

Planning for justice

**A value-based framework to help spatial planners
develop just housing strategies in Dutch regions**

Master thesis research

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2024



*MSc Architecture, Urbanism and Building Sciences (Urbanism track)
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Colophon

P5 report

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Delft, The Netherlands
January, 2024

Abstract

The current Dutch housing domain is characterised by injustices on multiple scales, such as a shortage of housing, disparities in well-being across regions, and unaffordable housing. This situation can partially be attributed to spatial planning practices focused on promoting growth-oriented economic thinking. These contemporary planning practices can be argued to be socially and spatially selective and to have a short time horizon. While some injustices remain unresolved, others are exacerbated by contemporary planning practices. The aim of this research has been to develop a justice framework which helps spatial planners address, instead of perpetuate injustices. This is approached through the question: *To what extent can a framework based on justice values help spatial planners design for justice in the housing domain in Dutch regions?*

This has led to the development of a justice framework constructed from three core justice values: Sufficiency, Limitation and Opportunity. These are made more concrete to the housing domain through two applied values each: (I) Availability and (II) Acceptability for the quantitative and qualitative aspects of Sufficiency; (III) Sustainability and (IV) Moderation dealing with intergenerational justice and intragenerational justice for Limitation; and (V) Influence and (VI) Diversity related to opportunities to assert influence on the living environment and to choose a living environment. These applied values are further specified using housing dimensions and strategy directions in two consecutive rings.

The first advantage for spatial planners is that the justice framework summarises and combines several abstract justice theories into digestible values relevant to the Dutch context. To test and demonstrate the justice framework it has been applied to the case study area of the Regio Stedendriehoek, which enabled answering the research question. First the justice framework helps to structure regional spatial analysis and policy analysis on a wide range of justice values, which can bring to light different types of injustices. Second, based on the analyses, clusters can be made of areas with similar problems regarding the applied values, which helps determine which type of strategies require priority in different areas. Then, based on these priorities, strategies can be developed using the outer ring of the justice framework. The justice framework helps to structure strategy development per applied value, but the justice framework can also be used as a tool to assess whether strategies can contribute to solving injustices for different applied values. In this way fruitful strategies can be prioritised and interventions that cause conflicts between different justice values can be avoided or mitigated.

Keywords: spatial justice, strategic framework, spatial planning, the Netherlands, Stedendriehoek, housing justice, well-being.



Figure 0.1: "Nothing tops ☐ money, ✗ Groningen" An angry protester about the gas recovery in Groningen, that burdened the residents of Groningen for the benefit of the state (ANP, 2022)

Preface & acknowledgement

I proudly present to you the product of a year worth of research and design which has been part of the graduation trajectory of the Urbanism master track at the TU Delft. The product you have in front of you is the culmination of skills and knowledge I have acquired over the past six and a half years on an academic journey that led me through Delft, Amsterdam and Utrecht.

I decided to focus this research on a topic which has fascinated me for several years. Before even starting my masters in Urbanism I had the idea to investigate different justice approaches in spatial planning in a thesis research. Although this topic is complex enough on its own, I decided to combine this idea with two other newly developed interests in post-growth and national spatial planning. This has made this thesis research into an interesting, but challenging process. In this way I want to thank everyone who helped me along the way. In particular my mentors, Rodrigo and Reinout, for their time, valuable feedback and inspiration; and Myrthe for her advice, care and patience. My thanks also go out to the practitioners who were kind enough to take the time to reflect on my research outcomes. And thank you as a reader for reading this report. I hope it will inspire you.

Matthijs Koch
January 2024

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1. Introduction

This chapter introduces the problem field that is addressed in this thesis. The chapter ensues with an overview of the research set-up, including research questions, research approach, social and scientific relevance and the report structure. A glossary is provided in which a definition is given for some important theoretical concepts. The definition provided in the glossary is used throughout the thesis report.



Figure 1.1: "we want an affordable house too later on!!" (ANP, 2021)

Deficiencies in planning practice

Spatial planning in The Netherlands has become increasingly growth-oriented in the past decades (Olesen, 2014; Rydin, 2013). This growth-oriented way of planning tends to overlook certain social groups and areas (Rydin, 2013). As planning is focused on stimulating economy and developments, cities became commodified with increasing inequality as a result. Some inequalities come about naturally, as a result of different geographic conditions, different levels of capability of individuals or sheer (bad) luck (Buitelaar et al., 2018), but some socio-spatial inequalities are systemic: they are perpetuated or caused by spatial planning – or the lack of planning.

Two critiques on this growth-oriented way of planning are outlined. A first critique deals with the coalescence of spatial planning and the neoliberal growth dogma. Spatial developments have become intertwined and dependent on economic growth. As spatial planning has become more entangled with the market, the reliance on market actor to deliver benefits to communities has grown. These practices risk leaving behind certain people and areas that do not offer a particularly good business case.

A second, related critique is that there is insufficient attention to justice in planning. Particularly justice has been narrowed down to an economic interpretation, which fails to capture many injustices. An additional issue regarding justice is its ambiguity. Spatial planning is inherently a moral discipline (Xue, 2022). It concerns distribution of space, which is characterized by conditions of scarcity. Any type of intervention therefore either implicitly or explicitly deals with justice choices. But even if justice were to be taken as a policy goal, different interpretations of the concept might lead to conflicting plans and policies (Buitelaar, 2020). Any policy goal related to justice should therefore be explicit about the justice values that guide it.

Reliance on growth

Creating productive land has become essential in fuelling economic growth in urban economies (Savini et al., 2022b). As a result, governments continuously pursue economically valuable functions at the cost of those functions that do not produce measurable economic outputs. This entrepreneurial approach

to governance has become so institutionalised that today the provision of essential amenities and public services, ranging from green areas to healthcare to housing, are dependent on increases of land value and real estate. If the productivity of land is not optimised, governments bear the risk of failing to provide essential services (Savini et al., 2022b).

For housing specifically, investors, banks, developers and owners have a lot to gain from increases in house prices and a lot to lose when prices fall (Rydin, 2013). Political parties in turn try to cater to the wishes of their middle-class, house owning electorate (Hochstenbach, 2023).

The perpetual quest for land productivity in cities leads to displacement of unwanted activities. Away from the successful urban centres, the urban fringes are characterised by pauperisation and socio-ecological neglect (Savini et al., 2022b). Meanwhile rural areas are treated as supply areas for urban economies, with a detrimental effect on ecology and the overall landscape (Savini et al., 2022b). Spatial planning plays an important role in this. A large number of planning instruments are employed to increase the ability of places to compete and in turn boost economic productivity and growth (Savini, 2021). Spatial planners have embraced and cultivated private-actors' profit-seeking aspirations and have stimulated private-led experiments. In this process of 'growth management', planning policy has been concentrated on connecting ambitions of economic growth with socio-ecological improvements (Savini et al., 2022b, p.5; Rydin, 2013). As Savini and colleagues (2022b, p. 5) put it: "The link between growth and planning is so strong today that it is hardly possible for planners, governments, and their constituencies to question economic growth as the sine qua non condition of urban well-being." It should be questioned however, whether it is socially justifiable to have such a strong focus on growth, despite a large body of research showing that the premise that "growth is a rising tide that lifts all boats" (Piketty, 2014, p.11) does not hold (Steijn, 2022). Nor do increases in GDP correspond to a higher level of well-being per se (Piketty, 2014; Rydin, 2013, p. 98).

Reliance on market actors

The current growth-oriented planning approach relies on market actors to deliver benefits to communities (Rydin, 2013; Hochstenbach, 2022). Although such market-led developments have proven to be successful in regenerating some areas and to improve both the built environment and quality of life, “it is not and cannot be the recipe for everywhere and everyone at all times.” (Rydin, 2013, p.2). Market-led developments are likely to negatively influence the weakest areas. A development focus in a place with some potential often redirects capital from less economically profitable areas towards developing areas (Rydin, 2013).

In the Dutch housing sector there is a particular reliance on market actors to deliver housing. Due to

restrictions on social housing corporations in the past decade and in the absence of a significant group of private developers, market parties are the only alternative option (Hochstenbach, 2022).

Thus, planning is growth-oriented both in terms of distribution, with a focus on increasing material well-being and stimulating economy, as well as in terms of procedure with a high dependency on the market which has an aim to grow.

This growth-oriented way of planning is socially selective, favouring groups rich in (social) capital and spatially selective, favouring locations which have most potential for productivity.



Figure 1.2: Image from the Nationale Omgevingsvisie (NOVI) which clearly shows a focus on the Randstad, with some more differentiation to other cities, in Brabant, Arnhem-Nijmegen, Zwolle and Groningen. Shrinkage in peripheral areas are taken as a given (Ministerie van Binnenlandse Zaken en Koninkrijksrelaties, 2020)

‘Don’t back the losers, but pick the winners’

Historically, Dutch national planning aimed to spatially redistribute housing and employment. This changed in the 1980’s as neoliberal thinking started to take hold. In order to stay competitive in a globalised market, the government started to shift focus to the already successful areas, in the spirit of “don’t back the losers, but pick the winners” (Milkowski, 2022; Steijn, 2022). The idea of this type of ‘efficiency policy’ was that economic gains would eventually trickle down to less competitive regions. Looking back on this, we can conclude that this policy only increases disparity between regions (Thissen et al., 2019). Instead, there is more evidence for a trickle-up effect, where investments in the periphery also benefit the stronger regions (Thissen et al., 2019). It can be questioned whether spatial policies which deliberately contribute to the exacerbation of economic inequality between regions can be justified.

Justice is a subordinate goal

As pointed out by Katharina Manderscheid (2011), the perspective on social justice is economistic and feeds into the neoliberal idea of regional competition for global capital in modern planning practice. Socio-spatial justice is in turn reduced to an equal distribution of economic opportunities across territories. In this way, the goal of socio-spatial justice is adopted in the neoliberal discourse and strengthens the foundations for economistic policies.

The study by Manderscheid (2011) is an analysis of the German spatial planning, but generally the same could be argued for the Dutch context. The most recent national planning document, the Nationale Omgevingsvisie (Ministerie van Binnenlandse Zaken en Koninkrijksrelaties, 2020), phrases like ‘social-economic revenue models’ and ‘strong regions’ make an appearance frequently, but ‘justice’, ‘fairness’ and ‘social sustainability’ do not. As can be seen in figure 1.2, the vision aims for strong cities and regions, while population shrinkage in peripheral areas is taken for granted.

‘Broad welfare’ (*brede welvaart*) has become a more common policy goal in recent years in the Netherlands. Broad welfare concepts measure multiple components, opposed to a single indicator of welfare, like GDP. It is still a new concept, and a lot is still unknown about how to measure it properly (Raspe et al., 2019). The concept of ‘broad welfare’ appears twice in the national environmental vision, thus it can hardly be said that it is a guiding principle right now. Recent policy, such as the investments in national

infrastructure attest to an economistic view on spatial developments, with the majority of investments in major urban areas (Nefs & Koomen, n.d.; Verkade, 2020). Economic arguments remain to have a strong voice in the allocation of resources (Verkade, 2020), over improvements in well-being directly. It seems generally accepted that a large share of the population benefits, while leaving another group out.

Housing inequalities

The deficiencies in spatial planning lead to a variety of problems on different scales, because the spatial planning system and growth-oriented practices protrude different operational scales. This paragraph outlines these problems.

Different scales: unaffordable housing

There are three main sectors of housing provision in the Netherlands: social housing, owner-occupied housing and private rental. These sectors have their own particular problems which make housing more unaffordable, particularly for low-income groups, as well as some middle-income groups. The main problem is a tension between housing as a right and means of social reproduction on the one hand, and the financialisation of housing as a commodity on the other hand (Byrne, 2019; Brenner et al., 2010).

Social housing

Despite its good international reputation, the Dutch social housing sector is under pressure due to several policy changes in the last decade. These changes have caused a residualisation of the Dutch social housing sector: a smaller sector houses a larger concentration of lower income groups (Hoekstra, 2017). Whereas for a long period of time, social housing associations catered to both lower-income and middle-income groups, which gave a broad support base for social housing and reduced the segregation of different socio-economic groups (Musterd, 2014). Recent policy changes limited the access of middle-income groups to social housing and de-institutionalisation increased the influx of vulnerable groups to the lowest segments of the social housing sector (Hoekstra, 2017). These changes lead to an accumulation of problems in certain neighbourhoods with a larger share of social housing and stimulate segregation (Hoekstra, 2017; Musterd, 2014).

The Landlord Levy (*verhuurdersheffing*), a tax that was only imposed on the social housing sector and has recently been abolished, obstructed investments by housing associations in new housing. The tax drastically decreased new building output by housing associations and led many housing associations to sell dwellings and raise rents in order to stay out of debt (Hoekstra, 2017). These rent increases were

higher than the income increases of tenants, leading to an overall rise of housing costs for residents (Hoekstra, 2017).

Owner-occupied housing

The last decades also saw a massive increase in real estate prices in the Netherlands. Owner-occupied houses have become unaffordable for many groups (Hochstenbach, 2022). The government stimulates people to participate in the owner-occupied market with fiscal policies that promote ownership and public discourse portrays house owners as better citizens (Hochstenbach, 2022). Yet those that wish to buy a house are more or less forced to participate in a game of ever-increasing real estate prices and higher mortgage debts. If you are not willing to put yourself in such debt, someone else will, be it a resident or investor (Hochstenbach, 2022). If you are not willing to participate in this game or are unable to do so, the expensive private rental market is all that remains.

Private rental

As a consequence of the two before mentioned processes, the private rent sector has taken up a larger share of the housing supply. During and in the wake of the global financial crisis, when the Dutch middle class was hesitant to buy dwellings, the Dutch government actively promoted the Dutch housing market to local and international investors (Hochstenbach, 2022; Hochstenbach, 2023). In this period, the Dutch government tried to reconcile interests of landlords and middle-class residents through a politics of rent liberalization. The emerging private-rental market offered an alternative to the middle-class that was excluded from both social housing and owner-occupancy; liberalisation provided demand for home-owners wishing to sell their dwelling and simultaneously provided an opportunity to investors. But as (neo)liberalisation of the housing market continued, it started to undermine the housing opportunities, stability and affordability of middle class residents (Hochstenbach, 2023). This has led to a shift in governmental action, which is more regulatory than stimulating. It is argued by Hochstenbach (2023) that recent policies that move away from rental liberalisation mark a notable turn in political ambitions, but that these new regulations are

not a return to a previous state. The playing field has changed due to the residualisation in social housing and increased house prices in the owner-occupied sector, and fundamental alternatives for affordable housing are lacking.

Living expense ratio

The 'living expense ratio' (*woonquote*) is the share of the income spent on housing costs, such as rent, as well as additional costs, such as gas, electricity and property taxes. This ratio gives an indication of the financial burden of housing on households. The average living expense ratio for COROP regions¹ in the Netherlands is shown in figure 1.3. The internal variation within the region is not visible in these numbers, even though differences within the region can be substantial. However, it can give an indication of the spatial differences within the country.

On a national level it becomes particularly visible that living costs are highest in the major city regions and in some peripheral areas. Housing expenses are highest in the Amsterdam region, the The Hague region and in Groningen. Housing costs are relatively low on average in Noord-Holland north, Zeeland and Southwest Friesland. The numbers show a diverse pattern in the periphery, with housing expense ratios at either extreme in Groningen and Zeeland.

Local: segregation

Local inequalities manifest themselves most clearly within the urban area and urban region, where spatial differentiation is visible in segregation. While segregation is not problematic by nature, when it is a result of preferences, it becomes problematic when it becomes associated with adverse processes, such as decreased levels of health, insufficient schools, chances for development - resulting in a decreased quality of life, which is perpetuated in a certain locality (Buitelaar et al., 2018).

Although the Netherlands is not highly segregated, inequalities and consequent segregation have increased, in part through processes such as gentrification (Marcinczak et al., 2016).

Regional: gentrification and the suburbanisation of poverty

Where one can live is more and more dependent on economic resources. Older policies aimed at mitigating socio-economic inequalities are gradually

¹ COROP regions are a statistical division of the Netherlands, containing a collection of municipalities, usually with one major city at the core, plus a service area.

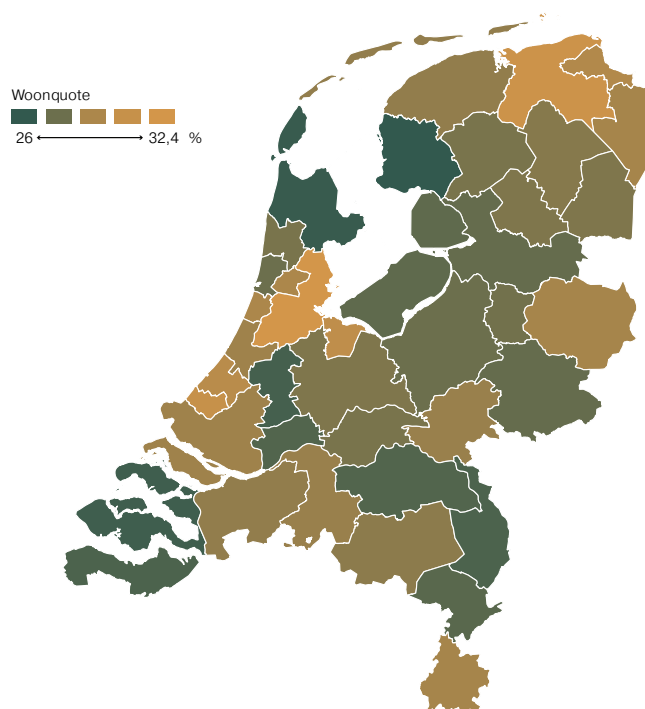


Figure 1.3: Average housing expense ratio in each COROP region (adapted from CBS, 2022)

eroded (Hochstenbach & Musterd, 2018, p. 47), concurrent with rolling out market-oriented policies. Urban governments try to attract middle-income residents to their city, predominantly to inner city neighbourhoods. Aided by government investment and policies that allow for tenure conversions from social rent to owner-occupancy, state-led gentrification amplifies already existing gentrification processes (Hochstenbach, 2016; Uitermark et al., 2007).

An important question in gentrification research is where displaced households go to. Generally there are two options when faced with gentrification: coping and moving. Coping is about staying put in the city, but through various precarious means, like (too) expensive rents in the private sector or home-sharing (Hochstenbach & Musterd, 2018). People might be willing to accept these circumstances in order to pursue other goals, such as maintaining social networks or pursuing a career (Cardoso et al. 2022). Apart from coping strategies to stay put, many households move away from gentrified neighbourhoods to the urban peripheries and the region surrounding the city,

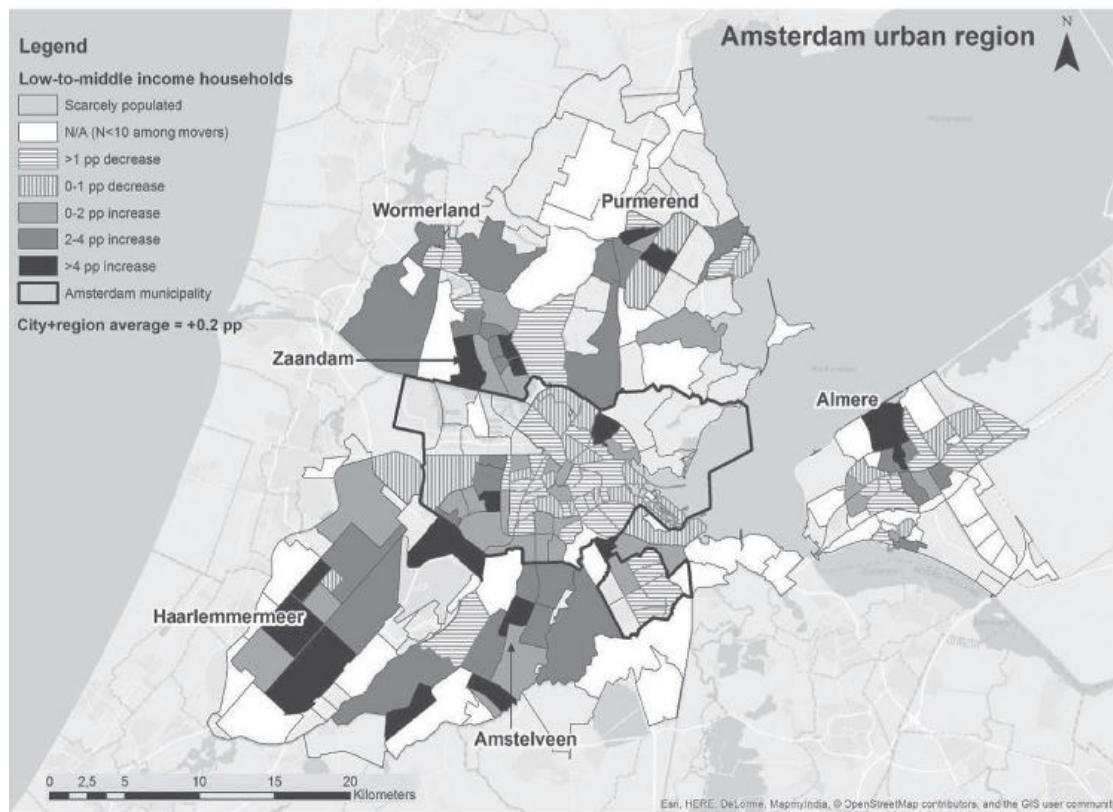


Figure 1.4: Change in share of low-to-middle income households between 2004 and 2013 in the Amsterdam Metropolitan Area (Hochstenbach & Musterd, 2018)

where there is social housing available and dwellings are more affordable to buy. Other groups wishing to settle in the region do not even move to the (inner) city and directly move from elsewhere to the more affordable peripheries. Satellite towns originally built for the middle class have become particularly popular destinations for lower income groups. “Thus, we see a rather ‘bundled’ suburbanization of poverty, as lower incomes concentrate in these areas.” (Hochstenbach & Musterd, 2018, p. 49). This suburbanisation of poverty is the other side of the coin of the gentrification in inner cities (Hochstenbach & Musterd, 2018), and provides a regional perspective to the local issue of gentrification.

National: shrinking regions

On a national scale, a similar process can be seen, where peripheral regions house a higher share of vulnerable groups. As production and consumption practices concentrate in ‘desirable places’, regions that are considered peripheral and have an economy that relies on old industries are highly vulnerable to economic fluctuations (Hoekstra et al., 2020). Many peripheral areas suffer from brain drain and a

greying population, when educated individuals move to core regions to study and work (Kooiman et al., 2018). Some peripheral areas already have a weaker socio-economic profile, due to a high share of former industrial workers, but the population decline tends to leave behind the most vulnerable groups: elderly and low-income households (Hoekstra et al., 2018). This further weakens the position of these regions.

The Netherlands has a history of deploying strategies to mitigate uneven development, and regulates housing through government intervention. Despite this history, policy has transformed to stimulate rather than regulate market forces (Hoekstra et al., 2018; Brenner et al., 2010). This reliance on market-based governance has facilitated the move from spatial redistribution towards uneven development, between and within regions and cities.

National: commodification

A major cause for the local problem of unaffordable housing and restricted access to the housing market for many groups has its origin in the commodification of housing.

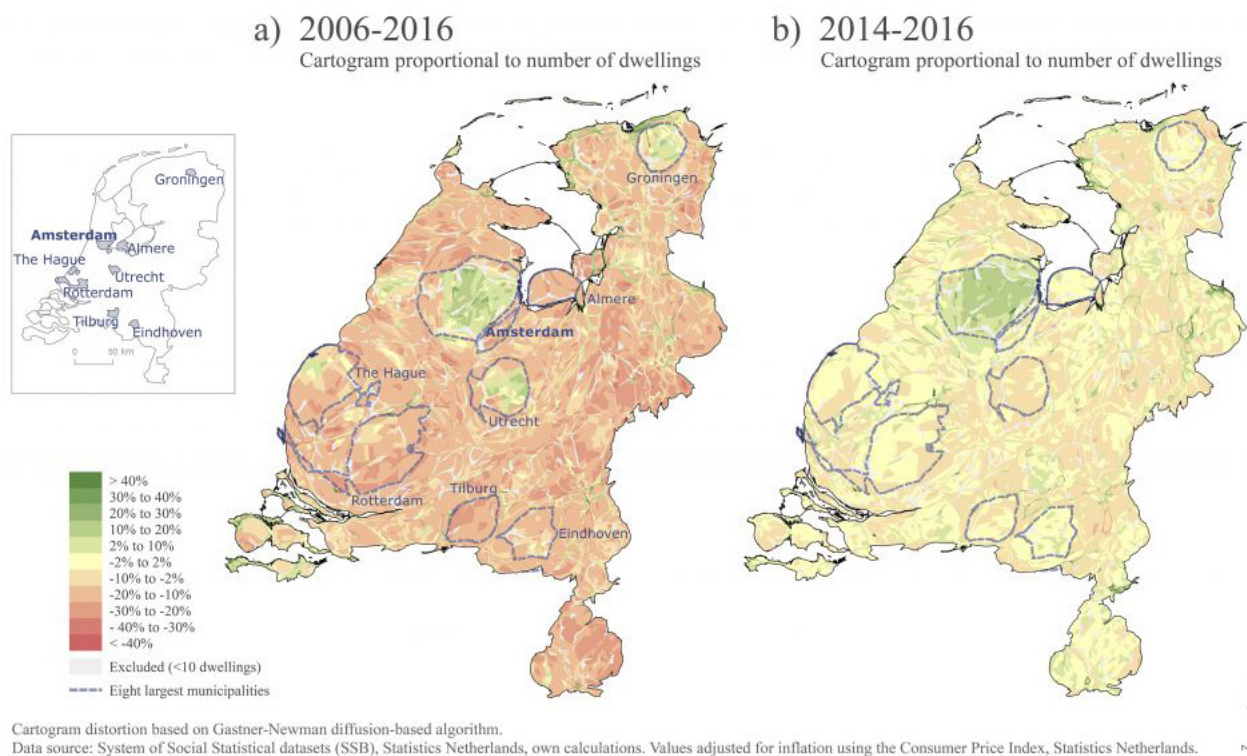


Figure 1.5: Cartogram showing the changes in real estate value per neighbourhood (Arundel & Hochstenbach, 2020)

Housing is first and foremost a place of social reproduction. The right to adequate housing is a constitutional right. Nonetheless, housing is also an asset, and for many owners the most expensive thing they will buy in their life (Hochstenbach, 2022).

Despite its social function, housing has increasingly become commodified since the 1980's. Due to various neoliberal policy changes, the housing sector has become integrated in the global financial system (Brenner & Theodore, 2002; Van Loon & Aalbers, 2017). Although institutional investors have been essential for financing spatial developments, shifts in financing methods have increased the perceived distance between dwellings and their residents on one side and investors on the other side. Investors do not directly invest in property, but in shares of property. This shift makes housing more comparable to forms of liquid capital like shares and obligations. For these types of assets it is not the intrinsic value that matters, but the perception of their value and availability of capital (Van Loon & Aalbers, 2017). Therefore, not the unique characteristics or use value of buildings, but their fictitious value is most important. "The actual use of buildings has become secondary, resulting in

real estate developments that lack a sophisticated perspective on how to contribute to better functioning cities where the final owners of the investment capital, in this case the pension fund members, have to work and live." (Van Loon and Aalbers, 2017, p. 234). The economic reasoning by institutional investments leads to investment in some areas, while entire provinces are not even in the portfolio of investors. When the objective is to make profit, investors who can choose freely will almost always pick Amsterdam over Zeeland (Van Loon & Aalbers, 2017).

These dynamics drive up prices in popular areas and leave areas that are less interesting to invest in behind, exacerbating inequalities.

National: wealth accumulation

The previous point of commodification is related to inequalities in wealth accumulation. Not only investors benefit from increases in real estate value, house owners benefit as well. House owners have a significant wealth advantage compared to renters (see figure 1.6). First, home owners gain wealth through property: they profit from price increases and by paying off mortgage they gain an asset. Second, costs of living are relatively lower, which allows owners

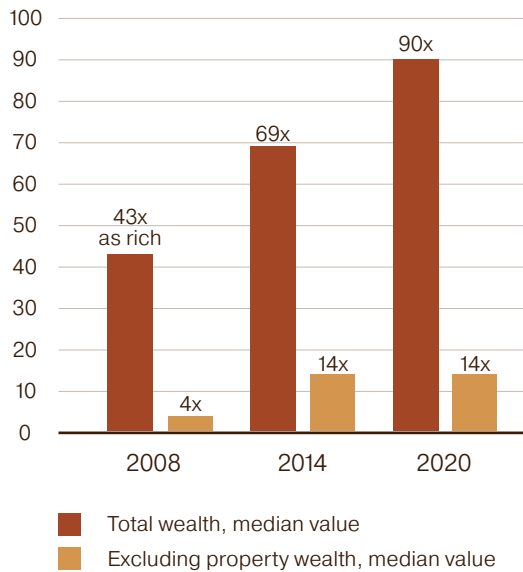


Figure 1.6: How much richer than renters are house-owners? Wealth difference between house-owners and renters. Adapted from Hochstenbach (2022), based on CBS (2021), *Vermogen van huishoudens; huishoudenskenmerken, vermogensbestandsdelen*.

to set aside more money each month (Hochstenbach, 2022).

One may argue that these differences are a matter of smart investment and that individuals that bought a house were lucky or smart, but these differences are partially a result of an uneven playing field: uncontrollable characteristics such as age and family wealth significantly influenced the capacity of individuals to buy a house in the first place (Hochstenbach, 2022).

Apart from this, rising price levels influence people in other sectors than the owner-occupied sector as well. Landlords that need to earn back money from investments charge higher rents in the private rental sector. Even the regulated social housing sector does not escape from the commodification of housing. One of the neoliberal policies that was introduced in the global financial crisis was to link social rent levels to real estate values (the WOZ value). So if transaction prices rise in an area surrounding social housing, rents can increase even to the point the rent is liberalised (Hochstenbach, 2022).

The differences in wealth accumulation between renters and owners are not geographically bound, as they occur everywhere in the country, but there are spatial differences. Certain regions saw a much bigger increase in house prices, in particular Amsterdam and Utrecht where the service industry is most important (figure 1.5, Arundel & Hochstenbach, 2020). Thus, not only is there a difference between owners and renters, but also within the group of house owners, there are geographically-bound wealth differences.

The rightfulness of these inequalities may be questioned. A certain group in the population clearly benefits financially from the effects of policies that liberated the housing market, which in turn negatively influences dwelling costs of other groups. Additionally, the wealth inequality can trickle down to future generations, because wealth is not taxed as much as labour.

Differences in well-being

People's place of residence is connected with their environment and day to day life. These environmental factors have a significant influence on the overall well-being of people.

Many efficiency policies have led to the centralisation of public services. As a result, many public services have become less accessible to many people, particularly in more peripheral areas (Van de Ven, 2021). As shown in figures 1.7 to 1.9, travel time to several essential amenities have increased over the years, in particular in peripheral areas. These changes can have a significant effect on well-being. The distance to hospitals can have a negative effect on health, while little choice in schools can negatively affect personal development. These changes also affect the attractiveness of people to settle in a certain location, which might lead to shrinkage, which can perpetuate the loss of amenities.

From figure 1.10 it becomes apparent that municipalities with a better access to amenities rank higher on the measure of broad welfare, as developed by the Netherlands Environmental Assessment Agency, PBL (Thissen & Content, 2022). However, this concerns one type of well-being measurement. Other broad welfare models from the Rabobank and Utrecht University (Aalders et al., 2019) and CBS (2022), show a different distribution of well-being. Nonetheless, disparities can be observed in all measures and generally the welfare is lower within the major cities and in peripheral areas at the Dutch border.

‘Shortage’ of housing

It is generally acknowledged that there is a shortage of housing in the Netherlands, which requires an additional 1 million homes (Ministerie van Binnenlandse Zaken en Koninkrijksrelaties, 2020).

It can indeed be reasoned that there is a mismatch between supply and demand. Many people now live in undesirable circumstances, such as too small apartments or in parent's houses and this share is expected to increase in the future, due to population growth and changing preferences. Equally, the share of homeless people has increased over the past years (Hochstenbach, 2022).

The main response is a call to ‘build, build, build!’². However, it can be questioned if the problem is a lack of real estate or housing. The amount of real estate has only grown over the years, even leading to ample vacancy. For example, the vacancy rates for real estate that could be made suitable for living that has been vacant for more than a year shows potential for many dwellings:

- 19,1 million m² vacant houses
- 3,5 million m² vacant offices
- 2,6 million m² vacant retail
- 2,1 million m² vacant total lodging, meetings, education, health and sports

Just concerning the vacancy of housing, figure 1.11 shows the vacancy rates of housing that has been vacant for at least one year. Because these vacancy rates concern a long time-period, dwellings that are shortly vacant due to moving are mostly excluded. The map shows the highest vacancy rates in highly urbanised areas (major cities) and in rural areas, particularly in peripheral border regions (Zeeuws Vlaanderen, Noord-Oost Groningen and Limburg). These vacancies likely have different causes. In the peripheral border regions, there is a lower interest in housing, due to bad connectivity, small offer of amenities and employment, and lower levels of well-being. The vacancies in the major cities are probably better explained through the steep increase in real estate value. In high-demand areas in major cities, real estate values have increased significantly over the past years. In expectancy of future value increases, some investors buy properties, in order to resell them later for a profit (Hochstenbach, 2022).

Another metric that is not shown in these numbers is the amount of second homes. These houses are not permanently in use (as opposed to private rental

² A phrase made popular by VVD member of parliament Daniël Koerhuis (Hochstenbach, 2022)

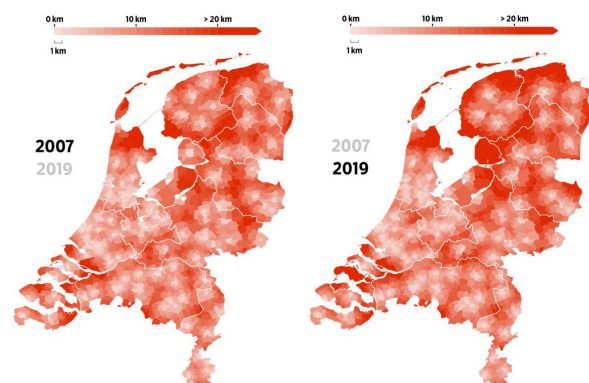


Figure 1.7: Distance to hospital, 2007 and 2019 (Van de Ven, 2021)

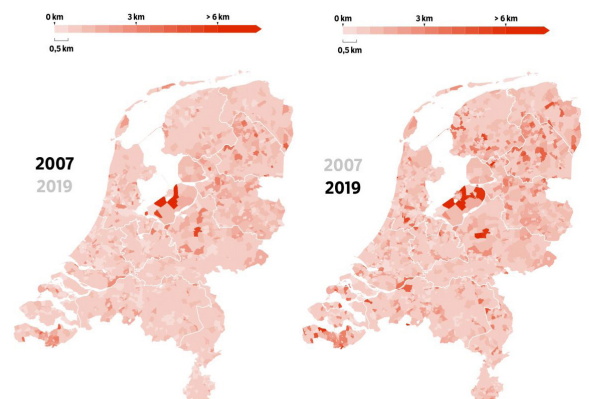


Figure 1.8: Distance to primary school, 2007 and 2019 (Van de Ven, 2021)

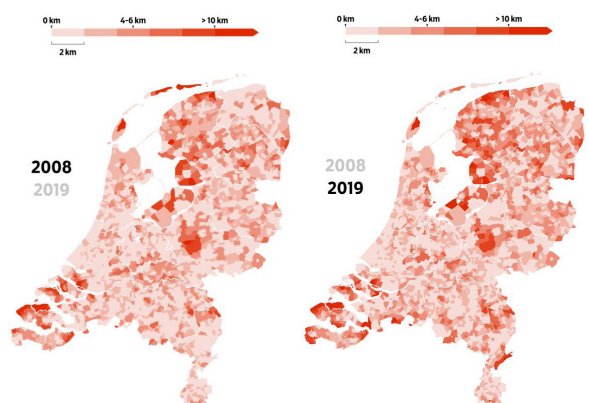


Figure 1.9: Distance to library, 2008 and 2019 (Van de Ven, 2021)

Ranking 'broad welfare' in Dutch municipalities, 2019

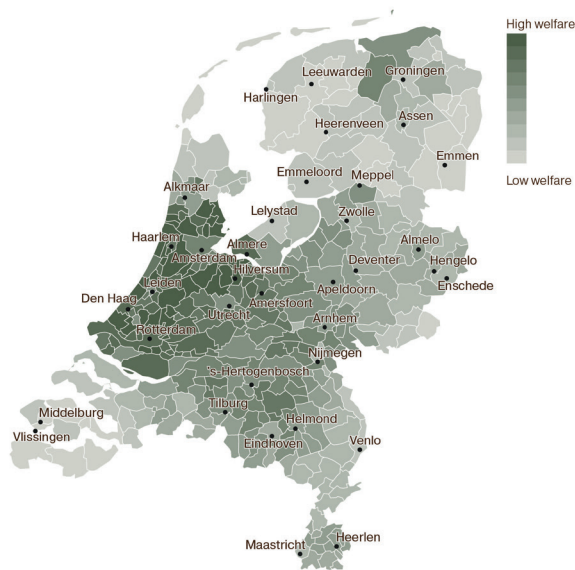


Figure 1.10: Distribution of 'brede welvaart' in the Netherlands, adaptation from the original by the PBL, based on data from 2019 (Thissen & Content, 2022)

dwellings) and are either used by wealthy individuals privately or used for holiday rental.

Despite the amount of vacant spaces, the amount of homeless people has steadily increased (Hochstenbach, 2022). It is therefore fair to say that the existing stock of buildings is not used optimally to provide suitable and sufficient housing for everyone, which can be considered unjust. Durrant and colleagues (2023) therefore argue that planning instruments could encourage better use of the existing stock of housing.

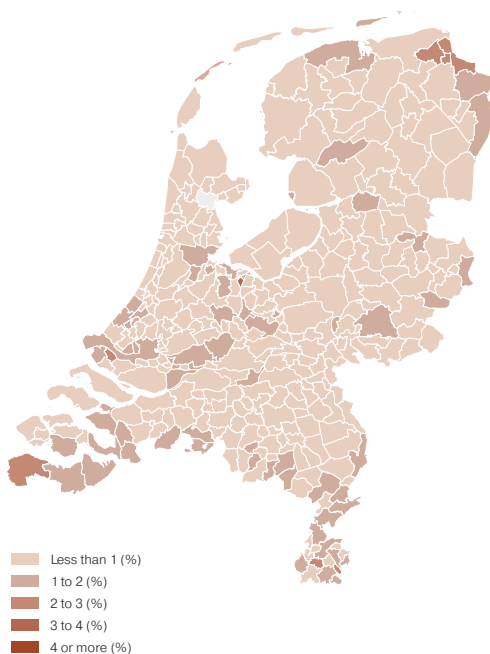


Figure 1.11: Administrative vacancy per municipality, 1 January 2021, also vacant the year before (adapted from CBS, 2021)

Intergenerational justice & sustainability

Intergenerational justice

Two common measures of justice, distributive and procedural justice, are focused on the present and fail to include a long-term perspective. Today's children and future generations equally will have spatial needs in the future, but are not able to participate in democratic decision making and are not included as actors when goods are distributed.

