



Master thesis report

# Understanding the Value involved in a Landlord-Tenant relation upon application of Circular economy

Qualitative study in the Netherlands

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## Acknowledgement

From digging up the back yard as a child to becoming a civil engineer who transitioned to a techno management course at TU Delft, I understood that a business works best based on the relations the stake holders are able to build. Through the study and choice of course my affinity for Real estate but with a sustainable approach, naturally leading me towards the topic of choice.

But the choice was not always the easiest with phases of confusion, reasoning and work towards the topic. The confidence afforded to me by the people around me help me see through this research study.

I would like to express deep and ever growing gratitude to my Supervisor committee, Chairperson Dr. P W Chan who afforded me a clear idea of the research and easy with which I should approach my first supervisor Ir. H.J.M. Vande Putte and second supervisor Xinyu Liu who from the beginning have enlighten me with topic in relevance to the research and their guidelines and advice help improve myself and the research. A humble thankyou H.J.M. Vande Putte for his constant encouragements, attitude of going out of his way to help me stay on track through out the entirety of this research. Having a great team ensures me to deliver a successful research outcome.

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The biggest pillars of support for me were my family for whom I strive to be better everyday and happily carry a debt which can never be repaid.

This thesis research drove me from darkness to academic and logical enlightenment summed beautifully by the shloka.

**|| “तमसो मा ज्योतिर्गमय” ||**

***From darkness to light***



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## Acronyms

CE	Circular Economy
SHO	Social Housing Organisation
BPD	Bouwfonds Property Development
MIA	Milieu-investeringsaftrek
NGO	Non-governmental organizations
CBS	Centraal Bureau voor de Statistiek



## Executive Summary

Over recent years, concept of circular economy has gained popularity and offers affordability making it a viable solution to the housing problems (Waldo Galle et al., 2020). The modern economic system's traditional linear extract-produce-use-dump material flow model is unsustainable while on the contrary the circular economy provides the economic system with a cyclical alternative flow model where the materials used are reused in the next cycle of application notes (Schulze, 2016).

Although the Netherlands is one of the first countries to move to circular economy in housing, it is vital to examine and solve implementation issues associated with this approach. As a result of this according to Priemus, (2001), findings, not all stakeholders are motivated to contribute to the movement toward circular economy, and many of them are waiting for tangible solutions that the stakeholders can utilize. Circular housing is also known for reduction of expenses by making alterations to the structures in response to shifting demands over its lifecycle, which also enhances the projected use of real estate since the structure will be able to be utilized for a longer period of time, requiring less money to be spent on repairs and maybe even less upkeep over time for both landlords and tenants.

According to Gupta & Tiwari , the concept of circular economy is attainable by a mix of reusing materials and making improvements to their functionality. Although the concept of and investing in circular housing real estate is becoming increasingly popular in various nations such as Netherlands, its acceptance among the stakeholders is still unknown.

There is however a missing link in the literature on how landlord and the tenant relationship evolves upon application of circular economy.

The research objective or the purpose of this research is to identify the impact of circular economy application on the relation between the tenant and the landlord. This research aims at examining the circular housing rental-real estate and the connection between tenants and landlords with the main goal of this study being to identify if "Value" can be created for the landlord post circular economy applications and can there be a monetary benefit with further translation to the tenant in terms of a lower rent price for the latter in the current Dutch rental real estate market.

This research also aims at responding to the lack in research in this field of study withing the broader topic of circular economy and the residential rental real estate in the Netherlands and connect the literature with the statements and findings from the qualitative analysis of this research.

The identification of research objective follows with the main research question to be answered in this thesis. Main research question **"How will circular rental real estate investment affect the relationship between tenants and landlords?"**

Since this is a pilot study a literature review will be made to identify the models that are feasible to implement from a circular economy perspective to the residential



portfolio of a landlord and further questions based on these circular economy models will be asked to industry experts and real estate stakeholders of different backgrounds and capacities within the Netherlands an comparison between the literature and industry practice will help to answer this question.

Semi structured interviews will be made use of to collect information which can be linked to the literature and driven towards answering the research question, with participating interviewees from various backgrounds of functioning in the housing rental real estate market in the Netherlands.

The research aims to concentrate on residential real estate segment and will add to the existing knowledge with introduction towards the operationalisation of circular economy in the rental real estate sector by making the stakeholders aware of the perceived value available and its further harnessing. Another practical contribution to the existing body of knowledge is that the study establishes practical relevance in that the relationship between the landlords and the tenants with regards to costs and rent prices.



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# 1 . Introduction

This chapter introduces the topic of circular real-estate, whereby the history of circular real estate in Netherlands, challenges related to the implementation of circular economy and model of circular economy are introduced and explained.



## 1.1 Fundamentals of Circular Economy

### 1.1.1 The Main Idea Behind a Circular Economy

A circular economy works towards eliminating waste and finding alternatives to continuously depleting the resources of the planet (Valavanidis, 2018). According to Valavanidis, (2018), circular economy is a concept that may be applied to either the economy as a whole or to a single company. The process of circular economy is shown in Figure 1. the figure describes how recovery of resources might be accomplished, for instance by, rethinking & reducing, redesigning, reusing, repairing & manufacturing, recycling, and recovery (Kirchherr, Reike, & Hekkert, 2017). Additionally, utilizing this method puts a little strain on the environment as the practitioners can produce less trash as possible (Kirchherr, Reike, & Hekkert, 2017) The modern economic system's traditional linear extract-produce-use-

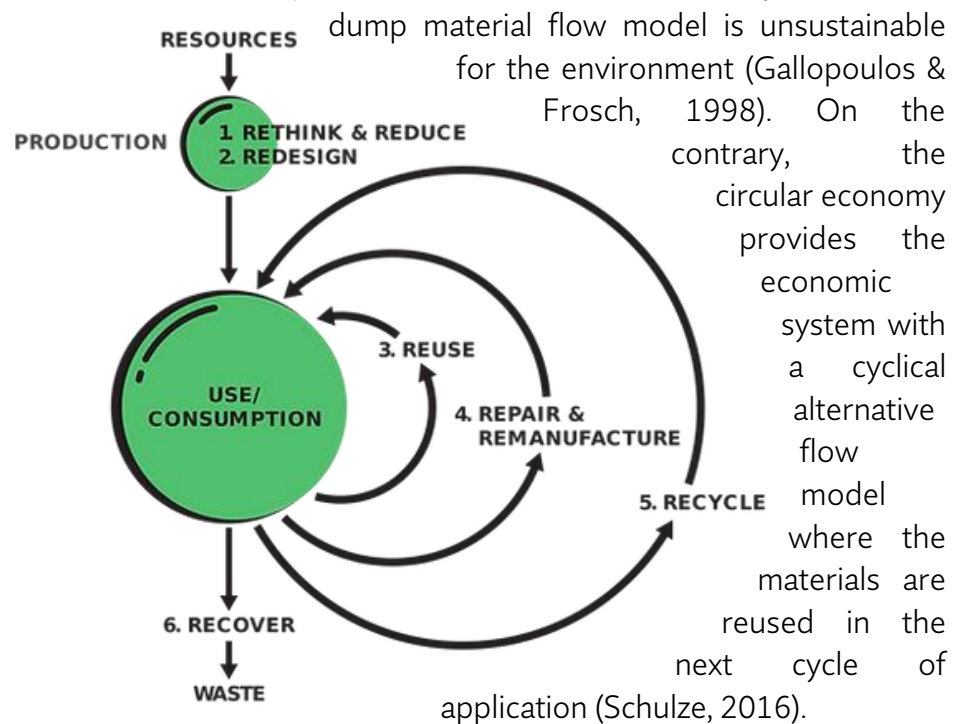


Figure 1 Circular economy explained (themasites.pbl.nl/circular-economy/)

### 1.1.2 Circular Economy in the Netherlands-History and Decisions

In the Netherlands, the circular economy is fast improving and becoming more efficient. It is clear that the new Cabinet emphasizes environmental responsibility to be of the utmost importance, and that it is now time to take things to the next level. This is shown in several diverse ways, one of which is the fact that the subsidy budget of the MIA an Environmental Investment Rebate Scheme has increased from 114 million euros to 144 million euros (Van den Berghe & Vos, 2019).



The quantity of raw materials that are used in the construction and real estate sectors is going to be cut down, according to commitments made by governments, corporations, and non-governmental organizations (NGOs) from all over the globe (Van den Berghe & Vos, 2019). For instance, a decision was made not so long ago in the Netherlands to reduce the use of raw materials by fifty percent, by the year 2030 (Van den Berghe & Vos, 2019).

A recent study by Almeida et al., (2016), indicates that the rise in subsidies demonstrates that the Dutch government is becoming serious about its intention to make the construction sector more circular. A circular economy is one in which materials and energy are renewable and can be placed back into supply chains. The circular economy is not easy to achieve, however, there are strategies that may be used to bring about the condition. The MIA is a Dutch investment initiative that provides company owners with the opportunity to get a tax reduction on their investment of up to 45 percent if they engage in "circular construction". Additionally, via the use of the material passport, Madaster partner AdamasGroep was successful in obtaining this subsidy for one of their clients (Priemus, 2001). Industry leaders in the Netherlands are already making extensive use of circular economy practices. For instance, the neighborhood builder BPD has produced the first 127 homes in Buitenoord, which is a new sustainable housing zone in the city of Wageningen in the Netherlands. Each of these homes has a material passport. These were the first of a total of one thousand BPD (Bouwfonds Property Development) residences that will eventually be completed with a material passport. Similarly, a company called Minitopia is constructing residential locations as living concepts where participants can build the house of their design and the materials are sourced from sustainable and circular construction products. They advise and build custom modular homes with multiple ownership options over the lifecycle of the building (Minitopia, 2022).

It is noted that, even after accounting for the expenses of destruction, transportation, and re-use, there is still the potential to make a significant amount of money from the demolition of a real estate asset (Bühler et al., 2017). This unrealized potential for value has the potential to have an impact on financial reporting, providing the real estate and construction sectors with the necessary financial motivation to transition to a circular economy.

According to Galle et al., (2020), circular housing offers affordability, making it a viable solution to housing problems. Although the Netherlands is one of the first countries to move to the



circular economy in housing, it is vital to examine and solve implementation issues associated with this approach.

## 1.2 Problem Statement

As Almeida et al., (2016) mentioned, the existing financial incentives for a circular economy are not transparent and straightforward enough, having a huge influence on a company's reputation. As a result of this, according to Priemus (2001)'s findings, not all stakeholders are motivated to contribute to the movement toward a circular economy, and many of them are waiting for tangible solutions that the stakeholders can utilize. There are a variety of financial incentives that may be utilized to make operationalization move in a loop in the real estate and construction sectors. One such shift is the expansion of the ways in which structures may be altered (Priemus, 2001). On the other hand, encouraging a circular economy via the implementation of legislation requires political will (Priemus, 2001), which is not likely to materialize in the near future.

According to the study done by Sharma et al. (2022), a few barriers to a circular economy are explained. The waste material management after the end of the building lifecycle in the linear economy is a critical concern for the circular economy, which makes the stakeholders reluctant in embracing the concept. Nonetheless, there are emerging technologies that are being implemented in circular housing to enhance waste management (Kirchherr, et al., 2017). According to Kirchherr, et al., (2017), the products manufactured using a circular economy tend to be more expensive than traditional methods. However, the documentation and data might be used in a variety of ways, for instance, certification, sales, leasing, renovations, demolitions, and the construction of new structures. Although some aspects of the circular economy are expensive the concept of circular housing is becoming more acceptable in the real estate market (Gupta & Tiwari, 2022). Circular housing is known to reduce expenses, and the concept of altering the structure in response to lifestyle demands will increase the utility of the structure and reduce maintenance, which is beneficial to both tenant and landlord (Almeida et al., 2016). It may be possible to reduce the expenses of periodic usage if structures can be designed to be reversible. According to Gupta & Tiwari (2022), the concept of circular economy is attainable by a mix of reusing materials and making improvements to their functionality. However, to bring about the significant shifts that are required, it must be accompanied by either stringent restrictions or financial incentives.



Although the concept of investing in circular housing real estate is becoming increasingly popular in various nations such as the Netherlands, its acceptance among the stakeholders is still unknown (Nobre & Tavares, 2017). Pérez-Lombard, Ortiz, & Pout (2008) further add, that it is still unclear how stakeholders will react to this type of investment. The missing link, however, is that in the literature the evolution of the relation between the stakeholders i.e. the landlord and the tenant upon application of circular economy is unclear. Thereby an uncertainty about the value that is created for the landlord after circular economy investments to their property portfolio and how this value can be captured and further distributed to the tenant.

### 1.3 Research Gap

It is important to acknowledge the role of a circular economy in the rental residential real estate in the Netherlands as its processes may have significant environmental, social, and economic impacts. A significant amount of research focuses on the opportunities and barriers (Debacker et.al., 2017) along with the sustainable applications of a circular economy (Murray, Skene, & Haynes, 2015). However, the research on the relationship between the stakeholders is limited. This also limits the understanding of the value that can be created by the stakeholder i.e. the landlord in a residential rental housing portfolio and how it can then be captured and the possibilities to transfer it further to the tenant at an operational level.

To date, there has been limited research on the perspective of Residential real estate landlords of different backgrounds in terms of portfolio size, sector, and the type and impact of investing in a circular economy makes on the business in terms of generating value. This research helps explore the gap and identify if the value created can be captured and further transferred between the tenant and landlord.

### 1.4 Research Objective

The purpose of this research is to identify the impact of a circular economy application on the relationship between the tenant and the landlord. This research aims to examine the circular housing rental-real estate and the connection between tenants and landlords with the main goal further is identifying if “Value” can be created for the landlord post circular economy applications and can there be a monetary benefit with value transferred to the tenant in terms of a lower rent price for the latter in the current Dutch rental real estate market.



This research also aims at responding to the lack of research in this field of study within the broader topic of circular economy and residential rental real estate in the Netherlands.

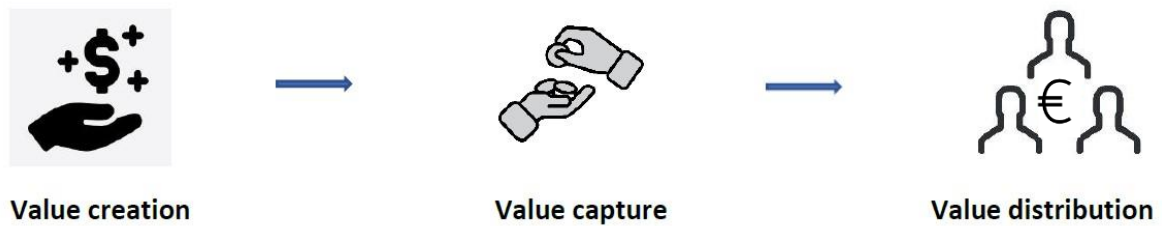


Figure 2 Concept of Value creation to value capture and value distribution, Self image.

## 1.5 Research Questions

The identification of the research objective leads to the main research question to be answered in this thesis.

### Main research question

Q. *“How will circular rental real estate investment affect the relationship between tenants and landlords?”*

### Sub questions

To support the main research question the following sub-questions have been developed to be answered in the different phases of this research.

1. What is circular rental housing real-estate investment in the existing Dutch real estate market?

This question aims at answering the existing market situation in the Dutch residential real estate segment and further aims at explaining the developments in the Circular rental real estate investment segment. This question is answered through a literature review.

2. How are the stakeholders receiving the idea of circular economy investment in the rental real estate?

Based on the study of the literature, a comprehensive idea about the existing market situation and stakeholder involvement will be understood and validated through open-ended interview questions.

3. What circular strategies are being implemented and how they affect the tenant landlord equation?





Since this is a pilot study a literature review will be made to identify the models that are feasible to implement from a circular economy perspective to the residential portfolio of a landlord and further questions based on these circular economy models will be asked to industry experts and real estate stakeholders of different backgrounds and capacities within the Netherlands. A comparison between the literature and industry practice will help to answer this question.

#### **4. Can a large scale for-profit circular rental housing exist in the Netherlands?**

This is a conclusive question that correlates to all of the earlier sub-questions and directly links to the main question. To answer this question semi-structured interviews will be made use of, with experts from various backgrounds in the housing rental real estate market in the Netherlands.

### **1.6 Theoretical and Practical Relevance**

So far, the research literature has only provided theoretical information on how the implementation of a circular economy in real estate may be beneficial with extensive research on pros and cons (Graziela, et al., 2018). Meanwhile, a limitation on the relevant knowledge on shaping the relationship between the participants has been emphasized (Graziela, et al., 2018). However, empirical research interviews with experts in the circular economy and the real estate landscape—are required to investigate how the adoption of the circular economy may affect the landlord-tenant relationship in the real estate industry in depth from within the rental real estate segment and if value can be created to be captured and transferred between the landlord and tenant.

The research aims to concentrate on the residential real estate segment and will add to the existing knowledge with an introduction towards the operationalization of circular economy in the rental real estate sector by making the stakeholders aware of the perceived value available and its further harnessing. The information provided by the relevant industry expert interviewees will have practical significance in the sense that different players in the housing sector or real estate will understand the applicability of models of the circular economy that might help the industry to transition from a linear economy model to a circular economic model. Another practical contribution to the existing body of knowledge is that the study



establishes practical relevance in the relationship between landlords and tenants concerning costs and rent prices.

In practice, the existing Dutch real estate market is highly saturated and competitive with property and portfolio valuations rising exponentially (Uri M., 2015). This study will also allow to complement this fact by providing insights into the willingness and possibilities of the landlord and optimize and enhance their business strategies and operations through incentivizing the circular economy

The study also brings forward the nuances and expectations of the various industry experts through their experiences in the field of circular economy and brings together the collective understanding towards a cohesive text for further researchers to build on.





## 2 .Method

This chapter provides the scope of the empirical research and the Method and actions taken to conduct the primary research that aim to answer the question of the thesis empirically. It is also in this chapter that the demographic of the study participants and the nature of the interview questions is provided.



