is about more than just reuse of materials. It is about reuse of energy and basically all commodities you require. With regards to this building or the new building, it is about reusing everything that can be reused and using it mindfully. And that also relates to people, the human factor. Our receptionists do not only sit behind the desk, rather we let them do other kinds of tasks as well. In this manner, they are multifunctional. Besides that, if the job of receptionist would be abolished, they are better suited to find another job. That is circularity as well, in my eyes."

"Het gaat veel verder dan alleen over hergebruikt van materialen. Het gaat over hergebruik van energie of het hergebruik van eigenlijk al je grondstoffen die je nodig hebt. Als we ons focussen op dit gebouw of het nieuwe gebouw. Alles wat je kan hergebruiken, waar je zo zuinig mogelijk mee om kan gaan, dat is voor mij circulaire economie. En dat gaat dus ook over mensen. Over de human factor. Wij hebben de receptie en we laten de receptie niet alleen maar zitten om receptiewerk te doen, we proberen ze ook te laden met werkzaamheden, waar ze A, beter van worden, daar leiden we zo ook voor op zodat ze een soort dubbelfunctie krijgen. En daarmee creëer je ook ge mogelijkheid dat als de functie voor receptionist zou komen te vervallen, dat ze opgeleid zijn op iets anders te kunnen doen. Dat is ook circulariteit vind ik zelf."

Chapter 5.3 Elements of the practices studied

Chapter 5.3.1 Elements of the higher scale level practice

Gemeente Den Haag, 2019b, p.44
"Next to that, the ambitions concerning the circular economy are not (yet) sufficiently specific to translate into rules for the 'Omgevingsplan Binckhorst'. The appointment of the resource manager is the first step towards stimulating the circular economy."

"Ook de ambities ten aanzien van circulaire economie zijn (nog) niet voldoende concreet om te kunnen borgen in de regels van het omgevingsplan. Met de grondstoffenmakelaar is wel een eerste stap gezet om circulaire economie te stimuleren."

Gemeente Den Haag, 2019b, p. 43
"The municipality of The Hague has appointed a resource manager that functions as a mediator to link businesses to one another, and thereby create synergy. This resource manager will stimulate circular developments in the Binckhorst for a year."

"De gemeente Den Haag heeft een grondstoffenmakelaar aangetrokken, die als bemiddelaar werkt om bedrijven aan elkaar te koppelen en synergie te creëren. Deze grondstoffenmakelaar zal gedurende een jaar circulaire ontwikkelingen in de Binckhorst stimuleren."

Gemeente Den Haag, 2018, p. 5
"The current economic system assumes an unlimited availability of raw materials and an unlimited resilience of the environment. In the meantime, however, it is recognised that both preconditions are both not realistic and maintainable. A future-proof economy takes into consideration the finitude of raw materials

and the impact of it on the environment."

"Het huidige economische systeem gaat uit van oneindig beschikbare grondstoffen en een oneindig incasseringsvermogen van het milieu. Inmiddels is bekend dat beide randvoorwaarden niet realistisch en houdbaar zijn. Een toekomstbestendige economie houdt dus rekening met de eindigheid van grondstoffen en de belasting daarvan op de leefomgeving."

Gemeente Den Haag, 2019b, p. 33
"The development that meets the needs of the current generation without compromising the ability of future generations to meet their needs."

"De ontwikkeling die aansluit op de behoeften van het heden zonder het vermogen van toekomstige generaties om in hun eigen behoefte te voorzien in gevaar te brengen."

Gemeente Den Haag, 2019b, p. 34
"Energy saving refers to all energy saving measures that reduce the consumption of fuels. That can be achieved through using energy more efficiently: doing the same with less energy. People can also save energy by making less use of a service that uses energy."

"Energiebesparing energiebesparing verwijst naar alle energiebesparende maatregelen om de consumptie van brandstoffen te verminderen. Het kan worden bereikt door efficiënter gebruik te maken van energie: hetzelfde doen met minder energie. Men kan ook energie besparen door minder gebruik te maken van de dienst die de energie verbruikt."

Gemeente Den Haag, 2018, p. 7
"In a fully circular economy, the value of a raw material is used for longer and multiple times. This is the case because the material is not incinerated. Rather, in the design of the product, reuse, repair and recycling is taken into account."