Today's wealth disparities in the housing market already show differences between different generations of home owners. Such wealth differences between individuals are likely to persist in new generations as well, also because current wealth can be transferred to next generations (Piketty, 2014). Although this can certainly be an issue, this mostly relates to fiscal policies. In this thesis, the problem of intergenerational justice is approached from the perspective of (spatial) resources and sustainability.

Sustainability

In an article from 1968, Garrett Hardin describes a process known as 'the tragedy of the commons'. The main idea of this tragedy is that individuals tend to maximise their own benefit and make maximal use of a shared resource ('the commons'). When the use of a natural resource is not in individual or collective ownership, is unregulated, and such a resource is used by many people, exhaustion or permanent destruction may occur due to overexploitation, which comes at the expense of long-term use and the public interest.

Unlike the idea of Adam Smith's invisible hand, which assumes that citizens also keep the common good in mind, Hardin (1968) posits that people act more selfishly: the benefits of the common resource are reaped by the individual, while the burdens are passed on to the community as externalities.

This principle of the tragedy of the commons can be especially applied to exploitation of the Earth's resources. The same is true for emissions, which benefit the producer of the emissions, because it grants mobility, provides heating or allows for production. However, the negative externalities of air pollution and climate change are experienced by the community, in particular by future generations.

Within the concept of planetary boundaries, as defined by Rockström and colleagues, the entire Earth is approached as commons (Hickel, 2019). An analysis of the Dutch performance in relation to the planetary boundaries can be seen in figure 1.12. This figure shows that the use of resources in the Netherlands far exceeds the fair global per capita use, especially when consumption-based calculations are used (Lucas & Wilting, 2018). Figure 1.13 shows that the emissions of the construction sector are currently also above the fair share which is required for reaching emission goals (Hemelaar et al., 2022).

Sustainability and justice

Advocates of sustainability and advocates of justice have long operated in separated movements. The goals of these movements are sometimes also

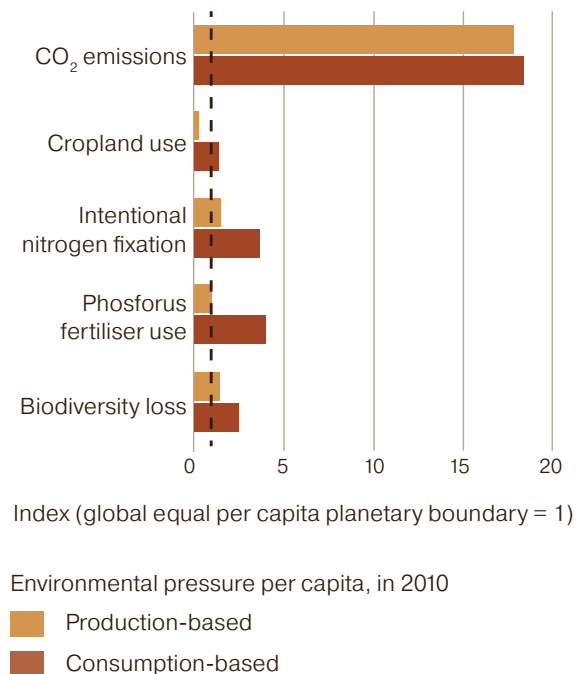


Figure 1.12: Dutch environmental pressures compared to allocated planetary boundaries (adapted from Lucas & Wilting, 2018)

conflictive. Middle class interests in sustainability may collide with the interests of the marginalised poor. The stronger position of the middle class may result in further marginalisation and injustice to the poor (Campbell, 2013). However, planners do not have to view the movements of sustainability and justice as separate. Rather, it can be a productive tension, and their goals can be merged in planning (Campbell, 2013).

Climate change adaptation

It is already well-known that climate change will also affect the Dutch climate. In particular, there are increasing chances for storms, longer periods of drought, and hot days, as well as the threat of sea level rise.

Because there is an increasing awareness in Dutch spatial planning that we need to deal carefully with natural systems it has become a policy goal to make water and soil leading in decisions on spatial planning (Ministerie van Binnenlandse Zaken en Koninkrijksrelaties, 2020). In a sense, this gives the obligation to avoid building in locations sensitive to climate change. If wrong decisions are

made now, future generations will bear the costs of floods, subsidence, climate adaptation and welfare costs. However, several plans by the by the national government and provinces designate vulnerable locations, such as deep polders, as locations to develop new dwellings (Platform Woonopgave, n.d.).

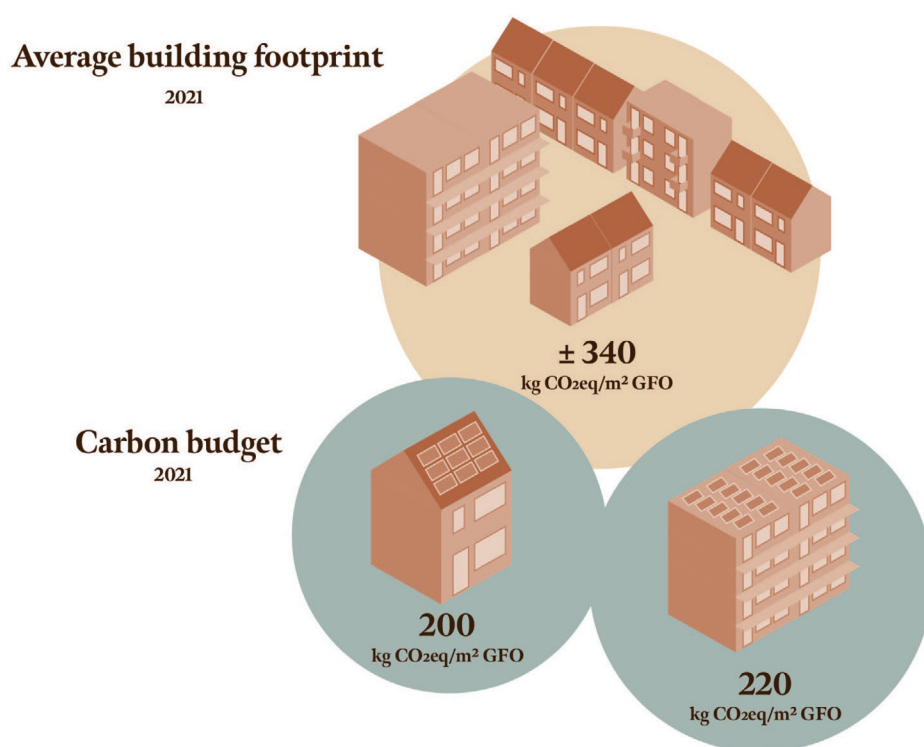


Figure 1.13: The footprint of dwelling construction needs to be reduced strongly in order to be within the carbon budget for dwelling construction. Adaptation by author of Hemelaar et al. (2022)

Problem statement & research aim

Problem statement

Currently dominant spatial planning priorities focused on promoting growth-oriented economic thinking perpetuate injustices that vary across different scales. While some injustices remain unresolved, others are exacerbated by contemporary planning practices.

Growth-oriented planning is socially and spatially selective and has a short time horizon. The injustices following from this are experienced by the population in various ways in the housing domain.

In order to address these injustices in housing, there is a need to scrutinize and challenge the contemporary growth-oriented principles in spatial planning and antecedently incorporate justice values in planning practices.

Problem: growth-oriented planning

- Planning practice and its tools are oriented to promoting growth.
- Growth-oriented planning is socially and spatially selective and focuses on the short term.

Research aim

The aim of this research is to develop a justice framework for spatial planning based on justice values from literature, that helps planners analyse and address injustices in housing. The aim of this is for spatial planning practice to mitigate and reduce injustices, rather than perpetuate or exacerbate them.

This framework should be transferable to different locations in the Netherlands and should be appropriate in this context, which means both feasible and acceptable by the population.

Testing this framework in a case study location should demonstrate the use of it in developing strategies for justice in housing.

Aim: Justice-oriented planning

- Facilitate spatial planners with a framework to analyse injustices in housing and develop housing strategies that aim for justice.

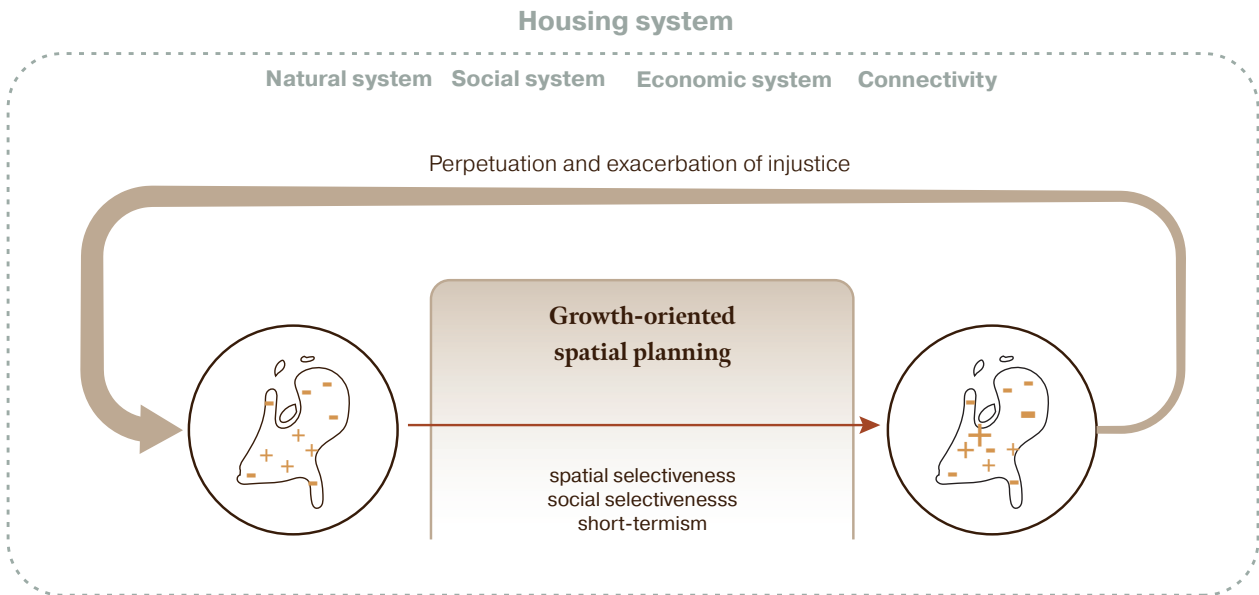


Figure 1.14: Visualisation of the problem: perpetuation of injustice under a growth-oriented spatial planning practice, by author.

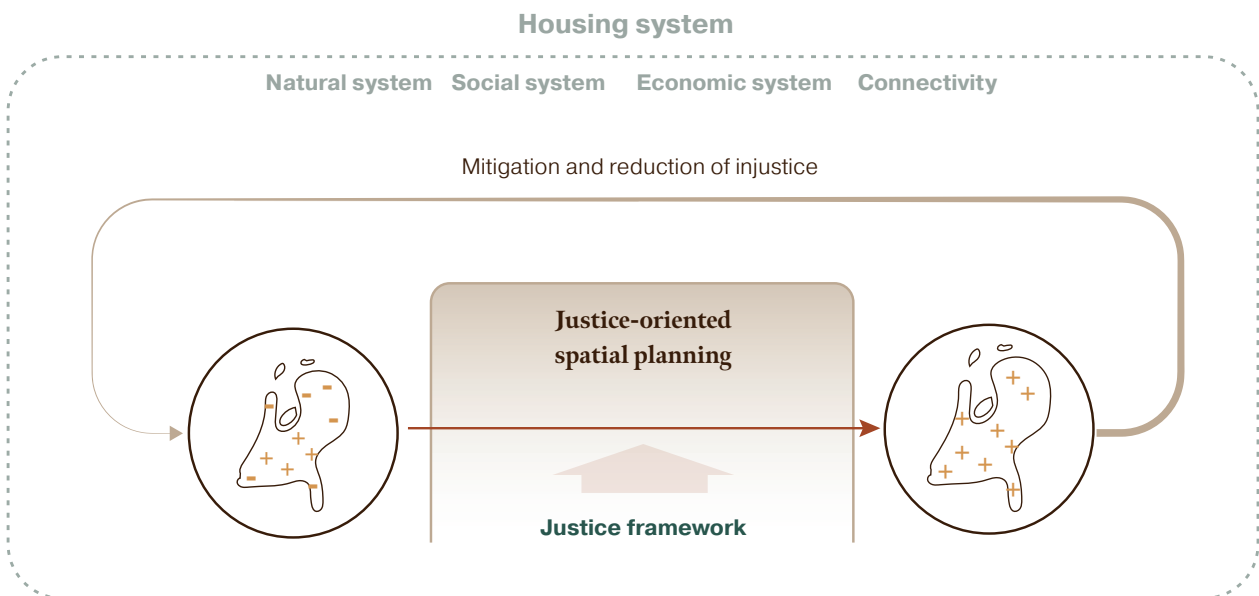


Figure 1.15: Visualisation of the aim: reduction of injustice under justice-oriented spatial planning practice through use of a justice framework, by author.

Research questions

Main research question

To what extent can a framework based on justice values help spatial planners design for justice in the housing domain in Dutch regions?

Sub-questions

1. To what extent are socio-spatial injustices in housing a result of contemporary planning practices?
2. What are the values behind different approaches of spatial justice and how can these values be operationalised for spatial planning?
3. How can a framework based on justice values help spatial planners to develop a planning and design strategy for housing in a region in the Netherlands?

Intended outcome

The intended outcome of the first research question is an overview of spatial planning practices that contributed to the perpetuation or exacerbation of injustices, based on a critical evaluation of planning practices. The goal is also to give an overview of possible ways in which spatial planning can influence development.

The first main design product follows from the second research question and is a justice framework which can aid spatial planners in devising planning and design strategies for justice in the Netherlands, with a focus on housing. This framework should help to identify injustices as well as propose strategies to challenge and resolve injustices in the housing domain. The justice framework should be guiding regional analysis as well as strategy and design. The framework offers general directions for strategies, which may have a specific application depending on the context. In this application to the context, a pattern language is developed.

The second main design assignment is to apply this justice framework to a case study in the Netherlands (the Stedendriehoek region). This application helps to test and improve the framework and demonstrate its use. The products consist of an analysis of the case location based on the justice framework, a strategy for the case locations, zoomed-in strategic maps and accompanying visualisations. The analysis and strategy are informed by the justice framework.

Research approach

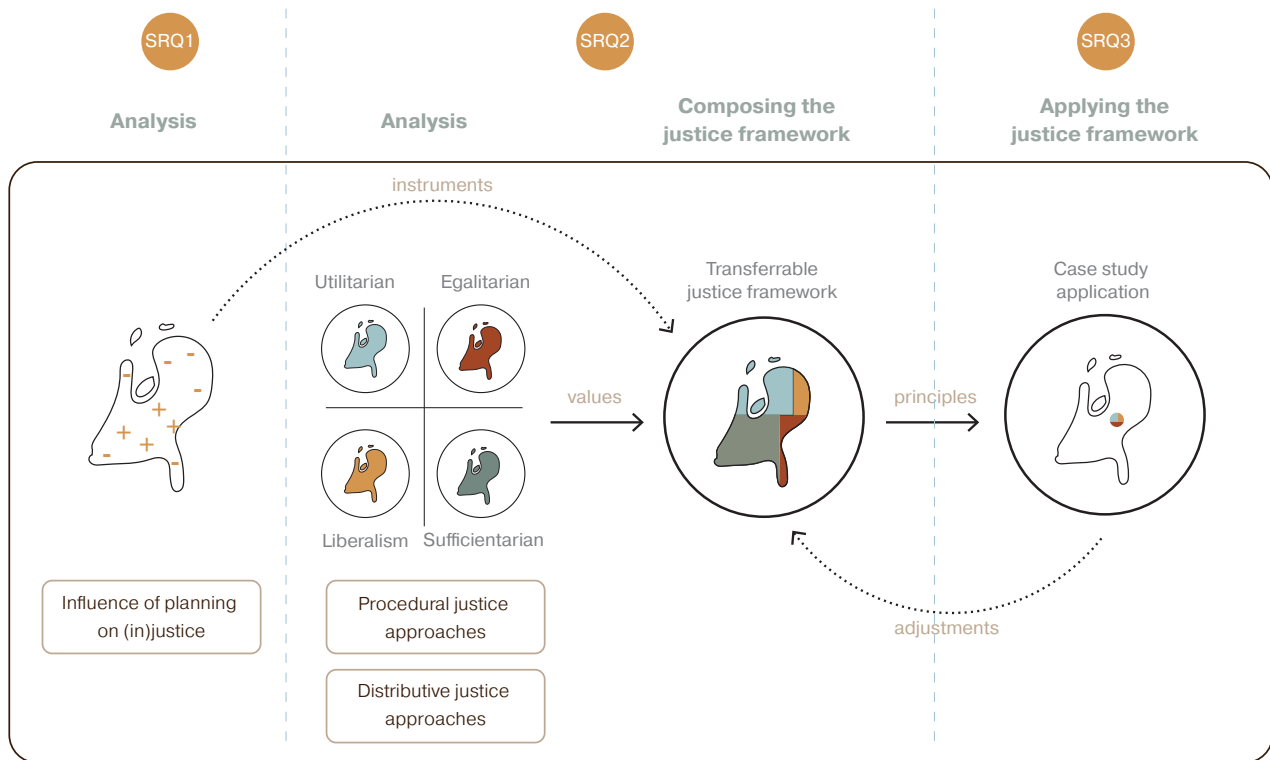


Figure 1.16: Research approach, by author.

The first research question is about understanding the influence of spatial planning on injustices in housing. This information gives an indication of the possible tools and instruments that spatial planners have, as well as information on the types of interventions that are necessary to implement.

To further inform the justice framework, an analysis is undertaken of the possible approaches to justice in spatial planning and their implications for the spatial configuration and organisation of the Netherlands.

After this, the justice framework is composed, based on the values found in the analysis and informed by the instruments at the disposal of planners. This approach should give an adequate answer to current injustices, and should be feasible within the Dutch institutional context.

The justice framework should be applicable to areas in the whole of the Netherlands, but it is applied and tested in one location, the Stedendriehoek of Apeldoorn, Deventer and Zutphen. The application to the Stedendriehoek will help to demonstrate the functioning of the framework, but will also reveal new information, by which the framework can be adjusted. This iterative evaluation is also shown in figure 1.16.

Conceptual framework & scope

Explanation of the conceptual framework

The top part of the conceptual framework in figure 1.17 represents the aim of the research: reducing injustice through justice-oriented spatial planning. A justice framework could serve to incorporate justice in planning.

The justice framework is informed by planning instruments, values and strategies. The first input of the justice framework is the planning instruments at the disposal of planners. Planning instruments could contribute to housing injustice, but also alleviate injustice, depending on how they are used. The actual possibilities to influence developments - as proven by the current situation - inform the justice framework.

The most important link to the justice framework is with values, which are intrinsically valuable or desirable principles or qualities (Merriam-Webster, n.d.), which can guide justice-oriented planning. These values are primarily derived from spatial justice literature, which deals explicitly with justice in relation to space and spatial planning. To enrich the justice framework and properly respond to injustices, human-needs theory and intergenerational justice inform the values in the justice framework too. These concepts are supported by the literature on well-being and post-growth.

The justice framework is composed with implementation in mind. Strategies are therefore taken in consideration. However, the link also works the other way, because the values and instruments give an indication of possible strategies. A combination of strategies can in turn be used to make strategic designs, which can eventually contribute to the reduction of injustice.

These three elements which inform the justice framework align with the research questions and research approach.

Housing lens

This problem is approached through the lens of housing, because housing forms an important node in people's lives, housing is connected to other spatial activities, and housing inequalities are experienced by the population on various levels. A focus on housing limits the scope, but through this lens, other systems

remain relevant. In particular, issues of housing deal with natural systems (water, soil, nature), social systems (leisure), economic systems (work) and connectivity (infrastructure and energy networks) when planned integrally. Housing forms a main node in this network of systems.

When planners deal with more systems than housing, the justice framework would also require adaptation.

Scope

Ideally, spatial planning deals with the aforementioned systems in coherence. However, this makes planning much more complex, especially on a larger scale. In order to delimit the research, the focus is on the housing domain. The primary focus is in reducing injustices in relation to housing. The secondary focus is on reducing inequalities in well-being, which are related to housing (the place of residence). Especially when dealing with the existing housing stock, it is not always possible to change dwellings themselves, but the surrounding could be changed to make the dwelling more acceptable.

Nonetheless, the housing system cannot be viewed in isolation. It is connected to other systems, which provide a context for housing decisions. It is not the goal of this research to intervene in other domains. Whenever possible, literature and trends are used to justify developments in these other sectors. However, sometimes plausible assumptions for directions of developments in these domains have to be made. The effects of some trends are also still unpredictable. It will be indicated in the report if assumptions about developments in other domains are made.

Secondly, the focus in this research is on spatial issues that can be influenced with spatial planning instruments. There are many other policies that can contribute to well-being and improve justice, such as income redistribution policies and policies promoting health. Proposing such non-spatial policies in other domains than housing and spatial planning is not the aim of this research and will be avoided as much as possible.

Thirdly, the research is focused on the Dutch context, so Dutch planning practice, policies and trends inform

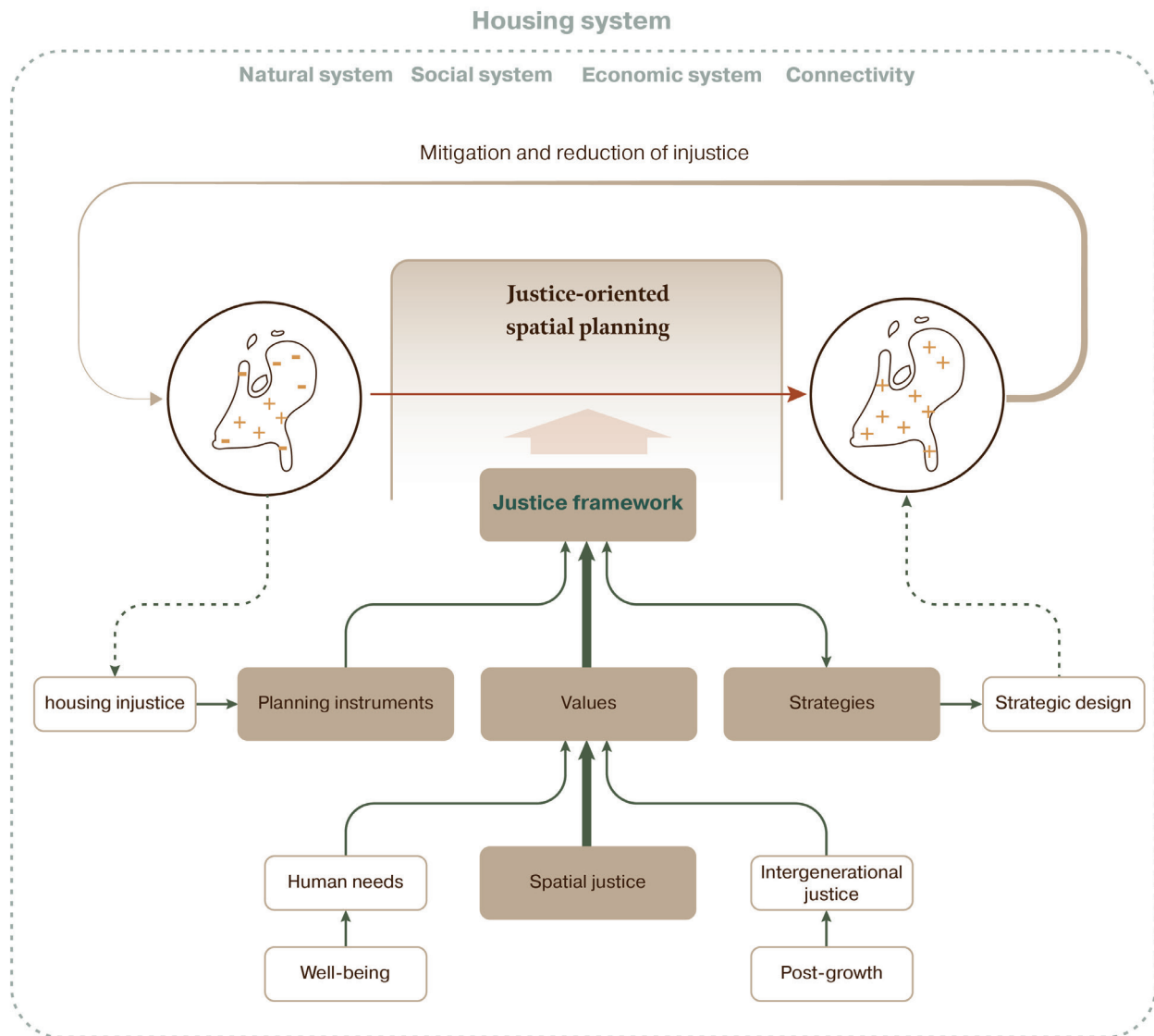


Figure 1.17: Conceptual framework, by author

the research. The justice framework can not directly be transferred to other countries.

Lastly, the scale of focus is the region. Due to the limited time available, the justice framework is only applied and tested in one region. The large scale also means that the design on a local scale will remain more general. The implications for other scales and regions is reflected upon.

Societal & scientific relevance

Societal relevance

The topic of housing injustices is extremely relevant to contemporary Dutch society. Even the United Nations has concluded that Dutch housing sector is in crisis due to poor policy choices (Rajagopal, 2023). Because housing injustices are felt directly or indirectly by a large group of people in the Netherlands, housing was one of the major topics during the 2023 national elections. Nonetheless, the political and societal debate remains shallow, with politicians and citizens scapegoating different groups and arguing for short-term solutions such as lifting nitrogen restrictions and building new cities in polders (Rajagopal, 2023). Although this research is an academic endeavour and the design is not directly implemented, the research helps to inform the societal, political and professional debate on a topic which concerns many people.

The analysis done in this research can help to understand current injustices and brings nuance to the debate. More importantly, this research offers design solutions for the societal problem of housing injustices, which helps to go beyond short-term and business-as-usual solutions for these injustices. The justice framework that is developed in this research aims to objectify and depoliticise the debate by focusing on justice values, which could potentially receive broad support. By testing the developed justice framework in a case study location, the research also aims to demonstrate a realistic and desirable perspective in which justice values guide spatial planning of housing.

In the end, a more just environment and a planning practice that focusses on sufficient well-being for everyone would be beneficial to the whole of society (Hin & De Hollander, 2023). Providing spatial planners with the tools to plan for justice contributes to achieving this goal.

Professional relevance

The relevance of this research for the spatial planning profession is that a justice framework is developed which is transferable to different locations and be used as a tool by different spatial planners. This justice framework can help make the complexity of justice perspectives more graspable for spatial planners and can create transparency in the process of designing for justice. The justice framework can be used in

different ways. It can be used for analysis as well as strategy development - as done in this research - but it can also be used as an assessment tool for policy proposals. Even if planners will not use the justice framework directly, the research might lead to a better understanding of justice values and the effects that spatial planners can have on distributional and procedural justice. This might inspire spatial planners to incorporate some of the values and principles from the justice framework in their daily practice.

Scientific relevance

This research first of all sheds light on the different interpretations of justice and their real-life consequences when applied to spatial planning. Applying more abstract concepts from philosophy to a practical context of spatial planning can show the robustness of concepts and can be a method of reflection on the practical application of philosophy to real-life contexts and practice.

The research also contributes to the critical evaluation of contemporary planning practice and the goals that guide it.

Although there is considerable scientific debate on spatial justice, guidance on the application to spatial planning practice is meagre. There are not many guiding principles or frameworks that help planners understand injustices or plan for achieving justice. The work of previous authors, such as Fainstein (2011), Buitelaar (2020) and student theses from Urbanism focused primarily on the city-scale. However, much less is written about the regional scale (Raspe et al., 2019), as well about the application to housing, which are contributions of this thesis.

Although the research is focussed on justice, it also has some post-growth components. It therefore also offers a small contribution to the emerging field of post-growth planning, in particular to the spatialisation of post-growth. As argued by Xue (2022, p. 405), post-growth debates “have so far not taken seriously the vital role of the spatial aspect in social transformation and its associated planning discipline.” The degrowth debate has mostly been focused on local initiatives on community or neighbourhood level and has failed to scale up to a larger level. Attention has been limited on the urban/regional scale (Xue, 2022), which is the focus of this research.

Report structure

The next chapter (2) explains the research design, focussing on the frameworks that guide the research process.

The third chapter covers the first research question, on the influence that planners have on perpetuating or exacerbating injustices in the domain of housing.

The second research question, leading to a justice framework, is covered in both chapter 4 and 5. In chapter 4, different approaches to justice are discussed and evaluated. In chapter 5, the main conclusions from the discussion and evaluation in the preceding chapter are used as a base for the composition of a justice framework, focused on housing. This is the outcome of the second research question. This forms the first part of the thesis report and can be seen as the theoretical contribution.

In the second part, starting in chapter 6, this justice framework is tested in the Stedendriehoek region as part of the third research question on how the framework can be applied. This application illustrates the use of the framework and is used to refine and evaluate the framework. The application consists of an area analysis based on the categories from the framework (chapter 6), as well as a design of strategic design interventions in the housing domain, based on principles that follow from the framework (chapter 7).

In the final chapter (8), the conclusion and reflection, the research questions are answered and the research as a whole is reflected upon, including an ethical reflection, research limitations and recommendations for future research.

The Appendices provide an overview of the analytic maps used for the research.

Glossary

Capabilities approach

“The ultimate goal of policy should be the expansion of capabilities of people to choose a life they value, rather than desire-fulfillments or possessions of resources, such as income, commodities and wealth.” (Kimhur, 2022, p. 2)

Core - periphery

The core in this thesis refers to the economic heart of a place, which is often stimulated most in growth-oriented planning. The periphery has a weaker economic profile and is at a distance from the core. In between is an intermediary zone, which has a medium distance from the economic heart, both in terms of physical distance and economic profile. On the national scale, the core is interpreted as the Randstad; the periphery as the northern provinces and border regions. The intermediary zone in between core and periphery consists of parts of Noord-Holland, Flevoland, Overijssel, Gelderland, and Noord-Brabant.

Distributive justice

“The principle of moral rightness regarding a distribution (of wealth, for instance). There are various principles of rightness under this heading.” (Buitelaar et al., 2017, p. 110).

Egalitarian justice

“A specific principle of distributive justice in which a distribution is considered right if everyone has (more or less) the same.” (Buitelaar et al., 2017, p. 110)

Limitarian justice

Limitarianism refers to upper limits on the possession, use or enjoyment of valuable, scarce resources. It holds the view that no one should hold a surplus of valuable resources. A surplus is defined as more than necessary for a flourishing life (Robeyns, 2019).

Sufficientarian justice

“Requires that everyone should meet a minimum amount of the things that distributive justice is concerned with.” (Robeyns, 2019, p. 252).

Utilitarian justice

A principle of distributive justice where the distribution is considered just if it leads to ‘the greatest good for the greatest number’.” (Buitelaar et al., 2017, p. 111).

Governance

State, civil society and private actors work in collaboration in a multi-actor setting (Loorbach et al., 2017). The resources and power of multiple stakeholders are used in the decision-making process (Rydin, 2013).

Growth-dependent planning

“The essence of such planning is the reliance on private sector development to generate benefits for the wider community and the use of the planning system to achieve this.” (Rydin, 2013, p.3)

Human needs

“All accounts of needs [...] reject single, usually monetary, measures in favor of ‘lists’ of components. The assumption is that these components are not substitutable: they have merit and contribute to wellbeing in their own right. The approach is ‘objective’ in the sense that collective reasoning is applied to understand needs and wellbeing. Mental feelings can be included in the list, but the focus is on functionings, not feelings.” (Gough, 2020, p. 209).

Justice

Justice can be described as “the principle of moral rightness” (Buitelaar et al., 2017, p. 110). Justice deals with fairness, but it does not describe what is fair. It is therefore a normative concept.

Post-growth

Post-growth is a research field that is concerned with an economy that does not use a single measure like GDP as a target, nor as a measure of success. Several theories and movements can be considered post-growth, such as steady-state economy, agrowth, degrowth and buen vivir (Drewe & Antal, 2016).

Degrowth is the most commonly known term, and entails “a social movement, a political debate and an academic research field.” (Xue, 2022, p. 404). The most common definition of degrowth

is offered by Schneider and colleagues (2010, p. 209): “an equitable downscaling of production and consumption that increases human well-being and enhances ecological conditions at the local and global level, in the short and long term.”

Procedural justice

“Procedural justice is about the guidelines that inform the procedure for public participation and decision-making regarding the implementation of plans.” (Ntiwane & Coetzee, 2018, p. 86)

Recognitional justice

“recognitive justice requires that policies and programmes meet the standard of fairly considering and representing the cultures, values, and situations of all affected parties.” Whyte, 2011, p. 200

Spatial justice

Spatial justice is a specific focus on the spatial components of social justice, which combines both perspectives of distributive and procedural justice (Soja, 2010; Madanipour et al., 2021).

Spatial planning

Spatial planning in this thesis is interpreted as both design of space, in particular setting out aspirations and goals for areas, as well as the institutional organisation of reaching these aspirations and goals, under a governance model.

‘*Spatial planner*’ in this thesis refers to planners working in or for the public sector, in line with Heurkens and colleagues (2015).

Value

A principle or quality which is intrinsically valuable or desirable (Merriam-Webster, n.d.). Value systems are interconnected sets of values based on a certain (collective) belief.

Well-being

A multidimensional construct, which cannot be adequately assessed in with a single measure. It encompasses both satisfaction and objective measures of functioning. See also ‘human needs’.

2. Research design

This short chapter discusses the research design of this thesis. It first starts with an explanation of the theoretical lenses. This entails a short introduction on the theoretical lenses; the main theories from the theoretical lenses are further elaborated in chapter 4 as apart of the second sub-question of the research. In this chapter also the conceptual framework is discussed and explained, as well as the methodological approach to the research.



Figure 2.1: Render portraying a re-development plan for the Tweebosbuurt in Rotterdam, a neighbourhood that has become infamous for its state-led gentrification (VORM, 2021)

Theoretical lenses

As figure 2.3 indicates, the main focus in this research is on spatial justice, but theories from post-growth and well-being are used to support the research as well.

These three research fields do not exclusively deal with spatial questions. Justice and well-being are mostly discussed in philosophy, and the emerging post-growth research field remains mainly economic and political. In this research, the focus is on the literature from these bodies of research that deal with spatial questions, as can be seen in figure 2.2.

These different bodies of research are three separate lenses by which to approach the problem of housing injustices, with justice as the most important lens. On its own, justice literature does not provide enough guidance for spatial strategies, because it does not often include a perspective on intergenerational justice, nor on application to spatial planning. The ethical lens of justice offers considerable input for a justice framework. However, on its own it might be insufficient. With additional literature from post-growth and well-being it is expected that a planning framework that addresses various housing injustices can be developed.

A closer look at the lenses

In the following part the lenses from the framework are further explained. A more extensive explanation of the theories in these fields will be discussed in the chapter 4, as they are part of answering the second sub-question of the research.

Justice

Justice, in particular spatial justice, is the main theoretical body on which the justice framework is based. The starting point of this research, as outlined in the introduction is an observation of disparities which are both caused and perpetuated by the current planning practices, which can be considered unjust.

One of the main products of this research, the justice framework has the objective of incorporating justice values in planning. There are many different interpretations of justice, which are described by many different philosophers and researchers. As Buitelaar (2020) describes, these interpretations to

justice are not always compatible with each other, which makes it necessary to be clear about the justice approaches that guide policy goals to avoid conflicts. For example, giving everyone free choice, which is a libertarian perspective on justice, can be considered just. Equally, an egalitarian perspective on justice, where everyone will receive a similar piece of the pie, can be considered just. However, it requires limitation to individual freedom to achieve equality. These conflicts in justice values can be a challenge for spatial planning, especially when guiding values are unclear (Buitelaar, 2020).

In the second research question, several approaches to justice are discussed, in order to extract justice values which can be applied to the Dutch housing context.

Well-being

Considering that the growth-oriented focus in planning contributes to injustice, one way of making planning more just is by using a different focus. Several authors, such as Cardoso and colleagues (2022), Savini and colleagues (2022) and Rydin (2013), have argued for using well-being or human needs as a guiding principle for planning.

Often in economic or political research it has been attempted to measure well-being with a single (subjective) metric, like life satisfaction, happiness or quality of life (Ruggeri et al., 2020). However, as Ruggeri and colleagues (2020, p. 2) argue, well-being is a multidimensional construct, which cannot be adequately assessed with a single measure. Such a construct should measure both how well people are functioning, as well as their pleasure, so cannot be grasped by one single unit.