## 2.1 Scope of Empirical research

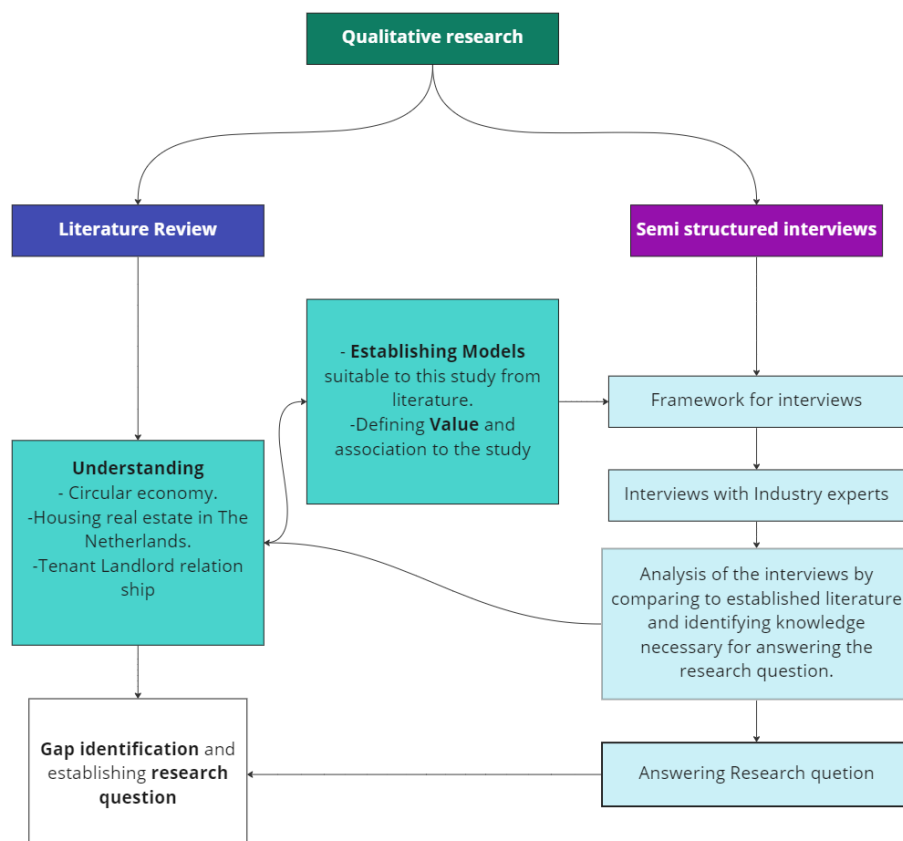
The purpose of the research was to investigate the current context of circular real estate investments and to examine the collaborative practices of landlord and tenant in the Netherlands. Because of this, it was necessary to conduct an empirical study to discover real-world methods in which real estate investment corporations might develop a sustainable model of a circular economy. The following figure gives a brief idea about the Methodology used.



Figure 3 Methodology for the research project, Self image.

### 2.1.1 Research Method

Figure 4. Research breakdown flow chart, self image.



The qualitative research method was used in this study. The primary objective of qualitative research is to collect data from participants through techniques such as in-depth or semi structured interviews, and focus groups (Ahmad et al., 2019). In this kind of research method, study participants are often interviewed to find out how they form their meanings regarding a particular ideas of circular economy. The scope of this study is the implementation of the circular economy in housing real estate and the impact of such an investment on the tenant-landlord relationship. For instance, throughout this research, participants were questioned on their perspectives on real estate investments in circular housing rentals, particularly those from the Netherlands. Participants were also asked how circular economy applications to their business will impact the relationship between the landlords and the tenants in terms of operational flexibility and costs, tenant satisfaction, housing prices and value created from this investment.

### 2.1.2 Literature Study

After defining the scope of the research an extensive literature review was made. This study focuses on understanding the basics of the circular economy and its application in the residential rental housing market in the Netherlands. A lack of information from the perspective of circular housing and its impact on rental prices was explored. A relevant set of literature reviews was made to identify the models suitable for application from a landlord's perspective to their rental real estate business. Based on the report by Acharya et. al., (2020) five models of circular economy in the built environment were established to use further in the formulation of an interview protocol. Value and its association with this study were subsequently explained in the study by supporting literature. The same five models by Acharya et. al., (2020), were also studied to identify if value was created by circular economy applications with further possibilities of capture and distribution to the tenant. Data collected in the interviews were compared with the same set of literature along with additional literature to formulate the results for this study.

This phase of the research aims to answer the sub-question (1). Along with sub-question (2). and sub-question (3). Both sub-questions, (2) and (3) will be further compared with the information from the semi-structured interviews.

### 2.1.3 Interview research design

This study makes use of a qualitative interview research approach for its data collection and analysis. When referring to qualitative



interviews, the terms intense interviews or in-depth interviews are sometimes used (Maxwell, 2012). These interviews are known as "semi-structured" interviews because the researcher has a certain subject in mind for the respondent, but the questions are formulated but spontaneous and are specific in response to the answers given by the respondent, and the researcher may not ask the same questions to each respondent in the same style or sequence.

The primary objective of such interviews is to discover what individuals believe to be significant about the matter at hand and to listen to them articulate their thoughts in their own words.

Such interviews aim to find out what the participants think about the circular real estate investment in the Netherlands and how it affects the relationship between landlords and tenants from the perspectives of value its capture and distribution. The participants were asked what they thought about the circular real estate investment in the Netherlands.

There are several reasons why qualitative interviews were used as a study design. One of the reasons is that there is a relative absence of bias. Interviews often have less observer bias and participant bias than other types of research (Maxwell, 2012). When it comes to membership focus groups, even a professional moderator will pick up on small biases.

The fact that qualitative interviews are, by their very nature, adaptable is the second justification for using them. It is much cheaper and allows interviews to be done quickly one after the other. Participants who miss an appointment can call back whenever it is convenient for them. Even though the researcher may lose some rapport and communication through phone contact, it still allows interviews to be done quickly one after the other (Adedoyin, 2020).

Consequently, qualitative interviews were employed as the research design to investigate intensively what the participants thought of the application of circular economy in real estate and how this affects the relationship between tenants and landlords.

To support the qualitative structure of this interview, research relevant models of circular economy in the built environment applicable to the rental residential real estate were identified. The 5 models studied by Acharya et. al., (2020) were used for an interview protocol for this thesis. Interviews were conducted with all participants in the research, with direct links to the residential rental real estate and development along with varying knowledge of the circular economy and its application through own practice.



These individuals interviewees provided their expert perspectives on a variety of topics, including the real estate industry as well as the growth of the circular economy.

This phase of the research comprehensively answers the sub-question (4) while validating the other sub-question and leads to the answer to the main research question.

#### 2.1.4 Analysis

This chapter will include insights from the interviewees and will provide an all-round analysis concerning the literature studied as a part of this research project. A well-coordinated link of the study with the expression of the relevant industry experts and practitioners will help the reader and this thesis to close the gap in identifying the aim of this research while providing analysis and interpretation of the findings.

#### 2.1.5 Closing

This will be the final phase of this research containing a conclusion, limitations, and final recommendations. There will be a discussions chapter to include information from the literature relevant to the interviews. This information will be summarised to make it clear for the reader the outcome of this research. The conclusion will answer the main research question. Furthermore, the chapter will include the limitation of this research and additional recommendation for practitioners and the future researchers.





In this chapter, the application of circular economy in real estate is discussed with respect to relationship between the landlord and tenant from the perspective of rent and laws related to tenancy. Additionally, an idea of the issue related to the topic at hand are presented.

# 3

## . Theoretical Framework





### 3.1 Circular Real Estate Investment

In this section, theoretical framework and literature related to the definition of real estate and integration of circular economy into real estate is provided. This section is divided into six sub-chapters to help explore the literature in the premise of this research. This will open different aspects of the rental residential real estate in the Netherlands. Sub-chapters under this section will lead to the existing circular housing and projects in the Netherlands giving a brief idea about it. This section will help address the following sub-question as understood in the literature.

1. *What is circular rental housing real-estate investment in the existing Dutch real estate market?*
2. *How are stake holders receiving the idea of circular economy investment in the rental real estate?*

#### 3.1.1 Real Estate Industry in The Netherlands

The real estate industry plays a significant role in the economy of the Netherlands. In general, when people talk about the real estate sector, they mean things like property development, real estate financing, appraisal and consulting services, brokerage and real estate agents, real estate investment firms, facilities services, building management, and so on. The built environment of the Netherlands is estimated to contribute over 10 percentage points to the overall wealth of the nation (Fitch-Roy, Benson, & Monciardini, 2021). The price of an existing property in the Netherlands' capital city of Amsterdam increased by 11.5 percent (9.4 percent when adjusted for inflation) in 2021, reaching an average of €569,890 (US\$627,865), as reported by Centraal Bureau voor de Statistiek (CBS).

The property market in the Netherlands saw a boom that lasted for 15 years, but it began to slow down in 2008, and it did not begin to get better until 2014 (Muscio & Sisto, 2020). From the beginning of the first quarter of 2014 to the end of the fourth quarter of 2019, the national average home price increased by more than 40%. The largest percentage increases were seen in Amsterdam (with a surge of 77.4 percent) and Rotterdam (61.8 percent growth).



Despite the widespread COVID-19 outbreak that occurred in the nation in the last two years, the price of housing has increased by a staggering 27.3% across the board (Walker et al., 2021).

There is still a healthy market for gross rental returns on flats in the Netherlands (Kalogianni et. al., 2020). The returns on investments are not enormous, but they are better than in many other countries, particularly when considering how secure the Netherlands is, how stable it is, how well the rule of law works, how strong the economy is in general, and how good the long-term outlook is. In particular, considering how well the rule of law works in the Netherlands, There are a wide variety of yields available for apartments in Amsterdam, from 3.7 percent to 5.3 percent (Kalogianni, Dimopoulou, Lemmen, & van Oosterom, 2020). As is customary, smaller flats bring in more revenue than their larger counterparts.

### 3.1.2 Investment in Real Estate in the Netherlands

In the 21st century, there has been an increase in the number of professional real estate investment businesses, and these corporations are investing an increasing amount of money in the building stock of the Netherlands (Ploeger, Prins, Straub, & Van den Brink, 2019). Although most of these companies are based in the Netherlands, businesses from other countries are showing a growing interest in the investment markets located in the Netherlands. Buying both the building and the land at the same time is one of the more common ways to invest in real estate, as is purchasing shares of either an apartment house company or a real estate company. In recent years, there has been a rise in interest regarding the practice of investing indirectly in real estate.

#### 3.1.2.1 Types of Investors in Residential real estate

Özogul & Tasan-Kok, 2020, in their research meta categorize the types of real estate investors in the residential real estate sector as (i) spatial scale of operation, (ii) size and social composition, (iii) investment object and finance, and (iv) investment and social behavior group. According to Van Gool, (2013), there are two major types of real estate investors in the Dutch real estate market Viz. Private investors and Institutional investors.

In the Netherlands, real estate investment corporations hold the vast majority of the country's buildings and housing stock. These corporations possess more than forty percent of the buildings in the Netherlands, which contributes to the overall value of these



properties. According to the value of the properties, professional investment companies own 20 percent of commercial properties like hotels, 12 percent of industrial properties, and a small number of residential properties (Shooshtarian, S. et. al, 2022). Even if they are not being utilized, businesses in the Netherlands make significant investments in brand-new construction. One of the most obvious aspects of the real estate investment industry there is the way that it is structured. If the firm can have some influence in the construction process of the new building, then there is a strong probability that the company will be able to create a circular economy revolving around its investments.

In the Netherlands, there is a discussion regarding the benefits and downsides of shifting to a circular rental housing sector, but there is no established research on the effects of such investments or how it impacts landlord-tenant relationships. By finding pertinent responses to the questions posed by this thesis, this study will attempt to better fill this research gap.

Granath Hansson and Lundgren (2019) hypothesize that social housing might be used in the development of large-scale for-profit circular rental housing. A program in which low-income families may acquire housing at a rate that is significantly lower than the local market rent or price over a prolonged length of time is what usually means when humans talk about "social housing" for this article (Hansson & Lundgren, 2019). Property management and tenant management are the two fundamental components that make up social housing management (Reeves, 2006). Hansson and Lundgren (2019) contend that residentially based networks are more successful in fostering social cohesion than other types of networks due to the frequent encounters, shared identities, and collaborative experiences that take place among the members of these networks.

When people and groups work together to overcome gaps in wealth and income, as well as build a sense of shared purpose and identity in the face of mutual obstacles, social cohesion is accomplished. People who live in social housing are often immersed in an atmosphere that is favorable to the establishment of relationships, which may eventually lead to better social cohesion. As a consequence of this, social housing often results in a more cohesive community (World Health Organization, 2016). It has been demonstrated that tenant participation in social housing can improve housing management services and service standards, increase community ownership, and stimulate the development of initiatives to enhance residents' quality of life (including local employment opportunities, training, and anti-social behavior programs, to name a few) (World Health Organization, 2016).



To successfully implement a Circular Economy in social housing, one of the most important aspects to focus on is changing the residents' production and consumption patterns so that they are less wasteful and use fewer resources. This can be accomplished through the development of technological housing solutions to address these problems. Marchesi and Tweed (2021) have principally concentrated their efforts on the development of housing technologies that are flexible and adaptive. In their Circular Economy Plan for Merton Regeneration, KLH Sustainability and Clarion Housing (2018) have considered a range of activities, such as demolition for recovery, products with high recycled content, supply chain integration, and construction waste management. These activities all aim to eliminate or significantly reduce waste before turning to more traditional forms of waste management, such as recycling (2021). In addition to the creation of technological solutions for a Circular Economy, the approach includes the inclusion of social value in the residential community as an important component of the evolution toward a Circular

Economy. This is done as an essential aspect of the evolution toward a Circular Economy. The goal of the method is to reduce the amount of garbage that is produced in the community via resident-led activities, while simultaneously strengthening social networks and cohesion, fostering a sense of ownership in the community, and creating a sharing economy (KLH Sustainability & Clarion Housing, 2018). Even though there is not yet any research to support these efforts, this approach reflects a rising willingness on the part of Housing Associations to incorporate their resident communities in the transition to a Circular Economy.

### 3.1.3 Challenges in transitioning to a Circular economy

This sub-chapter explains the challenges business and corporations face along with the ambiguities that exist in the industry when transitioning towards a Circular economy. This subchapter gives an overview of the industry and its approach to a circular economy.

According to Bai, Ahmadi, Moktadir, Kusi-Sarpong, & Liou, (2021); Chhimwal, Agrawal, & Kumar, (2021); Bakan et al., (2022); and Ormazabal, Prieto-Sandoval, Puga-Leal, & Jaca, (2018), transitioning to a circular economy is a difficult process. Generally, several companies argued to be adopting the circular economic model, but they are not adhering to the necessary processes of this kind of economic model. For example, Bakan et al., (2022) argue that while it is encouraging to see more enterprises adopt the concept of a circular economy, consumers should be wary of "circular-washing," in which dishonest



businesses falsely claim to be helping to foster an economy based on recycling and reuse. However, according to Bai, Ahmadi, Moktadir, Kusi-Sarpong, & Liou, (2021), businesses that make genuine efforts to adopt more circular processes stand to reap several economic and social benefits from doing so, such as a boost to Gross Domestic Product development, an expansion of employment opportunities, and the avoidance of climate collapse.

Prieto-Sandoval, Puga-Leal, & Jaca, (2018) pose that circular economy is dubbed "Circular economy for Circular economy's sake" when a company focuses just on becoming more "circular," rather than also reducing its negative effects on the environment.

The authors Adams, Osmani, Thorpe, and Thornback (2017) agree that completing material loops is crucial; yet, they believe that doing so alone is insufficient to ensure the long-term success of a business. Imagine a corporation that only makes products out of recycled materials, but those products have such a short lifetime that they are thrown away after just one use. According to Adams, Osmani, Thorpe, & Thornback, (2017), this would not be environmentally friendly. Utilization of such items is directly linked to an increase in the generation of waste, as well as an increase in carbon emissions and the loss of potential recycling possibilities.

Guerra and Leite (2021) also conducted research on the concept of sustainability within the context of the Circular economy, and they concluded that it can only be attained when all of the relevant factors—economic, social, and environmental—are taken into consideration. However, there are challenges with the metrics that are used to quantify sustainability, even though the circular economy may assist with sustainability (Guerra & Leite, 2021). As a result of this, the landscape of circular economy measures may be characterized by ambiguity and disparity as a result of the many elements that cause varying results.

According to Guerra and Leite (2021), metrics are significant; nevertheless, it is not apparent how to assess the Circular economy. The primary issue that Guerra and Leite (2021) brought to light was the question of how businesses may ensure that the circular activities they engage in not only enhanced the quality of life of individuals but also the environment and their status in the community. Several aspects must be taken into consideration. To begin, it is essential to understand the value that comes from having well-defined criteria for the Circular economy, which can then be utilized to help direct the



process of development. Secondly, businesses must steer clear of a narrow emphasis on "reduce, reuse, and recycle" and instead address the challenges posed by social metrics, which are still often absent. And lastly, businesses need to take a more holistic point of view and give closed-loop procedures a larger amount of weight in their deliberations. Research conducted by Torgautov et al. (2021), Rajput & Singh (2019), and Geng & Doberstein (2008), amongst others, suggests that the concept of the Circular Economy is still evolving.

As a result of this, businesses are engaging in a wide variety of activities and employing a wide variety of methodologies. Metrics for the Circular economy, also known as methodologies for measuring the Circular economy, use a variety of different approaches, provide a range of various amounts of information, and are connected to sustainability in a variety of different ways (Rajput & Singh, 2019).

According to the findings of Dias et. al. (2022), businesses are coming under increasing amounts of pressure to modify their traditional ways of production as the problems linked with climate change and the loss of biodiversity become more obvious.

According to Singh et al. (2021), striking a sustainable balance between economic, social, and environmental concerns is one of the most important steps toward attaining sustainability. In actuality, the social pillar of the circular economy is often the one that is given the least attention and is frequently the weakest. However, if the social component of a circular economy is neglected, there is a possibility that unexpected consequences would occur. Because of this, the use of a Circular economy statistic that does not reflect all elements of sustainability may come with related costs and constraints.

Nußholz, Rasmussen, Whalen, & Plepys, (2020) posed that reused products can end up being more expensive, which is another reason why it can be hard to use the circular economy in real estate. The use of reuse techniques enables firms to improve their standings on green certifications and fosters a positive image of what it means to be a "greener" company in the marketplace. However, if the ultimate cost depends on the repurposed item being able to fulfill the original function of the items, then the final cost might be greater. When it comes to reusing components during the adaptation of commercial real estate buildings, Elofsson & Lindstedt, (2012) pointed out that resource efficiency is a big issue that has to be addressed as a major concern.



According to Nußholz, Rasmussen, Whalen, & Plepys, (2020), consumers do not in many instances profit economically from reuse. However, the authors point out that a more effective reuse process would suggest economic and environmental savings, and that the adoption of reuse would provide value for the customers.

While another piece of study conducted by (Stahel, 2016) looked at both the positive and negative aspects of reusing things. According to Stahel (2016), customers who participated in reuse activities had a positive impact on the reputation of their business and the marketing of their products as a direct outcome of these social movements. Another obvious advantage is the time savings that result from reusing an object rather than deconstructing it and starting from scratch to create something new. According to Ddiba et al., (2020) and Adams, Osmani, Thorpe, & Hobbs, (2017), the key challenges that limit the adoption of reuse include a lack of knowledge, interest, and instigation on the part of potential users. Additional constraints come in the form of needs for storage and logistics, technical difficulties, the difficulty of forecasting the lifespan of reused objects, and the restricted number of competitors in the business. To build a broader application of reuse, there has to be an increase in sales, as well as consulting and demolition services.

Property owners and renters alike can improve the incentives for reuse that are already inherent in the adaptive reuse of commercial real estate by establishing reuse goals for the organization that are both realistic and attainable and/or including reuse incentives in lease agreements (Ddiba et al., 2020). When making new sustainable improvements, it is essential to investigate both the objective, monetary measurable utility and the subjective, experienced worth of the potential outcomes. When companies put their attention on value-in-context, which describes what the consumer perceives as value in the course of the user experience, the materials themselves become less crucial, while the achievements of the customers themselves become more vital.