"In een volledig circulaire economie wordt de waarde van een grondstof langer en meerdere keren benut. Dit komt doordat de grondstof niet wordt verbrand maar in het ontwerp al rekening gehouden is met hergebruik, reparatie en recycling."

Chapter 5.3.2 Elements of the lower scale level practices

Quote 5.3.2.1: P7
"Well in our stores, there are employees which need to know quite a lot about healthcare. Besides that, they need to be able to get along well with other people and to advise them. I do not know much about that, but it is their speciality."

"Nou je hebt zeg maar de winkels met winkelpersoneel. Die moeten toch wel goed weten op zorggebied en met mensen op kunnen schieten en ze wat kunnen vertellen. Daar weet ik verder niet veel van, maar dat is wel hun specialiteit."

Quote 5.3.2.2: P3
"The knowledge that is required is about repairing cars, and about working with, coaching and educating youth. I expect that my employees are empathic towards the youth and their circumstances."

"De kennis moet zijn over auto's repareren, over het begeleiden van jongeren en het omgaan met en coachen van jongeren. Wat ik verwacht van mensen die hier werken is dat ze inlevingsvermogen hebben in de situaties van de jongeren."

Quote 5.3.2.3: P3
"I also think that you need to be an expert-by-experience, in some situations."

"Ik vind ook wel ervaringsdeskundige in bepaalde situaties."

Quote 5.3.2.4: P3
"You know what it is like to sit on the other side of the table. You know what it feels like to deal with a certain kind of authority, and how the youth would like to be addressed."

"Jij weet hoe het voelt om daar te zitten. Je weet hoe het voelt om met een bepaalde autoriteit om te gaan, je weet hoe je aangesproken wilt worden."

Quote 5.3.2.5: P3
"This project exists 14 years now, 14 years ago we came up with the idea for it. My husband worked on the other side of the road at a car scrap yard. I worked at a library in a disadvantaged neighbourhood where we would have liked the young men to be removed from the library. But we did want them to be involved with some positive. Hence, I told them to go to my husband to ask if he possibly had something to do for them. They followed my advice and the progress that they made or went through was incredible, as was the way school and parents responded. Their enthusiasm sparked my and my husband's enthusiasm, and we said to each other that we should make this our work, since we enjoyed it so much. That is how it all started."

"We bestaan al 14 jaar dit jaar en 14 jaar geleden toen we met het idee kwamen. Mijn man werkte toen aan de overkant hier toen stond er nog een autosloperij, alles is veranderd maar dat weet jij waarschijnlijk wel door je onderzoek. Ik werkte toen in de bibliotheek dat was in een achterstandsbuurt en wij moesten die kinderen eigenlijk uit de bibliotheek hebben, maar wel positief met iets bezig laten zijn. toen heb ik gezegd: ga naar de Binckhorst, ga naar x, ga naar x en vraag of hij wat te doen heeft voor jullie. Dat hebben ze gedaan en de ontwikkeling die die jongens meemaakten of doorgingen en hoe positief iedereen daarop reageerde, de school, ouders, de omgeving, die waren zo enthousiast dat wij daar ook erg enthousiast werden en zoiets hadden van: hier moeten we eigenlijk ons werk van maken want we vinden het heel leuk om te doen. Zo is het eigenlijk een beetje begonnen."

Quote 5.3.2.6: P8
"I know that we are developing with regards to the product. We are exploring the waste of the fishing industry of salmon. Salmon skins that remain from the production of salmon can be worked up to salmon leather, we are currently developing that. Whether or not we will ever produce wallets made with salmon leather is unknown, but we are exploring the possibilities."

"Ik weet dat we aan het ontwikkelen zijn, dat is wel gerelateerd aan het product, met afvalstroom van de visindustrie van zalm. Zalmhuiden blijven over vanuit de productie van zalm, die zalmhuiden kan je opwerken tot zalmleer en daar zijn we mee aan het ontwikkelen. Maar of dat er uiteindelijk ooit komt dat weet je niet. Maar daar zijn we dus wel mee bezig."

Chapter 5.4 Context of the practices studied

Chapter 5.4.1 Context higher scale level practice

Quote 5.4.1.1: O1
"The Binckhorst is an extremely interesting area, from the municipality's point of view. It has always been an industrial area with a 'rough' edge. But also because it does not house the standard business such as retail, rather it houses especially manufacturing industry kind of businesses. That is awesome, it is a mixed area, also with a mix of housing and business. That is interesting from a circular perspective, because those are the desired kind of mixes."