Human needs theory

Theory on human needs is concerned with a basic level of well-being. Human needs in general refer to “the set of requirements – personal, economic, social and political – for people to avoid serious harm, realise their aims, lead a satisfactory life and participate in societal development.” (Cardoso et al., 2022, p. 2640). An important distinction that is made in human needs theory is between the needs themselves, which

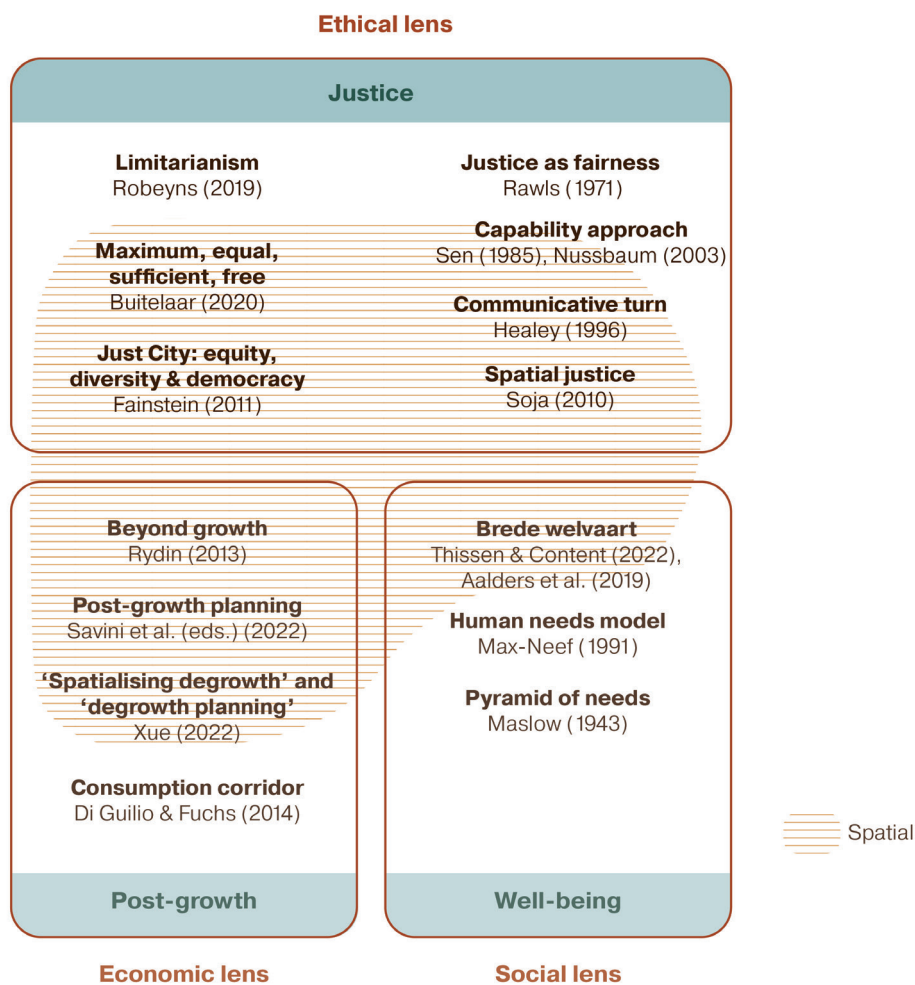


Figure 2.2: Theoretical lenses. Main theories in relation to their lenses, made by author

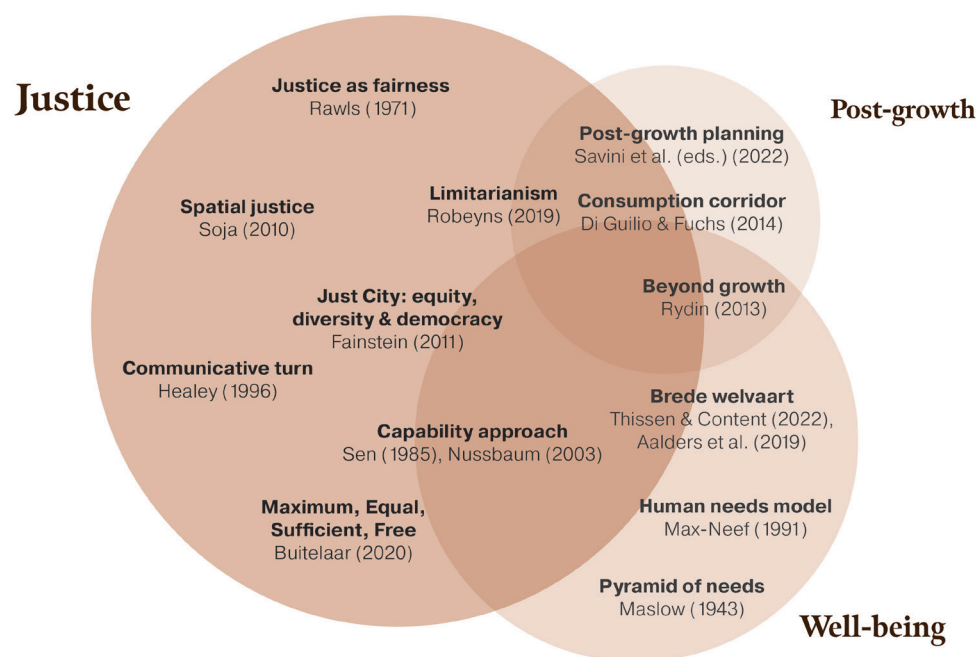


Figure 2.3: Venn diagram showing the overlap between the theoretical lenses, made by author

are potentially universal and the satisfiers of those needs, that vary with context (Gasper, 2022; Cardoso et al., 2022). Similar to general well-being, it requires multiple indicators to measure human needs.

Broad welfare

Broad welfare (from the Dutch *brede welvaart*) is a well-being concept that connects the research to the Dutch planning and policy discourse. Several agencies have worked on developing a way to measure broad welfare. These models analyse societal progress on multiple indicators, in a wider context than just economics, including factors that lead to satisfaction in the present, the influence on elsewhere, and the influence of indicators in the future (Aalders et al, 2019; Thissen & Content, 2022; CBS, 2022). These models all go beyond human needs, including desires as well. The different configurations of indicators and measurements give very different results, which proves the difficulty of measuring well-being accurately and objectively. These models are mostly relational, comparing places with each other, rather than computing independent scores.

Post-growth

The post-growth debate offers a sustainability perspective, relating to intergenerational and environmental justice (Ntiwane & Coetzee, 2018). Post-growth is the umbrella term of perspectives that critique a focus on aggregate economic indicators such as GDP to motivate policies and track progress of human society. Post-growth thinkers will generally agree with this critique of economic growth as main goal, consensus is lacking on what defines a post-growth society and what it entails (Savini et al., 2022b). Generally there is a sustainability perspective present in post-growth literature. As Jin Xue (2022, p. 404) puts it for degrowth, a branch of post-growth: "Central to the degrowth thinking is living within ecological limits by reducing production and consumption levels, and meanwhile striving for well-being for all and enhancing justice and democracy." Post-growth perspectives aim to be aspirational for many people, integrating a perspective on well-being. However, much of the literature remains vague about what "equitable" and "well-being" entail (Drews & Antal, 2016, p. 185).

Sustainability has become an integral part of contemporary policy-making. However, the dominant way of thinking about sustainability in planning is green growth (Xue, 2022; Hickel, 2021). The idea of green growth is based on the assumption that

it is possible to decouple economic growth from environmental impact (Hickel, 2021). However, several scholars argue that this is a risky assumption, for example, because there are limits to the growth of renewable energy (Hickel, 2021). Apart from this, it is important to recognise that emissions are not the only environmental burden. Even if everything were to be made with green energy, other resources still remain scarce. Fresh water, crop land, and rare metals are finite and cannot satisfy ever growing levels of consumption. In other words, there are spatial limitations to growth.

Aside from whether it is possible to decouple growth from resource use, 'green growth' does not question the structures that produce systematic inequalities, which is the initial problem outlined in this research. Urban economic growth is entangled with ecological damage and degradation of living conditions of more vulnerable social groups, and attempts to decouple urban growth from this socio-ecological impact have ultimately been ineffective (Xue, 2015). Therefore, a sustainability perspective which considers a post-growth future is more plausible for a justice framework.

Distinction justice and well-being

There is an overlap between justice and well-being. Not only income or opportunities can be fairly distributed, arguably a fair distribution of well-being is a better goal.

Well-being of one person, might influence the well-being of others. This is partially a spatial process (Storper, 2014). Satisfiers and dissatisfiers of well-being are co-located in space, "[serving] the interests of some groups while harming or neglecting others." (Cardoso et al., 2022, p. 2655). For example, car mobility can give individual freedom to one person, thus improve their well-being. However, the pollution and noise caused along the way influence another's well-being negatively.

Another spatial component of well-being is spatial quality, which is an important goal in Dutch spatial planning (Ministerie van Binnenlandse Zaken en Koninkrijksrelaties, 2020). Many spatial elements that contribute to well-being, such as infrastructure, energy, consumption, have an effect on spatial quality. The other way around, good spatial quality can also contribute to well-being.

Distinction justice and post-growth

The focus of the post-growth movement is on downscaling production and consumption (Xue,

2022). At the core, this does not necessarily mean it is just. Enhancing democracy and well-being are secondary goals to the post-growth movement, although frequently mentioned. Fundamentally, the post-growth literature does not specify what distributive or procedural principles should be used to make society more just.

Distinction post-growth and well-being

Achieving a decent level of well-being requires finite (spatial) resources (Raworth, 2012). The current problem in the Netherlands is that, although all social goals are achieved, this is done at the expense of overshooting planetary boundaries (Hickel, 2019). Thus, planning for well-being could have a negative effect on sustainability.

Because post-growth is a critique on using the metric of growth as an indicator of human progress, there is also a clear connection between post-growth and well-being. Namely, several post-growth theories have well-being at its core. These approaches which promote an alternative ideal such as “the good life” aim at directly improving well-being, rather than indirectly through economic growth (Dreus & Antal, 2016).

Conclusion

The literature connected to these theoretical lenses is further explored in the development of the justice framework, which is the focus of the second research question. The name ‘justice framework’ already gives away that the focus of this framework is on justice theories. However, as has been discussed in this paragraph, the other two lenses of post-growth and well-being are supplementary.

Methodology

The first part of the research, which is focused on developing a justice framework, consists of more traditional research methods: literature review, policy review, data analysis and stakeholder analysis. This theoretical and empirical analysis considers the spatial dimension specifically, because the justice framework should serve as a tool in spatial planning. Although the justice framework is based on normative values which are in a sense non-temporal, the application to a case study in the Netherlands make it more contextual. The theories offer possible values, but these values have to be extracted in order to be applied to the Dutch context. Such value extraction is common in methodologies on planning for the long-term future (Government Office for Science, 2016).

The second step in the research, the application to a case study (sub-question 3), is based on the previously developed framework. Some questions are still unanswered after the literature review in the first research question. Therefore, some additional literature review is required in this step. Additional analysis of the site as well as of policy is required too.

The design, based on the framework is conveyed through the techniques of 2D mapping and 3D imagery in collages. Patterns/principles serve as a translation between the justice framework and application to context.

To what extent can a framework based on justice values help spatial planners design for justice in the housing domain in Dutch regions?

sub-questions

1. To what extent are socio-spatial injustices in housing a result of contemporary planning practices?
2. What are the values behind different approaches of spatial justice and how can these values be operationalised for spatial planning?
3. How can a framework based on justice values help spatial planners to develop a planning and design strategy for housing in a region in the Netherlands?

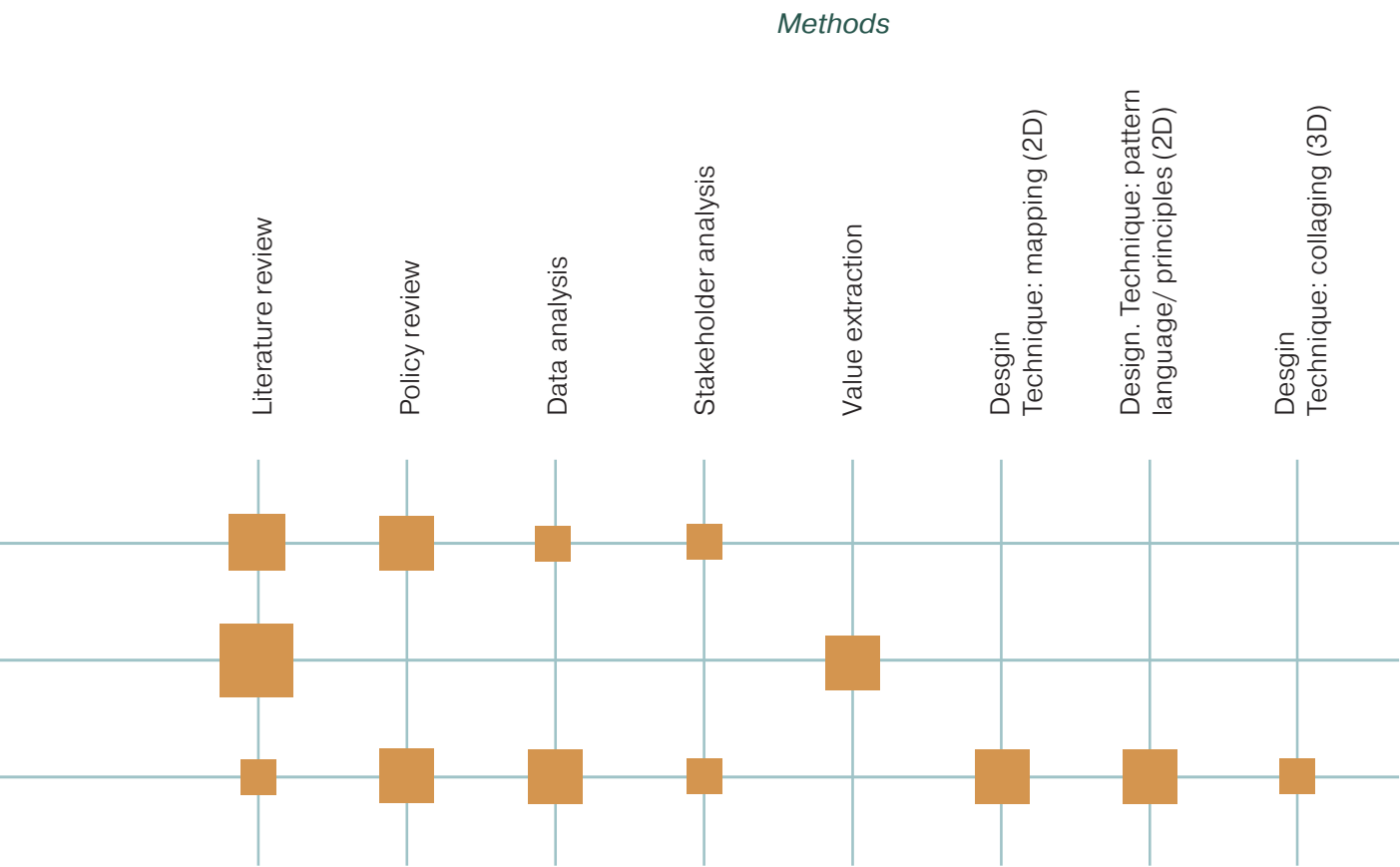


Figure 2.4: Overview of applied methods in relation to research questions, made by author

Literature review

There is an extensive body of literature written about (spatial) justice. This concerns scientific articles, books and grey literature. The literature that is used is both general on the topic of justice, as well as more applied to planning. The literature helps to understand the existing body of knowledge on justice. Additionally, connecting different literature sources helps to develop new insights.

Goal: literature on housing injustices is used to identify the problem. Next to this, literature is used to construct the justice framework.

Policy review

Planning practice is not often documented in formal literature. Instead, planning is documented in policies and spatial plans. These policies require critical evaluation to understand their goals and values and the effect that they have. (Historic) national planning policies, which reflect the trend in the whole of the Netherlands are analysed to understand the contribution of planning to current injustices. A further policy review of local policy is done in the case study location.

Goal: understand the current policies that influence spatial justice, and evaluate the contribution of these policies to injustice.

Data analysis

Primary and secondary data

Literature is not always place-specific. In order to develop a justice framework and a strategy for the Dutch context, it is necessary to understand this context. Data analysis helps to understand both the problem and the context.

Analysis of data can also help to identify trends, which should be considered in a design for the future situation. Trends can also hint towards the type of strategies that are required. Sources for data include CBS and other open data sources.

Goal: gain additional insight in housing and well-being injustices in the Netherlands in general and in the case study site.

Data mapping

Visualising data on maps can help in understanding the spatial dimension of injustices. Combining different data sets in a spatial context can help reveal patterns. Sources for spatial data include PDOK and Nationaal Georegister.

Goal: understand the spatial dimension of injustices in the analysis phases. In the case study, data mapping is used to reveal vulnerable areas which require intervention.

Stakeholder analysis

It is important to understand the decision-making environment in which spatial planners operate in order to develop strategies which can be used by spatial planners. An analysis of stakeholders, their goals, power and interest is input for how to steer developments.

Goal: provide insight in the role of different stakeholders and their influence. This helps to understand the way in which spatial planners can influence developments.

Value extraction

The literature and policy review provide insight in what the possible values are that could guide a justice framework. However, a next step is to extract and apply the values found in literature. The combined information from justice literature and the housing challenges allow for a translation of abstract values to applied values.

Goal: develop a list of justice values that serve as an input for the justice framework.

Design

Pattern language

The justice framework is not just evaluative, but should also help planners to develop strategies. In order to translate the challenges and general strategies and considerations from the justice framework to a strategic design, patterns which indicate implementation strategies and considerations are used. Patterns are used to present design solutions in digestible bits. "On the one hand, the pattern is underpinned with theory, while on the other hand, the pattern is clarified with a design sketch or an example. In one 'simple' overview a pattern presents a bridge between a problem and a solution." (Rooij & Van Dorst, 2020, p. 59).

Goal: connection between literature and design. Transitioning step for application of the framework to the location. Improving the framework based on new information from patterns.

Design mapping & collaging

The principles from the patterns themselves are simplifications of problems and their solutions. The complexity kicks in when patterns are combined. In the design for a case study, patterns are combined and applied to the situation. This is done through mapping as well as 3D visualisations in the form of collages or drawings.

Goal: visualise how possible combinations of patterns can help create strategies for justice. Make interventions more tangible by adding the third dimension.

3. The role of spatial planning

This chapter gives insight in the first sub-question: *'To what extent are socio-spatial injustices in housing a result of contemporary planning practices?'*

In this chapter the ways in which spatial planners can steer developments is discussed. First, a categorisation of possible steering instruments is discussed. Then, the actors which play a role in the housing domain are discussed and the power and interest they have is assessed. These actors can deploy steering instruments (in case of public sector actors), or should be steered with these instruments (in case of market and civil society actors).

Subsequently, the problems as outlined in the introduction are discussed and categorised under three headers: social selectiveness, spatial selectiveness and short-termism in spatial planning. In this discussion, the role of spatial planning in the perpetuation and exacerbation of these problems is analysed.



Figure 3.1: Climate adaptation in a new-built project in Deventer. Photo by author.

Spatial planning instruments

Some inequalities or injustices are manifested in space. However, not all inequalities are a direct or indirect result of spatial planning per se, so it is important to understand which injustices are influenced by spatial planners. Important in this understanding is the shift from government to governance in spatial planning. Whereas until around the 1980's the role of the government was active and directing, with direct government involvement in spatial affairs, recent planning takes place in collaboration with many stakeholders and public spatial planning authorities need to work together with market parties to implement public planning policies (Van der Cammen & De Klerk, 2003; Heurkens et al., 2015). Within this constellation spatial planners have several instruments which they can deploy to influence the decision-environment of market actors (Heurkens et al., 2015). In this research the classification described by Heurkens and colleagues (2015) is used. This classification is originally developed by Adams and Tiesdell (2013) and adapts well to the governance context in Dutch spatial planning. They describe four types of planning instruments which can influence market actors in development processes (see figure 3.2).

Shaping instruments

Shaping instruments set the context for market actions. They change the boundary conditions in which other actors operate and aim to modify the behaviour of actors. Documents such as plans, strategies, visions and designs are characteristic shaping instruments that planners can use to manage or encourage certain developments.

Regulatory instruments

Regulatory instruments put certain restrictions on the decision environment of market actors. They aim to compel, manage or eliminate certain (aspects of) activities. An example of a regulatory instrument is requirements for building permits. Such legal requirements are one-directional from the state, but contractual regulation is also possible.

Stimulus instruments

Stimulus instruments expand the decision environment of market actors. These instruments make certain developments more rewarding for market actors. This can involve direct state actions that helps start up development, such as the provision of infrastructure. Other instruments include price-adjusting, risk-reducing and capital-raising actions, such as subsidies and tax-breaks.

Capacity building instruments

Capacity building instruments are aimed at facilitating the functioning of the other three types of instruments. They are about building relations and trust among the range of development actors (Heurkens et al., 2015).

Spatial planning instruments and injustices

The current housing injustices have emerged within a governance setting, where spatial planners aim to influence the behaviour of other actors. Injustices cannot be seen as a result of spatial planning alone, nor of market action alone. The use of some spatial planning instruments has directly resulted in inequalities, while some inequalities are an indirect result of the use of spatial planning tools. Additionally, it could be said that a lack of response to market forces and refraining from utilizing certain planning instruments has contributed to injustices in housing. In the following section, the problems which have been described previously are scrutinized on the influence that planning has had on their creation and perpetuation.

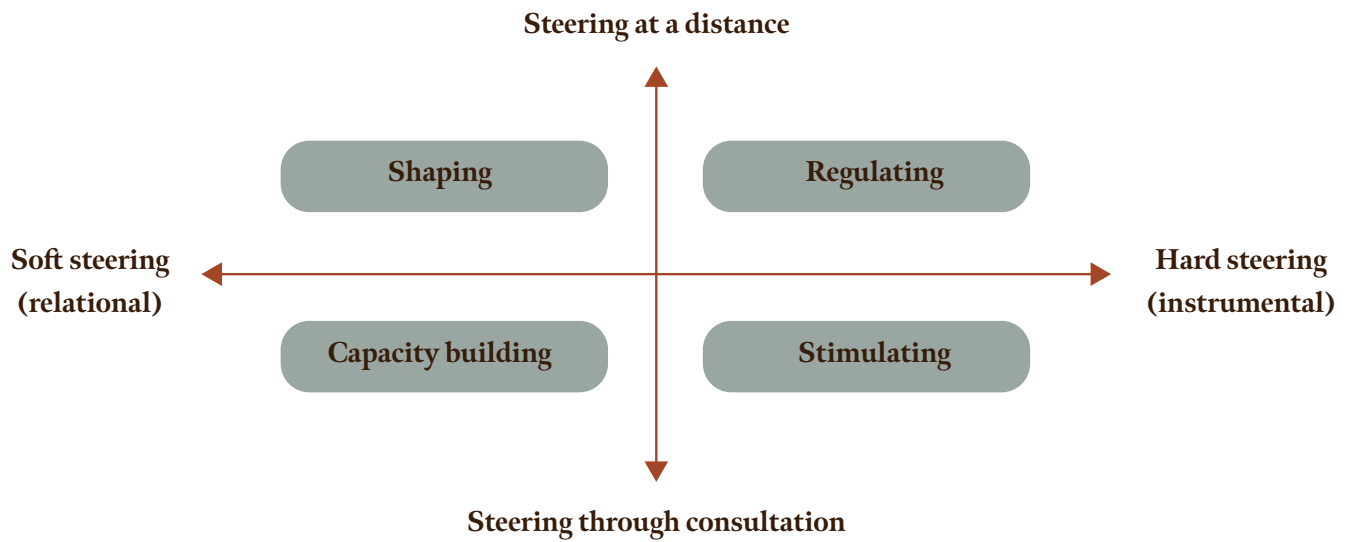


Figure 3.2. Planning instruments according to the type of steering, adapted from Heurkens et al. (2015)

Stakeholder analysis

Understanding how spatial planning influences injustices requires understanding the stakeholders that are involved in spatial planning processes. Figures 3.3 and 3.4 show the main stakeholders in the spatial planning of housing. They show the stakeholders for new housing development and interventions in the existing stock respectively. Table 3.1 gives more information on the placement of these stakeholders in the figures.

Diagram explanation

The stakeholders are placed in an onion diagram (Alexander & Robertson, 2004), which consists of three layers of stakeholders. The stakeholders in the core layer of the diagram are the primary stakeholders, which have a direct operational involvement and significant influence on the development process (Alexander & Robertson, 2004; Czischke, 2018). Stakeholders in the middle layer have an important role in the spatial planning of housing, but are not involved in its daily operations. Stakeholders in this category have medium to high control over resources (Czischke, 2018). Lastly, the outer ring of stakeholders concerns bystanders, or the wider planning environment. These stakeholders are affected in some way by the spatial planning of housing or are indirectly involved, but they have little legitimacy and control over resources (Alexander & Robertson, 2004; Czischke, 2018).

Similar to Czischke (2018), this stakeholder onion diagram is divided into three domains to which stakeholders belong: market, state and civil society. These domains work together in a multi-actor governance setting (Loorbach et al., 2017). This distinction helps to organise the diagram, but also gives an indication of interests.

Discussion

The diagrams in figures 3.3 and 3.4 offer a general overview of stakeholders in the spatial planning of the Dutch housing sector. This scheme is more or less consistent throughout the Netherlands. However, in different places the diagrams could look slightly different, for instance due to different constellations of land ownership.

It should be stressed that these figures are a generalisation. In practice many more (specific) stakeholders are involved. There are too many bystanders to place in the outer ring of the framework. This would concern NGO's, semi-governmental organisations, supranational governmental organisations and schools for example, which are not captured by the stakeholder categories currently in the figures. Secondly, a further breakdown could be made of the stakeholders that are represented in the figure: different types of residents, different types of businesses and different branches within governments, each with different power and interest. Furthermore, specific locations might draw some stakeholders more towards the core, because they have specific interests in that location. Spatial planning in existing urban areas is different than greenfield developments, because the ownership of land and the amount of stakeholders is different.

The stakeholder analysis has some limitations. In the first place, it is difficult to properly assess the power, interests and resources of stakeholders without talking to stakeholders directly. Additionally, there can be conflicting interests within one stakeholder category. There are for example multiple municipalities, which might have different goals. Within a governmental organisation there are different departments, which might have opposing views. On top of this, governments change regularly, which might change their objectives and interests over time.

Regarding the stakeholders in the market sector, the interests can even be more divergent. There are many different actors represented in one stakeholder bubble. These actors within a bubble can have divergent interest.

Specific interests and capabilities of stakeholders

The diagrams in figures 3.3 and 3.4 are constructed based on the power and interests of each stakeholder. Table 3.1 gives an overview of the interests and capabilities and resources that dictate the place of stakeholders in figures 3.3 and 3.4.

The capabilities and resources are classified using the three dimensions of power of De Bruijn and

New development

State

- S State
- M Municipalities
- P Provinces
- WB Water boards
- SP Spatial planners

Civil society

- R Residents
- FR Future residents
- HO House owners

Market

- A Architects / Urban designers
- HA Housing Associations
- II Investors (institutional)
- PI Investors (private)
- D Developers
- E Entrepreneurs / businesses
- LO Land owners

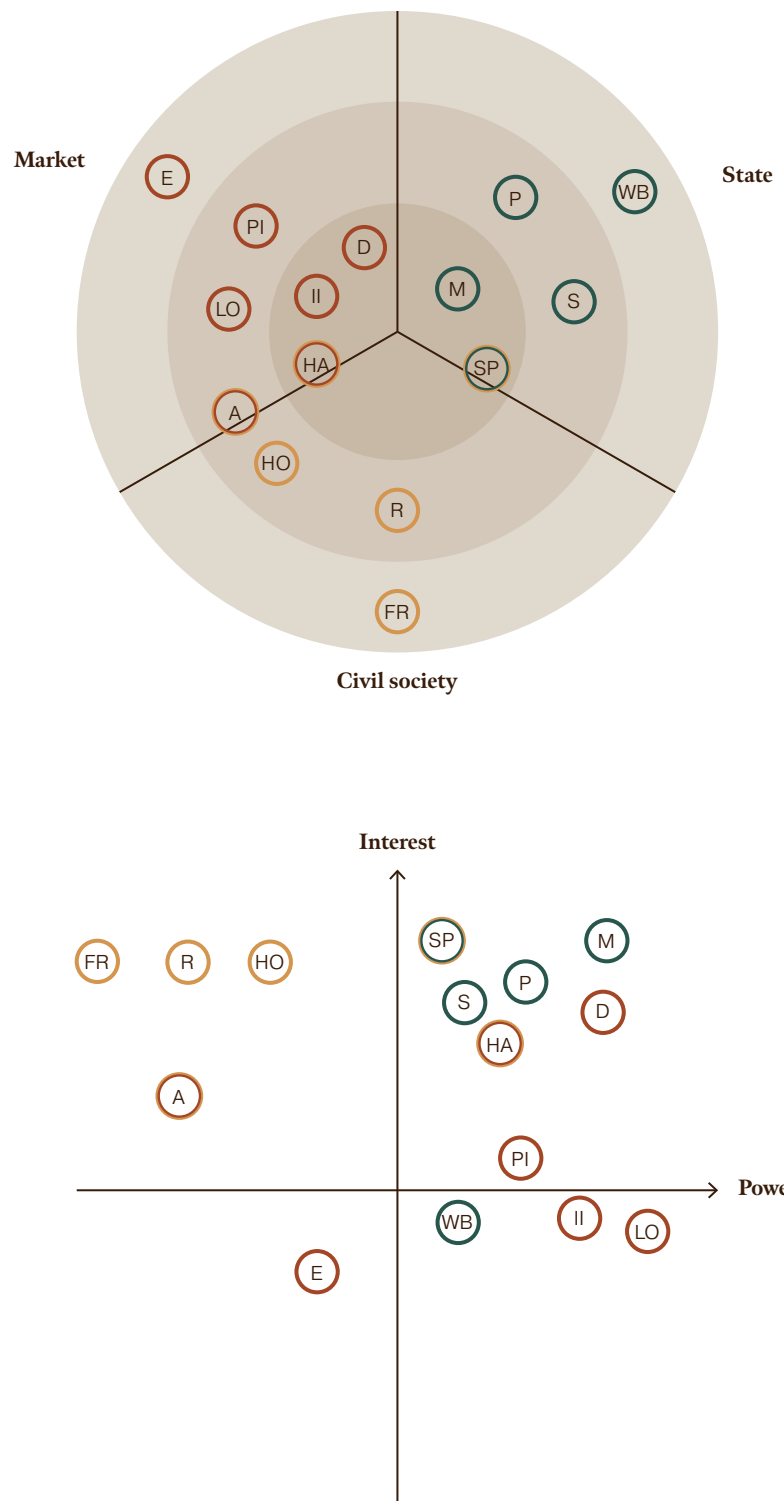


Figure 3.3: Stakeholder analysis for new developments in onion diagram and power-interest matrix, by author.

Existing stock

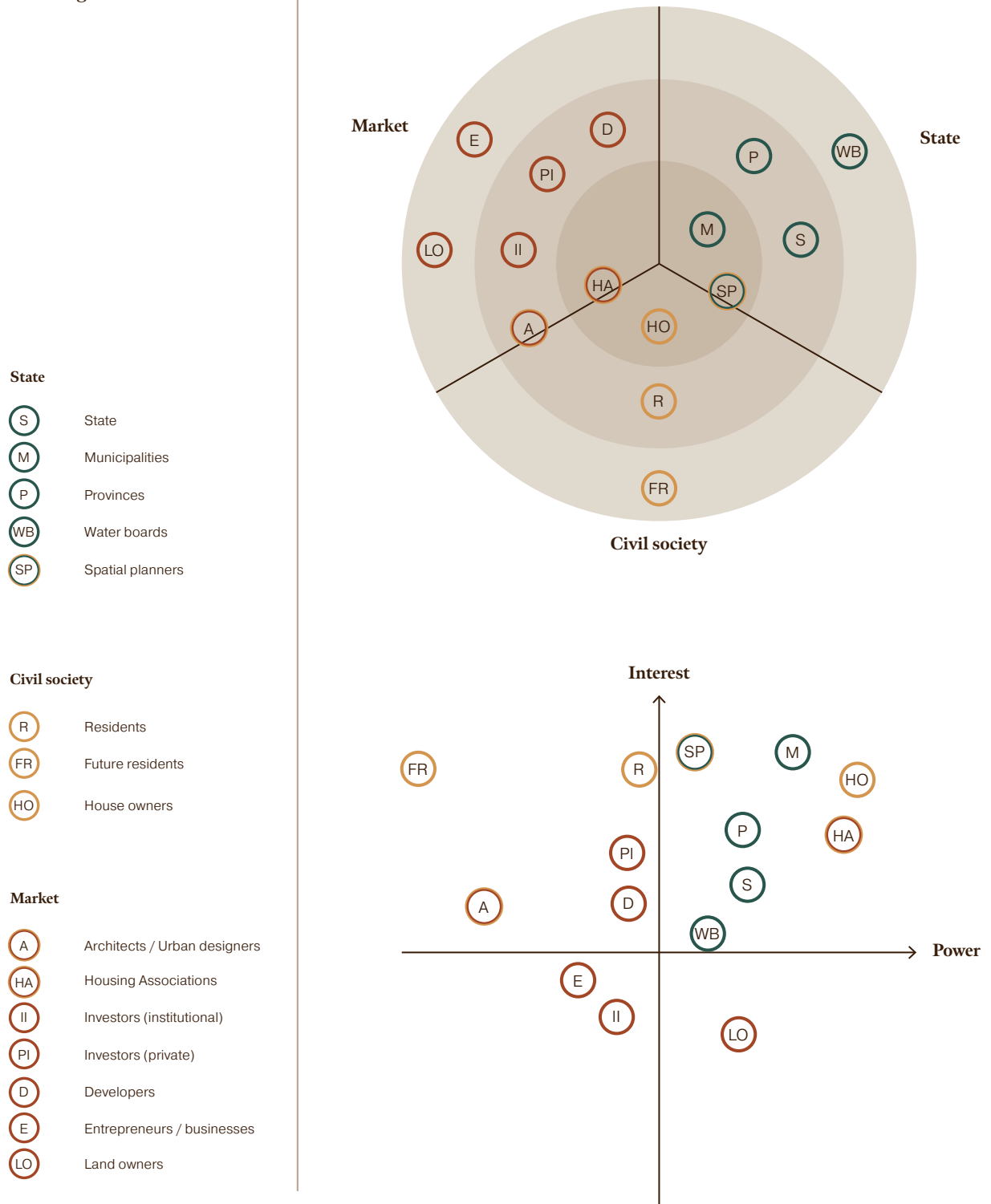


Figure 3.4: Stakeholder analysis for the existing housing stock in onion diagram and power-interest matrix, by author.

Ten Heuvelhof (2008, p. 37-38). According to this classification, the power of stakeholders can be categorised with three power positions:

- Production power – the ability to make a positive contribution to something happening.
- Blocking power – the ability to halt something.
- A diffuse power position - unclear what the power position of an actor is, that the position may change or that it is unclear if resources and relations will be used by the stakeholder.

These power positions are informed by the resources and capabilities of stakeholders, the strength of their network and the repetitive character of relations (De Bruijn & Ten Heuvelhof, 2008).

Table 3.1 : interests and capabilities of the stakeholders in figure 3.3

Stakeholder	Specification	Interests and objectives	Capabilities and resources
Municipalities	<ul style="list-style-type: none"> • Full municipal organisation • Including non-spatial departments 	<ul style="list-style-type: none"> • Enough housing for its residents • Gains taxes from residents, based on home value and on actual use (OZB, sewage) • Liveability (maintenance and provision of public amenities) 	<ul style="list-style-type: none"> • Production power: land ownership, subsidies, infrastructure provision, discussion partner with stakeholders • Blocking power: zoning plans, refusing to give permits • Connecting stakeholders
Provinces	<ul style="list-style-type: none"> • Full provincial organisation • Including non-spatial departments. • Focus on spatial department 	<ul style="list-style-type: none"> • Protection of natural areas • Develop spatial plans for the province • Speed up the dwelling production (objective province of Gelderland) 	<ul style="list-style-type: none"> • Production power: subsidies, infrastructure provision • Blocking power: structure plans, refusing greenfield expansion • Connecting stakeholders
State	<ul style="list-style-type: none"> • Full national government • Particular focus on the Ministry of the Interior, dealing with spatial affairs 	Objectives Ministry of the Interior: <ul style="list-style-type: none"> • Speed up the dwelling production • Develop affordable housing • Provide enough housing 	<ul style="list-style-type: none"> • Production power: land ownership, subsidies, infrastructure provision • Blocking power: zoning plans, refusing to give permits • Connecting stakeholders
Water Boards	<ul style="list-style-type: none"> • Full organisation 	<ul style="list-style-type: none"> • Protection against floods • Healthy water balance in the soil • (Aquatic) nature conservation • Gains taxes from residents 	<ul style="list-style-type: none"> • Production power: development of protective infrastructure • Blocking power: management of water levels
Spatial planners	<ul style="list-style-type: none"> • Planners working in or for the public sector. • Dealing with public visioning, zoning plans, capacity building in spatial domain 	<ul style="list-style-type: none"> • Improve well-being • Create and maintain spatial quality • Make developments future-proof • Balance the interests of different stakeholders • Create planning gain 	<ul style="list-style-type: none"> • Production power: create strategic plans • Blocking power: zoning plans, requirements for developments

Table 3.1 (continued): interests and capabilities of the stakeholders in figure 3.3

Actor	Specification	Interests and objectives	Capabilities and resources
Residents	<ul style="list-style-type: none"> • Complete set of current residents • Some are house-owners • Excluding future residents 	<ul style="list-style-type: none"> • Affordable and high-quality housing • High level of well-being (individual satisfiers for this goal) 	<ul style="list-style-type: none"> • Diffuse power: participation in planning and ability to protest. Some residents are also house owners
Future residents	<ul style="list-style-type: none"> • Residents in the far future • Excluding those that are currently main residents 	<ul style="list-style-type: none"> • Affordable and high-quality housing • High level of well-being (individual satisfiers for this goal) 	<ul style="list-style-type: none"> • No power
Organised residents	<ul style="list-style-type: none"> • Residents organised in collectives or tenants associations 	<ul style="list-style-type: none"> • Affordable and high-quality housing • High level of well-being 	<ul style="list-style-type: none"> • Diffuse power: participation in planning and negotiation with other stakeholders
House owners	<ul style="list-style-type: none"> • Current owners of dwellings 	<ul style="list-style-type: none"> • Low living costs • High level of well-being • Financial security 	<ul style="list-style-type: none"> • Blocking power: ownership of land and dwelling. Can refuse to sell or renovate. Particularly relevant for interventions in existing stock
Architects / Urban Designers	<ul style="list-style-type: none"> • Designers working for the private sector 	<ul style="list-style-type: none"> • (Spatial) quality 	<ul style="list-style-type: none"> • Diffuse power: minor interventions in project plans; crowd mobilisation through visioning and design
Housing Associations	<ul style="list-style-type: none"> • Housings associations active in the region 	<ul style="list-style-type: none"> • Provide affordable housing for people in the lowest income group • Renovate existing stock of housing 	<ul style="list-style-type: none"> • Production power: capital, knowledge • Diffuse power: few stakeholders willing to construct social housing (dependency of government)
Institutional investors	<ul style="list-style-type: none"> • Banks, pension funds and other companies with investments as core business 	<ul style="list-style-type: none"> • Financial gain 	<ul style="list-style-type: none"> • Production power: capital • Main provider of middle-segment rental housing
Private investors	<ul style="list-style-type: none"> • Small investors, such as private individuals or small businesses 	<ul style="list-style-type: none"> • Financial gain 	<ul style="list-style-type: none"> • Production power: capital • Main provider of middle-segment rental housing
Developers	<ul style="list-style-type: none"> • Initiator and coordinator of construction projects • Coordinator of large renovation projects 	<ul style="list-style-type: none"> • Financial gain 	<ul style="list-style-type: none"> • Production power: capital, risk and initiative, knowledge of process, connections to construction companies
Entrepreneurs / businesses	<ul style="list-style-type: none"> • Owner and/or user of commercial buildings 	<ul style="list-style-type: none"> • Financial gain • Security of future operation 	<ul style="list-style-type: none"> • Production power: capital, land ownership • Blocking power: refusal to collaborate or make place for housing
Land owners	<ul style="list-style-type: none"> • Owners of land, can be divergent set of actors, such as farmers or government • Excluding 	<ul style="list-style-type: none"> • Use of land for production or for personal use, to contribute to well-being • Financial gain 	<ul style="list-style-type: none"> • Production power: land ownership • Blocking power: refusal to sell or develop land, use land for other purposes.

Analysis results

From the stakeholder analysis we can conclude that the main actors in spatial planning of housing are municipalities and housing associations, who are at the core of the onion diagram both for new developments and interventions and the existing stock. Developers, investors and home owners are also core stakeholders for either new development or interventions in the existing stock.

The governmental actors each have production power and blocking power, as well as the capacity to connect stakeholders. These are essential for the development of housing. However, they do lack significant resources and knowledge to build and renovate housing and are not expected to take financial risks. This production power is provided by developers, housing associations and investors.

In this research, spatial planners are interpreted as working in or for the public sector (Heurkens et al., 2015). Nonetheless, they have less power than the stakeholder 'municipalities', because spatial planning is just one of the departments within municipalities. The combination of departments makes them more powerful as a whole. Interests can be more divergent within these different departments as well.