### 3.1.4 Advantages of circular economy in Real estate

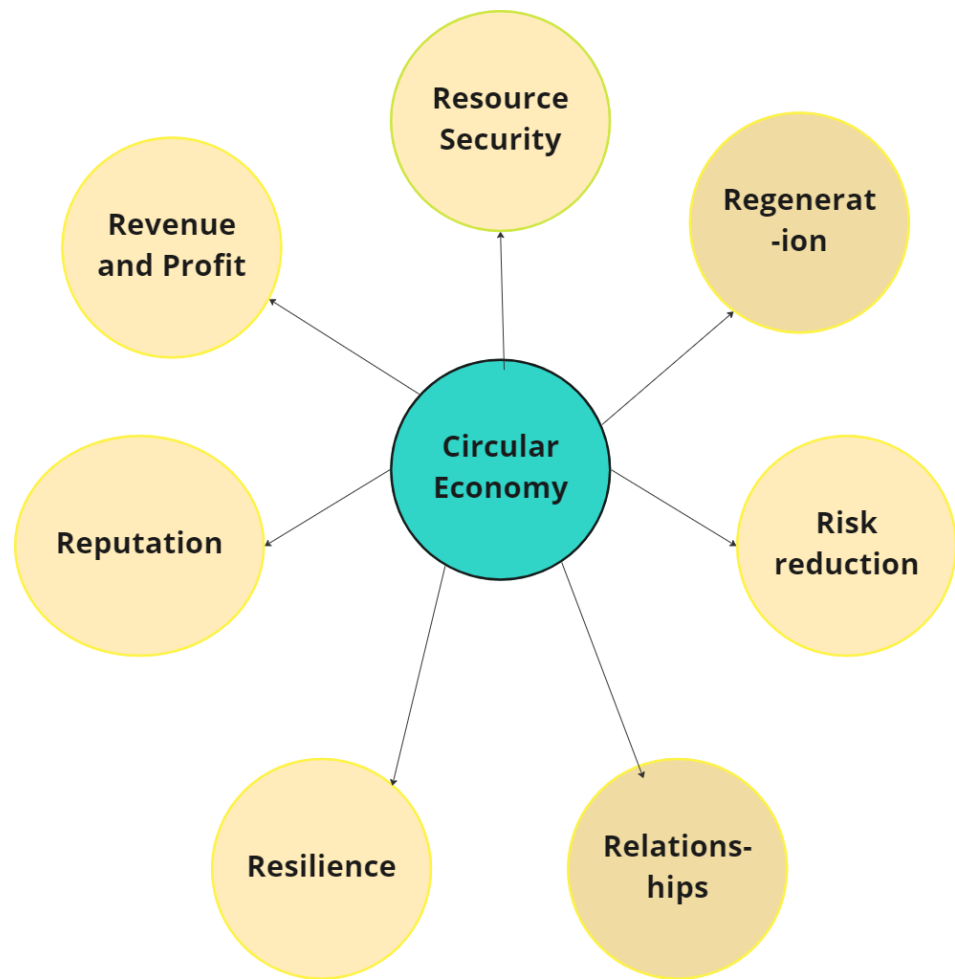


Figure 5. Advantages of Circular Economy in Real estate, self image.

**Resource Security:** When contemplating circular approaches, an excellent place to begin is by determining which materials are most at risk and which are most essential to businesses, particularly in the real estate industry (Devadas et al., 2021). It is possible to attain resource security and price stability by shifting away from resources that are limited and perishable and toward materials that are safe and sustainable.

**Regeneration:** In a circular economy, the emphasis is placed not on the process of extraction, but rather on the regeneration of resources. Natural capital, on the other hand, tends to grow through time rather than dwindle (Kouhizadeh, Zhu, & Sarkis, 2020). For example, the real estate business, and particularly house building, is notorious for throwing away materials that may be beneficial if given a new function.

**Risk Reduction:** The risk associated with supply chains may be reduced by taking steps such as diversifying the locations and kinds of resources that are used. One example of this would be a well-known





maker of washing machines, which can switch between magnesium and aluminum in the various stages of the production process (Böckel, Nuzum, & Weissbrod, 2021). Additionally, by using local and distributed manufacturing and assembly, the possibility of disruption caused by global trade tensions, climate change, and other dangers may be reduced.

**Revenue and Profit:** The creation of new by-products from recovered rubbish might lead to the opening of new markets and sales opportunities. Extending the production process such that it also includes repairing, remanufacturing, reselling, and sharing may result in the creation of new revenue streams (Gupta, Chen, Hazen, Kaur, & Gonzalez, 2019). Certain repair alternatives may need a supply of replacement parts, consumable materials, or even specialized equipment.

**Relationships:** In today's busy and difficult-to-track media world, investing time and energy into developing strong, long-lasting relationships with consumers may help businesses save money that would otherwise be spent on expensive marketing efforts designed to attract attention. Studies have shown that acquiring a new customer might cost anywhere from five to twenty-five times as much as retaining an existing one in terms of financial investment (Hossain, Antwi-Afari, & Amor, 2020 and Kouhizadeh et al., 2020). Adopting a strategy that is more circular, regenerative, and win-win for all parties involved may be beneficial to the connections that a business has with its suppliers, employees, communities, and shareholders.

**Reputation:** Strategies that implement a circular economy may improve a company's public reputation by making general improvements in both efficiency and quality. Increasing numbers of individuals are speaking out against practices such as deforestation, pollution, and the usage of minerals that do not regenerate, as well as businesses that are engaged in these practices (or remain silent) (Gupta et al., 2019). Users on social media are "calling out" businesses that sell products of poor quality, use packaging that cannot be recycled or contribute to damage to the environment. Businesses should use practices from the circular economy to both recruit and retain the most qualified workers.

**Resilience:** All of the aforementioned advantages of completing the loop contribute to the stability and growth of enterprises (Devadas et al., 2021). Businesses may benefit from a systematic approach by learning more about the ecosystem in which they operate to better anticipate and prepare for potential threats, problems, and opportunities.



### 3.1.5 Circular economy in the Dutch housing real estate

This sub-chapter aims at introducing the existing situation of the circular economy in Dutch housing real estate.

Housing associations have been around for a long time in the Netherlands, and Eikelenboom et al., (2021), say that they are seen as key players in the Dutch building industry. Around the middle of the 1800s, the first groups were set up to help people from the working class find homes. After World War II, there was a big problem with housing, and these groups were very important in fixing it. Even now, they are a very important part of the Dutch housing supply.

According to Sacranie et al., (2022), the umbrella organization of the Dutch housing associations describes the Dutch Social Housing Organization as non-profit businesses that pursue social goals within a strict framework of national laws and regulations by involving local government, tenants, and other stakeholders in their policies and are accountable to society. Their main goal is to make sure that low-income families have decent places to live by building, renting, and managing public housing and keeping residential areas in good shape.

Etin et al. (2021) think that by 2020, Dutch housing organizations will own 2.33 million homes, which is about 29% of all the homes in the country. At the moment, there are 312 Social Housing Organizations in the Netherlands. Some of them oversee more than 50,000 units.

To help meet national climate goals of reducing carbon emissions by 95% by 2050 (Etin et al., 2021), housing associations have put a high priority on energy transition, especially energy refurbishment of the existing housing stock, over the past 10 years. Circular Economy has recently become a new way for them to think about sustainability. It is linked to their climate goals and the government-wide Circular Economy plan. Because of these changes, more and more social housing organizations all over the country are starting to use circular methods in pilot programs. "Drenthe Woont Circulair" is the name of a program like this in the Dutch province of Drenthe (Etin et al., 2021). There are six experimental projects called "proeftuinen," which are like "playgrounds" for experimenting.

These projects will produce 110 social rental homes in the form of cheap, easy-to-make, and scalable circular homes. Overijssel has already started using a new circular test plot that is set up like a living lab. Architects and a company that take down buildings are working together on this project to learn more about how to take down buildings and how to use biobased materials to make sure that as many building parts as possible can be used again in the future. As part of the Super Local Estate project, three round homes were built



in the Dutch province of Limburg. More than 90% of the materials came from a 10-story apartment building, built in the 1960s (Etin et al., 2021). Some organizations in the housing sector are going above and beyond the experimental stage by setting high goals in their policies to reach carbon neutrality and a complete Circular economy over the next few decades.

The Private housing sector is catching up to the idea of a circular economy in the Dutch rental real estate scenario, with the government offering subsidies under the Stimulerende Duurzame Energieproductie en Klimaattransitie (SDE++), (2022) scheme. The Stimulation of sustainable energy production and climate transition (SDE++, translated) is a subsidy for the production of renewable energy or applying CO<sub>2</sub>-reducing techniques in the built environment under the construction and infrastructure sector along with deductions under the MIA (Milieu Investerings aftrek, translation Environmental Investment Deduction) with entrepreneurs and businesses allowed to write off up to 75 percent of their investment costs for having circular economy applications to their business and investing in circular buildings of all kinds (Rijksdienst voor Ondernemend Nederland, 2022). This is in line with the government initiative to be a completely circular economy by the year 2050.

There are many pilot projects in the private real estate segment within the Netherlands with options for construction of a circular house or renting one, “Minitopia” is one such example with Buurtschap te Veld in Eindhoven being one of the locations apart for a similar location at Poeldonk, where the participant register into the program allowing the use of sustainable repurposed materials to build houses with an option to buy or rent at the location. The design of the neighborhood invites participants to build a community together with their neighbors. No anonymous building blocks exist, but groups of houses in varying compositions and lots of shared space to meet and develop activities.

Within Buurtschap te Veld, the idea is to realize one plot with fifty compact (self-build) homes, which will be allocated to the tenderers of phase 1. The other fifty micro-homes will be divided into ten 'rooms'. There will be a mix of self-built and ready-made homes with social rent, free sector rental, and owner-occupied homes (Mintopia, 2022).

MVRDV a real estate developer in the Netherlands has developed an innovative energy master plan for one of its development Westerpark West, with a combination of district heating and seasonal thermal energy storage. Following the principles of material cycles and the circular economy, this has enabled them to



transform several existing office buildings on the site into comfortable and energy-efficient homes (Westerpark- West, 2015)



Figure 6 Minitopia in Buurtschap te Veld, Rens van Boxmeer.

### 3.1.6 Stakeholders and the idea of circular economy in real estate

According to the extant literature, stakeholders are very important to the completion and success of a Circular economy transition (Geissdoerfer et al., 2017). To carry out this study, the issue-centered stakeholder approach was used. This approach is a supplement to the traditional stakeholder management view (which puts a central corporation at the center of stakeholder connections; for example, see (Atkin & Skitmore, 2008)), which describes the conventional stakeholder management perspective. To effectively address a common issue, crisis, conflict, or complex phenomenon such as a Circular economy the issue-focused stakeholder approach recommends including and negotiating the interests of a wide range of stakeholders through the formation of multi-stakeholder networks. This can be accomplished by including a wide variety of stakeholders in the issue-focused stakeholder approach. This issue has been elevated to the position of utmost importance by all relevant parties.

The concept of the interests of the many stakeholders is an important component of the stakeholder theory, Parmar et al. (2010) highlighted the fact that both parties have interests and indicated that these interests are linked to one another. Horisch et al. (2014) argued that to establish reciprocal interests in sustainability in a particular circumstance, it is required to engage in stakeholder bargaining. They based their argument on the values and goals held by diverse



stakeholders. The interests of the many stakeholders define and differentiate them from one another. These interests also explain why the various stakeholders are driven to collaborate. As underlined, the term "mutual interests" refers to the benefits that each stakeholder sees in working, as well as their readiness to devote resources to make that benefit a reality (Kujala & Sachs, 2019). The ability of stakeholders to work together productively contributes to the expansion of both their interests and the interests they share with other parties.

When doing stakeholder research, the majority of the time, the researchers have handled the interests of stakeholders as if they were actual stakes. Another possible connection between stakeholder interests is things like stakeholder collaboration and trust (Kujala et al., 2019) or stakeholder communication and learning (with and from) that these things may be important to stakeholders (Kujala et al., 2019). (Kujala & Sachs, 2019). In the context of this study, "stakeholder interests" are conceptualized in terms of value-driven motivations, expectations, and stakes.

According to Kujala and Kuvaja, (2002) the expectations of stakeholders are very important and need to be taken into consideration while making decisions and formulating plans for the future. In addition, they expect that their requests will be met in a way that is equitable to all of the individuals and organizations who are involved. In the context of the Circular economy, examples of expectations held by stakeholders include issues on the economy, the environment, society, the law, and ethics.

Previous research has investigated how the interests of stakeholders are tied to the implementation of the Circular Economy. Lieder and Rashid (2016), for example, underlined the need of taking into consideration, align with, and merging the sometimes-opposing goals and interests of several stakeholders within the framework of the Circular Economy. This was done to get the best possible outcome. To this purpose, Geissdoerfer et al. (2017) said that cooperation amongst stakeholders is not only desired and expected in the Circular Economy but necessary to achieve the various expectations that stakeholders have. Last but not least, having common objectives serves as the bedrock upon which successful collaboration and trust are built among all of the concerned parties (Kujala et al., 2019).

Common ways of tenant engagement include front-line housing management, drop-in clinics, public or town hall meetings, and the outreach campaign described by Sacranie & Cetin, (2022).

The majority of tenant involvement in the circular projects would consist of knowledge transfer and teaching tenants about the many





elements of their new house, such as the alternative materials and heating systems, as well as any limits that could apply to the different requirements say Sacranie & Cetin, (2022). This would be the case for projects that are circular by nature. Because of technical limitations, there would be fewer choices available for circular dwellings in terms of the materials and finishes they could choose. It was found that it was not necessary to emphasize the use of recycled building materials in the new house designs since the presence of such components in an older rental home does not pose an issue. Even though the house would feature state-of-the-art architecture and engineering, the tenants' day-to-day lives would not be significantly altered in any way.

### 3.2 Landlord and tenant dynamics

Having understood the applications of circular economy to the Dutch built environment which also includes the housing rental real estate market involving different investment and investor types it is now important to pin further emphasis on the relational aspects that will evolve between the landlord and tenant. This chapter establishes common and interchangeable dynamics of a Landlord tenant relation and also provides a brief idea about the regulations in the Dutch rental real estate market setting up a precursor to the further literature review and further providing consequential literature towards answering the following sub-question.

#### 3. *What circular strategies are being implemented and how they affect the tenant landlord equation?*

##### 3.2.1 The Evolution of Rental Laws and other Regulations

Both tenants and landlords in the Netherlands have required rules regarding housing ever since the country's first organized cities were established. Most of the time, this was governed by the regulations that were in place in each city (Needham et al., 2018). The Netherlands passed legislation to protect tenants after the French Revolution when there was a drive for equal rights. This occurred during the same period. The Napoleonic Code was developed while Napoleon was in power and control of the country. During this period, the foundation was set for the majority of the laws that are still in effect today. One example of law from that era is found in the Netherlands in Article 1738 of the Civil Code (Vols, 2018). It states that the tenant must give the landlord permission before the landlord can terminate the tenancy contract.



The first national regulations regarding renting a home were enacted in the Netherlands in 1838 when the Civil Code was drafted (Vols, 2018). In the years leading up to and during World Wars I and II, there simply were not enough homes to go around. Tenants were forced to relocate or pay a higher rent since there were many refugees, most of whom came from Belgium, and an occupying authority. After that, the position of the tenant came to be regarded as inadequate, which prompted legislators to enact several fundamental regulations regarding this situation. The tenancy law from 1838 was amended during World War II, and it remained in force until a new law was established in 2003, which is more than 165 years after the original law was passed (Milchram et al., 2020).

In addition to regulations governing rent, there were other laws governing housing, such as the Housing Act of 1901, which made it permissible for housing organizations to come into existence (Jansma et al., 2020). The first piece of legislation that might be considered a "required law" in the realm of renting was the Rent Act, which was enacted in 1951. More will be said about this later. This act imposed restrictions on the right to leave as well as the rent. Additionally, the concept of "peaceful enjoyment in accordance with a rental agreement" was brought up. In 1967, when it appeared that the nation's housing crisis was finally coming to an end, the Rent Act and the protections it afforded were partially dismantled (Leclerc et al., 2022). Because of this, the rental market has become significantly less regulated.

### 3.2.2 Situation of the Landlord and tenant relation in The Netherlands

According to the findings of several studies, the reason that landlords and tenants in the Netherlands are constantly at war with one another is that rental prices are too high (Qin, Zhen, & Zhang, 2021); (Jansma, Gosselt, & de Jong, 2020 and Huisman, 2019). According to the Dutch housing organization (Woonbond), there are more than 300,000 people in the Netherlands who pay rent that is too high (Qin, Zhen, & Zhang, 2021). It is not necessarily common knowledge among landlords and tenants that the monthly rent that can be collected for some properties is capped at a certain amount.

The law says that it is not up to the landlord to decide on whatever price they want to charge for the rental of a home or apartment (Needham, Kruijt, & Koenders, 2018). Every rental property in the Netherlands, be it a house, apartment, or room, is assigned a



score. This rating is determined by several factors, including the size and number of rooms, the value of the property, the availability of amenities (such as heating and bathtubs), and the overall rating (Fang & van Liempt, 2021). With each score comes a maximum rental price that can be charged for it.

If a property has a maximum score of 140, the landlord is not allowed to charge more than the price that corresponds to that score for the room, house, or apartment that they are renting out (Fang & van Liempt, 2021). The homes and apartments listed above meet the requirements to be classified as social housing. If, on the other hand, the apartment or house has a score that is higher than 140, the landlord is free to set the monthly rent at any amount they see fit. These homes are found in the free market sector of the housing market.

One further element that makes it difficult for landlords and tenants to get along is the fact that landlords charge an all-inclusive rent fee. This makes it more difficult for landlords and tenants to reach an agreement (Leclerc et al., 2022). As was just mentioned, it is illegal for landlords in the Netherlands to charge "all-in" rent costs to their tenants. It is imperative that the price of renting and the price charged to pay the costs of the service to be kept distinct. If a landlord sets an "all-in" rental fee, the amount of monthly rent that they get from their renter may be significantly reduced (Fang & van Liempt, 2021). A tenant has the right to request that the "all-in" rental price be broken down into a "rental fee" and a "payment for the cost of services" of their own accord.

If the landlord rejects this suggestion, the tenant has the option of requesting that the Huurcommissie independently determine the total amount that would be owed for the rent and the services (Huisman, 2019b). The majority of the time, the Huurcommissie will reduce the total payment for rent and other services to 85% of the initial all-in rental price. This reduction can save a tenant a significant amount of money (Huisman, 2019b). Therefore, a landlord should expect to receive 15% less income than they did previously. This is something that landlords seldom agree to, which can result in a dispute between the landlord and the renter. Thus, it is necessary to investigate how rental rules and regulations are connected to tenancy to comprehend how the circular economy might be used to alleviate some of the challenges that may result from these tenancy laws.





One issue that arises when landlords, tenants, or agents do not have sufficient knowledge about the law is that they are unable to terminate the rental arrangement. Evidence by Olgun, (2020) shows that there is a possibility of surprises, which landlords prefer to avoid dealing with. For instance, rental agreements that were initially made for a limited amount of time frequently end up being converted into ones that are made for an unspecified amount of time (Vols, 2018). This indicates that the landlord does not have the option of terminating the lease arrangement. Tenants, on the other hand, frequently lack awareness of the legal protections to which they are entitled. This may cause them to pay an excessive amount of rent or agree to terminate the lease when there is no valid basis to do either of those things from a legal standpoint.