"De Binckhorst is een superleuk gebied vanuit de gemeente Den Haag. Het is altijd een industrieel gebied geweest met een rauw randje, je kent die verhalen wel. Maar ook omdat niet de standaard bedrijfjes als horeca detailhandel, maar vooral wat meer maakindustrie achtige dingen. Dus dat is tof, het is een heel gemêleerd gebied, ook een beetje een mix van woningbouw en bedrijven. Vanuit circulair oogpunt harstikke interessant, want dat soort mixen wil je juist hebben."

Quote 5.4.1.2: O1
"So I always exclaim: the official policy of the municipality is not to circularly develop the Binckhorst."

"Dus ik roep altijd maar: het officiële beleid is ook niet dat we de Binckhorst circulair gaan ontwikkelen."

Quote 5.4.1.3: O1
"There is an existing dominant system, let us call it the linear economy in the absence of a better term. That system is prevailing in all gradations, organisational, in the culture of people, in processes, products, services, and business cases."

"Je hebt een bestaand dominant systeem, laten we het de lineaire economie noemen, bij gebrek aan een betere term. Dat is dominant in alle gradaties, organisatoir, dus in de organisaties, in de cultuur van de mensen, in de processen, in producten, in de diensten, in de businesscases."

Quote 5.4.1.4: O3
"Even the frontrunners in the sector still work in old-fashioned ways, because there is a lot of suspicion. They regularly think: if I sit at the table with people beforehand, I lose my competitive position, which costs too much money…"

"Zelfs de koplopers in de sector doen het nog steeds op de ouderwetse manier. Omdat er heel veel achterdocht is. Er wordt vaak gedacht: als ik van tevoren met mensen om tafel ga zitten dan raak ik concurrentiepositie kwijt, dat kost mij altijd te veel geld…"

Quote 5.4.1.5: O2
"Thus, I can do things in an indirect manner. Such as with subsidies, or facilitating living labs for example in which experimental circular projects take place. Another option is stimulation of ReSourceCity kind of things. That can be done by including requirements in land allocation policies, such as requiring that business in a certain location are involved with the circular economy."

"Dus ik kan wel wat in de indirecte sfeer doen. Net zo goed als met subsidies, of met het faciliteren van living labs bijvoorbeeld waar je circulaire proefprojecten doet. Of het stimuleren van ReSourceCity achtige dingen, door in mijn grondbeleid iets te zeggen over: ik wil dat hier bedrijven komen die zich bezig houden met circulaire economie."

Chapter 5.4.2 Context lower scale level practices

Quote 5.4.2.1: P6
"The advantage of a business location is that you can park a van here. Additionally, you create a work environment for clients here, since people work in this area. Living is now starting to become a part of the area as well, but that has not been the case originally."

"Het voordeel van een bedrijfslocatie is dat je hier de bus kan parkeren. Je creëert ook voor de cliënt een werkplek want er wordt hier in de omgeving gewerkt. Er begint nu wonen, maar dat is van oudsher niet zo."

Quote 5.4.2.2: P3
"In my opinion, we have got the space to do what we do here. Luckily, we have got space for our workshop. But at the same time, I enjoy looking outside and seeing green. That is extremely important for our functioning, not only for our employees but also for our target group."

"Ik vind dat we hier de ruimte hebben voor wat we doen. We hebben gelukkig de ruimte voor onze werkplaats maar als je dan naar buiten kijkt dan zie ik daar ruimte, dat vind ik altijd wel heel prettig. Dus voor ons is dit qua functioneren een heel belangrijk, niet alleen voor het personeel maar ook de doelgroep, een heel belangrijke plek."

Quote 5.4.2.3: P4
''This is a sea of space. If we would get half of this, we would have to think how to do this differently to sustain our activities with a smaller space.''

''Dit is een zee van ruimte, als je straks de helft krijgt dan zou je iets moeten gaan doen, verzinnen van wat moeten wij anders gaan doen dan wij nu doen om met minder ruimte toch hetzelfde kunnen doen.''

Quote 5.4.2.4: P3
''In our opinion this is a suitable place with regards to the accessibility for the youth that come here by public transport.