One interesting element from this analysis is the specific power that institutional and private investors have: they create and maintain the supply of private rental housing. The exclusive power over this segment grants them a special type of blocking power, if there is a goal to have a certain share of private rental housing, these stakeholders are required. However, since 2021, housing associations also have temporarily gained more rights for developing private rental housing (Ministerie van Binnenlandse Zaken en Koninkrijksrelaties, 2023a), which restricts the power of institutional and private investors.

The position of housing associations is interesting, because they have multiple roles. They act as developer, initiating projects, with knowledge of the process. They also provide their own capital for developments, which makes them investors too. Furthermore, they perform a governmental task of providing affordable housing, and their efforts to improve liveability (Ministerie van Binnenlandse Zaken en Koninkrijksrelaties, 2023a), could be seen as part of civic society. Because of their limited financial capacity and restricted tasks, they hold less power than true market parties.

The stakeholders from civic society are not represented as core stakeholders in new developments, because they lack power in the development process, despite their high interests. The power of these groups is limited to engaging in participation. The group of home owners does have more power, because they (usually) own land. For interventions in the existing stock, the group of home owners can be seen as a core stakeholder, because they possess the majority of dwellings and their cooperation is essential for interventions. This is opposite from developers, who are essential in new developments, but less important in interventions in the existing stock.

Social selectiveness

Current spatial planning practice is socially selective. The government focus on attracting high-income residents and a reliance on market actors in search for profit, disregards renters, low-income and several middle-income groups, which limits the available housing and leads to problems of affordability and to displacement.

A first major problem is that housing has become unaffordable for many people. Housing expenses have grown in all housing sectors, with increasing rent prices as well as increasing house prices. A second major problem is a housing shortage. Consequentially, A lack of affordable options or increasing prices can in turn lead to displacement, suburbanisation of poverty, or residents coping with unsuitable living conditions (Hochstenbach & Musterd, 2018).

However, not everyone is equally affected by these problems. Conversely, for many people the housing market works wonders. Those that already own a house have seen their virtual wealth increase dramatically, investors in housing are able to make good profit and many people in social rented dwellings are able to sustain a good living. Instead, these issues are predominantly felt by two groups, which are often overlapping: renters and people with a low-income or middle-income. Although not everyone in these groups experiences these problems, for instance when they have bought a dwelling in favourable market conditions, many people from these groups experience severe housing problems. Thus, the current housing market does not work for everyone.

Trends not attributable to spatial planning

Some trends that contribute to the precarious situation of low-income and middle-income groups are not directly affected by spatial planning policy. There are for instance several fiscal policies that are only advantageous to home-owners. Owner-focused tax breaks do contribute to disparities (Hochstenbach, 2022), but are more of a fiscal policy than a spatial policy. Equally, the commodification of housing is also partially a result of fiscal policy, with investment constructs that allowed for speculation in the housing sector. This is outside of the scope of influence of

spatial planners. Instead, planners have to work with the conditions of a housing sector which has become financialised.

Another financial measure which has been highly influential is the Landlord Levy. This tax specifically exists for landlords providing social housing and has significantly reduced the investment capacity of housing associations. As a result, landlords have increased the rent and have sold a share of their properties (Hoekstra, 2017). In order to make sales worthwhile, housing associations mainly sold properties in areas with high demand, leaving the less attractive houses in their portfolio (Hochstenbach, 2022). The Landlord Levy also restricted how much housing associations could invest in the renovation of dwellings to make them more sustainable, as well as the capability to build new dwellings (Langenberg & Jonkers, 2022). Simultaneously demand for new social housing grew, due to changes in household structure and population growth, in part due to the influx of asylum seekers, but also because new groups such as psychiatric patients and former prisoners have been stimulated to live independently in social housing (Hoekstra, 2017). As a consequence, the social housing sector has become relatively more expensive and is mainly focused on providing dwellings for a growing concentration of vulnerable groups.

The residualisation of social housing can partly be attributed to international regulation. The European Commission declared that Dutch housing associations received state aid, which the European Union only allows under strict conditions. As a result, housing associations should focus on target groups. New policy declared that at least 90% of new allocations should go to target groups (those eligible for a housing allowance), whereas previously that was 75% (Hoekstra, 2017). Even though a 90% allocation rate to target groups in social housing is already strict, the government later raised this to 95%, which has been a national, not a European decision.

Contribution of spatial planning to the problems

Many regulations regarding the affordability of housing are a matter of national policy. Restrictions

for housing associations play a major role on making housing less affordable for lower income groups. Another contribution to unaffordable housing has been the strategy of the Dutch government to promote the Dutch housing market on international real estate fairs and through government channels as an investment opportunity. At the same time the conditions for private rental were eased, for example by allowing two-year contracts, which gave less obligations to landlords (Hochstenbach, 2022). A combination of increased investments and a lack of regulation on contract requirements and rent prices, has resulted in high rent prices, especially for middle-income groups, when they are not eligible for social housing, nor able to buy a home.

On a national level, new regulations on private rent levels have been announced (Hochstenbach, 2023). On a local level, some of these policies are already mitigated by the introduction of an obligation that the buyer will reside in the house themselves, in order to prevent speculative investments (Gemeente Amsterdam, n.d.).

The influence of planners on the existing stock of housing is somewhat limited. Planners have more influence on new developments. Dutch governments do not build dwellings themselves and the social housing sector has been rather muted in the last decade, which means that there is an increasing reliance on private parties to develop housing in the Netherlands. Unlike housing associations, private parties have a profit-objective. This profit objective makes the development of higher-end housing with higher profit margins more attractive. Developers need building permits and changes to the zoning plan in order to develop plans. Planners can impose regulations or make contractual regulations in order to leverage plans to make them more compatible with governmental goals (Rydin, 2013). In this way, spatial planning does have an influence on the amount and type of housing that is built and thus theoretically has an influence on the match of supply and demand. Governments could demand a specific share of affordable housing and stimulate this with subsidies, or tax breaks. Such stimulation has been done extensively up until the 1970's (Van der Cammen & De Klerk, 2003; Fainstein, 2011). However, in recent decades planning goals have not much stimulated the development of affordable housing. Instead, policy has been aimed at attracting more middle-income or high-income residents. When cities were in a bad state in the 1980's, strategic projects were initiated to revitalise the city and attract households with middle- or high incomes. Cities were actively marketed to

these groups and developments were aimed to facilitate them (Van der Cammen & De Klerk, 2003). As a result, policy aims shifted from facilitating a wide range of inhabitants to attracting specific 'desirable groups' (Van Veelen, 2022).

As a consequence, the goal for the share of social housing that is deemed desirable has been reduced (Hochstenbach, 2022), and municipalities have become fond of developing areas to suit the need of high-income groups. This can be seen in the large relative change in the stock of larger houses (Langenberg & Jonkers, 2022), generally aimed at more affluent groups.

Another example of a strategy that follows from the objective to attract 'more desirable groups' is state-led gentrification. Whereas previously policy was focused on improving the social situation in a neighbourhood, a new strategy has become to change the demographic composition in areas where problems are concentrated (Uitermark et al., 2007). The demolition and redevelopment in these areas may be positive for the area, but not necessarily for the people in an area.

Conclusion

Several policies that affect the precarious situation of renters and low-income groups in general can only be influenced on a national scale, such as policies that have led to the residualisation of social housing.

On a local scale, it is harder for planners to influence the existing building stock. However, redevelopment practices initiated by the government can lead to adverse effects such as state-led gentrification leading to displacement of vulnerable groups.

New developments tend to be focused on attracting 'more desirable groups', even though the situation of more vulnerable groups has become increasingly distressed by processes such as residualisation of social housing and financialisation of housing. Social selectiveness is enhanced by the increasing reliance on market actors, who seek to make a profit, which hampers development of housing which is affordable and desirable to low and middle income groups.

Table 3.1: Spatial planning instruments influencing social selectiveness

Instrument	Activity / policy / plan	Scale	Effect
Shaping	<ul style="list-style-type: none"> Lower social housing targets in policy goals (Hochstenbach, 2022; Fainstein, 2011) 	Local	<p>Exacerbate/perpetuate Direct / indirect</p> <ul style="list-style-type: none"> New developments tend to be more exclusive. Less supply for a group that has limited options.
Shaping	<ul style="list-style-type: none"> Marketing cities to higher income groups. This is reflected in policy goals and targets for the share of (expensive) housing or even explicitly stating the need for 'more desirable groups' (Uitermark et al., 2007). 	Local	<p>Exacerbate/perpetuate Direct / indirect</p> <ul style="list-style-type: none"> New developments tend to be more exclusive. Limited amount of dwellings available to starters. Scarcity of middle-income housing can drive up the price.
Regulating	<ul style="list-style-type: none"> 95% of social housing should be allocated to people that are eligible for housing allowance (Hoekstra, 2017). 	National, all	<p>Exacerbate/perpetuate Direct / indirect</p> <ul style="list-style-type: none"> Concentration of vulnerable groups in social housing. Decreasing liveability and less housing options for renters.
Regulating	<ul style="list-style-type: none"> Limited regulation of rent prices (Hochstenbach, 2023) 	All	<p>Exacerbate/perpetuate Direct / indirect</p> <ul style="list-style-type: none"> Limited regulation leads to excessive rent prices, resulting in high costs of living and increasing wealth disparity. Increased share of private rent dwellings, at the expense of social housing.
Stimulating	<ul style="list-style-type: none"> State-led gentrification (Uitermark et al., 2007). 	Local	<p>Exacerbate/perpetuate Direct / indirect</p> <ul style="list-style-type: none"> Displacement of social renters. Place-based intervention instead of a people-based intervention.
Stimulating	<ul style="list-style-type: none"> Limited stimulation of alternative housing option for groups that are no longer eligible for social housing (Hoekstra, 2017). 	All	<p>Exacerbate/perpetuate Direct / indirect</p> <ul style="list-style-type: none"> Scarcity in housing options for middle income groups. Scarcity leads to increased rents and competition, making dwellings more unaffordable.

Capacity building	<ul style="list-style-type: none"> • Implementation of the Landlord Levy (Hoekstra, 2017). 	National	<p>Exacerbate/perpetuate Direct / indirect</p> <ul style="list-style-type: none"> • Higher costs for landlords are transferred to renters. • Limited investment in new dwellings. • Limited investment in sustainability measures and housing quality.
Capacity building	<ul style="list-style-type: none"> • Reliance on market actors to initiate development (Rydin, 2013). 	Local	<p>Exacerbate/perpetuate Direct / indirect</p> <ul style="list-style-type: none"> • Market actors have the objective to make profit, so they aim to build more expensive housing, which is against the interest of low and middle income groups, who wish to have an affordable home.

Spatial selectiveness

Current spatial planning practice is spatially selective. The focus on promoting growth leads to investment in and development of core areas on various scales. This leads to development pressure and gentrification. At the same time, peripheral areas are more or less neglected. These areas face decreasing levels of well-being due to loss of population and amenities and lack of action in housing development.

Dichotomies related to spatial selectiveness can be observed on different scales. The growth of the Randstad is in contrast with shrinkage in the border regions of the Netherlands on a national level and the redevelopment of city centres at the expense of neighbourhoods are both exemplary of the focus on core areas and neglect of peripheral areas on various scales. This gives rise to two problems: the exclusiveness of core areas and decreasing well-being in peripheral areas. The exclusiveness of core areas is leading to gentrification and suburbanisation of poverty. This exclusionary character can be limiting the functioning of cities, as essential workers, such as healthcare workers and teachers, can not afford to live in the city (Milikowski, 2018). The decrease in well-being in peripheral areas can be seen in the loss of amenities in peripheral regions and the lack of positive development in more peripheral neighbourhoods.

Trends not attributable to spatial planning

Not all of these spatial inequalities are a result of spatial planning policies directly. These problems are also influenced by larger trends outside of the scope of planning instruments.

Globalisation at first may have had a negative influence on urban areas in the Netherlands. Industrial activities which were mainly located in or around cities relocated to other countries, leaving many people unemployed. However, recent effects of globalisation are the increasing importance of the knowledge industry in an internationally competitive environment, the importance of connectivity and international migration. These processes contribute to the attractiveness of cities, which offer agglomeration benefits (Glaeser, 2012). For example, international

migration has been a main contributor to the growth of major cities in the Netherlands. The availability of jobs and housing as well as international networks contribute to the attractiveness of these major cities (De Beer et al., 2018).

The decreasing level of well-being in relation to the loss of amenities is also not fully attributable to spatial planning. For example, online shopping has had a negative impact on local shops and efficiency thinking in the provision of public amenities has been at the root of centralisation in cities (Van de Ven, 2021; Milikowski, 2022). Even without applying planning instruments, these larger societal and economic processes tend to increase the demand for activities and housing in well-connected centres of cities in internationally competitive regions.

Contribution of spatial planning to the problems

However, spatial planning has also contributed to the problems associated with spatial selectiveness. First of all spatial planning has given an extra push to the processes outlined above. In the 1980's national planning policy was informed by the idea of 'don't back the losers, but pick the winners' (Milikowski, 2022). Whereas previously planning policy had the goal of equity and levelling by redistribution, the new planning philosophy aimed to stimulate the strongest regions, with the idea that this would later benefit the whole country. This was formalised in several planning documents, such as the fourth memorandum on spatial planning (Van der Cammen & De Klerk, 2003), which shaped the playing field into one based on competition. In this memorandum, thirteen urban areas were appointed for stimulating the service industry and improve the competitive position of the Netherlands. Strategic projects in these areas such as the Erasmus bridge and Kop van Zuid could receive governmental funding (Van der Cammen & De Klerk, 2003). Thus, mainly projects in major urban areas were stimulated. Equally, on a lower scale level, the main cities and business centres were developed to compete for investments, both with other countries and with other regions in the Netherlands.

One change in spatial planning that has significantly contributed to spatial selectiveness is the increasing

reliance on market actor to take initiative for development. Market actors have the tendency to develop housing for higher income groups and in more profitable locations, because it reduces the risk of investment and could result in considerable profit. Spatial planners can bargain certain requirements, such as a specific share of social housing or a contribution to the development of amenities. Such bargaining reduces the attractiveness of developments up to a point that developers might not want to take the risk. Some of this risk could be reduced by stimulus instruments (Rydin, 2013). Such an approach could be effective in some areas, where the gains on one end sufficiently compensate for investments that benefit the community on the other end. However, in other areas, developers are less keen to invest, let alone invest in community benefits (Rydin, 2013).

Unlike in the previous century – when stimulus instruments were frequently used to get planning gain (Rydin, 2013), recent action in spatial planning is much more accommodative of market demands (Hochstenbach, 2022; Van der Cammen & De Klerk, 2003). The lack of alternative developing parties gives the choice to planners: give in to these demands or no development will happen at all. Even so, many cities have the objective to attract more higher-educated (and generally higher-income) residents, as they are viewed as the drivers of the modern economy (Rydin, 2013). These goals shape the playing field in such a way that development of higher-priced housing is desirable, in areas that suit the needs of the creative class. This generally results in the (re)development of central areas at the expense of areas that are more peripheral. These developments are formalised in spatial planning visions and strategies, which are the shaping instruments at the disposal of planners.

Apart from direct planning action, the lack of action from spatial planning is remarkable too. While policy was deliberately aiming to stimulate the strong areas, peripheral areas have more or less been neglected. In recent decades the projected shrinkage of peripheral regions has been taken for granted, even in the most recent national planning document, the NOVI (Ministerie van Binnenlandse Zaken en Koninkrijksrelaties, 2020). Only recently with the creation of the Regio Deals policy, peripheral areas were able to again stimulate projects which could improve the well-being in the area, including housing. This policy does get the critique that it is too incidental. The four-year projects are too short and too small to bring about structural change. Instead, more structural support is required (RLI et al., 2023). Additionally,

if other policies still aim to promote growth in other areas, incidental investment in peripheral areas is like filling a bucket full of holes.

Even with today's knowledge, spatial planners have not necessarily been wrong for promoting the service economy in cities in the 1980's. The loss of industrial activities and a lack of a significant service sector at the time resulted in a high share of unemployment and financial burdens for the government (Van der Cammen & De Klerk, 2003). However, as Milikowski (2022) argues, planning and policy have been using this strategy to such extent that it has become problematic and imbalanced. It has become difficult however, to reverse this, as spatial planning and its instruments have been geared towards economic growth (Rydin, 2013).

Conclusion

To conclude, spatial planning has used shaping instruments to promote stronger areas as competitive places for businesses and for knowledge workers. The development of central places has been stimulated with governmental resources. Accompanied with this is the increasing importance of the market in shaping development. Market actors equally wish to develop stronger areas with a particular focus on the upper end of the market.

Accompanying the favouritism of stronger areas is the negative effect on weaker areas. Not only are they weaker to start with, it becomes harder to bring about positive change if scarce stimulative means are utilized for other locations.

The societal trends which also influence spatial disparities show how the context in which planning takes place has changed. Strategies which aim to promote justice should also consider these trends as given. A consequence is that for example the redistribution of service activities is much more difficult than of industrial activities, due to the requirements of connectivity and agglomeration for the service industry.

Table 3.2: Spatial planning instruments influencing spatial selectiveness

Instrument	Activity / policy / plan	Scale	Effect
Shaping	<ul style="list-style-type: none"> Encouraging development of middle-income and high-income housing in visions, in order to attract the creative class (Van Veelen, 2022). 	Local	<p>Exacerbate/perpetuate Direct / indirect</p> <ul style="list-style-type: none"> Spatial segregation. Decrease of supply for lower income groups in more central areas
Shaping	<ul style="list-style-type: none"> Plans/visions promoting densification in and around the inner city. 	Local	<p>Exacerbate/perpetuate Direct / indirect</p> <ul style="list-style-type: none"> New developments tend to be more exclusive, aimed at higher-income groups, due to demands of developers.
Shaping	<ul style="list-style-type: none"> National visions focused on promoting economic growth and development of major cities. Such as in the Fourth Memorandum and NOVI (Van der Cammen & De Klerk, 2003; Ministerie van Binnenlandse Zaken en Koninkrijksrelaties, 2020). 	National	<p>Exacerbate/perpetuate Direct / indirect</p> <ul style="list-style-type: none"> Results in increasing pressure on the urban areas. This indication of national planning priorities discourages development in areas that the national government does not consider important.
Regulating	<ul style="list-style-type: none"> Centralisation of amenities in spatial plans (Van de Ven, 2021) 	Local	<p>Exacerbate/perpetuate Direct / indirect</p> <ul style="list-style-type: none"> Decreases well-being in peripheral areas, which makes living less attractive for residents and development less attractive for investors.
Regulating	<ul style="list-style-type: none"> Restriction of greenfield expansion and densification in villages (Ministerie van Binnenlandse Zaken en Koninkrijksrelaties, 2020). 	National, regional	<p>Exacerbate/perpetuate Direct / indirect</p> <ul style="list-style-type: none"> Makes it more difficult to sustain amenities and create diversity in the population.
Stimulating	<ul style="list-style-type: none"> Subsidies for strategic projects in central locations (Van der Cammen & De Klerk, 2003). 	National, regional	<p>Exacerbate/perpetuate Direct / indirect</p> <ul style="list-style-type: none"> Increasing the attractiveness of areas that are already better off, while other areas that need investment are not stimulated.
Stimulating	<ul style="list-style-type: none"> Stimulation of knowledge industry in major urban areas (Van der Cammen & De Klerk, 2003). 	Local	<p>Exacerbate/perpetuate Direct / indirect</p> <ul style="list-style-type: none"> Brain drain in peripheral areas. The lack of suitable employment in peripheral areas leads people to move away.

Stimulating	<ul style="list-style-type: none"> Current stimulating measures, such as Regio Deals are project based and for a short period only (RLI et al., 2023). On a local level, investments in peripheral areas are sometimes more structural. 	All	<p>Exacerbate/perpetuate Direct / indirect</p> <ul style="list-style-type: none"> Even though the policy does not make matters worse, a lack of structural investment allows disparities to perpetuate, while some areas also do not benefit from these deals.
Capacity building	<ul style="list-style-type: none"> Dutch government promoting the Dutch housing market as an investment opportunity online and on real estate fairs (Hochstenbach, 2022). 	National	<p>Exacerbate/perpetuate Direct / indirect</p> <ul style="list-style-type: none"> Internationally operating investors have less ties to the Dutch context. These investors approach housing as an asset and prefer dwellings with highest returns, which are in major cities. This can contribute to increasing real estate prices and exclusiveness. At the same time there is a lack of investment in peripheral areas.
Capacity building	<ul style="list-style-type: none"> Reliance on market parties to initiate development and restriction of other developing parties (Rydin, 2013). 	All	<p>Exacerbate/perpetuate Direct / indirect</p> <ul style="list-style-type: none"> Market parties tend to favour building for high-end markets in central locations. Areas that do not offer a good business case will not be developed.

Short-termism

Spatial planning mainly looks to the near future. The plans that are developed insufficiently take into account the effect of the built environment on climate change and to the burdens and benefits of plans in the farther future. This may lead to prospective costs for future generations, which is intergenerationally unjust.

In the introduction, the problem of intergenerational justice has been briefly addressed. The current planning practices fail to take this perspective fully into account, as the focus of planning is on the near future.

First of all, the built environment has a significant impact on emissions in the Netherlands. The carbon budget of the building sector in the Netherlands would be exceeded even when the current norms are followed regarding energy performance, but with the use of classic building materials like concrete and brick, which is allowed under these norms (Platform Woonopgave, n.d.). In a similar situation in England, the business-as-usual housing strategy, which includes the target of building 300.000 new homes per year, would consume the entire carbon budget of England (Zu Emgassen et al., 2022). This clearly shows how current building practices could contribute to climate change.

Secondly, the current plans for new housing development are for a very large part located in flood-prone areas (see figure 3.5). Not only does this go directly against the government's aim to let water and soil be leading in decision making in spatial development (Ministerie van Binnenlandse Zaken en Koninkrijksrelaties, 2020), it is also not just for future Dutch residents. If plans continue as planned, it is likely that future generations have to bear costs that could be prevented with today's knowledge. Additionally, new developments are based on current demand, which may mean that the stock needs to be adapted again to suit future needs.

Trends not attributable to spatial planning

There are many processes out of the scope of spatial planning that contribute to climate change. Although many of these processes need to be facilitated in

space, which involves planning, the scope of this research is spatial planning practices in relation to housing. One trend related to housing which influences short-termism is the increasing demand for dwellings due to increased migration and a decreasing average household size. The need for more dwellings in the short term trumps long-term objectives.

Contribution of spatial planning to the problems

Recent national planning has implemented the objective that water and soil should be leading in development (Ministerie van Binnenlandse Zaken en Koninkrijksrelaties, 2020). Even though this shapes the decision-making environment, regulation for this is rather limited. The goal is translated to guiding principles, not hard restrictions (Harbers & Heijnen, 2022). Consequently, many houses are still planned in unsuitable locations, where for example flood risks are higher (Platform Woonopgave, n.d.). Two of such example are a new village in the Zuidplaspolder, the deepest polder in the Netherlands, and the development of a new neighbourhood in Alphen aan den Rijn in the Gnephoekpolder (Gemeente Zuidplas, 2021; Team Stadszaken.nl, 2023). One reason that such plans are still developed is that policy is mainly guided by quantitative goals. The main response to the current Dutch housing challenges is to enlarge the housing stock with roughly a million homes (Ministerie van Binnenlandse Zaken en Koninkrijksrelaties, 2020). This goal nudges the idea that all new dwellings have to be built from the ground up, although there are also many other alternatives such as transformation of office buildings (Platform Woonopgave, n.d.).

For the sustainability of buildings themselves there are several regulatory norms for new buildings regarding energy performance and sustainability performance of building materials. However, these norms are insufficient to stay within the carbon budget of the Netherlands. Regulation on this could be much tighter. Only in some locations there are additional requirements or goals, such as a quote of 20% wood-construction in the Metropolitan Region Amsterdam (MRA, 2022). These requirements are rare, but could be theoretically implemented everywhere.

Additionally, planning can also have a lack of long-term social sustainability. Current housing production does not necessarily cater to future needs. In recent years, primarily larger dwellings and small studio's were built. The future living area need is likely somewhere in between, as household sizes are decreasing (Langenberg & Jonkers, 2022). Additionally, the focus of developing housing in the Randstad leaves questions about the future liveability of villages.

Conclusion

The main problem regarding short-termism is not the lack of instruments, but the lack of action. Current knowledge provides enough insight into the long-term risks, but regulation is still permissive, allowing risks to progress instead of be contained. Several local plans and visions also propose building in unsuitable locations, sometimes even supported with stimulus instruments.

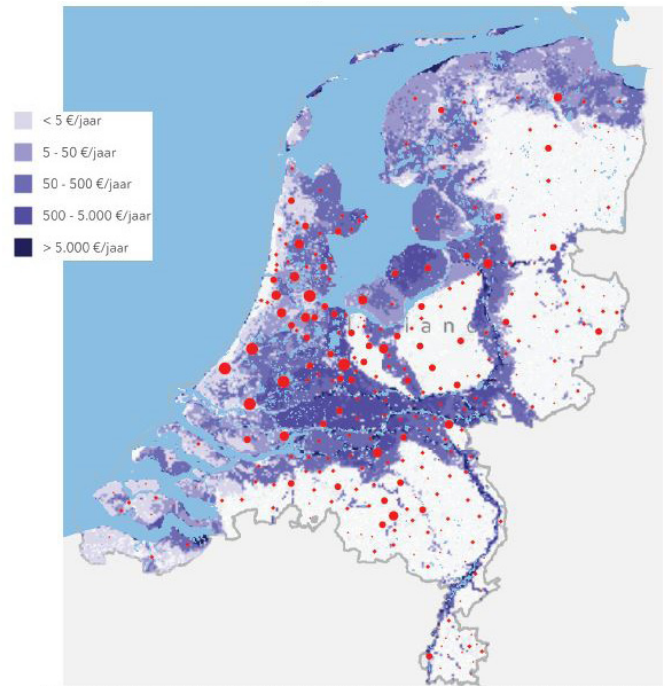


Figure 3.5 Housing plans in relation to flood risk in 2050 (Platform Woonopgave, n.d., based on map by Deltares)

Table 3.3: Spatial planning instruments influencing short-termism

Instrument	Activity / policy / plan	Scale	Effect
Shaping	<ul style="list-style-type: none"> Housing targets from Woondeals are primarily in the more vulnerable West of the country (Platform Woonopgave, n.d.). 	National	<p>Exacerbate / perpetuate Direct / indirect</p> <ul style="list-style-type: none"> The focus on these areas can lead to more dwellings built in (the most) vulnerable locations. The more housing in vulnerable locations, the more likely it is that there will be prospective costs.
Shaping	<ul style="list-style-type: none"> The discussion on dwelling development is shaped by quantitative goals (Platform Woonopgave, n.d.; Hochstenbach, 2022). 	All	<p>Exacerbate / perpetuate Direct / indirect</p> <ul style="list-style-type: none"> The material use of constructing the amount of dwellings planned will contribute significantly to Dutch emissions.
Shaping	<ul style="list-style-type: none"> Governmental visions that propose demolition and redevelopment. 	Local	<p>Exacerbate / perpetuate Direct / indirect</p> <ul style="list-style-type: none"> Demolition and redevelopment has a negative effect on emissions. The original building becomes waste, and new construction require resources.
Regulating	<ul style="list-style-type: none"> Building regulations still allow unsustainable resource use (material use, large floor spaces), even though extra requirements can be set, such as in the Amsterdam Metropolitan Region (MRA, 2022). 	All	<p>Exacerbate / perpetuate Direct / indirect</p> <ul style="list-style-type: none"> New construction contributes more to climate change than necessary. If regulation was stricter, burdens would be lower.
Regulating	<ul style="list-style-type: none"> There is no strong regulation on the national planning priority that soil and water should be leading in development (Ministerie van Binnenlandse Zaken en Koninkrijksrelaties, 2020). 	All	<p>Exacerbate / perpetuate Direct / indirect</p> <ul style="list-style-type: none"> The non-binding character of this goal makes it possible to divert from it.
Stimulating	<ul style="list-style-type: none"> Active land policy to develop in polders (such as Zuidplaspolder) (Gemeente Zuidplas, 2021; Team Stadszaken.nl, 2023). 	Local	<p>Exacerbate / perpetuate Direct / indirect</p> <ul style="list-style-type: none"> Building in vulnerable locations creates prospective costs for future generations.
Stimulating, Capacity building	<ul style="list-style-type: none"> Active stimulation through land policy and connecting stakeholders to demolish and redevelop industrial areas. 	Local	<p>Exacerbate / perpetuate Direct / indirect</p> <ul style="list-style-type: none"> Policy and plans ignore the future need for work locations in the city.

Chapter conclusion

To answer the first sub-question '*To what extent are socio-spatial injustices in housing a result of contemporary planning practices?*' the tools and instruments that planners have at their disposal and the way they have been used have been critically analysed.

Spatial planners are viewed as stakeholders who work for the public sector, and operate in a governance setting: the government itself has a limited executive capacity and needs the market and civil society for execution of plans and goals. In this position, spatial planners have several tools with which they can influence market actors. These *steering instruments* are classified by Heurkens and colleagues (2015) as shaping instruments (such as visions and ambition documents), regulating instruments (such as zoning plans, contracts and laws), stimulating instruments (fiscal stimuli, such as subsidies and provision of infrastructure), and capacity building instruments (such as network events).

An analysis of the stakeholders that need to be influenced by spatial planning reveals an interesting difference in power and interest between achieving goals for the existing housing stock and for new construction. For achieving goals in the existing housing stock, home owners are a very important stakeholder, which also proves that policy and design based on a justice framework should be supported by the population.

It is argued that spatial planning practice is spatially and socially selective and focuses on the near, rather than far future. It should first be said that each of the problems addressed are also influenced by other processes and trends outside of the scope of spatial planners. Nonetheless, spatial planning has played some role in the creation and perpetuation of several injustices in housing. Many shaping instruments (spatial plans, policy, strategic plans, visions, designs) have incorporated goals of growth and increased market activity. This has mainly been done by stimulating the stronger regions, which has shifted investment and development away from other – often peripheral – areas. Planners have aimed to stimulate growth and market-led development, which has been at the root of several injustices. The marketing of cities towards higher income groups has

been a cause of (state-led) gentrification. Municipal governments have actively made space for these groups, for example by preparing brownfield sites and providing infrastructure. Additionally, the stimulation of one area usually means that less money is available for other areas in need of it. In addition, regulation on for example social housing has lessened the relative importance of this sector and has limited the availability of affordable housing to a large number of people. It is not only active regulation which causes disparities, also the lack of regulation has allowed disparities to be exacerbated. For example, the lack of regulation on rent increases and on the use of housing as an investment has increased disparities between home owners and the rest of the population, and loose regulation still allows for unsustainable building practices. The active advertising of the Dutch government to invest in the private housing market can be seen as an example of capacity building which has been detrimental to many groups for obtaining affordable housing.

In general, the areas which are stimulated the most (spatial selection) are marketed towards high-income groups (social selection), which exacerbates inequalities. An example of a spatial planning practice where problems overlap is that of demolition and redevelopment. Demolition sometimes concerns buildings which are in good state, which is unsustainable and focused on the short term. The subsequent redevelopment can be at the root of displacement of marginalised groups and be aimed at attracting 'more desirable' groups, which illustrates social selectiveness. This practice can be spatially selective when it concerns neighbourhoods closer to the centre, which are more attractive for 'more desirable' social groups.

The positive note taken from this analysis is that planning instruments can also be deployed for different goals, such as housing justice, converting their current negative influence to a positive outcome.

4. Approaches to justice

This chapter will give insight in the first part of the second sub-question: *‘what are the values behind different approaches to spatial justice and how can these values be operationalised for spatial planning?’*

In this chapter different justice theories are examined. An explanation of spatial justice is given and different approaches to distributive and procedural justice are explored and connected to several operational models from well-being and post-growth theory.

These different justice theories represent different value-perspectives of what kind of distribution or procedure is morally right. These values are summarised and examined on their applicability for spatial planning.

This overview gives a theoretical basis for the operationalisation of these justice approaches and their values, which will be further discussed in the next chapter.

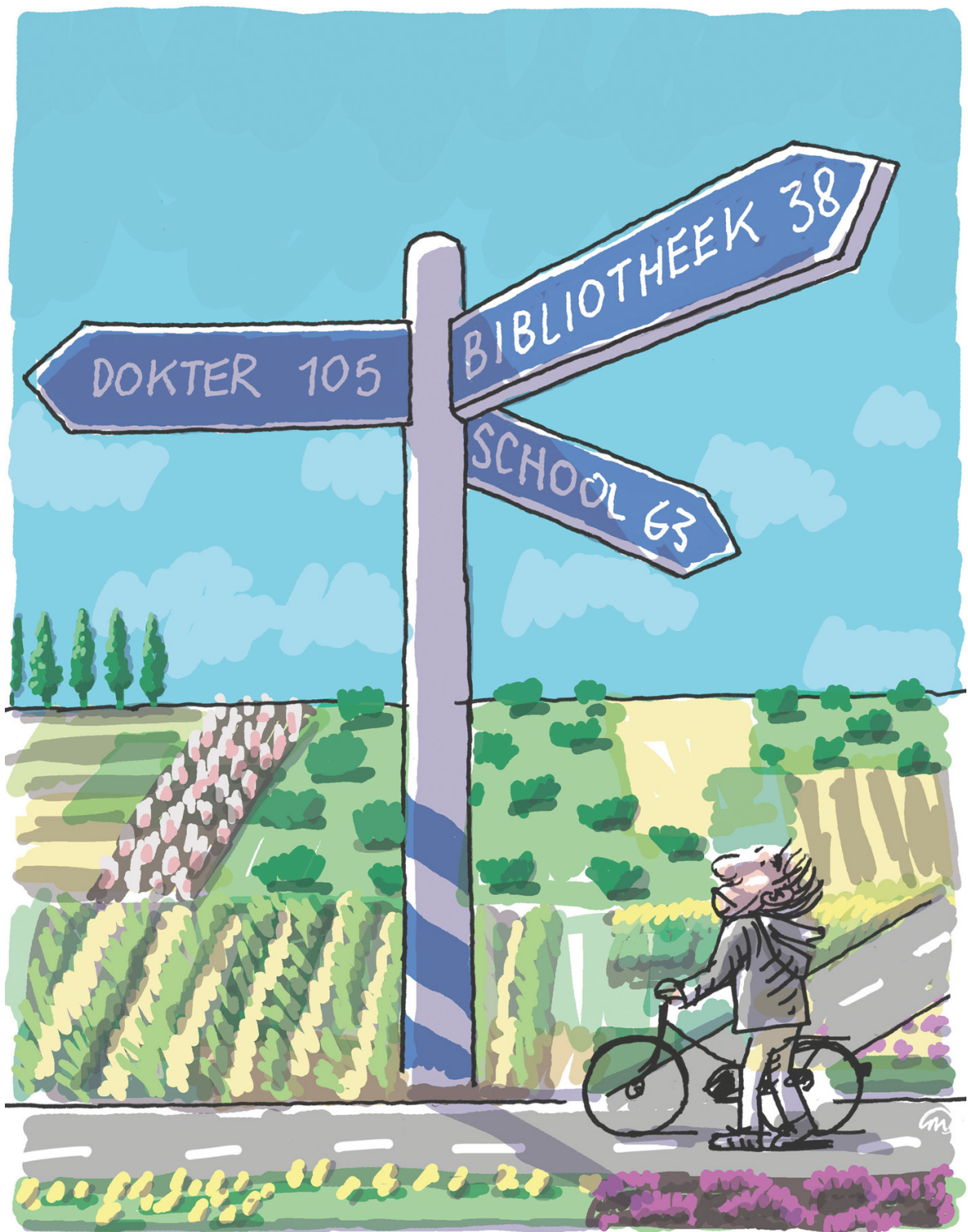


Figure 4.1: Illustration showing how the distance to public amenities has increased in rural areas (Van de Ven, 2021)

Justice theories

Although many might have an idea of what justice entails, there are various interpretations. Justice can be described as “the principle of moral rightness” (Buitelaar et al., 2017, p. 110). Justice deals with fairness, but it does not describe what is fair. It is therefore a normative concept.

Spatial justice

While discussions on justice in general, seen as “fairness in the way people are dealt with” has been discussed for ages, the spatial dimension of justice has only more recently been taken up into philosophical and scientific debate. Spatial justice as a concept has been around since the 1970’s (Soja, 2010), but it remains ill-defined, and often wrongly contrasted with social justice (Madanipour et al., 2021, p. 808). However, it is not a matter of choosing either social justice *or* spatial justice. Spatial justice is an intentional focus on the spatial aspects of injustice, which can add to the search for social justice (Soja, 2010; Madanipour et al., 2021). Understanding the geography of injustice can be a useful tool to more effectively achieve justice and democracy.

Patterns of (dis)advantage can become concentrated in some areas, which can cause further inequality. Spatial justice stresses this relationality of space and (in)justice in society. “[T]he inherent spatiality of the processes that (re)produce social inequalities within and across regions need to be recognized as intrinsic to public policies of resource allocation, market investment decisions, and individual and group life trajectories.” (Madanipour et al., 2021, p. 810). From this perspective, space is not a neutral container, but instead it is given meaning through social interaction: “social processes are inherently spatial and spatial processes are necessarily social.” (Lefebvre, 1991 in Madanipour et al., 2021, p. 810).

There are competitive approaches to justice, with some arguing that it is a distributional concern, related to the allocation of resources. Others argue that justice is about the procedure by which resources are distributed, which draws attention to the process. A focus on only the procedure may ignore resource inequality that might result from this. Conversely, a focus on distributive aspects may miss various forms of injustice in the process. Taking on the relational

view of space allows to reconcile distributive and procedural justice. However, both of these concepts are still open to interpretation: there are different perspectives on what constitutes a just distribution or a just procedure. A discussion of these different perspectives forms the next part of the chapter.

Distributive justice

Distributive justice is concerned with what is fair when deciding who and which places get what. Discussing distribution is relevant for scarce goods, such as money, jobs or dwellings, which can be divided, shared or taken. If scarce goods are distributed to one person, others might be (negatively) affected. This is not the case for some rights or opportunities, which are indivisible. For example, the right to not be discriminated is not scarce, so allocating such a right does not infringe the same right of others (Buitelaar, 2020).

Spatial questions clearly show a condition of scarcity. Land and space itself are scarce and can only be created to a limited extent. On top of this, locations which are fixed in space come with burdens and benefits, which makes some locations more desirable than others. Spatial planners are given the task to prevent unnecessary spatial burdens, stimulate benefits and manage and distribute these spatial burdens and benefits across populations in a fair way (Storper, 2014).

In the next pages different justice approaches which follow from different ethical disciplines are discussed. Although each can be interpreted as just, the distribution of resources can be very different for these approaches, as visualised in figures 4.2-4.5. In table 4.1 two approaches are further compared.