As a result of the implementation of the new civil code in 2003, tenancy legislation was modified. In addition to this, the old law utilized legal concepts such as "property" that are not utilized in contemporary legal systems. In addition, the Rent Act of 1951 had been watered down to the point that case law, which is the method by which courts interpret legislation, had begun to bear more weight than the statute itself (Kleinhans, 2019). This was because the act had been reduced so much over the last fifty years. The well-intentioned tenant assistance was interpreted by the courts in a manner that was different from what the legislator had in mind, which was one of the unfavorable aspects of this situation. At one point, the new law was going to take effect on January 1, 2003.

However, that plan was scrapped. The Upper House of the Dutch Parliament spent a considerable amount of time discussing some definitions of the act; thus, the minister was forced to postpone the commencement date of the act to August 1, 2003 (Kleinhans, 2019). The new rental law had the intention of consolidating all the regulations into a single chapter of the Dutch Civil Code. The legislation provides a great deal of elucidation, particularly in the sections about issues concerning property, by adding terminology. Not only was the tenant helped by this clarification, but the landlord was also given rights as a result of it. Before 2003, the law created a clear distinction between repairs and maintenance, which made it difficult for renters to find out which legislation to apply to persuade their landlords to correct problems. Since the law no longer makes this distinction, tenants have an easier time determining which law to employ.



Under the previous legislation, a tenant was permitted to sublease the space that he rented, but only if either the landlord did not object or the tenant could reasonably expect that the landlord would not have any valid reasons to object. The right to sublet was particularly significant in the 20th century when there was a shortage of student housing, and it is still very vital today because of the same dearth of student housing (Olgun, 2020). Another example of a difference between the old and new tenancy rules is the rule that dictates what kinds of improvements are permitted to be made.

When the term of the lease contract comes to an end, the tenant is no longer compelled, as a result of the new legislation, to reverse any alterations that were permitted or to repair any wear and tear that was caused by the passage of time (Kholodilin, 2020). When a tenant enters into a rented property and there is no description of the property, the renter is expected to return the property in the same condition as when he moved into the property. Because of the pressing need for repairs and improvements, significant amendments were made to the law in the end. Although many prior studies have discussed the interaction between landlords and renters as a result of current tenancy restrictions, no research has shown how the implementation of circular housing rental real estate may affect the relationships between landlords, tenants, and real estate investors.

### 3.3 Tenant Interactions and Conduct

According to Anderson (2017), for an organization's environmental efforts to be effective, the landlord and the tenant both need to have the same environmental goals and be dedicated to reaching those goals via the use of certain key ratios and indicators. To effectively manage real estate, it is required to have a full awareness of the requirements and intentions of the many stakeholders. Additionally, it is vital to evaluate the ecological, economic, and social elements in conjunction with commercial concerns. Models of corporate social responsibility (CSR) have the potential to be included in evaluations of the societal impact that a corporation has in any one of these three categories.

According to Alexander and Jaakkola's (2014) research, to establish a relationship that will last over time, it is essential for management to not only educate and respond to the company's stakeholders but also to incorporate those stakeholders in the Corporate social responsibility(CSR) communication. Participation and co-development on the part of customers may result in additional



benefits and cost savings for the business in the form of improved products and services. The last step in renovating spaces is determining how the occupants of such areas react to the changes and how pleased they are with the results.

According to Sanderson and Edwards (2016), the building and spaces have the strongest effect on tenant satisfaction. This factor, together with excellent communication with their property management and a strong belief that the tenant's needs are handled, is also important. When making modifications to a space, it is essential to consider the aforementioned aspects since the level of satisfaction experienced by tenants is very individualized and based on the characteristics of the tenants in question. The process of modifying a premise to meet the requirements and desires of a tenant is time-consuming and involves several choices as well as numerous conversations.

This is something that, as a landlord, one has to be aware of, and it should also be firmly ingrained in the business plan of the corporation. The business plan of a property owner should include how the owner intends to maximize the happiness of his or her renters, how the owner intends to encourage those tenants to pay for that contentment, and how the owner intends to transform those rent payments into a profit from those payments. According to the findings of Clayton et al. (2020), who investigated the connection between the theories of behavioral economics and finance, a decrease in the amount of energy that is used in buildings is closely related to the relationship that exists between the landlord and the renter.

Not just the emotional connection, but also the component of it where the landlord is trying to improve the tenant's space, which has been proven to be directly connected with the health and well-being of the tenants (Colenberg et. al., 2020). Because of this, landlords must be flexible and make sure that the space they rent out is designed in a way that provides their tenants with a pleasant working environment. One example of this would be ensuring that the space is consistent even when the tenants are making significant strides toward a more flexible living space.

According to Halvitigala et al., (2015) landlords have a responsibility to manage the factors that make their spaces attractive to tenants. This includes not only providing the best price-to-quality ratio but also providing loyalty and a willingness to create a relationship in which all parties are eager to perform as well as they



can toward each other. Historically, factors such as car accessibility, location, and the aesthetics of the building have been the primary draw for tenants and have contributed to the attraction of office spaces. Despite this, there has been a discernible shift as environmental concerns like the use of energy and availability of public transportation have grown more highly rated as criteria. According to the findings of Ghosh and Petrova (2017), there is a substantial positive association between the capital expenditures spent on tenant upgrades and the return on the property. This indicates that landlords will enjoy increased profitability if they take steps to improve the appeal of their properties under elements that are currently considered desirable.

According to Thaler and Sunstein (2021), to guarantee that the relationship between landlords and tenants is kept at a level that allows it to work well, it is of the utmost importance that neither party has the feeling that the other is being manipulated. Notwithstanding this, there are tools available for "nudging" that enable landlords to influence the behavior of tenants without directly affecting them. An earlier study examined these strategies through the perspective of consumer elective pricing, which is a pricing strategy in which customers are given the freedom to pick the price at which they are willing to acquire a product or service (Saccardo et. al., 2021). The study investigated how the use of nudges, or subtle prompts, might influence the degree to which customers are prepared to pay for a product or service, as well as whether or not the social aspect of consumer choice pricing should be emphasized.

Ebeling and Lotz (2017) researched the effects of nudging with a status quo bias on the real estate business. Almost 42,000 residences in Germany were assigned at random to either one of two energy service providers, and then the homeowners' energy providers Ebeling and Lotz (2017) were examined. The first group was allowed to actively enroll in green energy; the second group, on the other hand, was automatically registered with a green energy provider but given the choice to opt out of the program (delist).

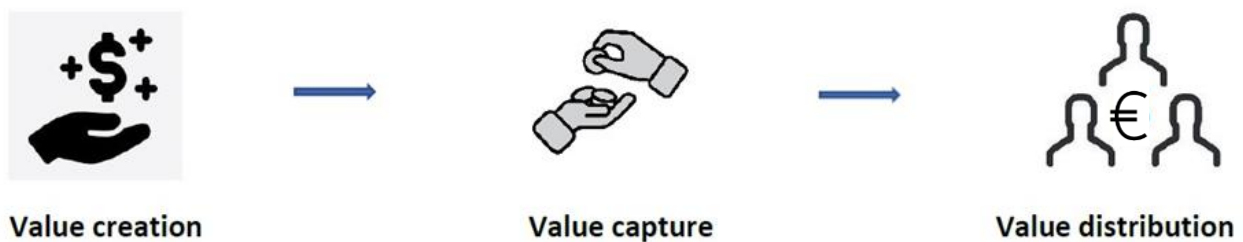
In Ebeling and Lotz's (2017) study, the status quo bias of the default rule of so-called green defaults had a significant impact, as evidenced by the fact that only 7.2% of the first group decided to enroll in the green energy provided, while 69.1% of the households that were already enrolled decided to remain with the green energy provider although the price of green energy was higher. The results of trials and conclusions showed that the nudge helped help decrease



pollution from households, which was one of the indicators that demonstrated its effectiveness.

### 3.3.1 Understanding Value

Having understood the landlord and tenant dynamics it now is crucial to understand the “Value” associated with this relationship. This literature will connect the central topic of discussion i.e. the relation between the landlord and tenant from a value perspective and the further translation of this value in their relation. This literature aims to form a foundation to link the Interviews towards a conclusive discussion of theory and perception of the same in practice and also help identify the circular economy models necessary for answering sub question (3) and relate to the literature from chapter (3.2.) The image below depicts Value and its translation in a relation acting as a precursor to the literature.



#### 3.3.1.1 Value

Golightly, (1956) understands, ‘Value’ as abstract and generalized notions which can be verbalized. These ideas according to Golightly, (1956) serve as instigators of behavior at a level much higher than that of instinctual behavior and need. But on a broader level value is often associated with money, supported by Agle, Mitchell, & Sonnenfeld, (1999) who say that the concept of value is already understood as economic value. Furthermore as emphasized by stakeholder theory the “joint-ness” of stakeholder interests by the need for all stakeholders to benefit over time through their cooperation (Freeman, Harrison, & Wicks, 2007).

Although claiming this Freeman, Harrison, & Wicks, (2007) argue that if the value created by a firm is economic then the arguments of this value may feed animosity among stakeholders as to who gets the larger share and each would want a larger share of monetary gain. To this statement Berman, Wicks, Kotha, & Jones, (1999) add that value created can also be by generous and fair treatment of stakeholders. But according to Bosse, Phillips, & Harrison, (2009), although fundamentally economic returns are key to a firm’s core stakeholders, most stakeholders want other values associated as



well. But before addressing how and if it is possible to create and share value in a circular economy as a conclusion of this research, we need to understand the importance of value in a relationship and the abstract notion it imparts. This is relevant because according to Wilson & Jantrania, (1994), Value is a problematic concept and it is the uncertainty of the value which can cause problems to a relationship..

### **3.3.1.2 Importance of value in the relationship**

Wilson & Jantrania, (1994) state that a strategic alliance or a partnership can be explained as a relationship, a synergy of individual and mutual goals that will encourage the participants to contribute towards a long collaborative effort in achieving a strategic advantage by investing time, effort, and resources.

The relational parameters are practically based on key factors which hold value like Trust, also that it is an important factor to form solid relations between stakeholders beyond economic and power factors furthermore Wilson & Jantrania, (1994) introduce Satisfaction and Investments as two other key constructs relevant to this research, the authors continue stating that in an established relationship, Satisfaction is key agree Bachet. al, (1987) state that by and large people spend their money on what they expect will give them the most satisfaction, there are exchanges of goods (real estate commodity) and unless the buyer(tenant) identifies the value that is based on the expectations of a promise made to them by the supplier(Landlord) a relationship will not endure and the buyer(tenant) will seek alternative options. The involved stakeholders also make investments in the relationship and at times are bound by them theses investments can go beyond economic perspectives (Wilson & Jantrania, 1994).

However, As the relationship develops between the landlord and tenant there is a need to assess the value created by their partnership versus choices, and knowing where the value lies is critical for this relationship (Wilson & Jantrania, 1994). In the case of new areas of research knowing value can be useful to the landlords (Anderson, Jain, & Chintagunta, 1993).

Wilson & Jantrania, (1994) conceptualize value in a relationship in three dimensions Economic, Psychological or behavioral and Strategic. Further explaining that, the Economic dimension moves from partnership to complex relational design and creates value through cost savings (Wilson & Jantrania, 1994). However, it is difficult to measure as it lies in the future similarly the behavioral dimension emphasizes long term growth of relationships based on performance but also states that a relationship must be driven by strategic goals to gain competitive advantage, although measuring this advantage is a perception and can be difficult to predict (Wilson & Jantrania, 1994).



Relations or strategic alliances create some value for both partners and how this value is shared likely becomes the major issue in the life of the relationship (Wilson & Jantrania, 1994).

#### 3.3.1.3 Value Creation

Lepak, Smith, & Taylor, (2007) explain Value creation as a central concept in the management and organization literature for both micro-level (individual, group) and macro-level (organization theory, strategic management) research. Value creation according to Lepak, Smith, & Taylor, (2007) depends on the relative amount of value that is realized by a user (tenant) who is the focus of the value creation and that this value realization is possible with the willingness to exchange a monetary amount but in contradiction Wilson & Jantrania, (1994) point out the possibilities to transfer value back to the buyer from a monetary perspective and the possibilities of doing so.

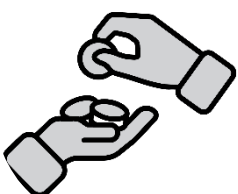
Value creation refers to those sets of activities that enable providers and customers to progressively realize this higher value (Chesbrough, Lettl, & Ritter, 2018).

Bowman & Ambrosini, (2000) state that the intervention of people is necessary to create new values from the acquired resources further adding that the same argument applies to less tangible resources like new Information and Brands. Brands do not add value by themselves and have to be associated with the services on offer or the goods produced and if not actively develop and projected in the market the value decreases (Bowman & Ambrosini, 2000) and this intangible value can connect to the statement by Wilson & Jantrania, (1994) in harnessing value beyond monetary means.

Bowman & Ambrosini, (2000) further note that Value is created by the actions of organizational members, who combine to transform the values that the organization has acquired. Value creation derives from the actions of people in the organization working on and with procured values (Lado & Wilson, 1994). Further, it is important to note that value within an organization is created by issues such as innovation, knowledge creation, and invention (Lepak, Smith, & Taylor, 2007).

#### 3.3.1.4 Value Capture

Chesbrough, Lettl, & Ritter, (2018) define value capture as, the process of securing profits from value creation and the distribution of those profits among participating actors such as providers, customers, and partners. Bowman & Ambrosini, (2000) explain that the theory of value generation is set out which concludes that the source of value





and hence profits (as the proportion of value captured by the firm is the combination and deployment of labor with other resources).

Capturing of value by the different stakeholders is highly heterogeneous, and asymmetries in value appropriation can generate perceptions of inequity, tension, and frustration (Bouncken, Fredrich, Ritala, & Kraus, 2020). Value capture can be possible in three forms, the buyers can negotiate the lowest possible prices and suppliers try to earn the highest possible margins, by increasing the price the supplier can capture more value at expense of the buyer (Homburg, Koschate, & Hoyer, 2005). Furthermore by transferring volume from one partner to other i.e. increasing the volume and cutting out the competition or stakeholders buyer and supplier can increase value capture say Ellegaard, Medlin, & Geersbro, (2014). Finally according to Cheung, Meyers, & Mentzer, (2011) to increase the size of the value-pie as the total value created in a relationship increases, the portion captured by each party can also increase.

However, Value capture is directly dependent on the relational dynamics and moderating characteristics of a relationship say, Bowman & Ambrosini, (2000). Hence, successful value capture calls for the design of appropriate governance mechanisms to ensure that value creation is greater than the cost of realizing that value and that the value surplus is distributed fairly among partners say, Chesbrough, Lettl, & Ritter, (2018).

#### 3.3.1.5 Value Distribution

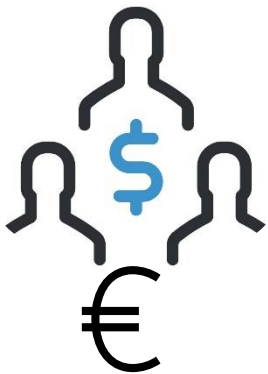
Value distribution is sharing of the captured value in form of expression, the distribution of economic value, and the distribution of bargaining power in form of wages, and output prices to the participating stakeholders (Lieberman & Natrajan, 2007).

The argument made by João Maurício Gama Boaventura et. al., (2020) is a result of the dominant logic that value creation and value distribution are understood as a two-step process and value is created in the first step and then distributed to the various stakeholders in the second step (Coff, 1999).

We understand that Relationships or strategic alliances create some value for both partners and how this value is shared and distributed likely becomes the major issue in the life of the relationship (Wilson & Jantrania, 1994)

#### 3.3.2 Models for circular economy in the real estate segment

In this segment, information on the common circular models in real estate was studied to identify the circular models relevant to the context of this research. The circular economy is a broad topic and





considering the limited time frame of this research the choice to select five models from the literature and link them to residential rental real estate was made. The impact on this relation between the two participating stakeholders will be based on the functionality of the five models viz. Flexible Spaces, Adaptable Assets, Relocatable Buildings, Residual Value, and Performance Procurement suggested in the study done by Acharya et al., (2020) hence the chapter explains them in detail. These models help form the background to the interview question and help identify the value creation it's capturing and distribution between the stakeholders.



Figure 7 Five models for circular economy in real estate segment (Acharya et. al. 2020)

### 3.3.2.1 Flexible Spaces

The Flexible Spaces model aims to list spaces in buildings that are not being used but could be used for an abbreviated time on online platforms. The spaces could be empty or could be used but not enough. Depending on the terms of the lease, any of the following three parties could be in charge of finding more people to rent the space:



**Landlord:** The main tenant signs a lease that gives the landlord the right to market any unused space through agreed-upon methods. Along with the anchor tenant, the landlord is in charge of finding other tenants. The landlord decides who can come in and out of the space.

**Anchor tenant:** An anchor tenant will sign a standard-length lease with clauses that allow them to get the most out of their spaces. The tenant is in charge of finding new tenants and deciding who can use the space.

**Third-party operator:** The anchor tenant and/or landlord works with a third-party space-sharing platform operator, whose business model is based on a portfolio of unused space. The third party is in charge of finding more tenants and deciding who gets to use the space, with the anchor tenant and/or landlord keeping an eye on things.

If a building is considered "smart," it can communicate in real-time with the platform on the number of vacant spaces it contains. This indicates that the spaces can be listed on the platform in the



same instant that they become available. Altering the amount of the fixed rent or employing a "pain/gain share mechanism" are two options for dividing the income (the upside) that result from any of these two actions. The concept provides the sharing economy with the ability to make better use of assets without the risk and volatility that certain segments of the flexible space market are currently encountering.

The connection to the circular economy is crystal clear: if existing spaces are used more intelligently and to their full potential with the assistance of new business models, then there is no requirement to build new spaces and use resources to do so. This eliminates the need for a circular economy. With this concept, those who only require room for a limited amount of time have access to well-designed facilities. Introducing a variety of ways of thinking in the workplace and forging connections between other industries may also be beneficial.

For the concept to work, the planning authorities will need to be as adaptable as the building itself, allowing, for instance, uses that are not strictly in line with the planned use class of the structure. According to Acharya, Boyd, & Finch, (2020), changing people's habits is crucial to the success of this paradigm. It is understood that due to the sensitive nature of their operations, certain businesses cannot afford to share office space. Shared offices are becoming more popular in the coworking sector, demonstrating that many tenants find that this kind of arrangement meets their operational and security requirements.

Building on the ideas discussed concerning agile and flexible working, a new method of desk allocation will be required for the current offices that are taking part. There has to be a shift away from commercial leases and other kinds of tenure that are traditionally inflexible if underutilized space is to be used. No matter whether the lease is a full repairing and insuring lease, an internal repairing insuring lease, or a whole new form of lease, the landlord's approach to charging for repairs will need to change. The tenant's or the landlord's insurance policy will need to be reassessed in light of the building's expanded and more varied usage to account for the higher potential for loss.