''Wij vinden dit een heel goede plek. Ook best qua bereikbaarheid voor jongeren die met het OV komen.''

Quote 5.4.2.5: P7
''Strategically, it is well located, close to the train station and highway.''

''Het is strategisch heel goed gelegen, en bij het station en bij de snelweg.''

Quote 5.4.2.6: P7
''Occasionally, customers – that bought a product via Marktplaats or Catawiki – fetch their product here, that is not a problem since we are simply close to the highway.''

''Ze komen hier wel eens spullen afhalen als ze iets gekocht hebben via marktplaats of catawiki, dat is geen probleem dan is het gewoon dicht bij de snelweg.''

Quote 5.4.2.7: P4
''It could be disadvantageous that we are in an industrial area, that is not easily accessible… Can people easily get here? Public transport is not active during the weekend. The bus drives from Monday until Friday, but not during weekends since nobody is working here in the weekends, so why would you provide a bus service then? In that case, people depend on their own mode of transport, a bicycle or car if they feel like it.''

''Het zou nadelig kunnen zijn dat je hier toch redelijk in een industriegebied zit, dat niet zo makkelijk bereikbaar is…kunnen mensen hier makkelijk naartoe komen? Openbaar verkeer rijdt hier niet in het weekend. Er rijdt hier een bus die tot en met vrijdag rijdt en zaterdag en zondag niet rijdt, want er werkt hier dan niemand dus waarom zou je de bus dan laten rijden. Dan zijn mensen afhankelijk van eigen vervoer, fiets of auto of ze daar zin in hebben.''

Quote 5.4.2.8: P6
''Rather than this central point – where our clients come to and are transported from – we would like permanent routes through the city. This route would run along sites where homeless people are, and shelters for homeless. Then, from those locations we could bring our clients to their workplace. That way, they would not have to come here first and we could reach more clients, which means there are more possibilities.''

''Eigenlijk willen we in plaats van onze centrale punt hier, dat alle cliënten hierheen komen en dan weer wegrijden willen we een permanente routes door de stad langs vindplaatsen, opvanglocaties en dat we van daaruit de cliënten naar hun werkplek brengen, dat ze niet eerst hierheen hoeven te komen. Dan bereik je ook meer cliënten en worden je mogelijkheden groter.''

Quote 5.4.2.9: P4
''We are located here for eight years. Before, we were located in a residential area for some time. That has advantages, since you are more involved with the neighbourhood. People easily walk by to donate something. Our current location is rather distant. People need to know that we are here, luckily people find us.''

''Nu 8 jaar, voor die tijd hebben ze in een woonwijk gezeten. Dat heeft wel voordelen, dat je veel meer betrokken bent bij de buurt. Dat mensen ook makkelijk even langs komen lopen om iets te geven. Je zit hier toch vrij uit de buurt. Mensen moeten wel weten dat we er zitten, gelukkig vinden mensen het wel.''

Quote 5.4.2.10: P5
''If there was another franchise of ASN, I would get into contact with them, since it is better for the both of us to help each other.''

''stel er zou in de buurt nog een ASN vestiging zitten dan zou ik dat contact wél leggen, omdat het voor beiden beter is dat we elkaar helpen.''

Quote 5.4.2.11: P7
''Across the street, there is a man that sells pellet stoves. In return for the use of his parking place, we saw his wood.''

''Hier aan de overkant zit een man van palletkachels en in ruil voor zijn parkeerplek zagen wij zijn hout. Dat soort dingen doen we wel, maar dat is een soort van burendienst.''

Quote 5.4.2.12: P8
''We produce locally in order to be able to quickly solve problems at suppliers. Next to that, it allows us to have a satisfactory view on how the products are produced, the circumstances of the employees, and the impact on the environment.''

''We produceren lokaal om problemen snel op te kunnen lossen bij suppliers en goed zicht hebben op hoe geproduceerd wordt, op de omstandigheden van de mensen en wat de impact is op het milieu.''

Quote 5.4.2.13: P1
''We proposed to manage the property, using a concept that would generate a cashflow for the building and vitalise the surrounding environment as a consequence of the large amount of visitors.''

''Toen hebben we een voorstel gedaan het pand te beheren middels een concept wat een enorme cashflow aan het gebouw zou laten hangen en de omgeving zou vitaliseren. Puur omdat heel veel mensen er op af zouden komen.''