Egalitarian

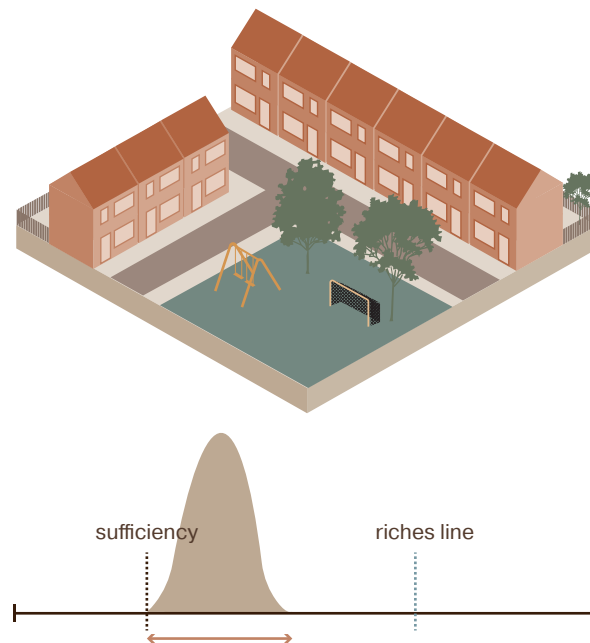


Figure 4.2: Spatial representation and distribution of an egalitarian justice approach, by author.

Egalitarianism

The egalitarian approach to justice proposes that everyone should have the same piece of the pie. It does not say much about the quality in which this results, which might very well be poor. Still, this is considered just if everyone has the same (Buitelaar et al., 2018).

Policy that aims for egalitarian justice will likely limit individual freedoms. People will have less opportunities and different merits will not necessarily translate to different outcomes (Buitelaar, 2020).

Because of these limitations, a pure form of egalitarianism is not often a guiding principle in planning. Nonetheless, there are several spatial policy examples which have an implicit or explicit goal of equality. Although mixing policy is often criticised (see Uitermark et al., 2007; Hochstenbach, 2017) it does often have the aim to oppose spatial segregation (Buitelaar, 2020). Throughout history it has also been common to require a minimum share of social housing in development plans (Buitelaar, 2020), which allows for a more equal distribution of people across space.

The Second National Memorandum on Spatial Planning (Tweede Nota Ruimtelijke Ordening) included a spreading policy. Offices of state agencies

were moved to different parts of the country and industries were stimulated to settle in disadvantaged locations, in an attempt to level employment, population and well-being across the country (Van der Cammen & De Klerk, 2003; Milikowski, 2022)

Several authors, such as Fainstein (2011) and Rawls (1971) take on a slightly different, but related perspective of *equity*. The goal of equity is not necessarily that the distribution is equal, but promotes that any change benefits the worst-off, leading in the end to a more equal outcome.

Table 4.1: overview of the distributive principles and possible policies of egalitarian and utilitarian approaches to distributive justice (based on Buitelaar, 2020).

<i>Ethical discipline</i>	<i>Egalitarian</i>	<i>Utilitarian</i>
<i>Distribution principle</i>	Everyone the same	Maximum for the biggest possible group
<i>Method example</i>	Gini-index	Social cost-benefit analysis
<i>Disadvantages</i>	<ul style="list-style-type: none"> ▪ Equality does not say much about well-being ▪ Equal supply ≠ equal access ▪ Equality is nearly impossible to realise 	<ul style="list-style-type: none"> ▪ Ignores distribution effect ▪ Favours the well-off ▪ Risk of favouring what can be monetized
<i>Housing</i>	Every person has about the same amount of floor space for living. People spend a similar share of their income on housing. Social housing is available for a large group, which diminishes differences.	This approach measures utility of housing. If some people remain homeless or in inadequate housing, but this is compensated by a large group that is very satisfied with their housing condition, the distribution is just.
<i>Policy example housing</i>	Social housing is made available across the city and accessible for a large group of people.	Building at the edges of cities to expand the single family housing stock.
<i>Mobility</i>	Mobility is accessible to everyone. Everyone also has different transport options and different types of roads in different locations get an equal treatment.	Mobility that serves large groups is prioritized, at the expense of local infrastructure that is infrequently used.
<i>Policy example mobility</i>	Every neighbourhood a bus stop.	Investment in main infrastructure.
<i>Amenities</i>	Everyone will have access to the same amenities, within a certain travel time. This might mean that sacrifices on quality have to be made or it should be accepted that cost-ineffective amenities have to be subsidised.	The focus is on quality of amenities, which are accessible to a large group of people. Some people might have to travel far or cannot use certain amenities.
<i>Policy example amenities</i>	Smaller libraries scattered across the city	Specialisation and centralisation of hospital
<i>Work</i>	Everyone is able to find a job on their skill level within the region. Everyone works an equal amount of time.	Work that generates most income is prioritized. The service and technology industry get prioritised. In some places there is an abundance of work, in other places employment is limited
<i>Policy example work</i>	Subsidising industries to move to locations with high unemployment.	Development of business districts and special economic zones.

Utilitarian

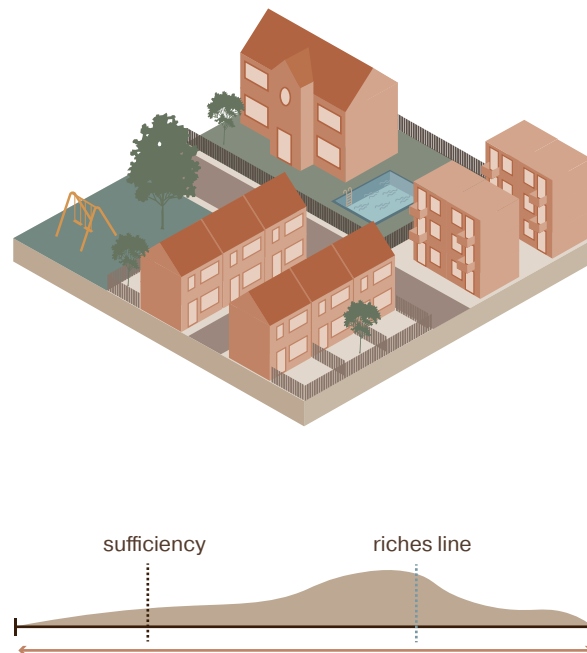


Figure 4.3: Spatial representation and distribution of a utilitarian justice approach, by author.

Utilitarianism

The utilitarian approach to justice is about bringing the most amount of utility (satisfaction) to the biggest possible group (Buitelaar, 2020). In spatial planning and in policy in general, the way to measure this has been through cost-benefit analyses, usually in terms of money. This type of reasoning is at the base of focussing on core areas or industries, such as inner cities (Buitelaar, 2020). In such an approach it is likely that populous regions receive most attention, because in those areas the utility of a big group can be improved (Nefs & Koomen, n.d). Such interventions are at the expense of less populous areas, where a smaller group would be influenced by interventions. This type of thinking and the use of cost-benefit analyses explain state investments in projects such as the North-South line in Amsterdam, while maintenance to infrastructure in peripheral provinces is postponed (Nefs & Koomen, n.d). Investments in important nodes in major urban areas in the Fourth Memorandum on Spatial Planning are also justified by this reasoning (Van der Cammen & De Klerk, 2003).

On a local level, and related to housing, the utilitarian approach is used to justify intervention in central

areas. Redevelopment in city centres for example have a noticeable effect to many people. According to many utilitarian measurements, investment should take place wherever the largest gain can be made. An investment in the centre can yield more return in real estate values, than in non-central areas, justifying intervention there.

In the utilitarian approach, often a narrow view of well-being is used, often focussing on elements that can be monetised. Such a perspective might fail to take effects elsewhere or later into account (Buitelaar, 2020). Additionally, the utilitarian approach ignores distribution effects. A focus on the total sum, might mean that some individuals are ignored. It is believed that benefits from interventions in one area will trickle down to other areas as well, but recent research (Thissen et al, 2019) shows that this claim does not hold.

Sufficientarian

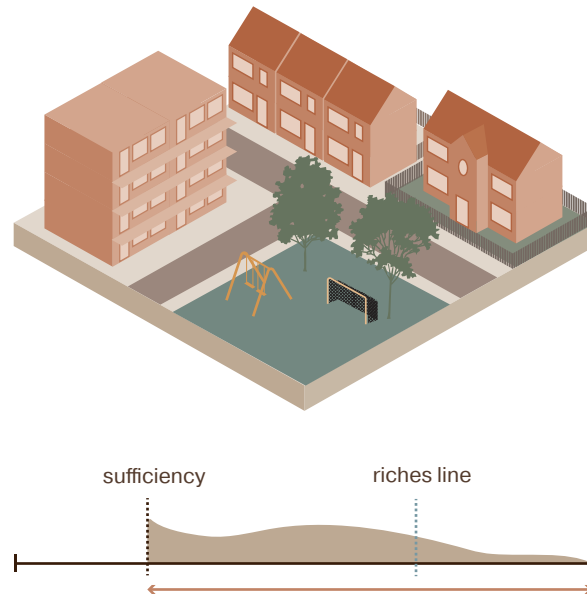


Figure 4.4: Spatial representation and distribution of a sufficientarian justice approach, by author.

Sufficientarianism

Another principle that can be applied to distributive justice is sufficientarianism (Buitelaar, 2020; Buitelaar et al., 2018). From this approach it is argued that the differences between people do not matter as much. What matters most is that everyone receives enough. If everyone had enough, it would be of no moral consequence if some had more than others (Frankfurt, 1987). Here, 'enough' pertains to reaching a certain standard, not a limit.

Similarly, John Rawls rejects comparing and maximizing well-being. He argues that everyone can be cooperative members of society as long as they have access to spatial primary goods (Rawls, 1993 in Buitelaar et al., 2018). Spatial primary goods are a specific form of social primary goods (Rawls, 1971), that everyone should possess or have access to. Social primary goods are goods that everyone wants, regardless of anything else they want (Rawls, 1971; Robeyns & Brighouse, 2010). *Spatial* primary goods are not defined by Rawls himself, however, Moroni (2004) proposed (1) decent housing, (2) access to basic transport, (3) availability of green areas, and (4) a safe living environment, as spatial primary

goods that everyone should have access to. The goal of planning would be to safeguard and distribute these spatial primary goods (Basta, 2016). This idea of spatial primary goods gives some direction for a sufficiency line in spatial planning. However, the list by Moroni has limitations. For example, access to basic transport is one of the four primary goods he proposes, but this says nothing about what places can be reached by public transport. Access to basic transport has little value when you are not able to reach places of employment or daily amenities.

Human needs

Sufficientarianism is concerned with a baseline in distributive justice. Apart from the literature on justice, the literature on well-being also gives insight into what such a base-line might constitute.

The concept of *human needs* could serve as a baseline for well-being. In general, human needs refer to "requirements – personal, economic, social and political – for people to avoid serious harm, realise their aims, lead a satisfactory life and participate in societal development." (Cardoso et al., 2022, p. 2640). There is an important distinction to be made between needs and satisfiers of those needs. Needs

Table 4.2: Human needs framework by Max-Neef, as summarised by Gasper (2022). The context-specific and divergent satisfiers to the needs would be inserted in the empty cells., adaptation by author.

		Existential categories			
		Being	Having	Doing	Interacting
Axiological categories	Subsistence				
	Protection				
	Affection				
	Understanding				
	Participation				
	Idleness/recreation				
	Creation				
	Identity				
	Freedom				
	(Transcendence)				

themselves are considered constant and potentially universal. The ways to satisfy them, do however change according to the spatial and temporal context (Cardoso et al., 2022).

Several scholars have developed frameworks to understand and operationalise human needs. Maslow (1943) discussed human needs, which he characterizes as ‘basic, unconscious goals’ in a hierarchical way (see Appendix I), where the first needs need to be satisfied in order to achieve a higher level of needs. Maslow’s pyramid has become popular, but it also has received the criticism that needs are not so much hierarchical, but that individuals make certain trade-offs, which do not necessarily follow this hierarchy. They pose that a hierarchical set of needs neglects complexity (Cardoso et al., 2022).

A more comprehensive model of human needs is given by Max-Neef, who developed the framework shown in table 4.2 for the South American context. Max-Neef enriched the debate about human needs and satisfiers by “considering multiple existential modes and the impacts of satisfiers on multiple needs.” (Gasper, 2022, p. 4). Cardoso and colleagues (2022)

argue that Max-Neef’s human needs framework can be a useful way to create urban policies which satisfy needs, while still allowing sensitivity for local conditions. They also categorise urban indicators of (dis)satisfiers, corresponding to the human needs framework. This reveals that housing is related to the axiological category of subsistence and existential category of having. The housing market is the interacting component of subsistence. However, there is a broader affiliation to many other categories, with housing as a node in a spatial network of elements providing needs.

Limitarian

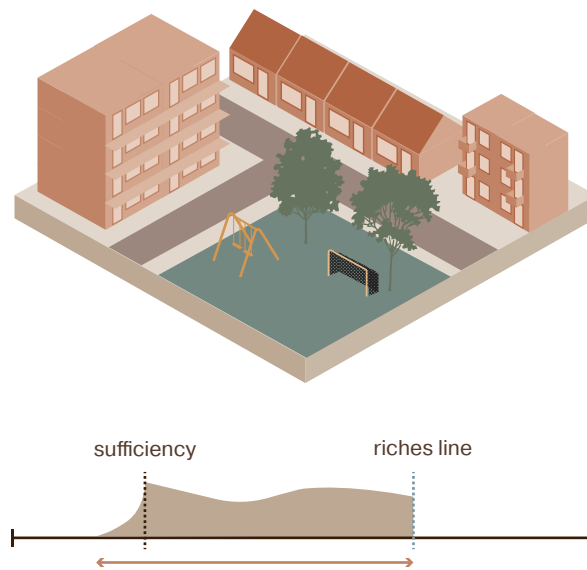


Figure 4.5: Spatial representation and distribution of a limitarian justice approach, by author.

Limitarianism

Whereas sufficiency proposes a minimum level, the ethical discipline of limitarianism deals with maximum level:

"In a nutshell, economic limitarianism holds the view that no one should hold surplus money, which is defined as the money one has over and above what one needs for a fully flourishing life. Limitarianism as an ethical or political view is, in a certain sense, symmetrical to the view that there is a poverty line and that no one should fall below this line."

(Robeyns, 2019, p. 252-253).

Robeyns (2019) argues that the money spent on excessive desires - those that do not contribute any further to a flourishing life - should have zero moral weight. It would be ethical to instead spend this money on urgent unmet needs of individuals below a sufficiency line or to contribute to global problems affecting everyone, such as climate change. The principle of limitarianism is conceived for monetary wealth, but could be applied to space too. Considering the scarcity of land, one could argue for a cap on

ownership or exclusive use of land when that land use hinders others from achieving sufficiency or could contribute to solving global crises.

A risk of quantifying amounts of land, is that it ignores the actual use. A farmer that uses a considerable amount of land to produce biological food, is arguably still better for society than when someone puts a smaller amount of land to no use. However, such use can still be justified if it does not infringe other people's opportunities to achieve sufficiency, according to the limitarian approach (Robeyns, 2019).

Where exactly the riches line would be drawn is not determined by Robeyns. It should be where additional wealth does not contribute anymore to flourishing. An indication of what the Dutch population finds excessive is as follows: "About 67% of the respondents claimed that a household that has a villa with private swimming pool, two luxury cars, a house in southern France and 500 000 euros in assets, is above the riches line." (Robeyns, 2019, p. 254). 96.5% found the same scenario with 70 million euros in assets above the riches line. Both cases show that even when a riches line is drawn, there is still room for ambition of individuals to reach the ceiling.

Table 4.3: Consumption corridors and their floors and ceilings in three domains (Gough, 2020)

Well-being domain	Consumption domain	Income/wealth domain	
<i>Excess</i>	<i>Luxuries</i>	<i>Riches</i>	
			<i>Ceiling</i>
<i>Flourishing</i>	<i>Plenitude, comfort goods</i>	<i>Prosperity</i>	
<i>Sufficiency</i>	<i>Necessities</i>	<i>Adequacy</i>	<i>Floor</i>
<i>Deprivation</i>	<i>Lack of necessities</i>	<i>Poverty</i>	

Consumption corridor

The consumption corridor by Di Giulio and Fuchs (2014) is a conceptualisation which consists of a combination of a sufficientarian and a limitarian approach to justice. The authors argue that sustainable consumption should consist of a minimum and a maximum standard. This maximum is set so that a good life is safeguarded in the future.

Before, an argument was made that human needs could be a good measure of sufficiency. Similarly, Gough (2020, p. 208) contends that a theory of human needs “is essential to buttress and give content to the concept of consumption corridors.” He applies this concept to identify the floors of the consumption corridors, (see table 4.3).

The consumption corridor concept directly makes reference to human needs and well-being, and at the same time is more applied to a local scale. Whereas the more famous doughnut model by Raworth (2012) makes reference to larger processes, such as planetary boundaries, the consumption corridor is more applied to a local scale and leaves more room for differentiation. Another benefit of the consumption

corridor compared to the doughnut model is that it allows for adaptation. The creators of the model even state explicitly that corridors of sustainable consumption cannot be defined indefinitely, but that instead they have to be redefined in order to take cultural and historic context into account (Di Giulio & Fuchs, 2014, p. 188).

The model shows that with a combination of a sufficientarian and a limitarian approach, a range for flourishing exists and that its principle can be applied to different domains.

Capabilities approach

Important for the discussion on distributive justice is the question of *what* it is that needs to be distributed according to a certain distributional principle. Two of such measures, utility (satisfaction) and spatial primary goods have been discussed under the header of utilitarianism and sufficientarianism. The capabilities approach is another important measure and stresses people's opportunity to make use of a good or to refrain from using a good, which might give satisfaction.

The capabilities approach is originally developed by Amartya Sen and discussed in his book, *The Idea of Justice* (1985). The concept of capabilities is consequently further developed by Nussbaum (2003), who also introduced a list of basic capabilities.

According to Sen, commodity ownership is not the right focus for expressing someone's standard of living. Resource-based approaches say little about the opportunities people have (Sen, 1985). Sen sets capabilities apart from goods and utility. He gives the example of a bike, which is a good. People then need the capability to ride it: they need to know how to ride it and be physically capable of doing so. Riding this bike from one place to another might give utility (Buitelaar et al., 2018). Sen argues that the bike itself is not a good measure, because it would be of no use to, say, disabled people. The utility is also not a good measure, because doing another activity might even make a person happier than riding a bike. Therefore, the ability to ride a bike and having the choice to do so is what matters and reflects the standards of living according to Sen (Buitelaar et al., 2018). Thus, possession of, or access to spatial primary goods is only helpful if people possess the basic capabilities to use them and want to use them. The capabilities approach stresses the actual capability people have to achieve the life they value (Sen, 1985).

Boram Kimhur (2022) applied the principle of capabilities to the Dutch housing context. She compared a conventional measure of housing deprivation based on income with an approach based on capabilities. By making this comparison she revealed a blind spot, as there is a substantial group of people that live in inadequate housing, but are not detected by income metrics. She does also acknowledge that this way of measuring is more complex and that some data is incomplete. For example, the differences between individuals in a household are not available in data, even though different individuals in a household might have different needs, like when adults are living with their parents and looking for housing (Kimhur, 2022). This research stresses the need for acknowledging restrictions in opportunities that people have, beyond monetary restrictions.

Procedural justice

Whereas distributive justice deals with outcomes, procedural justice deals with the process of how that distribution comes about. This relates to both the process itself and the institutional arrangement that facilitates the process.

Taking on an institutional approach, an observation of injustice in an urban situation - such as a peripheral neighbourhood in detrimental state - reveals the implicit assumption that what really is unjust are the institutions which allowed this situation to emerge and which did not intervene to make the situation more just (Moroni, 2020).

The focus on the process itself concerns a discussion on individual rights and freedoms to make decisions, and to organise distribution. This also includes the ability the democracy within the decision making process. Some argue that if the process of (spatial) decision making is just, then the outcome will also be just, no matter the distributional result (Buitelaar et al., 2018). If this is entirely the case if the circumstances in which decisions are made have unequal power structures can be questioned though.

Liberalism

The liberalism approach to planning emphasises free choice of individuals (Buitelaar, 2020). Within this approach, the institutional framework within which spatial development takes place should be facilitating of this freedom.

A theory that supports this is Nozick's entitlement theory of justice, which posits that a situation is just if people legitimately gain assets and assets are transferred from one party to another in a legitimate way (Buitelaar et al., 2018). An example of this entitlement theory in the domain of housing is that high rent prices in the private sector can be perfectly just. If an investor buys property to rent out for a high price, both the unequal distribution of assets, as well as the high housing costs of the renter are just, under the condition that the property is bought in a legitimate way and that the rental contract is signed under legitimate circumstances (Buitelaar, 2020). However, such a focus on process is ignorant of the distributional effects. It may therefore still allow for absolute poverty or unequal access to resources and opportunities (Madanipour et al., 2021). Another caveat of this theory is the uneven playing field in transactions. Historical processes outside of the scope of influence of different parties can cause an unequal distribution of assets, which gives an advantageous bargaining position to particular groups. Additionally, power differences between individuals (which can emerge with differences in capital) results in different opportunities to influence the process.

Communicative turn

The theory of communicative action has been introduced by Habermas (1981) as a way of just decision making.

The idea behind communicative action is that central to democratic decision making is communication, deliberation and argumentation among parties which have different interests to create an intersubjective understanding. (Ntiwane & Coetzee, 2018).

Healey (1996) applies this principle of communication to planning and advocates an inclusionary communicative approach to strategic argumentation. Planning in this communicative approach relies on the direct involvement of community members, “either through their active involvement or by their being accorded respect by those involved.” (Healey, p. 232). Those that are not present in the direct communication should be involved through a process of recognition (Healey, 1996). The aim of this type of planning is that all different stakeholders that have an interest in a project are involved and discuss both the problem and the solution collectively (Healey, 1996). This gives the planner a facilitating role in the process of discussion and consensus building.

The exact process is not defined by Healey, but rather it is the idea of an inclusionary ethic that can be adapted in a locally specific process.

Fainstein (2011) sees communicative planning as one of the core elements of a just city, which she frames as the importance of ‘democracy’. As is also acknowledged by Fainstein, the communicative approach has scale limitations. People are most directly involved with their direct surroundings, but a larger scale is usually necessary for decision making. Fainstein (2011) therefore argues for direct involvement of citizens on the neighbourhood scale, as this forms a bridge between objectives of planning on a larger scale and individual interest on a smaller scale. Spatial planners should however keep goals from a higher level in mind, such as coordination between cities, as these cannot be addressed on this scale. This is a shortcoming of Fainstein’s focus on the city scale.

Advocacy planning

Advocacy planning was developed as a theory by Paul Davidoff. The theory was a reaction to the marginalisation of socio-political issues in planning (Ntiwane & Coetzee, 2018). It calls for planners to advocate for the interests of the poor and minority groups. In this form of planning, planners are committed to a client group or a client community to which they do not belong themselves and they make and promote a plan on behalf of this client (Sager, 2022). Advocacy planners use their own experience to represent the needs of those that do not have the

access, resources and skills to represent themselves. The advocacy theory relates to the idea of equity, where planning serves those that are currently the worst off (Ntiwane & Coetzee, 2018). From several case studies it appears that it is a successful strategy (Sager, 2022). The benefit of advocacy planning compared to the liberalist and communicative approach to planning, is that people without much power are also represented. A flaw in this approach is that a lack of advocacy or improper representation, injustices are allowed to exist.

Chapter conclusion

This chapter has given insight into the first part of the second research question; *what are the values behind different approaches to spatial justice and how can these values be operationalised for spatial planning?*

Drawing from the work of Soja (2010) and Madanipour et al., (2021) it is argued that spatial justice is a specific focus on the spatial components of social justice, which combines both perspectives of distributive and procedural justice. Different ethical disciplines provide different interpretations of what a just distribution or just procedure entails. These different approaches to justice each emphasize different values, which can be considered just, but can result in very different outcomes. Although these approaches are presented as distinctly different approaches with different ethical backgrounds, in reality these different approaches inform different spatial policies concurrently. For example, the social housing sector is more sufficientarian in nature, from the perspective that everyone should have decent housing, but in the meantime there is also a tendency to attract high-income population with expensive dwellings, which stems from utilitarian values.

Several approaches to spatial justice have been outlined in this chapter. These approaches are summarised in table 4.4, including the key values and principles belonging to each approach.

The first approach to distributive justice is based on egalitarianism. An egalitarian approach has the aim that everyone has the same, for which equitable policies are required. The distribution says little about the level of well-being. A utilitarian approach to justice aims for the biggest utility for the biggest possible group. This allows inequalities, even if that means deprivation for some (Buitelaar, 2020). A sufficientarian approach proposes that there are certain thresholds which everyone needs to achieve. Above that threshold the distribution is irrelevant (Rawls, 1971). This sufficientarian approach aligns with the literature on well-being and human needs - particularly the latter stresses the need for a base line of need fulfilment (Max-Neef, 1991; Cardoso et al., 2022). Where the sufficientarian approach only suggests a minimum threshold for spatial goods, it is posited in the limitarian approach to justice that consumption above

a certain level does not contribute to well-being, so must be redistributed to achieve unmet needs of others (Robeyns, 2019). This redistribution towards urgent unmet needs encompasses some sufficiency thinking. This conjunction is further explored in the consumption corridor model (Di Giulio & Fuchs, 2014; Gough, 2020).

The capabilities approach is a distributive justice theory concerned with *what* is distributed. It stresses that it is not goods or satisfaction that are important measures of justice, but opportunities (Sen, 1985). The same is recognised regarding human needs, as individuals have different satisfiers for their needs and are independently able to make trade-offs between needs and between satisfiers (Gaspar, 2022).

For procedural justice, three approaches are outlined. The liberal approach to planning posits that if the process of acquisition and transfer are just, the outcome should be considered just. The theory on the communicative turn in planning (Healey, 1996) promotes the inclusion of stakeholders in the planning process and draws on the communicative theory of Habermas (1981) which argues that in a position where stakeholders are in an equal position and come to a consensus together, a just outcome is achieved, as opposed to a planning system where all decisions are made top down. Advocacy planning acknowledges that some groups are not able to represent themselves properly. Planners can serve as an advocate to represent the needs of marginalised groups (Ntiwane & Coetzee, 2018).

This overview of justice values is the foundation for the second part of the research question on making justice values operational for spatial planners. Although each of these justice approaches could be defended as suitable entry points, it should be considered that the values should be appropriate for the Dutch context - the scope of the project - and that the values should respond to the problems outlined in the previous chapter of social and spatial selectiveness and short-termism.

The justice approaches and associated values deemed most suitable in response to these criteria

Table 4.4: Overview of justice approaches and their values, by author

<i>Instrument</i>	<i>Approach</i>	<i>Key values & principles</i>
Distributive justice	<i>Egalitarian</i>	<ul style="list-style-type: none"> • Equality • Everyone should have the same
	<i>Utilitarian</i>	<ul style="list-style-type: none"> ▪ Utility maximization ▪ Maximum for the biggest possible group
	<i>Sufficientarian</i>	<ul style="list-style-type: none"> • Everyone should have enough (lower limit) • Basic human needs • Equity
	<i>Limitarian</i>	<ul style="list-style-type: none"> • Limitation of excess (upper limit) • Urgent unmet needs
	<i>Capabilities approach</i>	<ul style="list-style-type: none"> • Actual capability of use • Agency
Procedural justice	<i>Liberalism</i>	<ul style="list-style-type: none"> • Individual rights and freedom • Entitlement • Legitimacy
	<i>Communicative turn</i>	<ul style="list-style-type: none"> • Inclusion of stakeholders in the process • Consensus
	<i>Advocacy planning</i>	<ul style="list-style-type: none"> • Representation of marginalised groups • Equity

are sufficiency, limitation, the capabilities approach, the communicative turn and advocacy planning.

Unlike the values of egalitarianism and utilitarianism, sufficiency is a value that can get support from different political views and can respond to social and spatial selectiveness. The limitarian approach to justice is the only distributive perspective that explicitly deals with the problem of short-termism.

Regarding procedural justice, the communicative turn can ensure support of the population, who get a voice in planning. Such participation is already applied in different steps of the planning process in the Netherlands. However, additional principles of advocacy planning are required to fill gaps left by the

communicative approach, which fails to take future residents into account and where some groups are under-represented.

Lastly, the perspective of the capabilities approach better reflects the different ways in which people satisfy their needs than a distribution of primary goods or utility. The selection of this value follows from the theoretical lens of well-being.

The subsequent operationalisation draws upon these values and is developed further in the next chapter.

5. The justice framework

This chapter gives insight in the second part of the second sub-question: *‘what are the values behind different approaches to spatial justice and how can these values be operationalised for spatial planning?’*

The first research question, discussed in chapter 3 gave insight in the influence that spatial planners can assert on spatial developments. This influence has been discussed in relation to the problems of social selectiveness, spatial selectiveness and short-termism.

In the previous chapter, the prevailing theories on spatial justice were discussed, along with supplementary literature from well-being and post-growth research. Several justice values were derived from this analysis which are used as a basis for the development of the justice framework in this chapter.

This chapter forms the synthesis of these analyses in the previous two chapters. The goal of this chapter is to operationalise this information into a strategic tool which can help spatial planners in the Netherlands to make strategies and design for justice in the housing domain. This justice framework is the main, transferable, product of this thesis research. The justice framework is explained in this chapter, after which it is applied to a case study region in the Netherlands in the subsequent chapters.



Figure 5.1: Renovation works in Vaassen, by author

Introduction to the justice framework

The justice framework is based upon the justice values as discussed in the previous chapter and aims to respond to the deficiencies in planning practice which contribute to perpetuating injustices in housing. The full justice framework is shown in figure 5.5, but before discussing it as a whole, the components are explained.

Structure of the justice framework

A slice of the justice framework is shown in figure 5.2. As the figure shows, the justice framework can be divided into two parts: two inner rings with needs and two outer rings with satisfiers. The inner two rings are more theoretical and abstract and focus on values of justice. These rings are not completely specific towards housing and spatial planning. The outer two rings are more applied, in particular towards housing and spatial planning in the Netherlands. These rings can be seen as satisfiers, which are a response to the needs in the first two rings.

The intention of each consecutive ring is to make the abstract values of justice at the core more concrete for planners and designers. This translation of abstract values to concrete strategies makes it easier for planners that are not familiar with the moral philosophical debates on justice to apply these strategies in practice. A consequence of making the justice values from the inner rings more concrete is that there are also more options. There are multiple ways to operationalise each concept. Necessarily, the elements included in the justice framework are a selection. The housing injustices identified previously in this research are guiding the focus.

An analogy can be drawn with the human-needs framework by Max-Neef. He posited that needs are universal and finite, but the satisfiers of those needs are divergent and multiple. Key to this thinking is that satisfiers vary across time, place and context (Cardoso et al., 2022; Gasper, 2022). In the justice framework, the inner values are comparable to human needs, which are more or less universal across contexts and could be broadly supported over time. The housing dimensions on the next ring are ways to satisfy those needs. According to the scope of the research, the contemporary Dutch context is used to develop these 'satisfiers', but in a different spatial

or temporal context, these might differ. The third ring draws the attention to three housing dimensions which together should give a broad overview of the applied value in relation to housing. The housing dimensions are chosen in relation to the contemporary Dutch planning context and further elaborated on the next pages.

The outer ring proposes strategy directions. For each housing dimension, different strategies which promote justice can be developed. The ring of strategy directions indicates general strategies that can be helpful for devising a strategy for each housing dimension.

A strategy should always be specific to the location. The local context determines with which strategies injustices need to be addressed and which strategies need to be prioritised. It is also dependent on the context whether elements need to be introduced, or that existing conditions need to be enhanced. These context-specific strategies are not directly represented in the framework. These strategies are manifold and spatial planners should have the freedom to choose the strategies most appropriate to the context. The justice framework gives a general direction to spatial planners.

In this research, an example of this process is given through a case study application in the following two chapters.

The next pages elaborate on the justice framework in more detail.

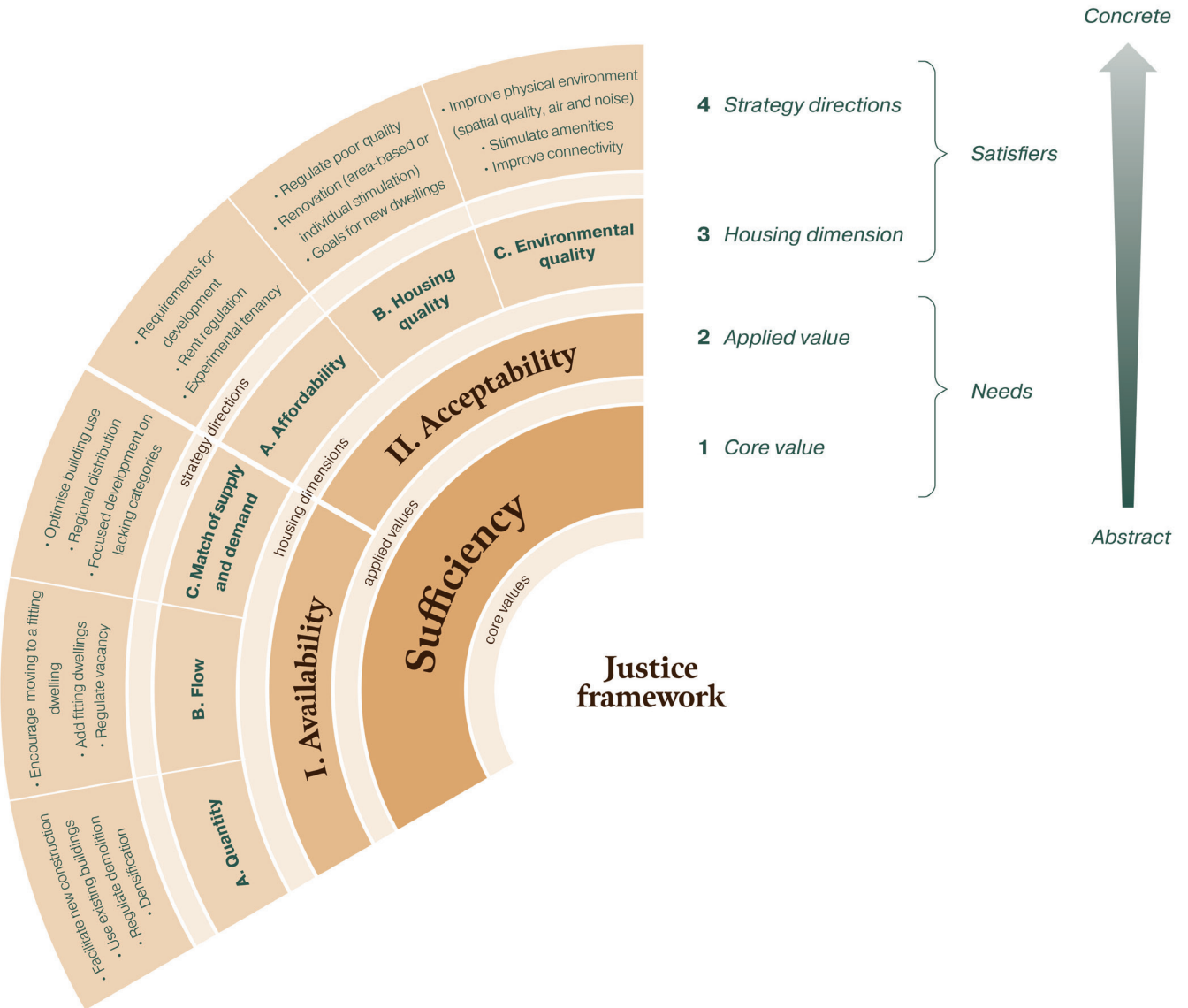


Figure 5.2: A slice of the framework and its components, by author.

The core of the justice framework

Core values and applied values

As can be seen in figure 5.4, the justice framework is composed from three core values: Sufficiency, Limitation and Opportunity, which are each discussed by means of two applied values. A schematic representation of the justice framework is shown in figure 5.3, to illustrate how the core values relate. The figure shows a lower and an upper limit to (spatial) resource use, which represent a sufficientarian and limitarian approach to justice respectively. This combination of an upper and a lower limit and the zones of deprivation, excess and flourishing can be recognised from the consumption corridor (as developed by Di Giulio & Fuchs, 2014; Gough, 2020). The flourishing zone between the lower and upper limit has a range of opportunities and represents the core value of Opportunity. This core value draws from the capabilities approach, which stresses the real opportunities of individuals.

Sufficiency

The core value of sufficiency is, not surprisingly, derived from the sufficientarian approach to justice. It can be well argued that in the Netherlands, a country with a strong history of welfare and sufficient economic means, all citizens should be able to achieve a minimum level of well-being for which a certain threshold of spatial resources is required. In their task to distribute spatial burdens and benefits, spatial planners can see it as their civic duty to assure a minimum level of well-being for everyone.

Other distributive approaches (such as egalitarian and utilitarian approaches) theoretically are indifferent about whether some or all people live below a sufficiency line (Buitelaar et al., 2018). On top of this, an egalitarian approach requires a more radical redistribution of (spatial) resources. This approach to justice would be less likely to get broad support from the population and politicians. Another concern with the egalitarian approach is that individuals have different needs and different ways to satisfy those needs, which is difficult to account for in an egalitarian approach.

The core value of sufficiency is made concrete through two applied values: Availability and Acceptability.

I. Availability

The first application of the core value of Sufficiency concerns quantity: for housing specifically, the number of dwellings should be enough. There should be at least as many dwellings as households in order to satisfy this need. This relates to Rawls's (1971) conception of basic primary goods, which are universal needs and can be seen as a sufficiency standard. Moroni (2004) further specified spatial primary goods, of which the first is 'decent housing'. Availability of decent housing first means it is important that there are enough dwellings are suitable for living and not in use for another function. The location of this quantity of dwellings is relevant as well. Quantity should be fitting the demand, because not all households will follow the supply and move to another region. Such choices are also related to other domains which make households attached to specific environments.

II. Acceptability

This applied value relates to the quality of housing. Housing must adhere to contemporary standards. Again, this relates to what Moroni (2004) specified as 'decent housing'. This applied value is more focused on the 'decent' part, whereas the applied value of Availability is focused on the distribution.

The dwelling itself should reach contemporary standards, but equally the environment in which the dwelling is located should be adequately able to accommodate the well-being of residents.

The issue of affordability concerns both the applied values of availability and of acceptability. It concerns availability in the sense that there is a need for a certain supply of affordable housing. The supply that is out of financial reach of households is not available to those groups. It concerns acceptability when the price of dwelling is restrictive for the quality of life of households. High living expenses are a risk for sufficiency in other domains than housing. It can be limiting for individual's capabilities (Kimhur, 2022) and be a source of stress. Although affordability could be part of both applied values of sufficiency, it is further discussed in the framework under acceptability.

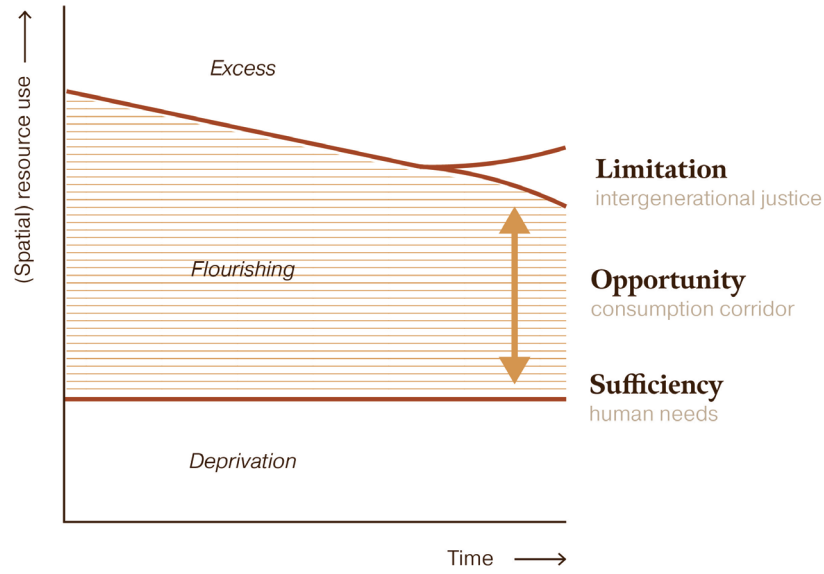


Figure 5.3: Schematic representation of the justice framework, made by author.