Flexible design strategies, shifting away from fixed-use spaces, will need new thinking from architects and engineers. The ideal way to do this is to use an open floor plan, adaptable furnishings and fittings, smart components and sensors, a building services design that allows



for many uses, a building management system that is helpful, and a robust security design. Costs associated with incorporating flexibility into a place can vary depending on the desired degree of adaptability and the extra steps needed to accomplish that adaptability state, Acharya et al., (2020). The technology required to implement this concept has been tested and validated in commercial settings. A city-wide trial program dubbed "Vacant Space Finding" has made data about vacant locations accessible in Amsterdam.

With the help of the platform, registered users may reserve and utilize certain areas for a price, which increases space utilization and money for the building owners. Sharing economy apps like Airbnb provide review mechanisms and security that might be used to reassure main occupants that they know who they are sharing space with. This allows space-sharing companies like Hire Space in London to bring these spaces to market at manageable transaction costs. But the curiosity remains if such an application can be made to a residential occupied building.

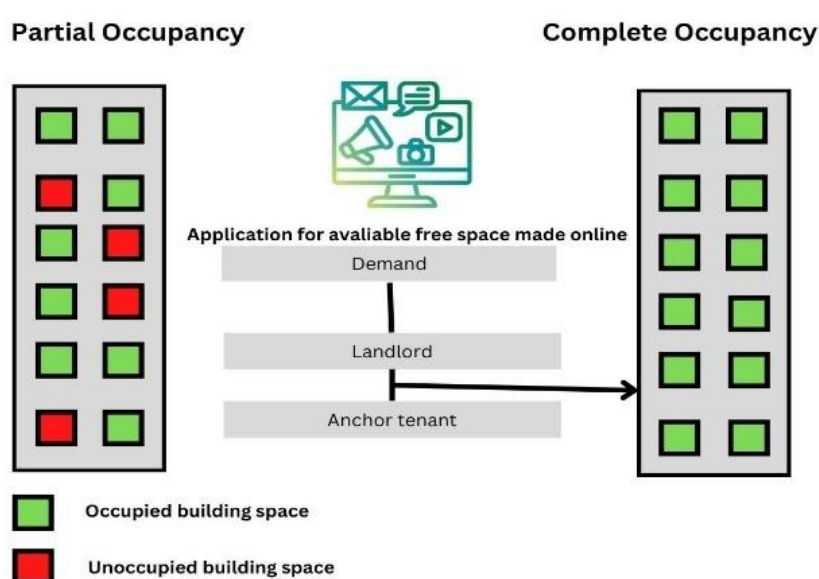


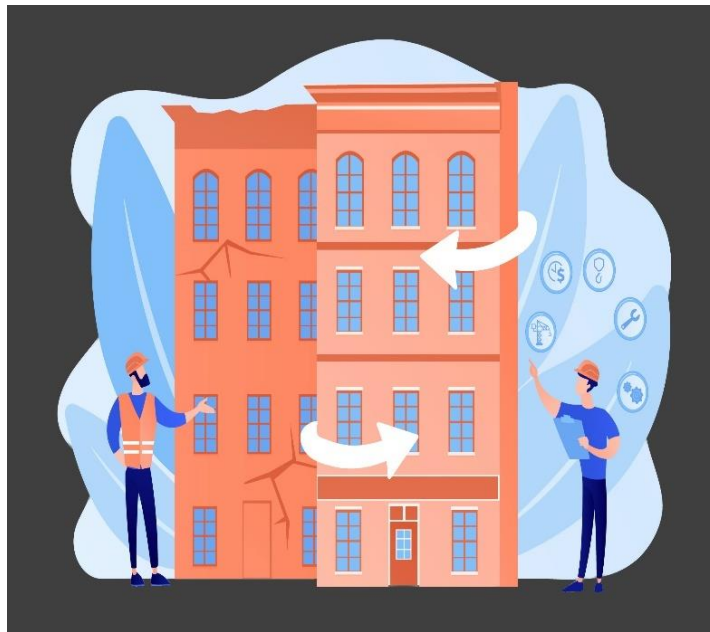
Figure 8: Schematic depiction of the functioning Flexible Spaces, Self image.

### 3.3.2.2 Adaptable Assets

According to Acharya et al., (2020), rather than being torn down and replaced, Adaptable Assets may be modified to serve several purposes throughout time. The model is driven by a novel type of investment partnership in which one investor puts money into the chassis (the outer covering and internal support system) so that it



can serve multiple purposes, while another investor (with shorter time horizons) rents the chassis and modifies it to suit their needs. If the market shifts and a new purpose is needed, a short-term investor can rent the chassis and make the necessary modifications to reposition it on the market at a reasonable cost, including the installation of the function-specific elements that are most vulnerable to market risk (falling rents and rising vacancy rates).



*Figure 9 Representation of Adaptable asset. Self image*

The skin and structure are longer-term, lower-risk, lower-return components of a building, whereas the services, space plan, and items are shorter-term, higher-risk, higher-return components. To prevent the opportunity cost of adaptation (or conversion) from exceeding the cost of demolition and rebuilding, this model encourages a long-lasting, loose-fit design. One of the three tenets of the circular economy is maximizing the amount of time and money that buildings are used before they are demolished.

There is a gap in the market for the long-term investor in the flexible skin and framework. The value of a flexible structure is underappreciated at the moment since it is thought that the client's wants will not change considerably throughout the building's economic life or that any change would occur after the developer has earned a profit on the structure. These assumptions may be flawed due to the quickening pace at which organizational requirements and market conditions are changing. More than half of a building's total cost might go toward its shell and framework, so protecting these investments from market fluctuations requires careful planning.



### 3.3.2.3 Relocatable buildings

The Relocatable Buildings model sees an operator deploying a portfolio of relocatable buildings on unused sites to create short-term, or meanwhile, spaces. Relocatable Buildings are modular, designed for deconstruction, and made of durable, high-quality materials that create spaces with a permanent feel. The operator is responsible for identifying tenants to rent the space; this could be done in alliance with the landowner.

The revenue generated from the rental income could be shared between the operator and the landowner to incentivize the landowner to activate the vacant land. When the space is no longer needed on the worksite, the building is easily deconstructed and relocated to another site. This model designs out waste by incentivizing prefabricated and modular construction techniques,

whilst ensuring materials are kept in use for as long as possible by designing buildings for deconstruction.

The effect is to be able to relocate buildings from one vacant plot to another. Leaving sites empty is costly, especially in cities where land is at a premium. Making use of such sites by deploying the Relocatable Buildings model can support placemaking,

offer affordable space to a range of

different users, and allow operators and landowners to recover the lost value of vacant land.



Figure 10 Visual representation of Relocatable building, Illustration by Tim Peacock







### 3.3.2.4 Residual Value

The Residual Value model involves the creation of a new contract, similar to a commodity futures contract. These contracts will be traded on a centralized exchange, their value tied to the estimated future of materials in a building when deconstructed. The futures contract, which contains detailed information about the recoverable materials (reusable when deconstructed) from the building, would first be placed on the market by the construction client after the building is constructed.

The futures contract can then be traded while the building is operational and the building materials are in use. Buyers are expected to be anyone seeking to manage their position against increasingly volatile material prices such as contractors, suppliers, and commodity traders. Whoever owns the futures contract at the time of deconstruction is the owner of the materials. In effect, the centralized exchange becomes a source of reusable building materials.

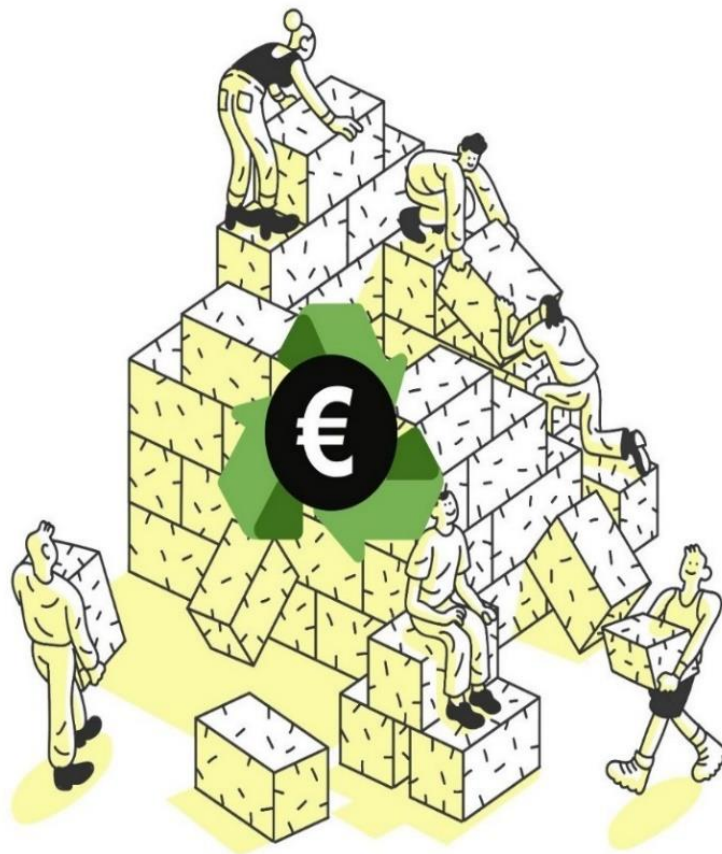


Figure 11 Visual representation of residual value, Illustration by Tim Peacock,



For the original construction client, additional capital expenditure related to design for deconstruction or durable materials is covered by the sale of the futures contract. The residual value model is designed to ensure that the true value of building materials is captured and recovered when they are removed from a building, thus creating an incentive to keep those materials in use at their highest value for as long as possible - one of the key principles of a circular economy.

### 3.3.2.5 Performance Procurement

Performance Procurement extends the, currently seen in individual products such as lighting, to the building level. Under product as-a-service procurement, rather than buying products from suppliers through capital budgets, construction clients and tenants buy subscriptions for services provided by those products through operational budgets. Following Brand's Layers model, the Performance Procurement model takes the concept to whole systems and assemblies within the skin, services, and space plan layers (since skin and services determine the energy performance of a building and all three layers have economic lifetimes within reasonable investment to allow this model to offer a return). The subscription payments are linked to real-time performance, or key performance indicators, and include operations and maintenance costs. The supplier, now a service



Figure 12 Visual representation of performance procurement., Illustration by Tim Peacock

provider, retains ownership of the products themselves and is responsible for their maintenance, repair, and upgrade.





# 4.

## Interviews

Through this chapter, we exclusively look at the interviews and the information collected for this research project, with main focus on the criteria of selection of the interviewees considerations made while asking the questions and impacts they lead towards this research project. Question were kept straight forward but inclusive of the topic i.e. circular economy and the 5 models of discussion along with emphasis on tenant renter relation from rental value sharing perspective.





## 4.1 Interview Protocol

Given that a qualitative approach has been chosen, it is slightly more important to employ a method whose contribution (to grasping beliefs' subjectivity in a social context) has been determined to be effective. Interviews tend to gather a variety of opinions and points of view on a specific topic of interest.

Taking into account the diverse range of participants (selected by certain characteristics such as work background, the field of expertise, educational level, etc.), it is clear that a diversity of characters and personalities achieves a better understanding. A well-established Interview protocol, containing the complete walk-through of the interview meeting was submitted to the interviewees upon request.

Creating an interview protocol necessitates careful consideration of what information is sought from the interviewee(s) and how this information can be obtained (Fontana & Frey, 2000). As Baxter & Babbie, 2004 say, What people say in the interview they will do may differ from what they do can be concerning with the authenticity of the interview hence to counter this a set of Questions were determined but countered with spontaneous follow-up questions as suggested by Foddy, (1993) who maintain that such changes in the interviews result in authentic and dramatic results.

The five models of circular economy, based on the study by Acharya, Boyd, & Finch, (2020) were included to form a framework of questions with the liberty given to the interviewee to choose at least two models relevant to their background of work and based on application relevant to the interviewee and organization they work with. A short presentation explaining the models to the interviewees was made before commencing the interviews. The interview lasted for 60 minutes for each participant. A sample of the questionnaire used can be found in Appendix A..

## 4.2 Selection of Interview Participant

The choice of interviewees was made thoughtfully with consideration of the following parameters.

- The role of the interviewee is followed by the type of company they work for which aims to cover all forms of rental segments in the Dutch real estate market. Interviewees belong to a variety of backgrounds with differing ideas and knowledge about the circular economy.



- Asset managers, private real estate investors to big budget built to let landlord corporation and social housing real estate landlords. Small single and multiple unit private landlords were interviewed as well to provide a perspective of the choice afforded to them to share value towards their tenant and the resulting impact on the relation they have with the tenant.

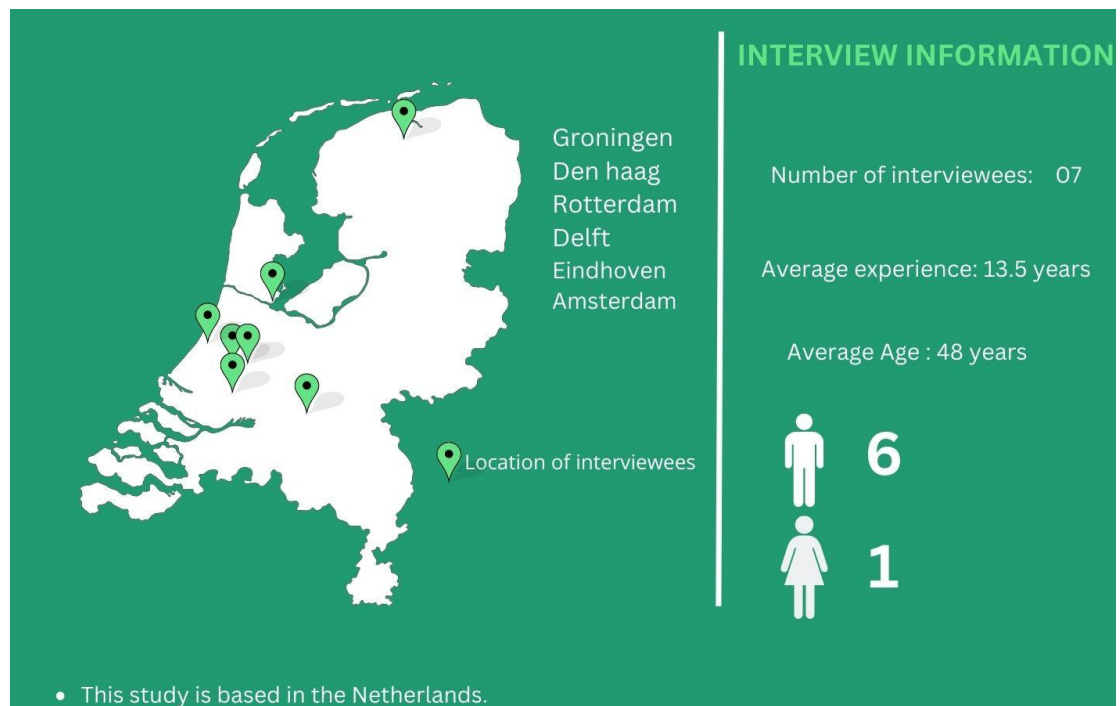


Figure 13 Interview information infographics, Self image

- The interview with a consultant provided credibility to the report from the application of circular economy towards big budget projects along with the challenges and opportunities and the basic want and need for the corporations to share value towards the tenant were understood and the choice and considerations made to include circular economy and its impact seen towards the tenant-landlord relation.
- Finally an interview with a real estate investment, (re)development, and management firm promoting circular with a long-term investment strategy based on the implementation of energy-efficient, zero-carbon technologies, innovative performance-based business models that promote material Circular economy, and on-site and off-site clean energy generation help provide a balanced and contrasting perspective towards this research project.
- Landlords were the key focus of the interviews with the possibility to create value, capture, and distribute it to the tenants who for this study are the beneficiaries from a rental



point of view with an expected positive outcome in terms of rent prices for them..

- All the interviewed experts have extensive experience within the field of application they belong to and with a direct connection to residential rental real estate.
- For representing the interview participants alphabet “A” followed by a number in sync with the chronology of the interview date have been used e.g. A1, A2, etc.

The following table introduces the participants for the interviews.

<i>Interviewee</i>	<i>Position within the organization</i>	<i>Experience(years)</i>	<i>Expertise</i>	<i>Familiarity with circular economy</i>
<i>Interviewee 1 (A1)</i>	Manager	15	Investor relations, researcher for investment management and development	Actively involved
<i>Interviewee 2 (A2)</i>	Manager	16	Asset Management	Actively involved
<i>Interviewee 3 (A3)</i>	Owner/ Proprietor	07	Investor owner and licensed real estate broker.	Knows about not involved actively
<i>Interviewee 4 (A4)</i>	Managing Partner	22	Real estate Management, finance and control, consultant.	Actively involved
<i>Interviewee 5 (A5)</i>	Owner/ Proprietor	08	Private Landlord	Indirectly involved without active association.
<i>Interviewee 6 (A6)</i>	Owner/ Proprietor	16	Private Landlord	Indirectly involved without active association.
<i>Interviewee 7 (A7)</i>	Owner/Proprietor	10	Real estate developer, Private Landlord and investor,	Actively involved in academics and practice



	architect, and building technologies engineer with academic and professional experience.
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Table 1 list of interviewees

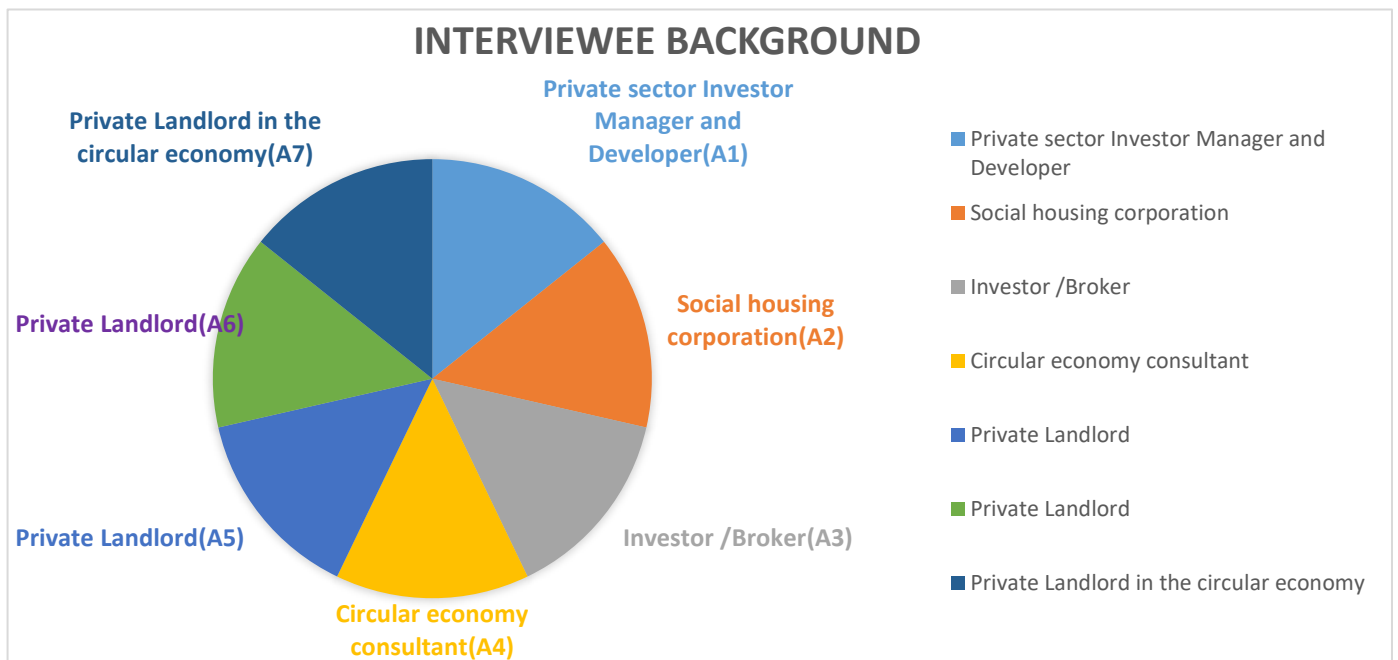
The interviewee considering their backgrounds were free to choose the relevant model to their professional background, the following table introduces an idea about the choices of models each interviewee made.