Quote 5.4.2.14: P1
''We have been an enormous catalysator for the development of business here. We were already quite active, and after that the neighbouring hotel opened.''

''Wij zijn een enorme katalysator voor de ontwikkeling van bedrijvigheid hier geweest. Het hotel hiernaast is begonnen toen wij hier al flink bezig waren.''

Quote 5.4.2.15: P3
''No, these are not all ours. In the evening, we always collect the cars that belong to us (i.e. our customers' cars) and drive them inside the workshop, since there is no control of the area at night. If all goes well, the street is empty at night.''

''Nee, dit is niet allemaal van ons nee. wat wij altijd doen is alle auto's die bij ons horen, die worden 's avonds omdat hier geen toezicht is, die worden binnengezet. Dan zijn er eigenlijk als het goed is, is de straat dan leeg. Want als iedereen weggaat, dan is de straat 's avonds leeg.''

Quote 5.4.2.16: P1
''Well, they were not able to sell the building. Vacancy is never a good thing, and anti-squatting does not add any value, while we wanted to add value. For this, we choose a community that was begging for space. This community consisted of sports people, musicians, and especially dancers. Almost all dance schools lost their subsidies due to the financial crisis. Therefore, I said: move into this building, because together we stand strong. They pay little here, and collaborating with others allows them to survive.''

''Nou ja, ze kregen het gebouw toch niet verkocht. En leeg staan is natuurlijk nooit goed, anti-kraak voegt geen waarde toe en wij wilden waarde toevoegen. Daarvoor hebben we een community of een doelgroep uitgekozen die om ruimte te springen was. Dat waren de sporters en de dansers en musici, met name voor

de dansers. Bijna alle dansscholen kregen geen subsidie meer door de crisis. Dus daarvan heb ik gezegd: kom maar hierheen, want samen kunnen we sterk zijn. Hier betaal je weinig en door samen te werken met anderen kun je het overleven.''

Quote 5.4.2.17: P1
''The financial crisis makes initiatives such as this one possible.''

''De crisis maakt initiatieven als dit mogelijk.''

Gemeente Den Haag, 2019a, p. 16
''Additionally, there are five important (area)qualities that provide guidance and give direction to new initiatives. However, these qualities are not a blueprint.''

''Daarnaast zijn er voor de Binckhorst 5 belangrijke (gebieds)kwaliteiten die verder richting geven aan nieuwe initiatieven en houvast bieden. Ook hier vormen deze kwaliteiten geen blauwdruk.''

Quote 5.4.2.18: P5
''If you want to be affiliated with an organisations as ASN, you have to meet certain criteria. 'Duurzaam repareren' is one of such requirements.''

''Als je aangesloten wilt zijn bij een keten als ASN, dan moet je aan voorwaarden voldoen. En daar hoort ook het duurzaam repareren bij.''

Quote 5.4.2.19: P5
''... I have got a plasma cutter for example. If ASN Nootdorp needs it, we share it with each other. I also have an aluminium welding machine, if something needs to be repaired we share the machine. If someone from another ASN location calls us: we naturally help each other out. However with Verweij we would not do that.''

''Ja, ik heb bijvoorbeeld een plasmasnijder staan. Als ASN Nootdorp hem nodig heeft, dan delen we hem met elkaar. Ik heb ook een aluminium lasapparaat staan, als er dan iets gemaakt moet worden dan delen we dat. Maar met een Verweij eigenlijk niet. Maar als iemand anders van een ASN vestiging belt: natuurlijk, we helpen elkaar.''

Quote 5.4.2.20: P3
''We were, of course, afraid that this building would be demolished because there are planned a lot of houses in the Binckhorst.''

''Wij waren natuurlijk bang dat dat werd gesloopt, want er moeten zoveel woningen komen in de Binckhorst.''

Quote 5.4.2.21: P4
''Currently the only limitation is the workshop. I fear that we have leave here one day.''

''De enige belemmering die er nu zit is toch een beetje de zaak. Ik vrees dat wij hier een keer wegmoeten.''

Quote 5.4.2.22: P6
''Why do you think we have to leave here? There will be houses worth €800,000 here, across the water.''

''Waarom denk je dat we hier wegmoeten? Er komen hier aan de overkant van het water woningen van 800.000.''