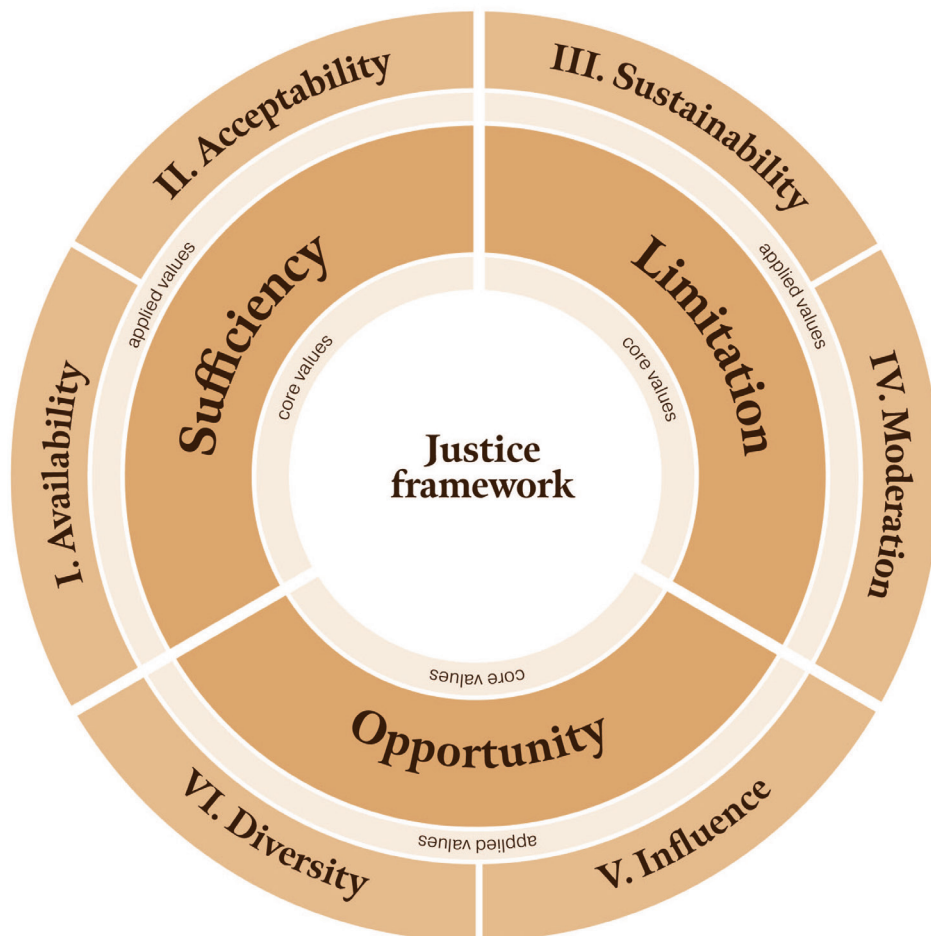


Figure 5.4: The core of the justice framework, by author.

Limitation

The core value of Limitation is based on the limitarian justice approach (Robeyns, 2019). This core justice value acknowledges that there are limitations to individual freedom and practices, when they are conflicting with the basic needs of others, in the present as well as in the future.

On one hand, the core value of limitation relates to the discussion on intergenerational justice, which posits that decisions in the present influence the burdens and benefits of future generations. On the other hand, it relates to contemporary distributional questions – intragenerational justice – as the use of spatial resources of one individual can cause burdens on others. These two limitations are reflected in the two applied values: Sustainability and Moderation.

III. Sustainability

The value of sustainability concerns issues of intergenerational justice. The long term effect of resource use of the built environment should be considered, so that future generations can adequately secure their needs. Resource use of housing relates to building material, energy consumption and transport associated with dwelling.

Because this applied value offers a long term perspective to justice, it also has a component of durability. Durability relates to the future use of the built environment and considerations of the *longue durée* in planning. Consideration of future use is necessary in order to avoid future burdens. Therefore it concerns durability in the face of changing climate conditions and changes in housing demands.

IV. Moderation

This applied value is about the limitation of excess. The limitarian approach to justice posits that there is not only a distributive lower threshold (discussed under sufficiency), but also an upper threshold. Beyond a certain point, the use of (spatial) resources does not contribute to the well-being of people. In that case, resources could better be used for the urgent unmet needs of others or for dealing with larger challenges such as climate change (Robeyns, 2019).

In a situation of scarcity, excessive use of resources by one individual for personal gain, is likely to negatively impact the capabilities of others (Robeyns, 2019). This is much like the tragedy of the commons (Hardin, 1968). For instance, an individual that owns a vacant house to wait for its value to increase withdraws it from the market and reduces the opportunity of someone else to live there.

Opportunity

The core value of Opportunity represents the range between sufficiency and limitation. The real opportunities people have is a core element of the capabilities approach. The capabilities approach can be a useful contribution to evaluate the adequacy of housing (Kimhur, 2022) and accordingly to develop housing strategies. The capabilities approach emphasises that a good might be available, but that when it does not suit the needs of an individual, it will not contribute to their well-being. A similar conclusion is drawn from the literature on well-being, which underlines that individuals have different needs and different ways to satisfy those needs.

This core value is represented by two applied values: Influence and Diversity.

V. Influence

The value of influence asserts that individuals should have some power in how their environment is shaped. Planners can impossibly be informed about all the divergent needs of citizens and are therefore likely to overlook some needs. Citizens should therefore be able to assert power, either in the planning process (*ex ante*) or afterwards in shaping their environment (*ex post*). However, citizens can also choose to refrain from asserting such influence. This value brings in values of procedural justice in the framework, drawing from the work on the communicative turn by Healey (1996) and advocated by Fainstein (2011) as 'democracy'.

VI. Diversity

Firstly, the applied value of Diversity can be translated to the need for diversity in the built environment. This applied value looks at the supply side, which should cater to different needs and prevent monotony and exclusion. Diversity is one of the main values of a just city proposed by Fainstein (2011).

This applied value also relates to recognition. Different individual traits, such as culture, age or income can cause different demands. Recognition also requires the acknowledgement of different environmental contexts (Ntiwane & Coetzee, 2018) and for instance the different lifestyles associated with different places of residence. Spatial policy should therefore maintain a certain level of heterogeneity in spatial and social environments in recognition of different needs.

Table 5.1: The origin of the applied values included in the justice framework, by author

<i>Value</i>	<i>Literature origin</i>	<i>Main literature reference</i>
<i>Sufficiency</i>		
I. Availability	<ul style="list-style-type: none"> Spatial primary goods 	Rawls, 1971; Moroni, 2004
II. Acceptability	<ul style="list-style-type: none"> Sufficientarianism 	Buitelaar, 2020; Frankfurt, 1987
<i>Limitation</i>		
III. Sustainability	<ul style="list-style-type: none"> Post-growth theory; Tragedy of the commons Limitarianism 	Savini et al., 2022; Hardin, 1968
IV. Moderation	<ul style="list-style-type: none"> Limitarianism 	Robeyns, 2019; Gough, 2020; Di Giulio & Fuchs, 2014
<i>Opportunity</i>		
V. Influence	<ul style="list-style-type: none"> Communicative turn; Right to the city 	Healey, 1996; Fainstein, 2011
VI. Diversity	<ul style="list-style-type: none"> Capabilities approach; Recognitional justice 	Sen, 1985; Nussbaum, 2003; Whyte, 1985; Ntiwane & Coetzee, 2018; Fainstein, 2011

Outer rings of the justice framework

Housing dimensions and strategy directions

The outer rings of the justice framework are more applied to the housing context and spatial planning. If the framework would be used for a different domain, the contents of these rings would change as well. After all, different needs require different satisfiers.

With the inclusion of these outer rings, the justice framework is complete, and presented as a whole in figure 5.5. The justice framework as shown in this figure is the final version of the justice framework and already adjusted according to the insights from the application to a case study. Some of these changes are discussed in the end of chapter 6.

Housing dimensions

The elements of the third ring, the housing dimensions, are the author's translations of the applied values to the context of housing injustices in the Netherlands. This translation is based upon the discussion in the previous chapters. An explanation of the housing dimensions can be found in table 5.2. The housing dimensions are more concrete than the applied values, but they need to be operationalised for analysis and design with indicators, which is done in the case study application in the next chapter.

Strategy directions

The spatial strategies in the outer ring are focused on the housing problems addressed in this research and their relation to the values and housing implications. This ring gives directions for strategies that can be used to address the applied values and their housing dimensions. These directions are still generic; the specific context determines if a strategy should be applied and whether elements need to be introduced or enhanced. The strategy directions give guidance for strategy and design. In the case study application in this research, these strategies are presented as strategy patterns, which are more concrete (strategic) design and planning interventions in the form of pattern language. These patterns are more elaborate and developed in relation to their context. In order to show the whole scope of the justice framework, the generic strategy directions are shown within the justice framework as well.

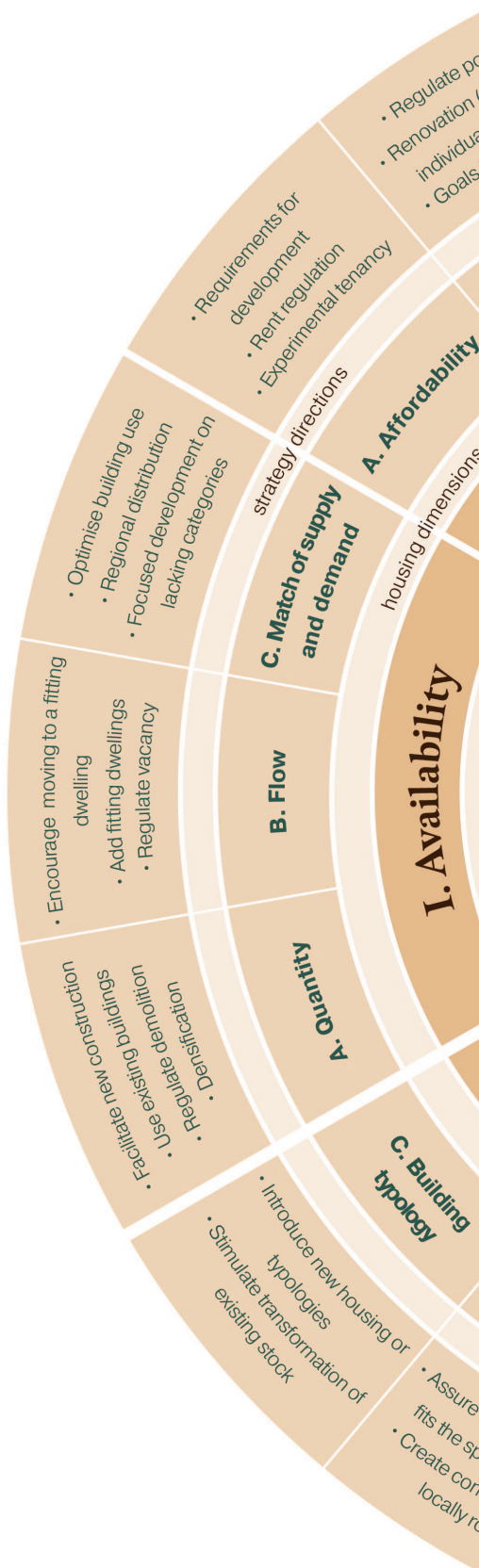




Figure 5.5: Complete justice framework, by author.

Table 5.2: Explanation of the housing dimensions in the third ring of the justice framework, by author

<i>Applied value</i>	<i>Housing dimension</i>	<i>Explanation of the housing dimension</i>
<i>I. Availability</i>	A. Quantity	The amount of dwellings in an area, compared to the amount of households
	B. Flow	Indication of whether dwellings regularly become available for new residents
	C. Match of supply and demand	The distribution of dwellings over space and the availability for specific needs
<i>II. Acceptability</i>	A. Affordability	Whether the price is acceptable and does cause financial burden
	B. Housing quality	The quality of the dwelling, concerning structural quality, installations and indoor climate
	C. Environmental quality	The quality of the surroundings of the dwelling, including spatial (visual) quality, access to amenities, and pollution
<i>III. Sustainability</i>	A. Energy and Material Use	The use of energy, particularly emissions, caused by construction as well as use phase of housing
	B. Transport	The sustainability of transport to and from dwellings
	C. Land suitability	Whether the land is suitable for building in the long term
<i>IV. Moderation</i>	A. Land use	The excessive land use that does not contribute to well-being but could be used for urgent unmet needs of others
	B. Unused space	The functional space which could, but is not used for satisfying needs
	C. Living space	The excessive living space of dwellings that does not contribute to well-being but could be used for urgent unmet needs of others
<i>V. Influence</i>	A. (Collective) private development	The ability to have influence on own dwelling development
	B. Right to the city	The right to assert influence on the existing urban environment
	C. Participation	The influence in decision-making in spatial planning
<i>VI. Diversity</i>	A. Recognition	The recognition of the diversity of population and specific (cultural) needs regarding housing
	B. Spatial identity	The opportunity to choose from a diversity of social environments
	C. Building typology	The diversity of dwellings and neighbourhoods

Strategy patterns

The strategy directions, such as ‘facilitate new construction’ are still at some level of abstraction. There are still various ways in which such a strategy can be addressed. In order to give clarity on the way in which these strategies can be implemented, strategy patterns can be developed. One such pattern is illustrated in figure 5.6. These strategy patterns give more tangible input for strategic design and planning. The example in figure 5.6 for instance shows a possible way in which construction can be facilitated on a small scale in rural areas. This strategy is combined with policy steps and stakeholders to show how a strategy impacts planning practice.

In line with the pattern language method, these strategy patterns provide a bridge between a problem and a (design) solution (Rooij & Van Dorst, 2020, p. 59). In chapter 7 of this thesis, these strategy patterns are explained in more detail and will be applied to the case study region.

In this research, this step of strategy patterns is preceded by another step: clustering. The regional analysis based on the justice framework can help to reveal similarities and differences within the region. By grouping areas with similar problems into clusters, strategies can be more targeted towards specific locations as well as specific problems. Using the justice framework does not prescribe this step, but it can be a helpful tool to organise the development of strategies.

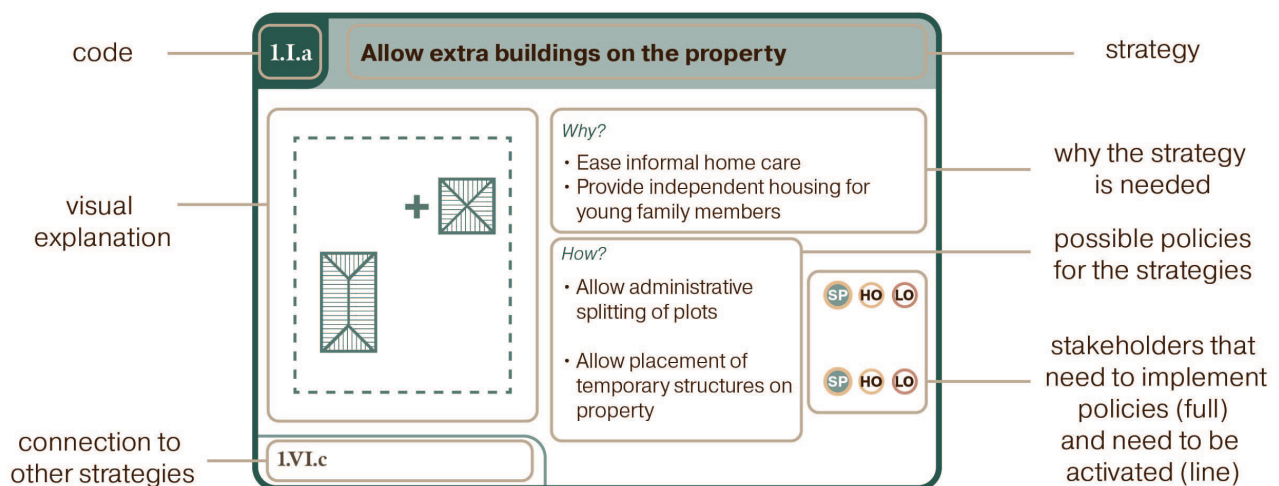


Figure 5.6: Structure of a pattern card, by author.

6. Case study analysis

This chapter discusses the application of the justice framework to a case study of the Stedendriehoek region in Gelderland and Overijssel, in service of the third research question: *‘How can a framework based on justice values help spatial planners to develop a planning and design strategy for housing in a region in the Netherlands?’*

First, the choice of the case study location is explained, based on a discussion of four criteria. After that, the area is analysed, by means of the applied values and housing dimensions from the justice framework. This concerns both a spatial analysis and an analysis of regional policy. Based on these analyses, clusters which contain areas with similar issues will be identified in the next chapter, for which strategies will be developed.

The chapter concludes with an evaluation of the justice framework as a tool for analysis.



Figure 6.1: Row dwellings in Apeldoorn. Photo by author.

Case study area selection

In order to demonstrate the use of the justice framework it is tested in one region in the Netherlands. Not only does the application to a case study demonstrate the use of the justice framework, it also brings new challenges to light. In this way, the application to a case study serves as a way to refine the justice framework as well.

Case study scale

The justice framework has been devised with the regional scale in mind and is therefore tested on this scale. This does however not exclude the option to utilise the framework on other scales. However, use on a different scale might require some adaptations to the framework.

As has been demonstrated previously, housing injustices are manifested on different scales. Although much attention is given to urban injustices (such as Fainstein, 2011; Buitelaar, 2020, Buitelaar et al., 2018; Moroni, 2020), injustices on the regional scale, such as sub-urbanisation of poverty (Hochstenbach & Musterd, 2018) are less often studied. Zooming in too much can ignore such distributional issues, which is a current blind spot in spatial planning (Hin & De Hollander, 2023).

Not only are several injustices related to the regional scale, several solutions require intervention on regional scale. In particular, collaboration between municipalities is required. Regional collaboration is already given shape by housing associations that operate across municipal boundaries to distribute the scarce social housing supply. But also for scarcity of resources such as land, construction labour and materials, in a region, collaboration can ensure that resources are used for the right purpose. Official performance agreements can prevent resources being used inefficiently.

Case study criteria

The main purpose of this research is to develop a justice framework which can be applied in different locations in the context of the Netherlands. Each different location is unique in the combination of challenges that it faces. This is accounted for in two ways in the justice framework.

Firstly, the framework combines different justice theories, that together provide a broad spectrum of justice. By focussing topically on housing, there is less constrain on the range of dimensions of justice. Because of this wide spectrum of dimensions, specific challenges of regions are likely to fit in. This can make specific parts of the framework more relevant for some regions.

Secondly, the dimensions facilitate some flexibility, within the structure that the inner rings of the framework supply. If specific issues of justice are more relevant for a region, extra indicators can be added to the housing dimensions. Through time, more data tends to become available, which can also enrich the framework. If a certain issue is particularly present in a location, governmental bodies can decide to gather additional data as well.

Even though the justice framework can be applied to any location, not any location is suitable to be a case study for the purposes of this research. The time frame of the research only grants time for testing the framework in one case study area. Because only one case study is used, it is important that the selected case study is helpful for both the purpose of demonstrating the scope of the justice framework, as well as improving the justice framework.

For both of these conditions, some variation is necessary. If a whole region is characterised by only a certain type of injustice, such as unsuitable land, that dimension will come to dominate the analysis and design of the region. The case study would rather show how the framework could detect and help design solutions for different types of injustices. Variation in justice issues would also grant more information for improving the framework throughout. Particular dominant problems would conversely only help to improve a part of the framework.

In order to help choose such a case study, four criteria are devised, and a pre-selection of regions is made. These regions are then examined on these four criteria in order to make a choice for the case study.



1. Housing injustices

As argued throughout the first part of this thesis, there are different types of injustices in housing in the Netherlands, some of which are caused or perpetuated by spatial planning practices. Although these injustices are widely present throughout the Netherlands, it is important that the case study area does actually exhibit such injustices, in order to test whether the justice framework can help to address these effects of social selectiveness, spatial selectiveness, and short-termism of spatial planning.

Indicators for these problems are growth and shrinkage, which could show spatial selectiveness, or new developments aimed at higher-income groups showing social selectiveness.

For the problem of short-termism the analysis showed that there are still many building plans for areas that are vulnerable to the effects of climate change. It would be interesting to have a location which poses both challenges and opportunities regarding climate change.



2. Size differentiation

Ideally, the case study application demonstrates the use of the framework for different types of places. It would be especially interesting to see different scales, from urban to rural. Differentiation in size is connected to the previous criterion of diversity of housing problems. In the given context of the Netherlands, different types of locations have particular problems related to justice. Smaller villages often deal with a lack of amenities and a shortage of affordable housing, while cities more often deal with issues of space scarcity and environmental quality.

The differentiation in core sizes in a region indicates different environmental typologies, which is a part of the justice framework as well.



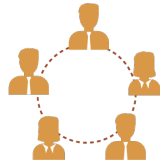
3. Intermediary zone

The justice framework should be applicable to any place in the Netherlands. For the purposes of testing the justice framework, it would be interesting to test it in a location that is neither at the core of the country, nor in the periphery, because these intermediary zones in the country are likely to show some problems which are reflective of both core and periphery.

Several of the issues of housing injustice are very explicit in the core and in the periphery. The zone in between is less extreme, but there is an interesting uncertainty in these areas, with some areas which are more likely to experience growth and associated pressure, and some areas which are likely to experience shrinkage and associated liveability issues. This uncertainty also means there is no a particular focus on a dominant problem. Because problems are less explicit in these regions, intermediary areas are often ignored in national policies, where both cities and peripheral regions receive most attention, despite the large amount of people living in intermediary zones.

The Randstad is an interwoven and complex polycentric urban region. Regions which are more disconnected from this system are more stand-alone. Although the justice framework could be applied in the Randstad, the advantage of a region outside the Randstad is also that (a) the system is more closed, which helps to draw better conclusion in the analysis, and (b) because regions outside the Randstad are less populous, the strategy and design can accommodate more nuance, whereas interventions on a region such as Amsterdam might remain shallow.

A last reason to opt for an intermediary region is that from a sustainability perspective, these are the places that we should be looking at to develop further from a post-growth perspective, as they generally have less problems regarding water and soil, unlike a large part of the Randstad.



4. Institutional cooperation

Lastly, it would be of great value if there is already institutional cooperation in the region and if there are already plans for the area regarding housing. Current and past policies can then be evaluated using the justice framework. Proposed design interventions could hypothetically be implemented through the existing institutional framework.

Pre-selection

The third criterion of an intermediary zone delimits the scope of possible locations.

A zone roughly around the Randstad is indicated in figure 6.2, which forms the first rough pre-selection of areas. On a regional scale, comprising functional city-regions, six areas can be distinguished. Three of these areas are discarded from the pre-selection after a first inventory.

- The Breda city-region and Tilburg city-region have somewhat similar characteristics. Both cities have a similar amount of inhabitants and a functional urban region around them which mostly contains smaller cities and villages. However, Breda is more entwined with the Randstad than Tilburg; it is physically close, and well connected by road and by a high-speed train connection. Because on first glance the regions are similar, only one is chosen to investigate further; the choice is made to do this for the region of Tilburg, which is more stand-alone than the Breda region.
- The Den Bosch city-region (Noordoost Brabant) does not have much institutional cooperation regarding housing (Gemeente 's-Hertogenbosch, 2023). The Woondeal is made in the large of North Eastern Brabant, which is roughly similar to the area covered by the collaborating social housing associations. Ideally, the framework would be used to examine different types of policy made by a regional cooperative body. This is not the case in the Den Bosch city-region, while it is the case in several other of the regions on the short-list. For this reason, the Den Bosch city-region is excluded.

- The region of Zwolle similarly does not have established institutional cooperation, which is why this region is also eliminated during the pre-selection.

After these three regions are excluded, the pre-selection list is condensed to three regions: the Regio Stedendriehoek (Apeldoorn, Deventer, Zutphen and surrounding area), the Regio Hart van Brabant (Tilburg and surrounding area) and the Regio Foodvalley (Ede, Wageningen, Veenendaal and surrounding area).

These three remaining regions are examined based on the four criteria is discussed on the following pages. This concerns a preliminary analysis. Particularly for the housing injustices it is a first inventory. The real challenges only becomes clear through thorough analysis after one region is selected for the case study. The criteria are not quantitative enough to rank them based on a score. Therefore, the choice for a region is made on a qualitative comparison.



Figure 6.2: Pre-selection of 6 regions based on the criterion of an intermediary zone. By author.



Figure 6.3: The three regions that are further examined. By author.

Regio Stedendriehoek



1. Housing injustices

The region is in the zone between areas where population growth to the West and population shrinkage to the East are expected (figure 6.3). Within the region this causes different pressures on the housing market. Ranging from increasing pressure where growth is expected and possibly left-behind regions where shrinkage is expected. However, because the area is intermediary, both more shrinkage and more growth are possible in the region.

The justice framework also deals with issues of sustainability and intergenerational justice, related to the core value of limitation. With the inclusion of this value, Concerning the issue of climate change, the area is mostly on higher ground. However, the river IJssel does pose a certain flood risk (figure 6.4). Also, the municipality of Apeldoorn contains a part of the Veluwe nature area, which brings certain risks in relation to building new houses.



2. Differentiation

The region consists of smaller villages and municipalities to the three cities in the area. These cities are medium to large in size, with Apeldoorn as the biggest city with around 140.000 inhabitants (Wikipedia, n.d.). The size differentiation is rather evenly distributed over the villages and cities.



3. Intermediary zone

The region is in the provinces of Gelderland and Overijssel. In particular Apeldoorn and Deventer are quite well connected to the Randstad by train and car, but remain somewhat at a distance from the major cities. Some parts of the region are less well enclosed. Nonetheless, the region can be considered intermediary.



4. Institutional cooperation

There is a history of institutional cooperation. The cooperation exists since 1993, after the region was appointed a city-region in the Fourth Memorandum.

The municipal and provincial governments have put forward the intention to develop policy together on spatial planning, including housing, in 2001 (Wikipedia, n.d.).

The Woondeal is made within provincial boundaries. Deventer is part of the Woondeal Overijssel-West and not included in the Woondeal Stedendriehoek.

Social housing in the region is organised through 'Woonkeus Stedendriehoek', which does include Deventer, but excludes Epe and Heerde.

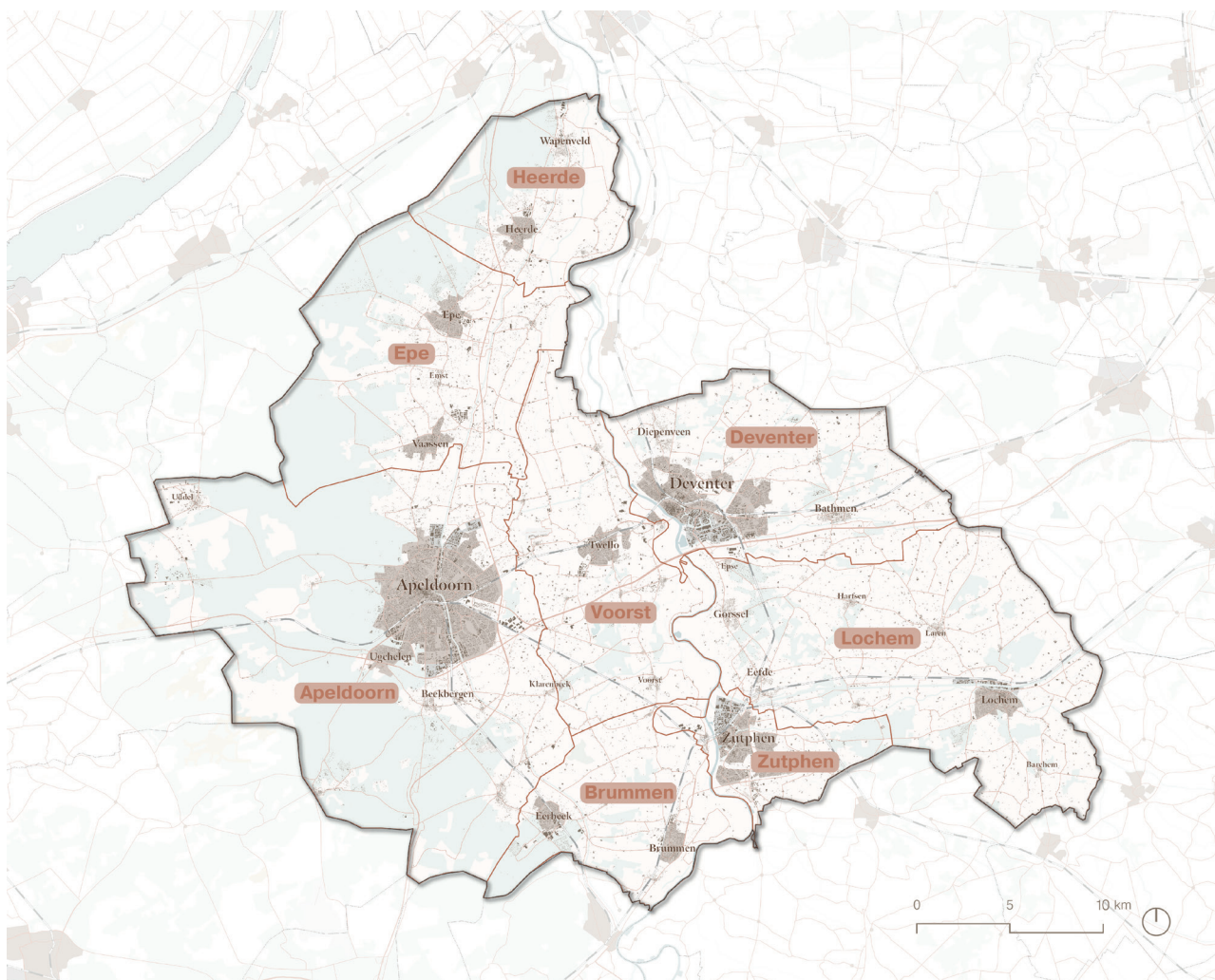


Figure 6.4: The municipalities within the Regio Stedendriehoek, by author.

2021 - 2050

- Strong shrinkage ($\geq 10\%$)
- Shrinkage (2,5% to 10%)
- Fairly stable (-2,5% to 2,5%)
- Growth (2,5% to 10%)
- Strong growth ($\geq 10\%$)

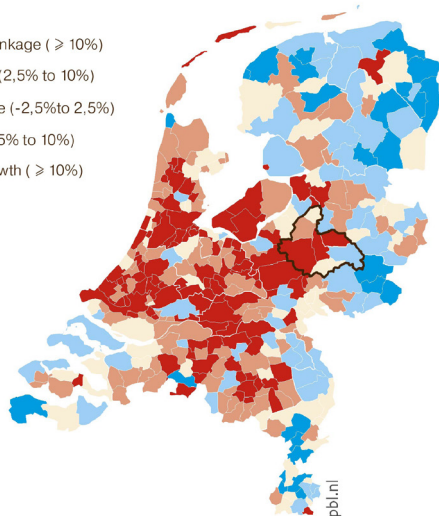


Figure 6.5: prognosis population change 2021-2050, adapted from PBL and CBS, 2022 .



Figure 6.6: Flood risk areas, adapted by author from interprovinciaal overleg (2021).

Regio Hart van Brabant



1. Housing injustices

Within the region, the city of Tilburg can be contrasted with the other municipalities. The city of Tilburg has particular challenges which are more exemplary or major cities. It has several problematic neighbourhoods with lower liveability, mostly from post-war urban expansion. Additionally, housing of migrant workers is a particular challenge for Tilburg (Regio Hart van Brabant & Royal Haskoning, 2021). Another issue mainly present in major cities is the (growing) student population which requires particular housing solutions. Although the specifications of the problems are likely to be different in the other municipalities, all municipalities are faced with a housing shortage and the challenge to expand the building stock (Regio Hart van Brabant, 2022). The regional prognosis (figure 6.8) shows that most municipalities are likely to experience growth, while the population in Alphen-Chaam might shrink.

Concerning the issue of short-termism and climate change, the area is mostly on higher ground. Only in the northern part of the region a threat is formed by the river Bergsche Maas (figure 6.9).



2. Differentiation

By inhabitants, Tilburg ranks as the 7th largest municipality in the Netherlands. The surrounding municipalities provide the region with multiple smaller cores, ranging from smaller villages, such as De Moer, to larger villages, such as Dongen, and small cities, such as Waalwijk.

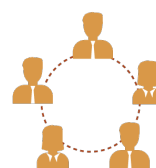
There are however no medium-sized cities in the region. The surrounding cities and villages have no more than 35.000 inhabitants (source), which leaves a considerable gap on the rural-urban scale.



3. Intermediary zone

The Tilburg city-region does not fall inside the scope of any of the conceptualisations of 'the Randstad' (source). The region does have direct connections by road and rail to Rotterdam, as well as the metropolitan region of Eindhoven.

The Hart van Brabant region shares a border with Belgium and could therefore be considered peripheral itself, but due to the network integration of the region and the presence of other large cities in the vicinity makes it more of an intermediary zone. In contrast, the nearby province of Zeeland does have severe issues of shrinkage and can be considered more peripheral.



4. Institutional cooperation

The city-region of Tilburg has a formal collaboration within the region 'Hart van Brabant'. This governmental collaboration consists of 11 municipalities, with Tilburg at its core.

This region works together on the social, physical and economic domain. Regarding the physical domain, the region has developed a Regional Environmental Agenda, as well as a Regional Energy and Climate Strategy, which guide the developments in the municipalities in the region (Regio Hart van Brabant, 2023a). Decisions regarding housing are made as well in this collaborative body, as part of the physical domain. However, the 'Woondeal' is not made in by the Hart van Brabant region, but in the informal collaboration 'Stedelijke Regio Breda-Tilburg', which is formed together with the province, four water boards and the municipalities from the collaborating region West-Brabant (Regio Hart van Brabant, 2023b).

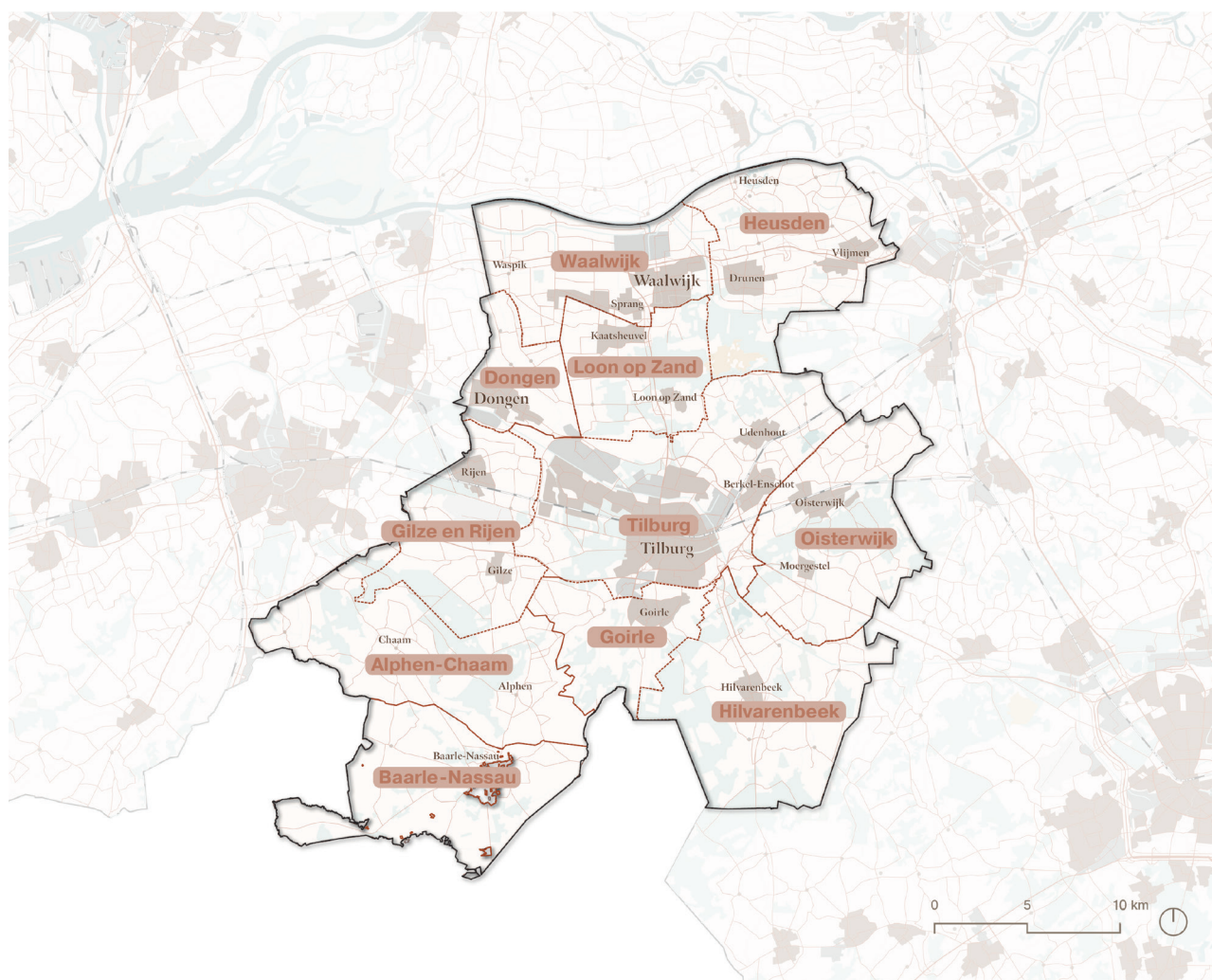


Figure 6.7: The municipalities within the Regio Hart van Brabant, by author.

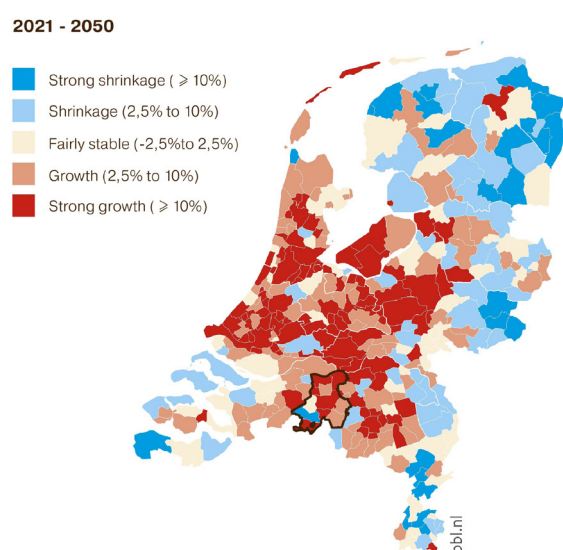


Figure 6.8: prognosis population change 2021-2050, adapted from PBL and CBS, 2022 .