Table 2 Choices of models each interviewee made.

Interviewee 1 (A1)	✓			✓	✓
Interviewee 2 (A2)			✓	✓	✓
Interviewee 3 (A3)	✓	✓			
Interviewee 4 (A4)			✓	✓	
Interviewee 5 (A5)	✓	✓			
Interviewee 6 (A6)	✓	✓			
Interviewee 7 (A7)		✓		✓	✓
	Flexible Spaces	Adaptable assets	Relocatable buildings	Residual Value	Performance Procurement



Figure 14. Interviewee backgrounds and industry association selected for the study, Self image



### 4.3 Viewpoints of interviewees

The following Chapter introduces a summary of the interviewees and the choice of their models along with a concise representation of their answers in context to the corporation or business each individual is involved which are then compared with the literature in the consequent chapters.

#### Interviewee 1 (A1)- Employee Private Residential developer and Built to let Company.

Position- Manager Investor relation.

Familiarity with the circular economy- Actively involved.

Models discussed viz. Flexible spaces, Residual value, and Performance Procurement.

#### Flexible spaces

The company has closed multipurpose places within the development which are managed by Community managers and property managers. Tenant involved only in the management of activities and events. Most of the Communication between landlord and tenant is through this mediator. The development discussed was a fifteen-acre redevelopment with fixed utility and limited scope to include outside functions from the company's perspective. Although the spaces were made available to the tenants and residents of the development, the finances are managed by the community manager and property managers.



## **Residual Value**

Projects associated with the company tend to be re-development oriented. The company does recover residual value, and this is done in line with the requirement of local authorities. This value is transferred indirectly to the tenant in terms of upgraded and energy-efficient units albeit no transfer is seen in terms of rental price benefit.

## **Performance procurement**

Being a large company with more than two decades of experience and with approximately 21000 homes under its management having the autonomy to make decisions is a primary focus for the company. Investors, and company executive deal with third-party operators and property managers for maintenance and other such grievances. The company executive believes limited value is created through a subscription-based model and believes in investing in new systems and applications. The tenant has a very limited involvement and no monetary benefit to the rent is afforded.

## **Interviewee 2 (A2)- Employee Social housing corporation.**

Position- Asset Manager

Familiarity with circular economy- Actively involved

Models discussed viz. Relocatable buildings, residual value, Performance procurement.

## **Relocatable Buildings**

The company has a sizeable housing portfolio renting out approximately 33,000 homes and the employee operates in the Region of Groningen. Being an earthquake-prone area the interviewee has an indirect experience and interest in relocatable buildings. The company operates in an earthquake-prone region and owns land which is rented and built upon by the local body along with a contractor using timber. The local body is responsible for costs and the profits are shared on an agreed proposition. The company can choose to be involved in the operations directly but prefer to lease for a term of five years. Value is created in terms of cost and energy-efficient housing made available to the tenant at the lowest market prices and offers of rental help in case of emergencies and damages are made along with temporary accommodation..

## **Residual Value**

The company participates in demolition activity but doesn't realize monetary value from doing so to date. Although the company endorses circular economy it is realized through the third-party applicant, Demolition Companies have delegated the work on a



contractual basis, and value or liability if any is realized by them. The future tenant sees no value transferred to them from this activity and model as most of the structure is built new. The priority is to provide new housing quickly and interviewed expert believes this concept is lucrative to be applicable in the future from the company's perspective.

### **Performance Procurement**

The company is relatively large and considering this fact has the resources and expectations for autonomy. The interviewee claims that the company has different departments to handle specific requirements from various procurement perspectives. The involvement of third-party service providers is complicated and engages resources with inefficient functioning. Although there are

some houses within the company's portfolio with service provided Geothermal energy. Tenants pay the Service provider directly but at a subsidized cost.

### **Interviewee 3 (A3)- Investor, owner and Licensed real estate broker.**

Position- Owner/ Real estate specialist

Familiarity with circular economy- Knows about not involved actively.

Models discussed viz. Flexible spaces and adaptable assets.

### **Flexible Spaces**

The interviewee deals with housing real estate and specifically closed gated apartment buildings, hence for them, it is typically difficult to have an exterior function running simultaneously. Flexible spaces in the building exist and are made to be used by the residents. Benefits to the landlord in terms of marketability and outreach of the building. Such places afford additional convenience to the tenants. Rental yield tends to be higher for the landlord but hardly any monetary value in terms of rent shared directly with the tenant. Restrictions in regulations are hurdles for participants to implement this model.

### **Adaptable Assets**

The interviewee implies that it is more feasible to build a newly planned apartment building in place of a repurposed building. Newly built buildings are easier to be marketed and have a better return and efficiency. Adaptable assets involve surcharges.

### **Interviewee 4 (A4)- Real estate Management, finance, and control**

Position- Managing Partner

Familiarity with circular economy- Actively involved



Models Discussed viz. Relocatable buildings and Residual Value.

### **Relocatable Buildings**

The interviewees have been involved in Relocatable buildings and dealt with a project of 650 units in Eindhoven- Buurtschap te Veld. As a consultant has been involved with five companies to build temporary housing main material wood where the building stays in one place for approximately 30 years. The rents according to the interviewee are regulated by the central government and the yield is more often constant. Has involvement in the project related to the concept of Circular relocatable housing at Minitopia. It is a small community where people live with sustainable forms of living that are compact, flexible, ready-made, or modular with a subscription to be applied before being selected to live at the location. The homes are digitally designed and built with natural building materials or by reusing existing materials and the choice for orienting the house and material options along with floor specifications are specific to the tenant. This concept according to the interviewee was very popular amongst the tenants with 800 responses for accommodation in 4-5 days. Minitopia provides custom homes that fit the choice of the tenant hence value is created in terms of opportunity and sustainability for both tenant and landlord, with the tenant afforded more customization options and community living..

### **Residual Value**

The interviewee has been involved in the concept through his partners. The shared experience of having participated in recovering the residual value of a social housing building adds up to a substantial five-figure amount. The industry practice exists that there is an agreement between the owner and demolisher, a fixed amount is paid to the owner and materials are recovered by the demolisher. The interviewee oversaw the reuse of material from old housing in building the new student housing at Erasmus university but agrees that governing bodies and Municipalities influence the decision with companies expected to be circular in the procurement process. Although these steps are promising from a consulting and procurement point of view no value is transferred to the tenants in terms of the rental price.

### **Interviewee 5 (A5)- Private real estate investor**

Position- Owner

Familiarity with circular economy- Indirectly involved without active association.





Models Discussed viz. all with varying effects main focus on Flexible spaces and Adaptable assets.

The interviewee is a small investor with comprehensive knowledge of the rental real estate market through their investment and market research and acquaintances with real estate brokers. Converts and remodels underperforming assets into high rental-yielding units seeing an increase of 30% in the rental yield in his portfolio after repurposing a one-bedroom residential unit and converting it into a 4 bedroom rental apartment. Their property portfolio has seen a change in the tenant demographic from a small family to young professionals and students. Provides all the updated resources required but the ultimate goal for this landlord is to maximize profit on their investments as a result little to no added value to the tenant in terms of the rental price.

#### **Interviewee 6 (A6)- Private real estate investor**

Position- Owner

Familiarity with circular economy- Indirectly involved without active association.

Models Discussed viz. all with varying effect main focus on Flexible spaces and Adaptable assets.

Similar interview background to that of interviewee 5, has exceeding knowledge and actively invests in the Dutch real estate market. Investments are solely for returns over a larger timeframe. This participant has limited to no knowledge of the circular economy although in line with the principles of adaptable assets has modified their real estate portfolio by adding new rentable space within the existing unit. Sees additional rental income from this proposition and in contrast to interviewee 5, shares partial benefits of this increased value with the tenants in lowering their rents per month.

#### **Interviewee 7 (A7)- Real estate developer and investor, architect, and building technologies engineer with academic and professional experience in circular economy.**

Position- Owner

Familiarity with circular economy- Actively involved in academics and practice.

Models Discussed viz. Adaptable assets, Residual value, and Performance procurement.

#### **Adaptable Asset**

The interviewee has a decently sized residential rental portfolio of approximately 50 units in the Netherlands, with one property which



was an old monument building converted into apartments, Adaptability model was used firsthand in particular aspects of this development with each of the 16 apartments having a customized layout and configuration. With a conscious decision to make the development circular and energy efficient. There were immense financial and technical liabilities that made way through the project but the decision to make the development circular through its lifetime was holistic and for a longer timeframe exceeding 50 years.

### **Residual value**

The interviewee explains his perspective that there is high uncertainty about the Residual value reclamation from Materials. According to them, banks just will not take the risk of combining these two things, so they will never invest in residual value and as a result of that, there's no mechanism to allow this flexibility in practice. The interviewee as a part of their development did invest in using structurally efficient beams for the development but considers it a hassle and added engagement of resources which does not bring value to his business model.

### **Performance Procurement**

The Interviewee is actively involved in the Performance procurement aspect through their research at university and has been working on getting a real commercial case of a facility service implemented on a building on behalf of another developer. Performance procurement has been used in the redeveloped monument building with performance control that is signed between the service provider and the owner(interviewee), it specifies the response time that they have to have for dealing with different issues with the subscribed services (Kitchen solutions for the apartment) within a pre-agreed time. Opting for a Performance procurement is beneficial to the landlord as it saves time and day-to-day maintenances while the rental payments to the service providers are passed through the landlord ensuring control.





This chapter sums the information to answer the research question with a logical link between the literature research and the interviews. This is a discussion of the results combined with reasoning from a literature base.

## 5 Analysis



## 5.1 Purpose of Analysis

This section helps place the findings in context with the literature studied. The literature from the previous chapters will be connected to the findings from the interview will answer the sub-questions (2), (3), and (4), and points the way to answering the main research question. This chapter gives the reader the opportunity to summarize the main findings and also get information about unexpected results and contradictions from the interview before the chapter ends with a summary of the stakeholders' ideas.

### 5.1.1 Key findings a link between theory and practice

The interviews were the most interesting phase of this research, with interviewees complementing and contradicting each other, resulting in the following connections to theory and differences from practice were found.

#### 5.1.1.1 Circular economy comparing Theory and Practice

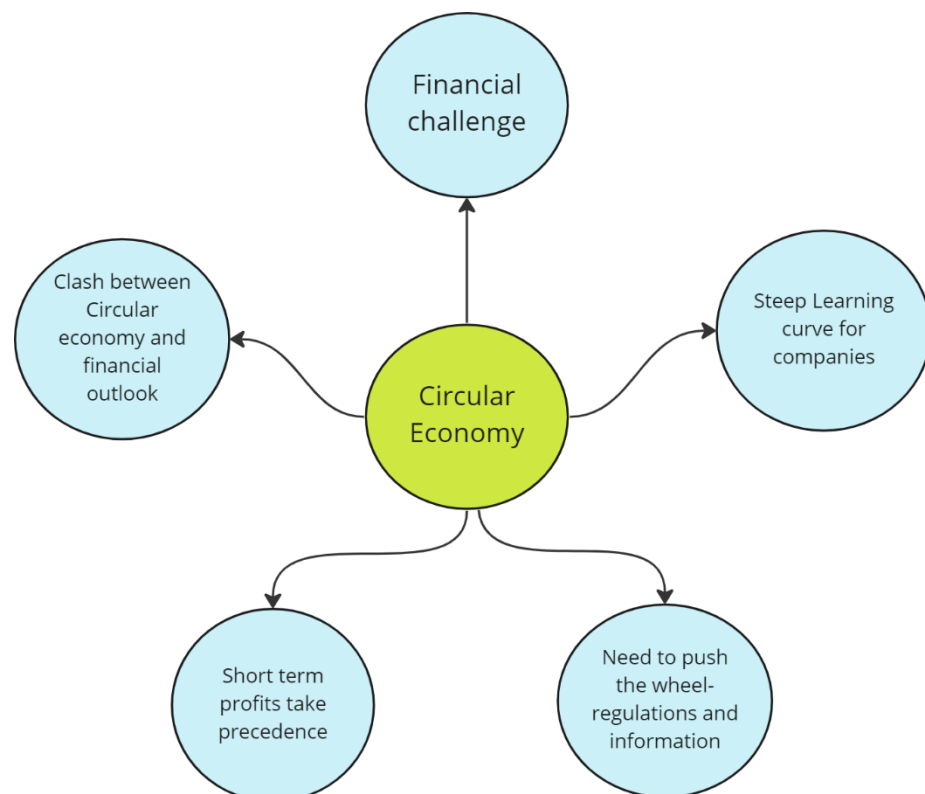


Figure 15. Circular economy- Linking challenges seen in the literature with the idea of interviewees in practice, Self Image.

According to Bai, Ahmadi, Moktadir, Kusi-Sarpong, & Liou, (2021); Chhimwal, Agrawal, & Kumar, (2021); Bakan et al, (2022); and Ormazabal, Prieto-Sandoval, Puga-Leal, & Jaca, (2018), the transition to a circular economy is a difficult process. Interviewee (A7) adds in



the investments made to their residential rental residential properties, *"The financial challenge is a big challenge because you can never predict exactly what the renovation process will entail, and it was a conscious effort to build this building (a building in their portfolio) as an energy efficient circular building"*, in the literature there is a lot of ambiguity about the circular economy, as the existing financial incentives for the circular economy are not so transparent and simple, explain Almeida et al., (2016) and the impact on a company's brand image.

As a result, according to Priemus' (2001) findings, not all stakeholders are motivated to contribute to the movement towards a circular economy and many of them are waiting for tools that stakeholders can use, which interviewee (A2) adds by saying, *"We as companies, and I think this is true for most companies, we do the same work. We are learning and learning, it's a mix of ideas and then they get past the circularity, but not efficient in practice yet,"* although interviewee (A4) stresses with great urgency that *"you have to put pressure on these kinds of ideas. Whether the circular economy is a useful idea or not is beyond question, it's something that needs to be done. You have to push the wheel"*.

The majority of the interviewees believe that real estate investors are motivated by a desire to make money on their investments. It is necessary to consider and explain why investors want to change the way the economy works (Gravagnuolo, Angrisano, & Fusco Girard, 2019). Interviewee (A5) who invested in flexible assets notes that *"I did not think about the circular economy and that I am doing it purely from an investment perspective."*

Interviewees who belong to large rental companies agree with this fact, as they are accountable to their investors and stakeholders. Interviewee (A1) explains, *"Investors invest in us because, yes, they need a return on their investment to be able to pay out pensions or insurance claims, but also because they need to invest in a socially responsible way"* from the social housing perspective interviewee (A2) adds, *"We talk about houses, we talk about money, but our customers also have feelings and they want to know what is going to happen, when it is going to happen, what are my rights, and it is much better if we communicate directly with our customers than if it goes through others. I have colleagues who specialize in communicating with our tenants, and sometimes we get together and talk about the plans and rights"*.

#### **5.1.1.2 Impact of Circular economy on Landlord tenant relationship**

Strategies that implement a circular economy can improve a company's public reputation by driving overall improvements in efficiency and quality. More and more people are speaking out against practices such as deforestation, pollution, and the use of minerals that do not regenerate, as well as companies that use these practices



(Gupta et al., 2019), but interestingly, interviewee (A3) suggests that when considering the circular economy models, *"I have also heard of some cases where it was less expensive to just tear down the building and build a whole new building, and I am not sure if that makes a difference to the tenant in terms of value, but for some reason the government wants to keep the original building and maybe subsidize it a little bit. Then I can imagine an investor, because you know, it's all about the return on investment, of course."* Interviewee A7, however, has implemented a holistic approach to circular strategies in his company as part of his investment. He notes a significant improvement in the functioning of his investment portfolio by increasing efficiency and freeing up more time to focus on the necessary aspects of the business: *"I am convinced that using materials and the circular economy is the only way to move forward and maintain the standard of living that we are used to without destroying ourselves in the process. So there was a motivation from the financial aspect, to reduce the initial investment cost."*

According to Bai, Ahmadi, Moktadir, Kusi-Sarpong, & Liou, (2021), businesses and companies that make a serious effort to adopt circular processes can reap several economic and social benefits, such as an increase in gross domestic product, an expansion of employment opportunities, and the avoidance of climate collapse. However, in this market-based system, according to the interviewee (A4), *"In this kind of market with high demand and low supply most people, mostly tenants only look at how much they have to."* This statement leads us to the logical reasoning that the existing market supports a capitalist approach, where demand is driven by the tenant to cope with the housing crisis, overlooking the sustainability aspect, which is confirmed by the interviewee (A3): *"I think that the markets, especially the rental market here in the Netherlands, are a bit too dynamic, there are not enough houses, everything is rented at prices that are sometimes ridiculous if you ask me"*.

### 5.1.1.3 Circular economy models and their impact

#### Flexible spaces

Interviewee (A2), asset manager of a large social housing organization, explains the need to constantly search for spaces that are flexible to temporarily house their tenants in case one of their existing buildings needs to be repaired when they come into contact with earthquakes in their region. Interestingly, interviewees A5 and A6, who are private small landlords in the Netherlands, apply this model and interviewee (A5) says, *"For my apartments, I completely remodeled the inside of the apartments to get the maximum rent."* The interviewee explains this with an example, *"For example, I converted one of our apartments into a*



Flexible  
Spaces



four-bedroom apartment, so that the large bedroom became two smaller bedrooms of about 10 square meters each." Similarly, interviewee (A6) explains that she originally had a large vacant space on the first floor of their building, which she converted into an independent room in order to increase living space and rental income. Interviewee A(5) confirms a rent increase, "So there's a significant increase in rent that I could charge if I converted the building into a four bedroom apartment because I rent it by the room. If I rented it out as a two-bedroom apartment or to a family, I probably would have gotten, say, 70% of what I am getting now. However, the challenge was finding a contractor both are quoted saying, "The only big challenge was getting a contractor who could do it". On the contrary, larger companies because they are more interested in utilizing spaces within their development for tenants by bringing communities together.

Such companies have identified a need of community managers as explained earlier in parts of literature to facilitate harmony in the development the participant add that, "We provide spaces for tenants to use by residents of the neighborhood and we have a community manager who initiates initiatives like for example running classes, weekend classes, barbecues, and just from the standpoint that we are getting people to get to know each other by using a certain area of a certain neighborhood and also with the intention behind is that people have as positive experience as possible of living in the neighborhood, yes, and maybe they'll live there longer." For this company, the implementation of this model is much more indirect and there is still some ambiguity about the impact on rent, as the participant further confirms, "The answer is that we do not know the impact on rents yet. Yes, it is not so easy to measure, but I would say that property management is becoming more intensive, so the property manager has invested more effort and time to do the job, and therefore receives a higher remuneration".

### Adaptable assets

Interviewees are very ambivalent about this model, with the interviewee (A7) stating, "I do not think it's a mainstream thing, but I think it's something that more realistic developers think about in terms of the adaptability of their portfolio because, well, mainly because there's a gap between the financial investment period of a project and the period of time you can expect to exploit it to the maximum value" The interviewee also has a courthouse building in Delft in his portfolio that has been adapted into apartments. The interviewee talks about his experience, "It's a building from 1900. It's a Rijks monument, so it's the highest level of cataloging in the Netherlands, which means that everything you do to it is very closely scrutinized by the monument committee. We also wanted to make it as energy-efficient as possible. Every single one of the 16 apartments had to be customized, with



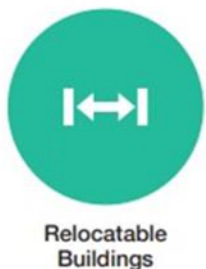
**Adaptable  
Assets**





different floor plans, different furniture, and all the "trimmings," but there were enough challenges in adapting the building to make it more energy efficient and ultimately circular. We were able to insulate the attic and crawl space in the basement, but we could not insulate the walls because then most of the walls were covered with historic panelling that we could not remove." Interviewee (A3) confirms this paradigm: "It is cheaper for developers to tear down the existing building and build a new one than to adapt the existing building." However, interviewee (A1), who works with his company on redevelopment projects for large industrial sites, uses this model as a tool to leverage the cohesion of commercial tenants who use makeshift spaces for their business and continue to work there after the redevelopment is complete to add value for residential tenants who will move into the same location, the participant explains: "When industrial areas are converted into residential areas, we think about the temporary use of the space available in such an area and always try to attract tenants who could also play a role in the residential area when it is realized, this idea contributes to the cultural capacity of the development by making spaces available for artist, studios restaurants and similar".

### Relocatable buildings



Interviewee (A2), an asset manager of a large social housing organisation located in the Midden Groningen region, applies the concept of relocatable building. They are the landowners on which Nationaal Coördinator Groningen (NCG) builds. Since this is an earthquake-prone area where severe subsidence occurs, the buildings are vulnerable to damage. Therefore, the company is implementing these steps towards resource efficiency and circular economy, according to the participant.

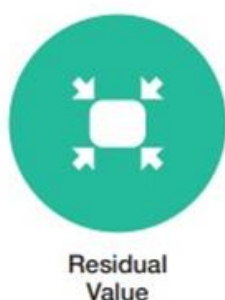
"We own a piece of land in a village near Groningen that now has 23 modular houses on it, which are flexible, and we made an agreement with the builder that if you put the houses on it, we can provide at least temporary housing for the people in the area. To be honest, these houses look very good, but they will only be there for five years or maybe a little longer. After that, the houses will be torn down and can be reused elsewhere." While this business model meets the requirements of their goals, interviewee (A1) from a large rental company is skeptical about this circular economy model because it has no relevance, "We just do not apply it in our business." Interviewee (A4), a consultant also involved in the circular economy, adds that new pilot projects are needed to be successful. He gives an example of such a project, "There is a project called Buurtschap te Veld in the north of Eindhoven with about 650 housing units that will last for the next 30 years, where companies build temporary housing from recyclable and sustainable





materials such as wood and after a while, we can reuse and we can rebuild those houses on a different kind of place. In this type of project, tenants benefit through low rental and purchase costs." According to the participant, this project was successfully implemented: "We had more than 800 requests for an initial housing stock of 40 units." However, since this is a pilot project, the benefits will only be seen over the years, "It is an ongoing business case and the results will only be seen after 30 years.

## Residual value



As landlords and part of the development team, both private housing sector and social housing participants added with interviewee (A2) adding, "You know, right now we are still paying the demolition company to demolish our houses. But there will come a time when they might pay us because they can reuse the materials, but right now we are still paying the demolition company to demolish the houses," interviewee (A1), furthers this conversation by pointing out the need to engage in this activity, "We need to plan to include this activity in the future." The literature states that expanding the production process to include repair, remanufacturing, resale, and sharing can lead to new revenue streams (Gupta, Chen, Hazen, Kaur, & Gonzalez, 2019) Interviewee (A4) agrees, citing his experiment as part of residual value reclamation on a project in 2015: "I think in 2015, one of our consulting clients did a calculation as part of an experiment to look at the inventory in a public housing building, and the value of that is. And the calculation showed that everything, if you reuse it and average it out, is worth about €70,000 and so it was possible to recover residual value. The owner shared the value, but otherwise I think the demolition contractor is the one who benefits the most." Interestingly, interviewee (A1), who is part of an investor relations team at a large private developer, contradicts this assertion: "The company does not find enough value in claiming residual materials."

Interviewee A7 sums up this claim by saying, "Residual value is not interesting from a financial perspective, So if the stakeholders get financed by the bank to deliver the kitchens, the bank will not take into account the residual value of the materials and the reason is very simple: banks do not want to take the risk of combining those two things, so they will never invest in residual value, and so there is no mechanism to allow that flexibility." Furthermore upon asking interviewee (A2) At the end of the life cycle, do you see the tenant involved or getting any kind of value out of this equation? they replied, "no, I do not," but for a public housing company, the participant adds, "If we are going to demolish houses in 2028 or 29 and say the current tenant is moving out sooner, we put in temporary tenants who do not pay full rent, but half and these are fixed-term and they have to move out at the end of the lease. This is more financially attractive and also has a social value, because we want



the houses to be occupied". Interviewee (A4) added that from the perspective of the residual value model, "there are a lot of dead costs, such as logistics and storage and a lot of other costs for operations," which aligns with Nußholz, Rasmussen, Whalen & Plepys' (2020) theory that reused products can end up being more expensive, this is another reason why it can be difficult to use the circular economy in the real estate industry, as it is subject to additional constraints in the form of storage and logistics needs, technical difficulties, the difficulty of predicting the lifespan of reused objects, and the limited number of competitors in the industry. According to Nußholz, Rasmussen, Whalen, & Plepys, (2020), in many cases consumers do not economically benefit from reuse, and according to Ddiba et al, (2020) and Adams, Osmani, Thorpe, & Hobbs, (2017), key challenges limiting reuse adoption include a lack of knowledge, interest, and impetus from potential users, as in the case of interviewees A(4) and A(5)

### Performance procurement



Interviewees used this model interchangeably depending on the autonomy their organizations afforded them, Interviewee (A7) has acquired kitchens for the courthouse building development in Delft and explains the choice for doing so, "I do remain the person responsible for keeping track that the kitchen supplier is fulfilling their obligations, right? So, the performance control that we sign specifies the response time that they have to have for dealing with different issues, especially crucial issues in the fridge, is not working or the store not working, or something that affects the tenant directly. Then they must respond. I think within 24 hours or 48 hours. So in the end I do I am still the person responsible for keeping the oversight, but I'm not responsible for it unless the conflict emerges. For example, unless the tenant made a report on the kitchen supplier hasn't responded for too many days, then I have to step in, but otherwise, I have the advantage, which is worth a lot more than monetarily to me, of not having to be part of the day-to-day management of it" the interviewee (A7) says that in managing his property portfolio time is a bigger asset he explains, "it takes me between 5:00 and 10:00 hours to coordinate the replacement of a washing machine that's like a two or three times the price of the washing machine itself compared to hours worth of my time, so it does not make sense for me. I want to sort of peace of mind and save time for me of not having to manage that or not having to find someone to manage it for me" further reasoning that as a small to medium scale landlord their operation is unique and scaling is possible if, "if there were more offers on the market for these kinds of things. I would be able to upscale my activities. I have hopefully around 50 properties for me. That's kind of a peak that I can manage myself and as a real estate. speaking realistic developer you don't want to expand this is a business in which you want to remain small. Ideally, you want to be yourself and a good accountant.



*That's it and everything else possible you want to externalize to be very dynamic and competitive". However large businesses of which interviewees A(1) and A(2) are associated state that autonomy is key to their business policy and functioning, Interviewee A(2) relates saying, "we buy everything ourselves, we have ours within our organizations the people who do the maintenance and the rentals. And you know we have many things in the house so at the moment you have a second or third organization of a party within always get more complicated" interviewee A(1) adds in agreement, "I would say that there is an there will be a preference to own the total building and from the viewpoint that you have at maximal say in their in their building and then there are always the options to get a cooperation with yeah certain times of companies which adds to the quality of building yeah also after the building but we yeah there is the preference to where it's fully in your to be 100 percent owner because you have the maximum say about what happens you have control over that building". Interestingly small private landlords also feel it convenient to have installation to be made in their portfolio completely owned by themselves unless regulations require to do so Interviewee A(6) in accordance with (A5) and (A3) states that they only install appliances like solar panels, boilers based on the convenience it brings to them, however, the rent is increased and is a surcharge.*

#### **5.1.1.4 Value and its impact on the Landlord tenant relation.**

According to Anderson (2017), for an organization's environmental efforts to be effective, the landlord and the tenant both need to have the same environmental goals and be dedicated to reaching those goals via the use of certain key ratios and indicators

According to Sanderson and Edwards (2016), the building and spaces have the strongest effect on tenant satisfaction agrees interviewee (A2) stating that the houses provided as relocatable buildings are efficient and luxurious with positive output from tenants, *"I also know that the people who live in those houses, they are also quite comfortable because there is enough space, there is enough luxury and there is also the flexibility of building those houses here with two bedrooms, three bedrooms, maybe bedroom on the ground floor, you know so there are compartments"* This factor, together with excellent communication with their property management and a strong belief that the tenant's needs are handled, is also important as see earlier the same company adds value to its tenants by having in place a team which can coordinate and answer all their queries and requirements. On the other hand, the process of modifying a premise to meet the requirements and desires of a tenant is time-consuming and involves several choices as well as numerous conversations interviewee A(6) had to hold intense conversations with her tenants in the existing



building before making changes to the unused space within the building.

Halvitigala et al., landlords have a responsibility to manage the factors that make their spaces attractive to tenants. This includes not only providing the best price-to-quality ratio but also providing loyalty and a willingness to create a relationship in which all parties are eager to perform as well as they can toward each other. According to the findings of Ghosh and Petrova (2017), there is a substantial positive association between the capital expenditures spent on tenant upgrades and the return on the property. This indicates that landlords will enjoy increased profitability if they take steps to improve the appeal of their properties in accordance with elements that are currently considered desirable this statement has been by large agreed upon by the interviewees from appointing community managers to establishing a line of contact between the tenant and contractor to catering to the basics requirements of the tenant regardless of the size and scale of operations, all the participants agree that they are a part of service industry and most value additions are intangible.

The majority of tenant involvement in the circular projects would consist of knowledge transfer and teaching tenants about the many elements of their new house, such as the alternative materials and heating systems, as well as any limits that could apply to the different requirements. This would be the case for circular projects. Because of technical limitations, there would be fewer choices available for circular dwellings in terms of the materials and finishes they could choose. However, Interviewees (A4) and (A7) have complimenting and contradicting views, Interviewee (A4) says, *“When you look at education degree and when you look at values they are conservative with low income and educational background. And when you look at the opposite and you see that people have a high living income and have a higher education they have an open mind for their environment, they look at future and their responsibilities”* while interviewee (A7) stated that, *“I was a bit surprised, even though both of my tenants are to you the Ph.D., for example, like they're very, very well educated, very like high-income people like their Ph.D. students or like master students, or recently graduated the starters they're very definitely on the higher end of education level none of them seem to be very interested in the topic of the kitchen being circular or not or look at it as a decision making factor”*.

Value transfer is more intangible, especially for businesses of large scale. As landlords' profit maximization is always in the front seat due to a short-term planning phase of 10-15 years explains the



interviewee(A7), *“The main problem like as a traditional company you just have to maximize profit then they will make very different decisions then they would try to offer the minimum quality allowed basically and try to charge the highest rent you can squeeze out, for us, it's much more about is not about cash profitability necessarily. It's about the store of wealth and a sustainable, sustainable long term, Normally the developers and large companies have a 10-15 year planning horizon and then they keep the options open of selling the property or doing something else for us is really like we plan to open it until long term so at least for a good 50 years if not more”*. Having a longer planning horizon allows for holistic decisions free from interference with the application and experiments of the circular economy.

But strikingly all the interviewees agree that Circular economy and value addition are an expensive combination with the statement by the interviewee (A7) hitting the nail on its head, *“think circularity as a concept is for the financially affluent people, it is like a story of boots the rich will go and buy these pair of boots that will last in 10 years and the poor will have to keep buying cheap personal boots every year because they will keep getting destroyed”*.





This chapter aims at connecting the study together .

## 6 Discussions



## 6.1 Interpretation

This research aimed to examine the circular housing rental-real estate and the connection between tenants and landlords with the main goal further is identifying if “Value” can be created for the landlord post circular economy applications and can there be a benefit with value transferred to the tenant in terms of a lower rent price for the latter in the current Dutch rental real estate market. The existing Dutch real estate market is highly saturated and competitive with property and portfolio valuations rising exponentially (Uri M., 2015). The study also brings forward the nuances and expectations of the various industry experts

### 6.1.1 Summary of value for landlord and tenant

#### 6.1.1.1 *Flexible spaces*

This model produces contradicting responses from the participants who chose to answer. From the perspective of a Social Housing Organisation (SHO), they find value employing this model in their business which is intangible. For the SHO the comfort of the tenant is of importance and there always in a need for temporary housing. This situation is however unique to the location in Groningen, although the same interviewee confirmed that they have similar requirements and are always in search for such housing capacities and Flexible spaces are convenient model to use.

Although the interviewee (A1) belonging to a large private landlord organisation is sceptical about the value that is directly afforded to them by employing this model. They always are looking for new places to build and only rent thereafter. Within interviewee (A1)’s organisation the *modus operandi* is to exercise control in all the departments. As a result the choices made for an investment are purely profit based. Although they employ the concept of flexible spaces in the acquired industrial estate which are planned for redevelopment and employ property managers and community managers to improve the quality of life for the tenants. The organisation according to the interviewee does not expect a direct benefit from a monetary perspective but the same interviewee (A1) confirms as a result of employing these methods they see longer retention in the tenants and a better word of mouth.

Interestingly this model was best suited for the small private landlords both interviewee (A5) and (A6). Both of these interviewees have utilized this model without prior knowledge and its links to the circular economy. As an outcome both the landlords have seen an exceedance in rental revenue for the combined unit.





### Value for the tenant.

All the relevant interviewees but interviewee (A6) confirmed reluctance to share monetary value or benefits in rents with the tenant. For them the value afforded to the tenant is more intangible produced by a pleasant stay which they take responsibility for.

The interviewee (A6), however was constantly in discussion with her tenants about the planned flexible space and after the completion each tenant saw a undisclosed percentage reduced from their monthly rent.

#### 6.1.1.2 *Adaptable Assets*

This is one of the complex models within the five models described by Acharya et al., (2020), since there is a need to engage different stakeholders together for a successful application. These reservations were made by interviewee (A7) who confirmed that many old buildings in the Netherlands are Rijks monuments and the bureaucracy take enough time, effort and investments for this model to work.

This model requires a high level of customisation for a standard living space from the landlord. Making it less lucrative from the value perspective for the landlord. The interviewee (A3) has added that developers and build to let organisations of newer buildings not monitored by the monument committee see value in rebuilding.

The interview (A1) adds that by adapting places before they go into redevelopment e.g. large redundant industrial estate afford a cultural value and builds a community for young entrepreneurs and artists. This is convenient for their business model as it creates new areas for people to come together and exchange intangible values like happiness, culture, food etc. The small business tenant renting such a space is retained in the same space by the company and helps build a symbiotic relation confirms interviewee (A1).

### Value for the tenant

There was limited to no value gain in terms of rental benefits for the tenant. However the promise of expecting a comfortable stay with amenities and associations with local business and experiences which the landlords have invested to develop for the tenant.

#### 6.1.1.3 *Relocatable buildings*

This model was a surprising hit for the Social housing organisation as a part of their active business deployment. However considering the substantial investments and holding costs it is seen as a pilot project for private and small scale developments. These small scale developments have met exceeding success according to the





interviewee (A4) but he also confirms that since the scale of operations is larger it will need a longer time to see the clear results.

Interviewee(A2) has actively seen this model being employed on one of their portfolios and hopes to see the further continuation of doing so. Small scale private investors do not find this model lucrative or suitable for their business.

#### Value for the Tenant

There was no monetary value exchanged between the landlord and tenants. The tenants in the private development had the choice to create their own living space in coordination with the landlords and customise it based on their needs. The SHO afforded immediate housing to the tenants in needs and in turn gained value for themselves by leasing out the land on which the relocatable building stands.

##### 6.1.1.4 *Residual Value*

All the interviewees who answered questions from this model confirmed that it is an industry standard to pay demolition companies. These demolition companies further reclaim the residual value. The companies themselves do not experience any monetary gain. Pilot studies have been made from the perspective of this model although in the end the demolition company is the one to gain the most.

#### Value for tenant

There was seemingly no tangible or intangible value shared with the tenant.

##### 6.1.1.5 *Performance procurement*

Interviewees belonging to the organisations with a large scale operation and a very small scale confirm that it is not a preferred model for their businesses. The large private and social housing organisation prefer to employ people in different departments to cater solution to all challenges. To include a third party for operations is sufficiently inconvenient. The value to be autonomous is preceding all other reasons to choose this model.

While small scale investors find it inconvenient to engage or maintain a recurring payment model and want disassociation in their business and prefer to do things according to their choice. However interviewee (A7) finds it convenient to engage this model for their business as the feel it affords him enough time to run a sizeable portfolio with limited employees which would be spent otherwise on maintaining inefficient systems.



## Value for the tenant

Although this model was not extensively used by this set of interviewees, interviewee (A7) highlighted that he was able to provide state of the art appliances to the tenants with fraction of the hassle needed to care for them. The same interviewee however confirms that the tenant is not bothered enough by the choice of equipment or facilities provided over the rent the are supposed to pay. This model did not afford any monetary value to the tenant.