Figure 6.9: Flood risk areas, adapted by author from interprovinciaal overleg (2021).

Regio Foodvalley



1. Housing injustices

The population in the Foodvalley region is growing. There is a migration surplus from surrounding regions, particularly of Randstad households (Regio Foodvalley, 2023). Additionally, a relatively high birth rate causes a natural population increase (Regio Foodvalley, 2023).

The main housing issues reflect this pressure on the housing market. To relieve this pressure, the goals are to add 25.000 dwellings by 2030 and 40.000 by 2040 (Regio Foodvalley, 2023). The price of houses has been rising since 2013 and the amount of transactions is increasing as well. Shrinkage is not likely to be a problem until 2040 (Regio Foodvalley, 2018). These issues of growth and rising prices are particularly exemplary of the Randstad and major cities. Apart from these quantitative challenges, the housing agenda's (Regio Foodvalley, 2018; Van Heck, 2021) particularly stress issues regarding affordability, middle segment rent, housing & healthcare, sustainability, liveability and flexibility, which are themes that are broadly discussed nationwide.

Concerning the issue of short-termism and climate change, the area is mostly on higher ground. The western part of the region has an interesting challenge regarding flood risk: it is located in the valley between two elevated nature areas, which could funnel river water into the area (see figure 6. 12).



2. Differentiation

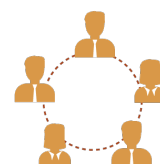
The cities in the region are medium sized cities. Ede is the biggest city with over 75.000 inhabitants. The southern part of the region is most urban, with several small to medium size cities enfolding around the green Binnenveld area. In the northern wing, north of the city of Ede, smaller villages can be found. This gives a decent range on the urban-rural scale.



3. Intermediary zone

Although Veenendaal and Rhenen are located in the Province of Utrecht, which is a Randstad province, the area as a whole cannot be considered a part of the Randstad.

The cities of Veenendaal and Ede are relatively well-connected to Utrecht and the rest of the Randstad by rail and road, as well as to the Arnhem-Nijmegen region. This makes the area more an extension of the core of the country than part of the periphery.



4. Institutional cooperation

The municipalities work together in the Food Valley region, where eight municipalities (Barneveld, Ede, Nijkerk, Renswoude, Rhenen, Scherpenzeel, Veenendaal and Wageningen) as well as the provinces of Gelderland and Utrecht cooperate.

'Quality of Living' is one of the seven points on the strategic agenda of the Food Valley region.

The municipalities in the Foodvalley region have been working together on regional housing agenda's since 2014 in three subsequent housing agenda's (Van Heck, 2021). It is also in this constellation that the 'Woondeal' is made as a part of the national objective to build 900.000 houses. Barneveld and Nijkerk were also part of the Woondeal of the Amersfoort region, because of their proximity and housing connection.



Figure 6.10: The municipalities within the Regio Foodvalley, by author.

2021 - 2050

- Strong shrinkage ($\geq 10\%$)
- Shrinkage (2,5% to 10%)
- Fairly stable (-2,5% to 2,5%)
- Growth (2,5% to 10%)
- Strong growth ($\geq 10\%$)

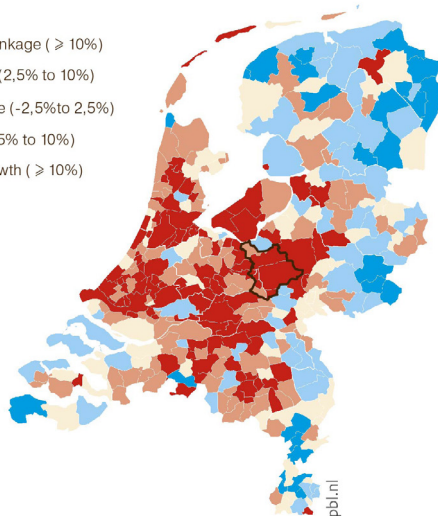


Figure 6.11: prognosis population change 2021-2050, adapted from PBL and CBS, 2022.



Figure 6.12: Flood risk areas, adapted by author from interprovinciaal overleg (2021).

Introduction to the Stedendriehoek

The analyses of the pre-selected regions on the four criteria show that none of the regions satisfy all the criteria perfectly, but that each of them have potential. The goal of this research is to make a transferable justice framework, so it should in theory be applicable to any location. Based on this preliminary analysis, the Regio Stedendriehoek is thought to have the most potential for demonstrating the justice framework. The main reasons for this are the size differentiation and the established institutional cooperation, which enables an analysis of current policy.

About the Stedendriehoek

The Stedendriehoek ('city triangle') derives its name from the three core cities in the region: Apeldoorn, Deventer and Zutphen. The name Stedendriehoek has been in use for a longer time to indicate the region around these cities, but with varying borders. In this research, the name Regio Stedendriehoek refers to the formal institution 'Regio Stedendriehoek', which consists of eight municipalities: Apeldoorn, Brummen, Deventer, Epe, Heerde, Lochem, Voorst and Zutphen. The municipality of Deventer is located in the province of Overijssel. The other seven municipalities are all located in the province of Gelderland.

Structure of the region

The area is defined by the Veluwe and the IJssel. Many of the cities and villages emerged along these natural areas. There is a chain of cities and villages in the hem of the forests of the Veluwe, close to its resources and agricultural land. The cities of Deventer and Zutphen have grown as trading cities with their strategic position along the IJssel. Both of these cities have a large historic centre illustrating historical prosperity. Additionally, the man-made canals are anchor points for habitation.

The region is crossed by two highways, the A1 and A50, and several rail lines which connect the region to the Randstad, as well as regional cores. This contemporary infrastructure shows how specifically Apeldoorn has a very strategic position with direct connections to major cities by both road and rail. Zutphen is more isolated, at a distance from highways and not connected to the east and west by intercity trains. Deventer is well-connected in all directions by rail, but primarily in east-west orientation by road.

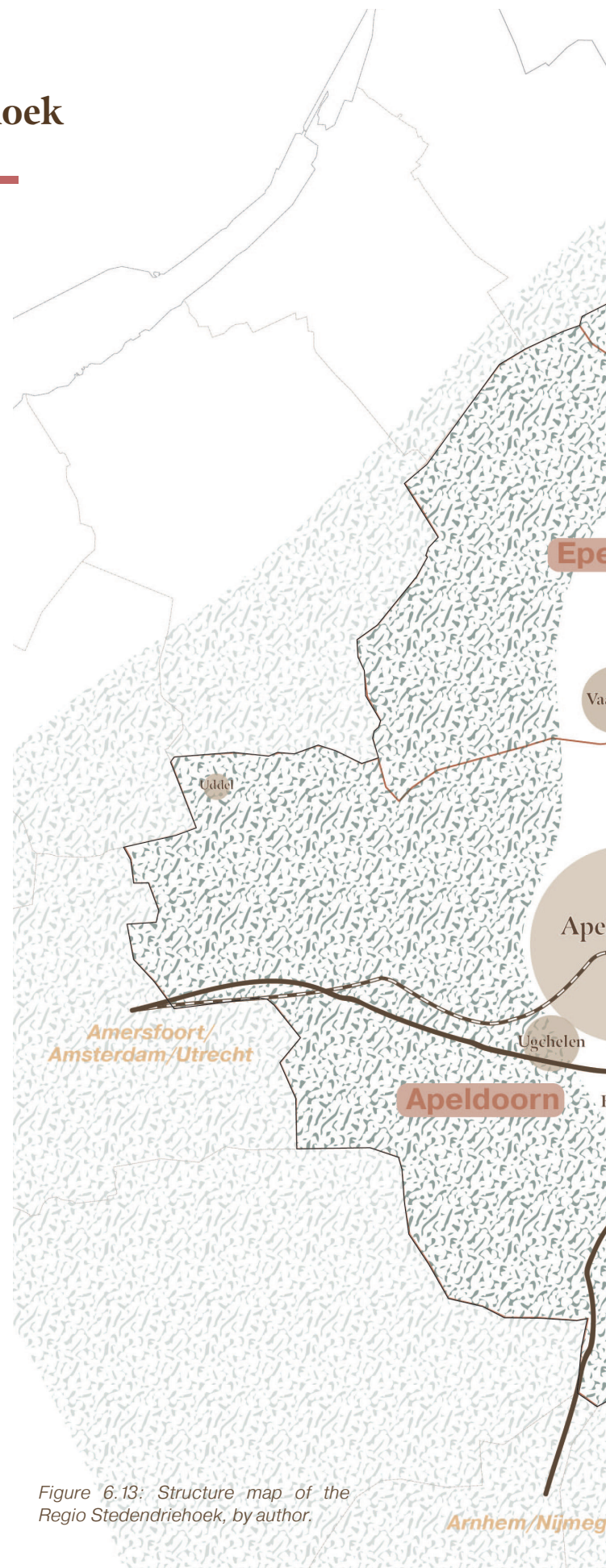
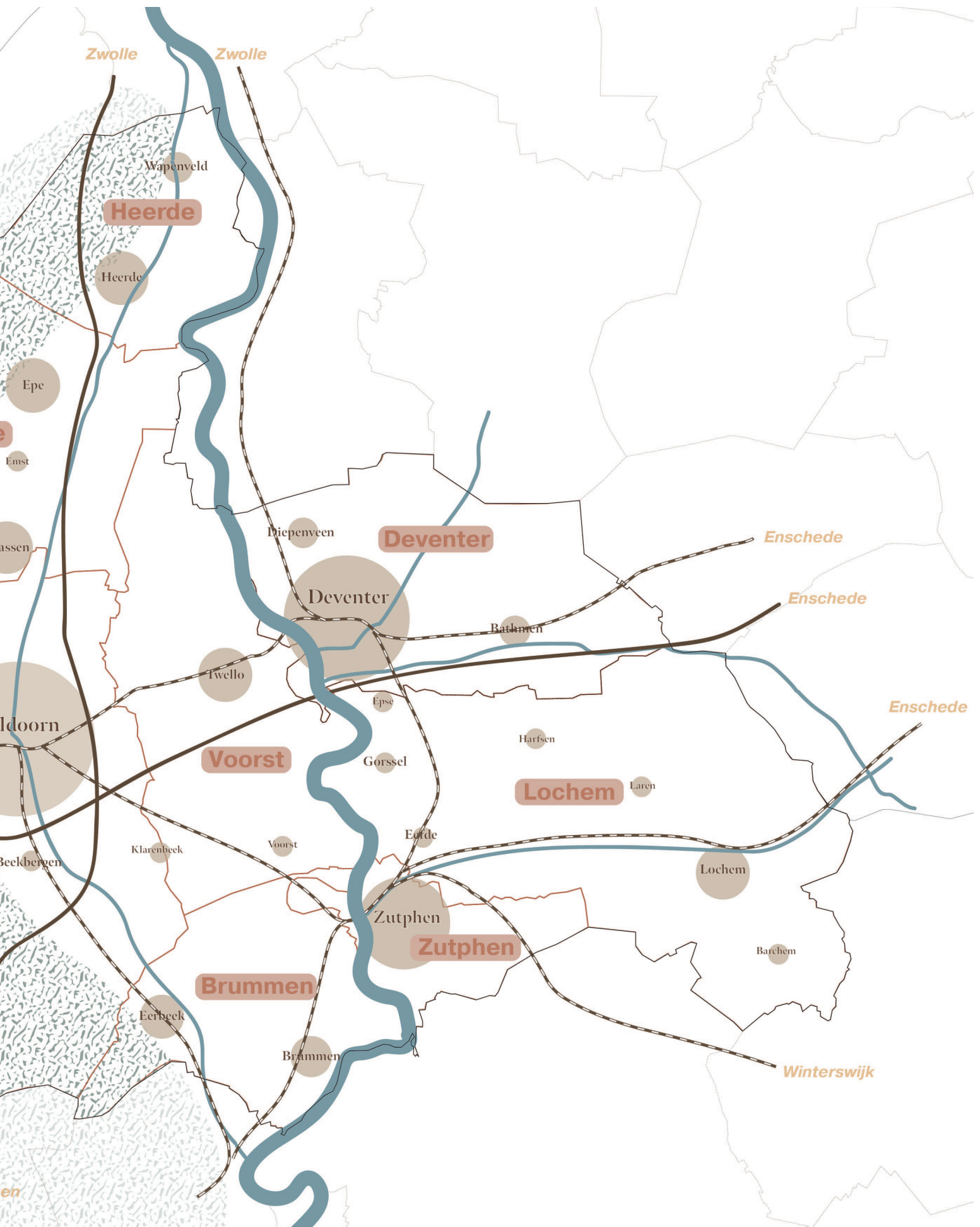


Figure 6.13: Structure map of the Regio Stedendriehoek, by author.



General information

The map on the right in figure 6. 14 shows some general descriptive statistics of the Regio Stedendriehoek. For the general orientation, these statistics are connected to the base map which is used in the analysis. The base map gives a more detailed image of the built fabric in the region as well as the names of the main cities and villages in the region which might be referred to in the analyses.

Legend

-  Inhabitants
-  Households
-  Dwellings
-  Area

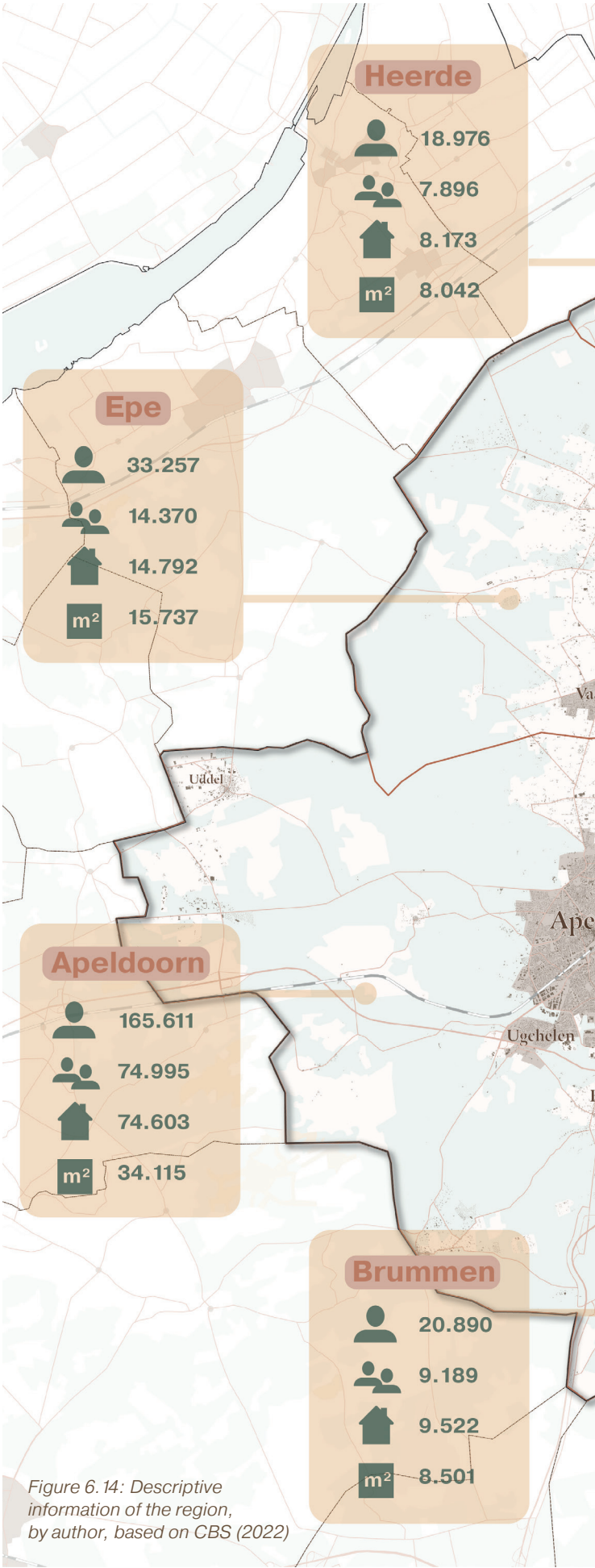
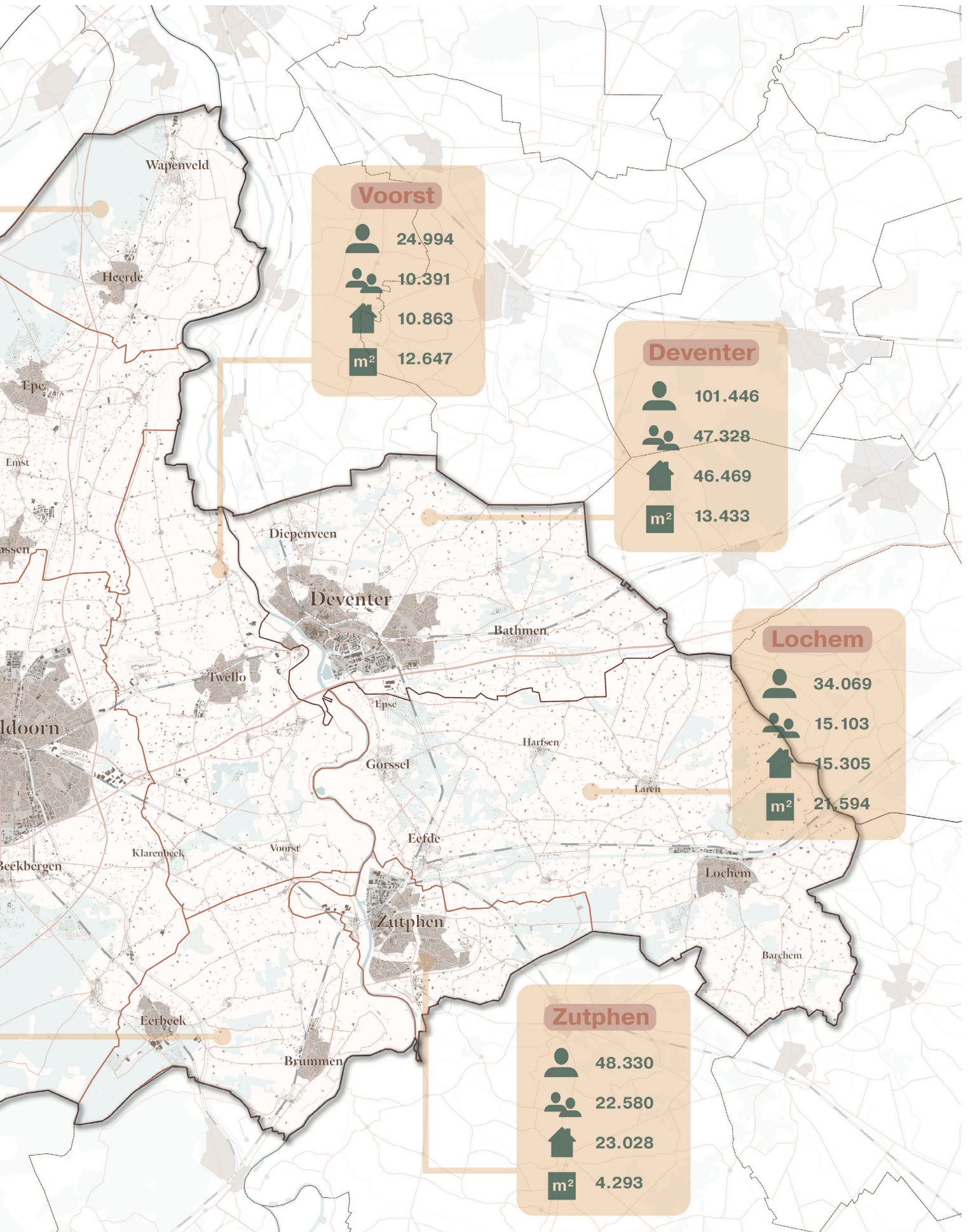


Figure 6. 14: Descriptive information of the region, by author, based on CBS (2022)



A new stakeholder

As discussed under one of the criteria for the choice of case study, there is already institutional cooperation in the Stedendriehoek region. This means that there is an additional stakeholder involved in the spatial planning of housing, which has not been discussed previously.

This stakeholder is the ‘Regio Stedendriehoek’, which is an official governmental body. The organisation specifically uses a regional perspective. The idea behind this is that many problems are not solvable on a local level without looking at the larger picture (Regio Stedendriehoek, 2023b). The general interests of the Regio Stedendriehoek are to improve the broad welfare in the region as a whole. The organisation aims to stimulate collaboration and knowledge sharing in the region. It does so by working together with other more local stakeholders, such as schools and entrepreneurs.

The capabilities of the Regio Stedendriehoek are diffuse. As a governmental body they can create vision documents and plans, but there are not any official instruments, such as structure plans or zoning plans of provinces and municipalities. However, agreements can be made on this regional level for municipalities to implement policies.

Compared to individual municipalities, the region represents a sizeable population, which makes it an important scale for negotiation with the state. The region is for example the driver behind the application for Regio Deal subsidies (Regio Stedendriehoek, 2023c).

In figure 6.15 the ‘Regio Stedendriehoek’ is positioned in the stakeholder onion diagram and power interest matrix, as previously shown in figure 3.3.

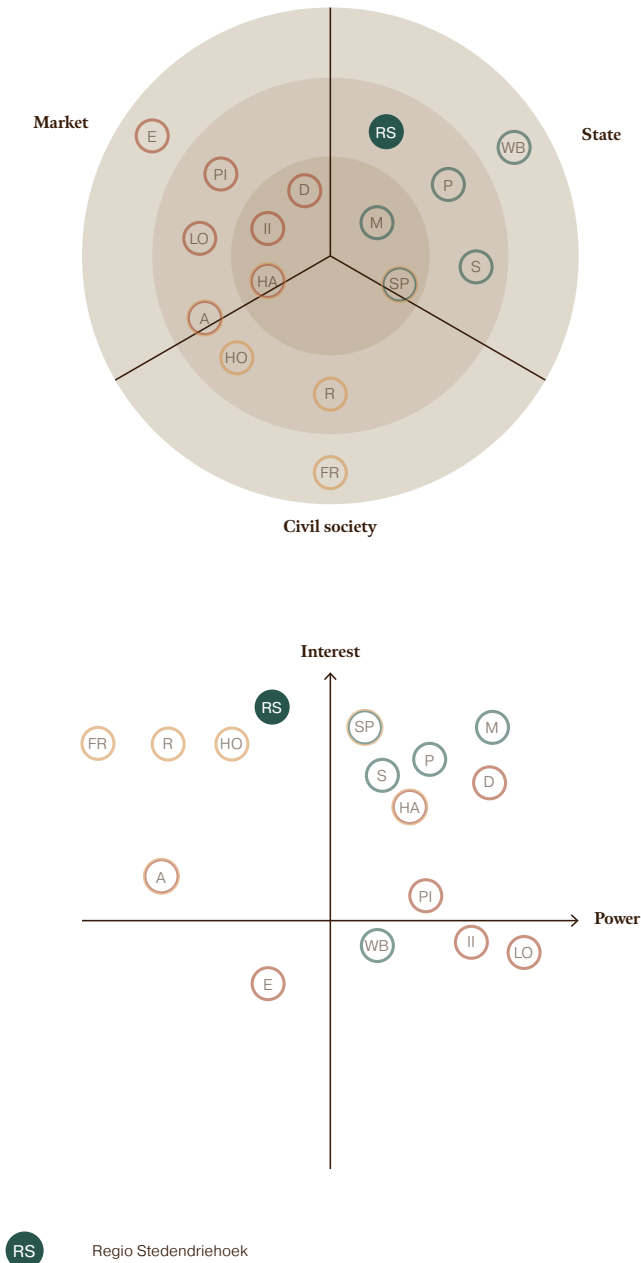


Figure 6.15: Addition of ‘Regio Stedendriehoek’ to the stakeholder diagrams for new development

Table 6.1: Additional row to the stakeholder analysis, specific to the Regio Stedendriehoek

Actor	Specification	Interests and objectives	Capabilities and resources
Regio Stedendriehoek	<ul style="list-style-type: none">Public body, comprised of eight municipalitiesCollaborating frequently with entrepreneurs, schools and different governments	<ul style="list-style-type: none">Improve broad welfareShare knowledge within the regionStimulate collaboration	<ul style="list-style-type: none">Diffuse power: create vision documents and plans, which guide policy of individual municipalities; connecting stakeholders; lobbying position

Area analysis

The analysis of the area is based on the six applied values from the justice framework: availability, acceptability, sustainability, moderation, influence and diversity. The third ring of the justice framework, the housing dimensions belonging to these applied values, guide the analysis and the discussion of the analysis maps. The analysis of each dimension consists of a synthesis map which combines the different housing dimensions, which is supplemented by figures and photographs. In addition, a policy analysis of two documents is included in the analysis of each applied value.

Policy analysis

On a regional level, there are currently two main planning documents related to housing. The first main document is the Woondeal (Regio Stedendriehoek et al., 2023). The Dutch Ministry of Internal Affairs has the goal to develop 900.000 new dwellings by 2030 (Regio Stedendriehoek et al., 2023). In order

to get grip on the distribution of these dwellings and to speed up the building process, the ministry has signed *Woondeals* with regions throughout the country. Following, the goals formulated in these Woondeals are predominantly quantitative. In line with the national ambitions, these Woondeals also include agreements about affordable housing (Ministerie van Binnenlandse Zaken en Koninkrijksrelaties, 2023b). The second main policy document regarding housing in the Stedendriehoek region is the Uitvoeringsagenda (Regio Stedendriehoek, 2023a). This document is an elaboration of the Strategische Agenda 2022-2030 (Cleantech Regio, 2022), which set the general goals for the region. Both these documents are general strategic planning documents, in which housing is one of the main pillars.

Because these documents are frequently referred to, the citation is only given once in each policy analysis paragraph. In spite of their spatial character, these policy documents barely contain maps. These analyses are therefore textual.



Figure 6.16: The main regional policy documents analysed for each applied value (Regio Stedendriehoek, 2023a; Regio Stedendriehoek et al., 2023)

I. Sufficiency - availability

The number of dwellings should be enough.

Points of attention are the total amount of housing, regional distribution of housing, availability of different tenures, and whether dwellings become available (the flow).









The applied value of availability is divided over three dimensions:

- I.A. Match of supply and demand
- I.B. Flow
- I.C. Quantity

The analytic maps of individual indicators of these dimensions are included in Appendix B, in figures B.0-B.4.

Figure 6.17 on the right shows a synthesis of these analyses. This analysis is further discussed on the following pages.

Legend

-  Insufficient share of social housing (medium density)
-  Insufficient share of social housing (high density)
-  Low (ownership) mutation rate (low density)
-  Low (ownership) mutation rate (high density)
-  Demand > supply of elderly housing
-  > 800 dwellings per km²
-  > 2000 dwellings per km²
-  Key projects from Woondeals

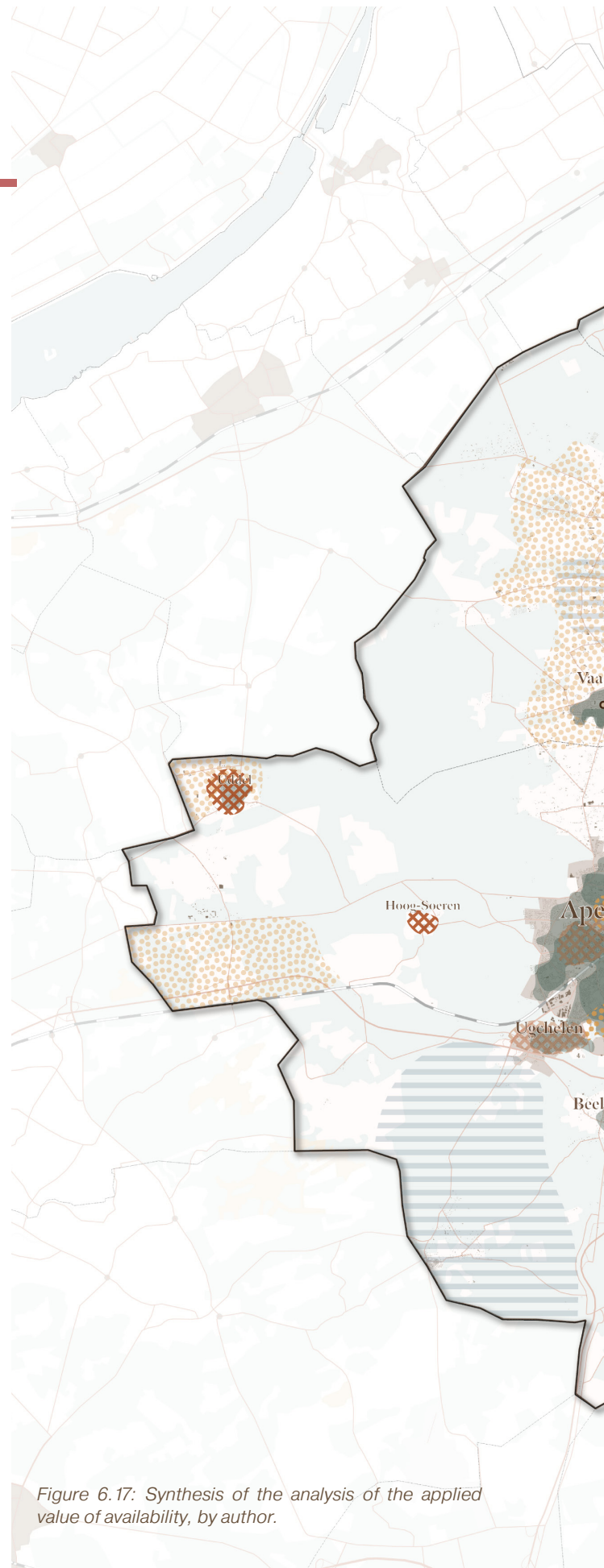
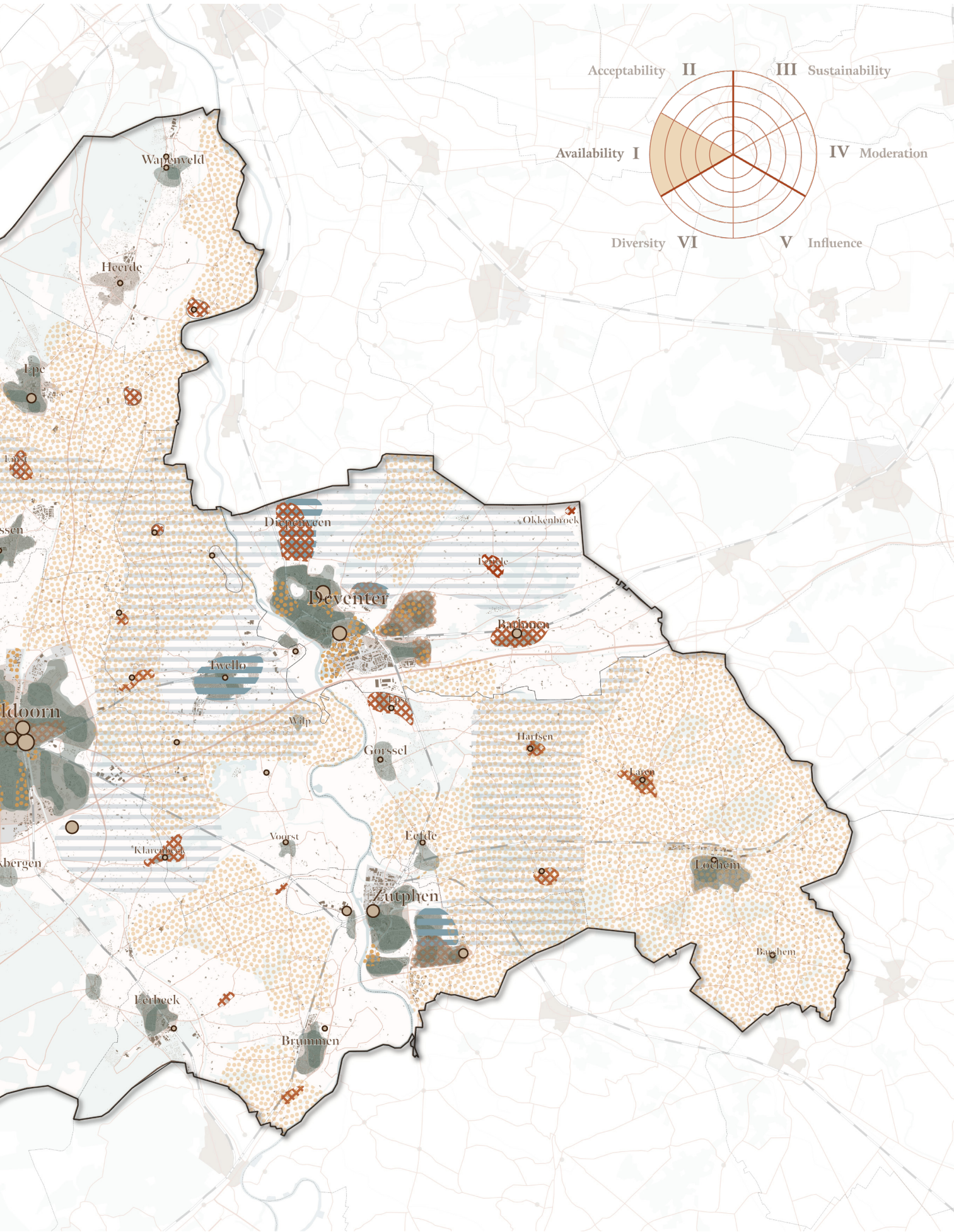


Figure 6.17: Synthesis of the analysis of the applied value of availability, by author.



I.A Match of supply and demand

There is not only a need for enough dwellings, there is also a need for specific types of dwellings, such as housing that is suitable for elderly people and housing that is affordable for low-income groups. The analysis reveals that in rural areas and in some neighbourhoods in Deventer and Apeldoorn, there is a higher demand for dwellings for people with motion disabilities than that there is supply. This reveals that there is currently a qualitative gap in the supply and demand of housing .

The share of social housing is limited in the smaller villages and sufficient within the cities, considering a sufficiency norm of 30%. The social housing share is particularly low in the municipalities of Heerde, Lochem and Voorst, where there are mainly smaller villages. The prevalence of villages does not need to be an excuse for a low share of social housing, however, as the municipality of Brummen has the highest share of social housing in the region, only in villages. These values give an indication of the match between supply and demand, with the assumption that the desired share of social housing is similar throughout the country. In reality, there might be a difference in demand between cities and villages.

I.B. Flow

The flow of residents to other dwellings, which theoretically would be a better fit, can be measured with the mutation rate. The mutation rate is the percentage of dwellings that changed residents

The mutation rates show a very different geographical spread for owner-occupied housing and social housing. The mutations for owner-occupied housing is low in the more rural areas and high in the (centre of) cities. Whereas for social housing, it seems to be the opposite: the social housing mutation rate is much higher in the rural areas than in the cities. The share of social housing is generally lower in rural areas (see figure B.1), which makes it important that housing becomes available regularly.

The high mutation rate for owner-occupied housing in the cities indicate some availability and perhaps longer chains of movement, with one movement resulting in several others in a chain.

I.C. Quantity

The biggest quantity of housing can be found in the three main cities of the region. These areas also have the highest housing density. Currently, the amount of households in Apeldoorn and Deventer is higher than the amount of dwellings, which indicates a shortage of housing.

The building plans for the amount of housing in the region surpass the prognosis for the amount of households in 2030 in all municipalities. Adding a set amount of housing will have a very different effect on a village than on a city, where it disappears more into the mass, and where higher densities and smaller houses are more common. However, both the relative and absolute differences in quantity in the region increase with the housing plans that are proposed in the Woondeal (see table 6.2). This means households will be concentrated even more in cities, in particular in Apeldoorn and Deventer.

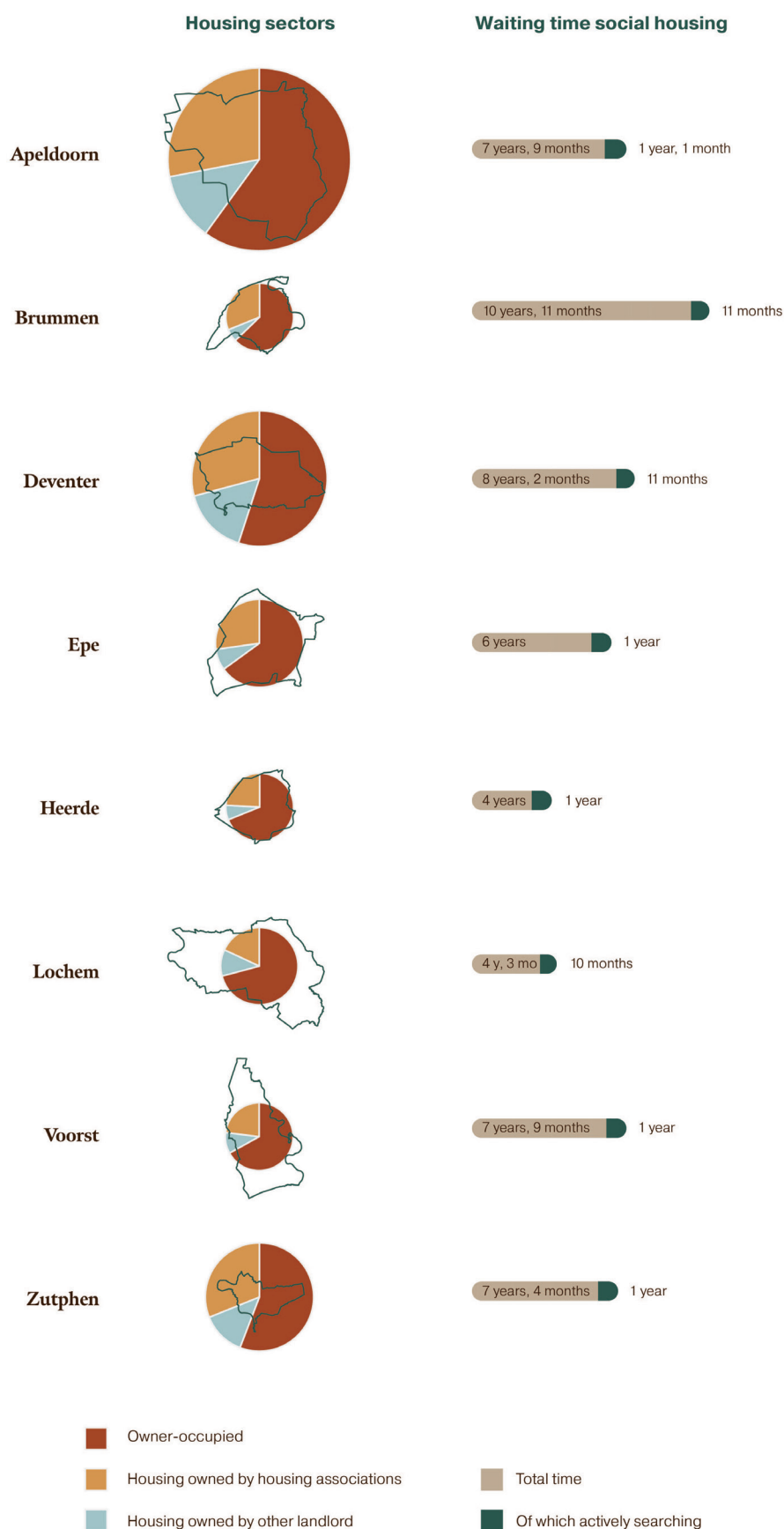


Figure 6.18: Dwelling volume (shown by size of the diagram) and the division in sectors per municipality, compared to the size of the municipality. By author, based on CBS (2023).
 On the right: waiting and search time for social housing (NOS op 3, n.d.; based on data from 2020).