### 6.1.2 Summarized findings of this study

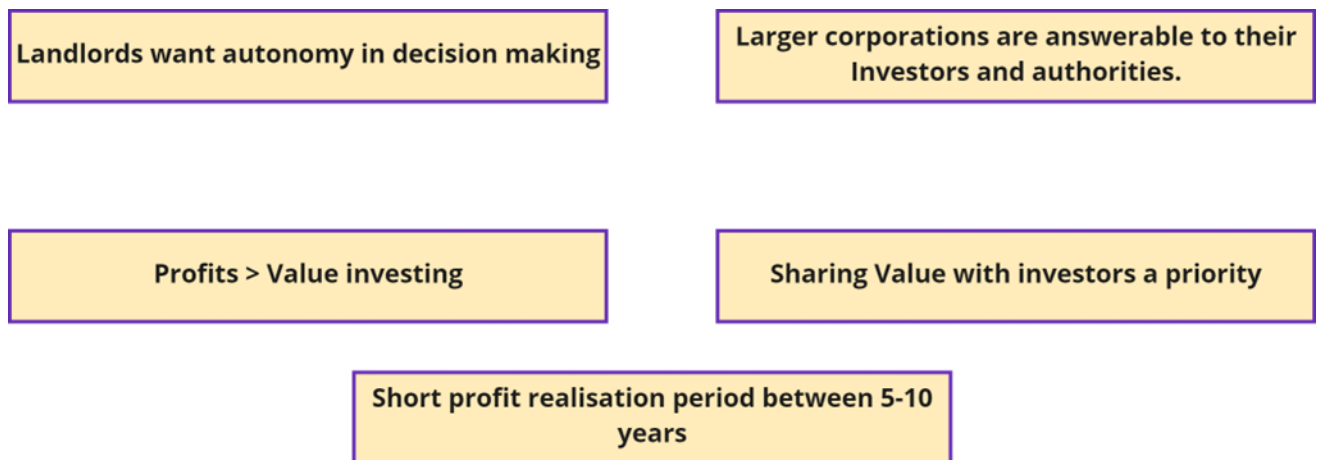


Figure 16 Findings of the study, self- image.

The study was started to identify the relation in between the landlord and tenant if circular economy is introduced to their business and the potential to create value and the choice to share it with the tenant.

While it was noted that the set of interviewees had a mixed idea of Circular economy and its applications, it was interesting to find that most of them is making use of these models in their business.

The interviewee and participants confirm that the tenant is of key priority to their business although they are reluctant to share monetary value or benefits from the business to the tenant but ensure provision of value by providing standard living facilities with comfortable amenities and all such values which are perceived to be abstract and intangible.





This chapter concludes the study adding to its limitation and further recommending future researchers towards a complete study in this field over the years to come.

## 7. Conclusion, limitations and Recommendations



## 7.1 Results

This section presents the answers to the sub-questions in lead up to answering the main research question.

### 1. *What is circular rental housing real-estate investment in the existing Dutch real estate market?*

This sub-question was addressed during the research phases. As a part of the literature review, the concept of Circular economy was investigated in the context of the Dutch real estate market. It was understood from this literature review that the Circular economy in the Netherlands exists in its nascent stage with implementation and regulatory framework under development by the Dutch government. The vision by large formulated by the Dutch government is to be completely circular by the year 2050. New real estate rental projects are being set up as a pilot projects to understand the impact of resource efficiency and quality of living from a circular economy point of view. This however is part of a larger experiment in which the results are not yet complete. As estimated by one of the participants of this research it may take up to 30 years to understand the impact of a circular economy in the Dutch context from the point of side effects and benefits of such an investment. On the contrary, the tenant seems to be detached from the concept of circular economy, and thereby large exists a void in their knowledge about the same. There still exist significant barriers to the implementation and existence of a full-fledged circular rental housing segment. Investments are always a tool for financial freedom for investors and an expectation to profit from, but the experimental and loosely regulated field of circular economy is not the best promise for investment in the circular rental housing real estate sector.

### 2. *How are stake holders receiving the idea of circular economy investment in the rental real estate?*

This sub-question was addressed through literature and then linked with the interviews. The interviews allowed us to gain a perspective of the industry stakeholders and a key focus was made to include stakeholders from different backgrounds like the size of the company, field of operation, scale of operation, and relevance to the circular economy. This choice provided an encompassing view of key stakeholders from the private and social housing sectors. The stakeholders here are considered



the landlord and the tenant. According to existing literature parts of the stakeholder theory were studied and emphasis was made on the relational aspect of this theory. It was understood that as a part of this theory, the key stakeholder has the larger powers of decision making which translate into practice as well, during the interview phases all the participant confirmed the necessity of circular economy investment in the rental real estate segment from environmental perspective by are bound to do otherwise by their immediate financial goals. In literature it was found that implementing a circular economy is expensive and largely and interviewees from large corporations and social housing backgrounds agreed as they were answerable to their investors and tenants with a short there recovery period of 5-10 years, however interestingly one of the landlords with a larger investment period of around 50 years opinioned that although in immediate effect Circular economy application to the rental real estate segment is slow to see results through his investment he has seen positive value in terms of efficiency and ultimately in a financially free business model. In the existing market demand for housing is at the forefront, as a result, the concept of the circular economy seems time-consuming for both the landlord who wants to maximize their gain on investment and tenants who want to find a home at the earliest at least possible financial output.

**3. *What circular strategies are being implemented and how they affect the tenant landlord equation?***

The tenant and landlord engagement depends on the service provided by one other. Creating and distribution of value is rather intangible and for this purpose five models of the circular economy were studied as a part of the literature along with the tenant-landlord dynamics in The Netherlands. Through the interviews, it was understood that the models, Flexible spaces, and performance procurement along with relocatable buildings are positively impacting the tenant-landlord dynamic. As a part of flexible spaces, one of the interviewees confirmed that value was transferred to the tenant by lowering the rental price for the existing tenant by adding additional rental space in the building albeit another landlord in a similar position chose not to share this value with their tenant and sees it as a business profit. Furthermore, large corporations chose not to be a part of the Performance procurement models one of the participating interviewees confirmed valued addition to their business by being able to



save valuable time otherwise spent on managing the nitty gritty and affording state-of-the-art and efficient applications and appliances for the tenant, this choice according to them has a transformational effect on their interaction and dynamic with the tenant. Lastly, as a part of the relocatable building promising impact was seen with an interviewee positively impacting their relationship with the tenant, their main focus was to provide temporary housing to existing tenants affected by earthquake damage to the existing buildings, although this was a unique case and specific to the region of Groningen it must be noted that the choice to be sustainable with the needs of their tenants was put forward and realized through the concept of circular economy model. The other two models, flexible spaces and residual values have many ambiguities and risks involved as a result if implemented it is still unclear how they will affect the relational dynamic of the tenant and landlord relation. As a key takeaway from all the interviews, it was clear that the existing dynamics of the relation between the tenant and landlord is largely independent of a circular economy but certain scenarios as mentioned above positively impacted this relation in terms of both tangible and intangible value afforded to all participants.

**4. *Can a large scale for-profit circular rental housing exist in the Netherlands?***

The answer to this question is a condensation to this research, it is difficult for a large-scale for-profit circular rental housing to exist in the Netherlands. The following reasoning support this claim, firstly the current real estate market is high demand-oriented with a main emphasis on more housing rather than housing with circular economy applications companies don't find enough motivation to add value from the marketing point of view which circular economy potentially can provide a boost to, most of the interested tenants are curious to find a house and pay the minimum possible rent rather than wait for a circular economy based house with a higher rent. Secondly, for private and small-scale landlords to use a Circular economy there has to be a capping limit to the housing portfolio as explained by one of the private landlord interviewees, according to them, it is increasingly difficult to manage a circular housing portfolio after their portfolio crossed a certain threshold of property units, this is because being actively involved in the circular economy needs constant monitoring on the part of the landlord. Thirdly with rapidly increasing interest rates and added risks to the existing business, entities both



large scale and small scale are reluctant to be involved in circular economy citing existing issues needing urgent attention. The existence of a for-profit circular rental housing is a necessity for sustainable development of this sector and potentially can be realized based on the experimenting investment made in the field of Circular economy within the rental housing segment studied as a part of this research, but the time frame to realize this ambiguity remains unclear..

### **Main research question**

***How will circular rental real estate investment affect the relationship between tenants and landlords?***

This research allows the conclusion that the market is yet to warm up on how circular economy can impact or contribution in lowering rents or providing value in terms of experiences to the tenant. Large companies which are investor and profit-driven maximize the use of resources for sustained financial growth while it was observed that the social housing sector prioritizes the quota for housing to be made available at affordable prices in a market facing housing shortages. While both these large market companies are willing to make contributions towards the role they play in the circular economy they seem to be answerable to their investors and stakeholders and individual accountability. The companies value autonomy in decision-making. The companies are willing to pay facilitators to employ circular economy for them if there is a perceived profit generated. Similarly larger companies like private build-to-let and social housing are always answerable to investors and the authorities and make decisions based on this fact. The average profit realization period for such companies is between 5 to 10 years hence profits supersede value investing. Albeit not much changed for the private individual investor who invests solely for the rental yields although tries to provide value-oriented homes, lower rental prices are a myth. The idea for circular housing is niche and experimental at this moment. It is an effort for both the landlord and tenant to participate in a process where the decision to consciously choose the house and the processes involved are given to the tenant as well. For an investor with a small-scale rental business, being circular or is attractive as it saves valuable time and makes work efficient but is an out-of-pocket risk that banks are not willing to finance and also ensures steady gain in rental income. These facts seemingly are a big distraction for regular large and small investors. While there is no direct transfer of value towards the rent for the tenant but such processes of circular investing have made contributions for efficiency to the landlord.





## 7.2 Limitations

This research provides an exploration of how the relationship between tenant and landlord exists and circular strategies within their current list of parameters considered to impact rental prices. Since this largely depends upon the interpretation of interviewees (landlords and consultants), the guidelines explored might not carry forward with the same intention of the researcher. Thus, since this is exploratory research, the connections provided are mere directions that the reader can take or use as a basis to advance further in the domain and possibly to evaluate further the prospects that may show in addition to different prospects.

With the limited timeline of the thesis, it was not possible to test the connections on live cases. The testing may have provided useful feedback on how it could be improved and iterated for practice, which could be considered a limitation.

Concerning the Method chosen, There is a possibility that more rounds of interviews and specific case studies over a larger time frame would generate slightly different results. They can be positive or negative. There would be chances for more accuracy, but at the same time, the interest and level of participation of interviewees could have been reduced.

### 7.2.1 Scope

The research scope is focused on the investigation of the relationship between the landlord and tenant. The main limitation of the scope is the depth of the investigation. Even though the circular economy and landlord-tenant relations are global issues, the research is focused on the Dutch territory. Therefore, the data collection, particularly during the interview process, is explicitly from the Dutch market industry. The research scope for this thesis is based on the five models in the real estate segment based on the research of Acharya et al., (2020).

### 7.2.2 Interviewees perspectives

A significant part of the research is covered by the interview session. The interviewees were selected under certain criteria and requirements, coming on the literature findings. Interviewees originated actually from consultancy firms and public organizations. Despite the valuable data (derived from both consultants and public organizations), it is not verified whether these viewpoints are also be found in different consultancy firms and public organizations.



Therefore, additional research is required with a broader set of interviewees.

### 7.2.3 Recommendations

In consideration of the time and resources made available, the thesis addresses the scope of identifying the relation in Tenant and landlord relation and impact on the rent prices. Furthermore this thesis draws some recommendations for future researchers and practitioners elaborated below.

- The interviews opened up different sets of complications from perspectives of different housing sectors along with the role of the investors and participants involved. It would provide comprehensive knowledge by further researching the relationship between the landlord and tenant by individually studying the housing organizations i.e. Social housing organizations (SHO), Private build to let housing organizations, Circular pilot housing projects, etc. allowing for a detailed insight.
- Since the research is exploratory further comprehension of the financial impact with calculations can help provide valuable and specific insights concerning the monetary value that is being created and the potential of it being transferred. This will be difficult from a thesis perspective and will need the association of an organization with the link to the university.
- Various market conditions in the Housing sector will impact the decisions further shaping the relationship between the tenant and landlord and specific studies in this segment will elaborate toward conclusive results.
- A strong recommendation is to gather policy and regulatory knowledge along with formulation of a profit-sharing mechanism towards a beneficial circular economy application of the building by the landlord.



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## Appendix

### Appendix A- Interview protocol and questions

#### **Circular real estate investment and its effects on relationship between tenants and landlords in terms of rent prices.**

Interviewee:

Interviewer:

Date:

#### **Protocol for Getting Started**

I'd like to record our conversations today to help us take notes.

Only researchers working on the project will have access to the recorded data will be destroyed after they have been transcribed.

This interview will take place under the following terms:

- (1) all information will be kept strictly confidential.
- (2) Your participation is entirely voluntary, and you may withdraw at any time if you are uncomfortable.
- (3) I have no intention of causing harm.

Thank you for agreeing to take part.

I've scheduled this interview for no more than one hour. We have several questions that we would like to address during this time. If time begins to run out, it may be necessary to interrupt and push further.

#### **General questions**

Years in this position:

Former experience:

Education/Training:

International experience:

Familiarity with circular economy in Built environment:

Responsibilities:

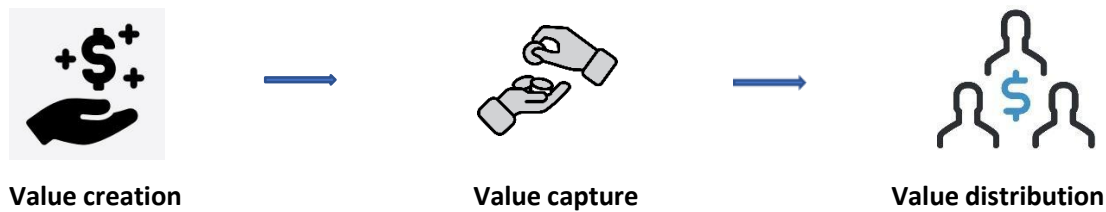
#### **Outline**

Construction industry is changing radically with introduction of innovative ideas and technology. This has a transformational effect on how we interact and engage and adapt to the change. Circular economy has been an upcoming and relevant topic in today's housing segment.

When most has been said about the application of circularity to buildings the ideas of it shaping the relation between the participating stakeholder after applying circularity to a residential building are yet unclear, in our case between the tenant and the landlord/owner/provider.



The main aim of this study is to identify if there is a value being created and how industry is trying to then capture this value and the further distribution to the stakeholders in our case the landlord and tenant.



The impact on this relation between the two participating stakeholders will be based on the functionality of the five models viz. Flexible Spaces, Adaptable Assets, Relocatable Buildings, Residual Value and Performance Procurement suggested in the study done by Acharya et al., (2020).



**Fig. Five models of circular real estate Acharya et al., (2020).**

### Description about the five models Acharya et al., (2020)

#### Flexible spaces

The Flexible Spaces model aims to classify existing, underused building spaces for short-term use on an online platform. The spaces could be completely unused or in use but underutilized.

#### Adaptable Assets

Buildings that can be retrofitted to serve multiple purposes rather than being demolished are considered adaptable assets.

#### Relocatable Buildings

Relocatable Buildings are modular, designed for deconstruction, and constructed of long-lasting, high-quality materials that give spaces a permanent feel.

The operator is responsible for finding tenants to rent the space, which may be done in collaboration with the landowner and rent is shared between them.

#### Residual Value

Residual value models will involve creation of a new contract, Futures contract, to be traded on centralised exchange. The idea of this model is to ensure that the true value of building materials is captured and recovered when they are removed from a building, thus creating an incentive to keep



those materials in use at their highest value for as long as possible. Whoever owns the futures contract at the time of deconstruction is the owner of the materials.

### **Performance procurement**

Rather than buying products from suppliers through capital budgets, construction clients and tenants buy subscriptions for services provided by those products through operational budgets. This model aims at capturing lost value of underperforming assets.

### **Interview Questions**

**Based on the Five models of circular real estate (we can discuss 2 or 3 depending on the ones you find functional and the time you have)**

#### **Flexible spaces**

Could you tell me a bit more about flexible spaces in your domain of work?

1. Have you applied this concept to your real estate?
  - i. If yes, what opportunities or challenges you faced?
  - ii. If no, is it a model applicable to your business and do you find a value created?
2. How do you operationalise a flexible space (do you do it with or without involving the tenant)?
  - i. How does this choice shape your dynamics with the tenant?
3. How do you think it will affect the tenant in a residential unit?
  - i. Do you see an opportunity for the existing tenant to be involved through the process, If so at what point?
  - ii. Will it impact the overall rental price of the unit?
  - iii. Is there an opportunity to share the benefit with the tenant e.g., a reduction in rental price?
  - iv. Do you see other possible shared benefits with the tenant in an operational flexible space?

#### **Adaptable assets**

Do you involve this model in your business practice?

1. Have you applied this concept to your real estate?
  - i. If yes, what opportunities or challenges you faced?
  - ii. If no, is it a model applicable to your business and do you find a value created?
2. How would you prefer to operationalise this concept?
  - i. Do you see the tenant being involve?
    - a. If yes, how?
    - b. If no, why?
3. Do you find value created e.g., efficiency, cost saving etc in such an endeavour?
  - i. Does it translate to monetary benefit?
  - ii. Does it translate to Brand valuation (usually linked to historical or salvage value of the adaptable asset)?
4. Is there an opportunity to share this value with the tenant/how will it affect the tenant from a rent perspective?





- i. Do you expect premium rents or subsidised rent?

### **Relocatable Buildings**

Do you have previous experiences collaborating with a similar model in your real estate business?

1. Have you applied this concept to your real estate?
  - i. If yes, what opportunities or challenges you faced?
  - ii. If no, is it a model applicable to your business and do you find a value created?
  - iii. Can a symbiotic relation exist between you as an operator and your tenant to share expenses?
    - a. How can this be operationalised?
2. Holding cost and rebuilding will involve expenses?
  - i. Will they be shared with the tenant or the landowner?
  - ii. How do you plan to do that?
3. How do you feel the profit sharing will exist between the landowner and you as the operator?
  - i. Do you see a direct translation of this to your tenant?
4. Would you be open to consider the relocation period based on the landowner or the tenant/s?
  - i. Do you feel a need to balance both their opinions and expectation?
  - ii. Will the existing tenant be prioritised for tenancy at the next proposed relocation?
  - iii. Will you consider accommodating the tenant in case of relocation of the building?
    - a) Are you willing to share the compensation with the tenant during the downtime?

### **Residual Value**

1. Have you experience a similar concept in your domain of work?
2. How would you operationalise this concept?
3. Will you incentivise the tenant for maintain the value of the building over the period of the tenancy?
  - i. If yes, how would you plan to do that?
  - ii. If no, do you see other ways to ensure value retention by the tenant?
4. Can the tenant be involved to find value at the end of lifecycle of the building in form of owner ship?

### **Performance Procurement**

Have you experience this model in your real estate application?

1. What is your understanding of this concept?
2. This model will involve a supplier/service provider responsible for maintenance, repair, and upgrade,
  - i. How do you see your relation between you, the supplier, and the tenant?
  - ii. Do you see yourself in the role of service provider?
    - a. If so, how?
  - iii. How do you operationalise the inclusion of the product in the residential unit?
    - a. Will the tenant be consulted for the subscription of the Product as a Service (PaaS)?
    - b. How do you see the subscription payments to be shared?



Sacranie & etin, (2022) people who come from wealthier backgrounds are more likely to participate actively, in contrast to people who come from lower socioeconomic statuses, such as refugees, who are less likely to do so for a variety of reasons, including a lack of fluency in French and a lack of fluency in other common languages spoken in the area. Those who come from more affluent backgrounds are more likely to participate actively.