Policy analysis availability

This section explores in which way the dimensions of justice are discussed in two main policy documents: the *Woondeal* (Regio Stedendriehoek et al., 2023) and the strategic *Uitvoeringsagenda* (Regio Stedendriehoek, 2023a). To maintain legibility, these are referred to by their name and not the full citation.

I.A. Match of supply and demand

In the *Woondeal*, targets for dwelling production are defined. This reveals that there are plans to build 8.800 dwellings in Apeldoorn and 7.000 in Deventer. These municipalities are expected to grow the most according to the prognosis (PBL & CBS, 2022; see table 6.2). These figures are mutually enforcing: new households require housing, but new construction in an area can also attract new residents.

In the *Woondeal*, agreements are made about the share of affordable housing. The core principle is that there is a balance with 30% social housing in the future supply, regionally, as well as in every municipality. The province does take specific conditions in municipalities into account which make it infeasible to grow to 30% social housing (p. 13).

The *Woondeal* stresses the need for housing suitable for elderly (p. 18). This document does not deal with the issue, but will be further developed regionally and locally in the second part of the *Woondeal*.

The *Uitvoeringsagenda* is brief about this dimension of availability. The aim is stated to contribute to solving the national housing shortage and counter greying in the region. "That requires dwellings that fit the demand: from students to 'empty-nesters', from families to labour migrants and from social housing to owner-occupied." (p. 14, translated). In the section about rural areas in the region, the *Uitvoeringsagenda* states the goal to realise an affordable dwelling supply in the villages for young adults, and to create a suitable supply for seniors, which allows them to live independently in the villages (p. 24).

I.B. Quantity

The *Woondeal* states that the whole Stedendriehoek region, including Deventer has the need to develop 24.000 dwellings (p.5). Although the formulation in the *Woondeal* ("woningbouwopgave") makes it appear as if all these dwellings need to be newly built, the

Uitvoeringsagenda is more neutral and formulates it as an addition of dwellings (p. 14).

The need for this quantity of dwellings is not further explained in either of the documents. It appears to be connected to the bid of the Province of Gelderland to contribute with 100.000 dwellings to the State's goal of 900.000 dwellings (*Woondeal*, p. 5, p. 26-27).

In developing the agreements for the *Woondeal*, the municipalities of Brummen, Epe and Heerde have agreed to develop more dwellings than initially agreed upon in earlier deals (p.6).

The prognosis for residents until 2030 is an increase of roughly 14.900 to 16.200 in the whole region (PBL & CBS, 2022; ABF Research, 2023). Compared to the Primos prognosis (ABF Research, 2023; table 6.2), the plans amply cover the increase in households. The plans to build 24.000 dwellings would more than sufficiently cover this increase in population, also taking into account shifts in household structure.

I.C. Flow

The *Woondeal* includes several key points from the "Actieplan Wonen" of the Province of Gelderland in its appendix. One of these points is to assist housing associations in stimulating senior residents to move from large socially rented dwellings to a fitting home. Two instruments that are used for this are moving coaches and a relocation allowance.

Surprising of this provincial programme is that it is solely focused on social housing, while the same issue of limited flow in owner-occupied housing can be observed, with an increasing number of elderly households living in owner-occupied dwellings (Lijzenga et al., 2019).

The *Uitvoeringsagenda* states the aim to add new and fitting dwellings for current and new residents. It mentions a large variety of different types of dwellings, which are required to create a flow in the dwelling market (p. 14).

Analysis conclusion availability

There are currently slightly more households than dwellings in the region, which affirms a dwelling shortage. If dwellings are constructed according to the plans in the Woondeal, and if the residential and household prognosis for the region are correct, the dwelling supply will be more than sufficient in all municipalities.

Dwellings are planned primarily in the two largest cities in the Stedendriehoek region. This increases both the absolute and relative differences in the region regarding the amount of dwellings and inhabitants. This does not need to be problematic, but important to be aware of.

Another important factor to be aware of is that the planned housing quantity does not only surpass the population prognosis for 2030 in all municipalities, but even surpasses the prognosis for 2050 in several of the municipalities. As currently planned, there will be almost no new construction necessary in the period 2030-2050. Although it is always useful to look at the

long term demand when planning housing, in the case of these municipalities, it is especially important to consider the needs of inhabitants of the future in building plans. Ideally the housing stock from 2030 is adaptable to the needs of the inhabitants in 2050.

The fear expressed in the Uitvoeringsagenda is that this future population is increasingly of older age. Considering that in the current housing stock there is already more demand than supply for houses suitable for elderly people (especially in the smaller municipalities), getting this balance right should be a priority in housing policy. Right now this is mentioned in policy, but not as a direct goal.

Another mismatch of supply and demand that is revealed by the analysis is in social housing. Especially in some of the larger villages, the supply of social housing is low. On a municipal level the social housing supply is around 30% in cities, with clear differences in neighbourhoods. However, the mutation rate of social housing is low in cities, which indicates a shortage.

Conversely, the mutation of owner-occupied dwellings is low in rural areas, which points to limited availability in that sector.

Table 6.2: Comparison of dwelling plan capacity and household prognosis for each municipality (CBS, 2023a; Regio Stedendriehoek et al., 2023; ABF Research, 2023)

Municipality	Dwelling quantity 2023	Net addition	Net quantity 2030	Growth	HH2023	HH2030	HH2050
Apeldoorn	75.096	8.499	83.595	11,3%	76.080	81.630	86.810
Brummen	9.647	957	10.604	9,9%	9.310	10.000	10.850
Deventer	47.015	7.000	54.015	14,9%	48.150	51.350	56.530
Epe	14.844	1.789	16.633	12,1%	14.380	15.470	16.870
Heerde	8.195	844	9.039	10,3%	8.040	8.390	8.820
Lochem	15.446	1.165	16.611	7,5%	15.230	16.100	16.890
Voorst	10.938	908	11.846	8,3%	10.490	11.070	11.760
Zutphen	23.381	1.980	25.361	8,5%	22.820	23.900	24.830
Total	202.755	23.142	227.704	11,3%	204.490	217.900	233.360

II. Sufficiency - acceptability

Housing should be of sufficient quality.

Points of attention are energetic quality, structural quality, environmental quality, at a price that is acceptable.






The applied value of acceptability is divided over three dimensions:

- II.A. Housing quality
- II.B. Affordability
- II.C. Environmental quality

The analytic maps of individual indicators of these dimensions are included in Appendix B, in figures B.5-B.10.

Figure 6.19 on the right shows a synthesis of these analyses. This analysis is further discussed on the following pages.

Legend

-  Weak or insufficient housing dimension of Leefbaarometer
-  Relatively many households experiencing energy poverty
-  High living expense ratio in social housing
-  Very high living expense ratio in social housing
-  Weak or insufficient access to amenities

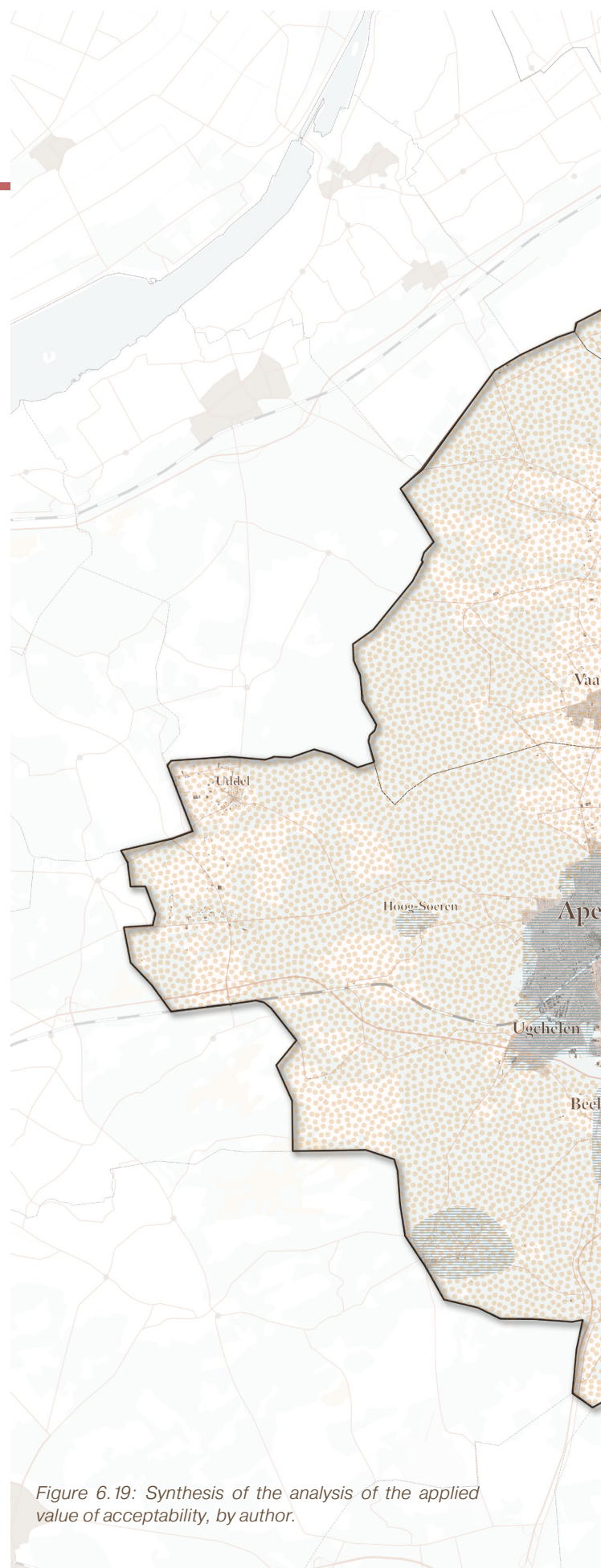
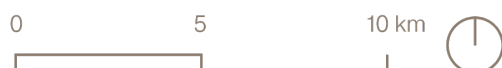
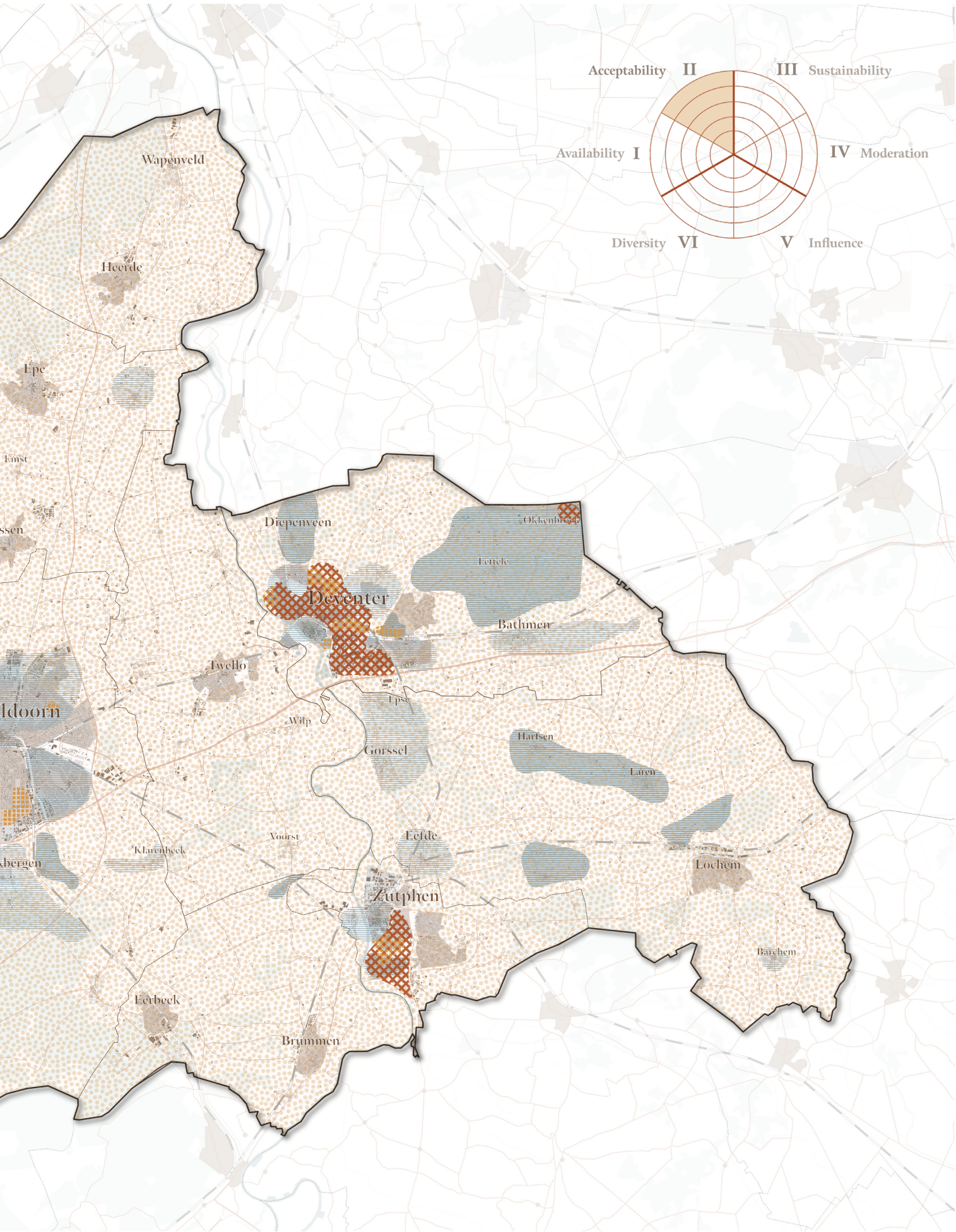


Figure 6.19: Synthesis of the analysis of the applied value of acceptability, by author.



II.A. Housing quality

Generally the housing quality in the region is decent. The liveability dimension of 'Dwelling' from the Leefbaarometer (see also figure B. 10) is very sufficient or good in rural areas. This dimension is sufficient or very sufficient in cities. There are some larger weak and insufficient areas in Deventer and Zutphen, and in a small area in Apeldoorn.

The indicator of energy poverty bridges between housing quality and affordability. Affordability issues can emerge from high housing expenses which limit the opportunity to pay for energy costs, or from housing with bad energetic quality resulting in high energy bills, to which specifically low income households are vulnerable (Mulder et al., 2023). The analysis of energy poverty on CBS *wijk*-level shows that the districts with relatively the most households likely to experience energy poverty are within the city of Deventer, in two districts in Zutphen and in the village of Okkenbroek. In the cities the population density is relatively high, so there it concerns a substantial absolute amount of households as well.

II.B. Affordability

There can be strong differences in affordability in a neighbourhood. Issues of affordability are experienced on an individual level and can depend on many different factors such as age, occupation and family (Hochstenbach, 2022). Housing expenses can for instance greatly differ depending on when a house is bought. Also the housing expenses or opportunities can greatly differ between owners and renters in the same neighbourhood. These individual differences are complex to map, especially on a regional scale. However, there are some geographical patterns.

In figure 6.19, an analysis of the living expense ratio in social housing is shown, which is the total housing costs (including energy and taxes) compared to the household income. The living expense ratio is the highest in the smaller villages in the east of the region. However, the living expense ratio is relatively low in all of the large villages, so it cannot be concluded that a high living expense ratio is common for villages. The living expense ratio in cities is somewhat high, with the exception of the newest (Vinex) neighbourhoods.

Living expense figures for the owner-occupied segment are not available, but there could be serious affordability issues in this segment as well, for example due to high energy costs.

III.C. Environmental quality

Environmental quality in the region is generally very high. Especially in the rural areas, the liveability, composed of many different indicators, is high. Only a few neighbourhoods in Deventer and Zutphen are not sufficient according to the Leefbaarometer (see also figure B.8).

A negative contribution to the liveability in rural areas is the dimension of 'amenities'. Only the centres of some villages are sufficient on this dimension. Several villages are not even sufficient in their core. The image for the whole municipalities of Heerde, Brummen and Lochem is not very positive regarding amenities.

Another interesting observation is that the newer neighbourhoods in Deventer (Colmschate-Noord and Colmschate-Vijfhoek) and Zutphen (De Leesten, Zuidwijken) are insufficient in the amenities category. These neighbourhoods are at a distance from the city centre and are not well-equipped with amenities themselves.



Figure 6.20: New development in the centre of Apeldoorn, taking both energetic quality and affordability into account. Photo by author.



Figure 6.21: Owner-occupied housing with contrasting levels of maintenance in De Maten, Apeldoorn. Photo by author.

Policy analysis acceptability

This section explores in which way the dimensions of justice are discussed in two main policy documents: the *Woondeal* (Regio Stedendriehoek et al., 2023) and the strategic *Uitvoeringsagenda* (Regio Stedendriehoek, 2023a). To maintain legibility, these are referred to by their name and not the full citation.

II.A. Housing quality

The *Woondeal* is predominantly quantitative. There is not a specific passage about the quality of housing. It also does not mention quantifiable qualitative goals, such as minimum size or energetic quality. It is implicit that newly constructed dwellings need to adhere to the contemporary standards that are inscribed in national law. This guarantees a basic level of quality. On top of this, individual municipalities can also have additional policies quality. However, these are not mentioned in the *Woondeal*.

The *Uitvoeringsagenda* is also concerned with the existing stock. The goal in the *Uitvoeringsagenda* is to make 20.000 dwellings more sustainable (p. 14), and the agenda mentions that the energy transition and climate adaptation will be addressed with an area-oriented approach (p. 15), and that the sustainability transition of commercial and non-commercial properties will be stimulated (p. 15).

Although the large majority of dwellings in the region are owner-occupied, individual and institutional home-owners are not explicitly mentioned in the document as a group that needs to be stimulated to improve housing quality. This group could be included in an area-oriented approach, but no indication is given which areas the goal concerns.

II.B. Affordability

The *Woondeal* states that in the region (excluding the municipality of Deventer) 17.000 new dwellings should be realised, of which 70% is affordable, including 30% social rent (p. 5). This is even slightly above the national goal of 67% affordable housing.

The *Uitvoeringsagenda* states the specific aim to build affordable dwellings for young adults in the villages (p. 24). Interestingly, the document does not state anything else about affordability, except that there is a need for social housing in the region. However, a reference is made to the *Woondeal*, where affordability is a main concern.

One element that is missing in both documents is the long-term affordability of housing. A third of affordable housing in the plans in the *Woondeal* is affordable owner-occupied housing (p.5). The initial price does not guarantee affordability in the future, unless other instruments are used to secure this. Such measures are not mentioned in the regional documents. It could be part of individual policies of municipalities, but it is not made a regional priority. A second element not touched upon is the affordability of the existing stock. Rather, there is a focus on the new developments.

II.C. Environmental quality

Similar to housing quality, the *Woondeal* is not explicit about environmental quality.

In the *Uitvoeringsagenda*, there is more attention for environmental quality. The current housing supply is considered a bit monotonous, which is why it is argued that the addition of functionally mixed urban areas can be stimulating for the liveability in the region (p. 16).

There is also special acknowledgment for the liveability outside of the cities, which concerns proximity to amenities as well as connectivity to the rest of the region (p. 24). However, no real solutions are offered for maintaining a level of amenities in the region. There are on the other hand several solutions for sustainable connectivity, such as regional cycling network (p. 18) and a strong stance on maintaining local bus lines and good public transport connectivity in general.

Analysis conclusion acceptability

The housing quality in the region is quite well. Only in a couple of (sub-)neighbourhoods in the cities is the housing quality not sufficient. However, throughout the region, there are still many dwellings that have an energy label that is not sufficient. While the Woondeal does not address quality, the Uitvoeringsagenda touches upon the issue of energetic quality: 20.000 dwellings should be made more sustainable, using an area-oriented approach.

The policy does not mention which areas should be redeveloped, but the places where interventions in energetic quality are urgent, are in several neighbourhoods in Deventer and Zutphen, where there is a relatively high share of households experiencing energy poverty. An area-oriented approach would be justified here, but it remains important to develop policies for less dense areas where (private) property is of bad quality.

Affordability issues are primarily experienced in the cities and in some smaller villages East of the river. It should be said that this is on an aggregate level. The map just show where there is a higher concentration of affordability issues. This might obscure individual differences within the neighbourhoods.

Policy is concerned with adding affordable housing, mentioning specifically for elderly and young adults. However, the focus is on new construction, not on the existing stock, which will still be the majority of the supply.

Lastly, in terms of environmental quality, the whole region scores quite well. One major challenge is the accessibility of amenities. This issue plays out in the more distant suburbs of the major cities and in almost all areas outside of the cities.

This issue is acknowledged in policy. The solutions offered for this in policy only concern improving connectivity, not so much about maintaining or adding amenities in the rural areas.

III. Limitation - sustainability

Referring to intergenerational justice: concerning the long term effect of contemporary planning choices.

Points of attention are durability of design and emissions originating from housing.

The applied value of sustainability is divided over three dimensions:

- III.A. Energy and material use
- III.B. Housing related transport
- III.C. Land suitability

The analytic maps of individual indicators of these dimensions are included in Appendix B in figures B.11-B.17.

Figure 6.22 on the right shows a synthesis of these analyses. This analysis is further discussed on the following pages.

Legend

- High average gas use
- Extremely high average gas use
- Sub-optimal soil conditions
- Medium high flood risk (1 per 100 years)
- High flood risk (1 per 30 years)
- Protected landscape
- Bad public transport connection - medium density
- Bad public transport connection - high density

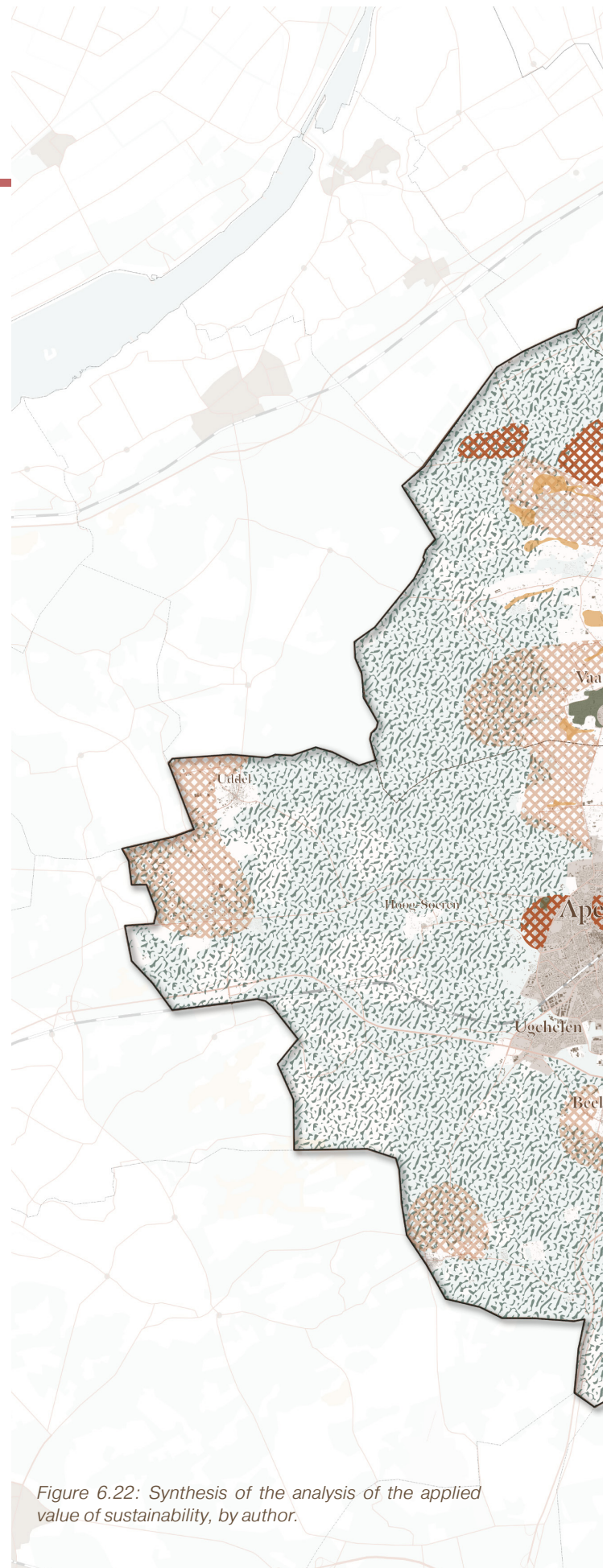
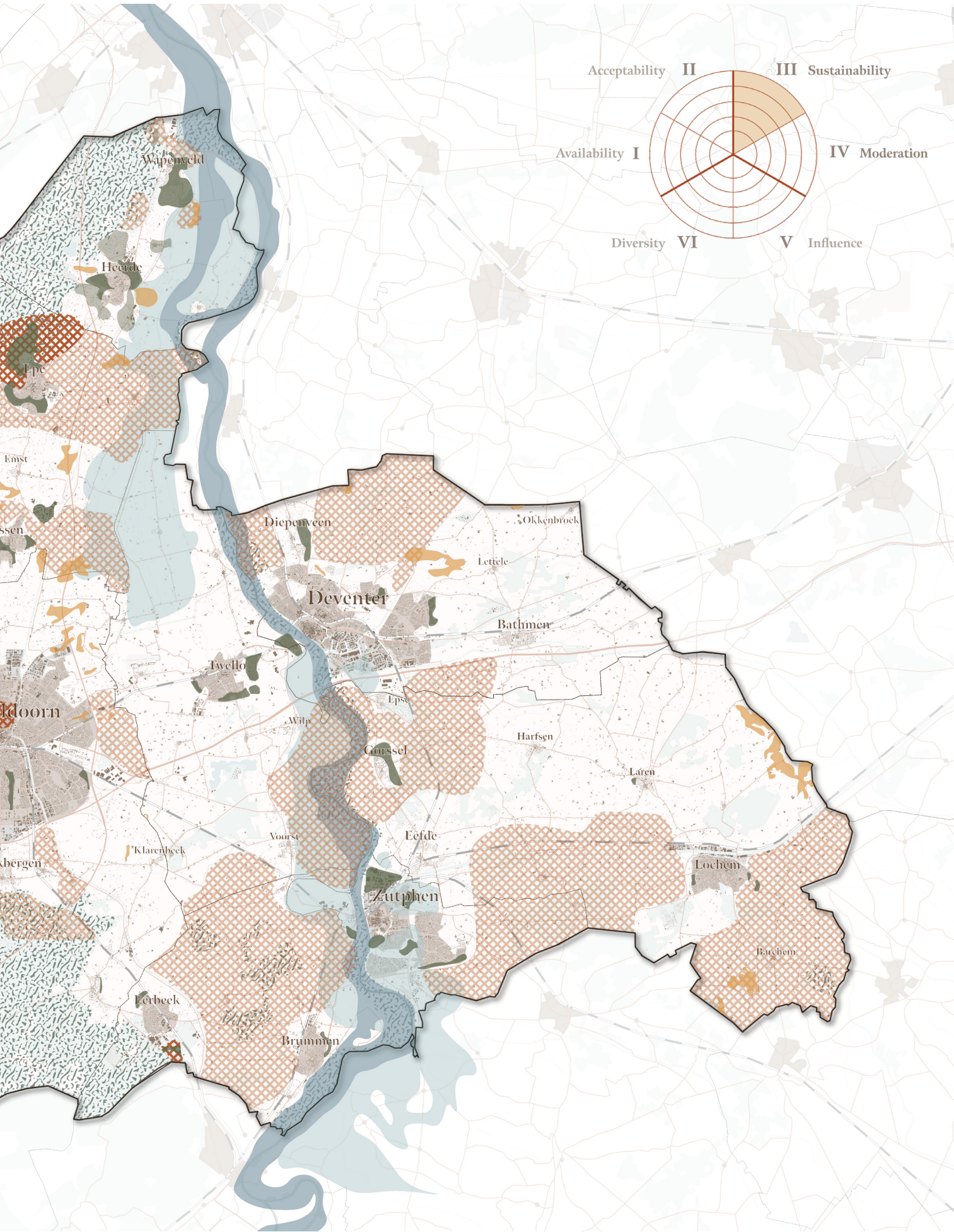


Figure 6.22: Synthesis of the analysis of the applied value of sustainability, by author.



III.A. Energy and material use

Dwellings generate emissions during construction and during use. There is no indicator for material use of the existing stock, but considering that this stock is already there, this is less relevant. Since this analysis only focusses on the existing stock, only energy use is analysed. Gas use is taken as an indicator, because other sources of energy (electricity and heat) could be generated sustainably and at a distance from the dwelling, while gas is a fossil energy source used on location. High electricity use could also indicate that the dwelling is disconnected from gas, while this is not the case the other way around.

High gas use is an indication of excess. Gas use contributes to climate change, but the use of gas can be minimised by proper insulation and technical solutions. From the perspective of intergenerational justice, such measures are necessary. The analysis shows that high levels of gas use ($>2000 \text{ m}^3$) are primarily found in rural areas. Cities and villages show a relatively low level of gas use, with one exception: the areas with extremely high levels of gas use ($>2500 \text{ m}^3$) are all villa neighbourhoods. Dwellings in these neighbourhoods are not only large, they are often older as well, which corresponds to a bad energetic quality.

Neighbourhoods that experience energy poverty (see figure 6.19) do not have high levels of gas use, so it is not excessive gas use that causes affordability issues.

III.B. Housing related transport

The analysis map (figure 6.22) shows to what extent the environment provides residents with the spatial conditions to use public transport. The analysis on regional level focusses on public transport, but the walking and cycling infrastructure could be interesting topics of analysis as well. The accessibility of public transport touches upon the applied value of sufficiency. Even ignoring rural areas, the map in image 6.22 shows that low-density areas do not have access to bus stops within a 400m radius. On top of this, there are several areas with a higher dwelling density that do not have access to public transport nearby. These places can mainly be found on the edges of villages, but also in some city areas. Industrial areas are also not served by public transport.

However, there is not necessarily a causal relationship between access to public transport and sustainable

mobility choices. If there are more public transport options, it does not mean that people will take public transport. There is already a higher share of cars in the more rural areas, which people might continue to use. Nonetheless, availability of sustainable transport options is a precondition for enabling sustainable behaviour.

III.C. Land suitability

The soil conditions in the region are excellent for building. Two soil types that are generally less suitable for building are peat and 'moerige gronden'. These soil types can bear less load and are more prone to subsidence (Silvis et al., 2016). These soil types can only be found in a couple of places in the region, all in rural areas. These small patches of unsuitable soil are unlikely to form a problem for the durability of developments.

Much more interesting are the restrictions brought about by water. The IJssel forms the main threat in the region. Floods that are likely to happen multiple times in a lifetime are contained to the floodplains. However, there is also a smaller, but nonetheless possible risk of flooding of a larger area. Such a flood endangers the city of Zutphen and a part of Deventer, as well as several rural areas in the municipalities of Heerde, Epe, Voorst and Brummen. There are already interventions made to mitigate the effects of high water levels in the IJssel, but nonetheless, a risk remains, to which planning should be sensitive.

Another main restricting factor in the region is the prevalence of Natura 2000 areas. Building in or around these protected nature sites is not prohibited, but strongly restricted by nitrogen regulations (IPLO, n.d.). This poses a challenge for expansion as well as renovation of the cities and villages in the Western part of the region, including Apeldoorn, the larger villages of Epe, Heerde, Wapenveld and Eerbeek, as well as several smaller villages.



Figure 6.23: Car-oriented urban design in Apeldoorn. Photo by author.



Figure 6.24: The river IJssel is a threat to development in its proximity. This is why it has been redesigned to be able to handle more water. Another limitation brought about by the river is its protection status under Natura 2000 ([source](#)).

Policy analysis sustainability

This section explores in which way the dimensions of justice are discussed in two main policy documents: the *Woondeal* (Regio Stedendriehoek et al., 2023) and the strategic *Uitvoeringsagenda* (Regio Stedendriehoek, 2023a). To maintain legibility, these are referred to by their name and not the full citation.

III.A. Energy and material use

The focus in the *Woondeal* is on the quantitative side of housing. The quality, and in particular energetic quality of housing is not mentioned. The only reference to energy in the document is that the planning of housing should be considering other spatially demanding domains, such as the energy transition.

The *Uitvoeringsagenda* does consider the energy use of new buildings as well as existing buildings. The goal is expressed to make 20.000 dwellings in existing neighbourhoods more sustainable by 2030 and to have built 'a considerable amount' of dwellings using bio-based materials by 2030 (p. 14).

Although 20.000 dwellings may sounds like a considerable number, this is only about 10% of the housing stock in the region. However, we should also not overestimate what is possible within 7 years, considering the availability of labour and materials, and taking into account the length of procedures.

What is more concerning is the vague formulation of these goals. There is no specification of a target goal of 'making more sustainable' and of the amount of bio-based buildings, or the degree to which buildings must contain bio-based materials.

III.B. Housing related transport

The sustainability of transport related to housing is not a primary focus in the *Woondeal*. Proper accessibility is considered a precondition for the development of housing (p. 27). However, this can also concern car accessibility, because not much further specification is given.

The *Uitvoeringsagenda* is more explicit and mentions that housing development should lead to as little mobility demand as possible (p. 19). This is done by combining living and working in multi-modal accessible locations (p. 11). This is somewhat visible in the key locations of the *Woondeal* as well, of which several are in station areas (p. 39). The *Uitvoeringsagenda* further sets the goal for

municipalities to organise public space according to principles that set pedestrians, cyclists and public transport first (p. 15, 16). In small and large municipalities, car use should be reduced ('gedrukt', p. 11).

On the local scale in redevelopments and in new housing developments, there seems to be a focus on sustainable modes of transport. On the regional scale, however, car mobility still seems to have an important role. This ambiguity also shows in the *Mobiliteitsagenda 2023-2027* (Brink et al., 2022), which starts with the need to improve bottle-necks in car mobility, only to continue later with more sustainable interventions. Although improvements in public transport could also be a means to decrease car mobility bottle-necks, the priority in the mobility agenda shows a car-centred approach.

III.C. Land suitability

Land suitability is put on the agenda in both the *Woondeal* and the *Uitvoeringsagenda*. In both documents, the national ambition to make the soil and water conditions guiding in spatial development is repeated.

The *Uitvoeringsagenda* mentions that it is necessary to visualise the spatial consequences of this goal (p. 23). This means that although the local governments will have some knowledge of soil and water conditions, it is not yet part of integral planning.

Analysis conclusion sustainability

On average, the more rural areas are the least sustainable: the average gas use per dwelling is higher outside of the cities and villages. Between villages and cities, there is not much of a difference.

The efforts of the region are mostly targeted towards the city neighbourhoods. This is most likely because there is an advantage of scale, a higher share of social housing (i.e. less fragmented ownership) and because energy poverty is a bigger issue in cities, according to the analysis on acceptability.

There is a difference in transport accessibility with city neighbourhoods and villages. With the exception of some edges, the city neighbourhoods are well-connected to public transport. This lack of access to public transport might make residents more dependent on the car for regional transportation. Evidence for this is found in the higher share of car ownership in areas with less accessible public transport.

Sustainable transportation is an integral part of the policy documents, where the goal is expressed that new housing development should generate a minimal mobility demand. This should be achieved by strategic choice of development locations and through mobility design guidelines.

Lastly, the analysis of land suitability reveals that the majority of land is suitable for development. The main threat for durable developments comes from water, not from soil conditions. Additionally, protected natural sites limit development potential in the area.

The policy acknowledges the importance of soil and water, but does not further specify the consequences for the region.

IV. Limitation - moderation

Referring to intragenerational justice: excessive use which limits sufficiency of others now and in the future.

Points of attention are excessive use of (floor) space and other resources.

The applied value of moderation is divided over three dimensions:

- IV.A. Land use
- IV.B. Unused space
- IV.C. Living space

The analytic maps of individual indicators of these dimensions are included in Appendix B, in figures B.18-B.21.

Figure 6.25 on the right shows a synthesis of these analyses. This analysis is further discussed on the following pages.

Legend

-  80-100 m² living space per person
-  100 + m² living space per person
-  4% vacancy
-  5%+ vacancy
-  Working dominant
-  Housing dominant
-  Housing extremely dominant
-  High density

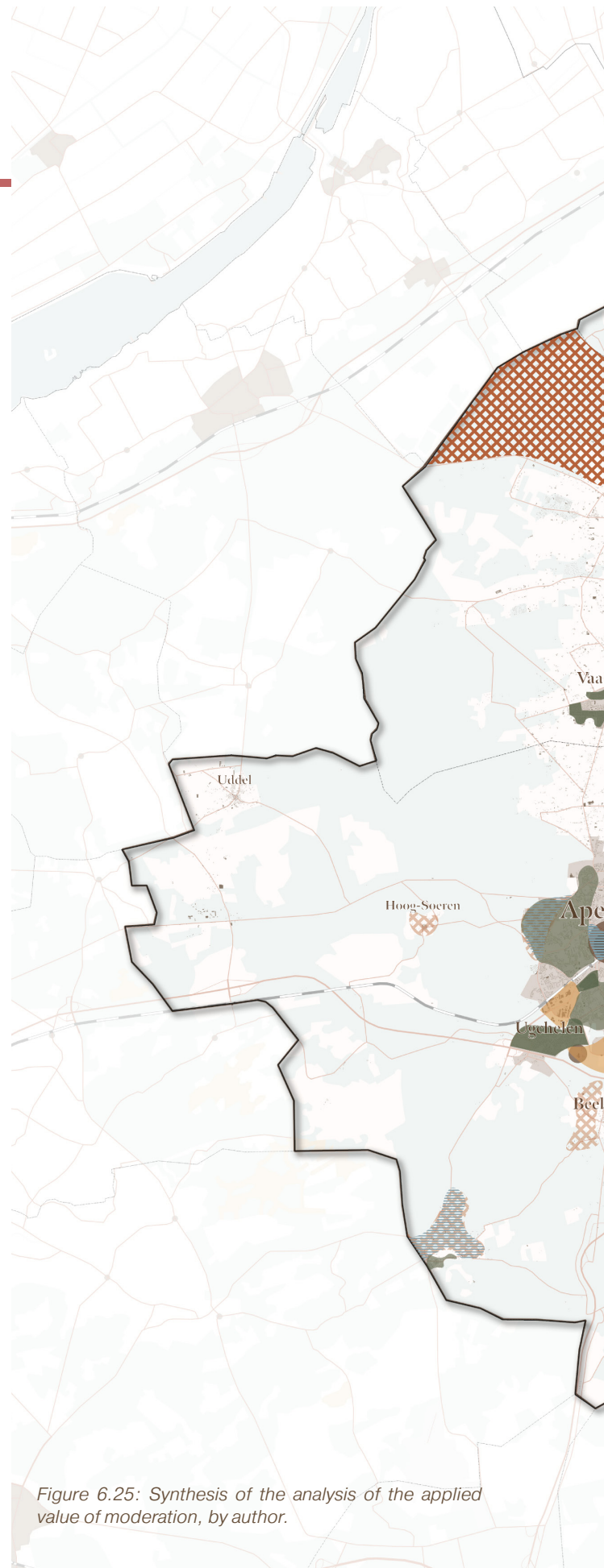
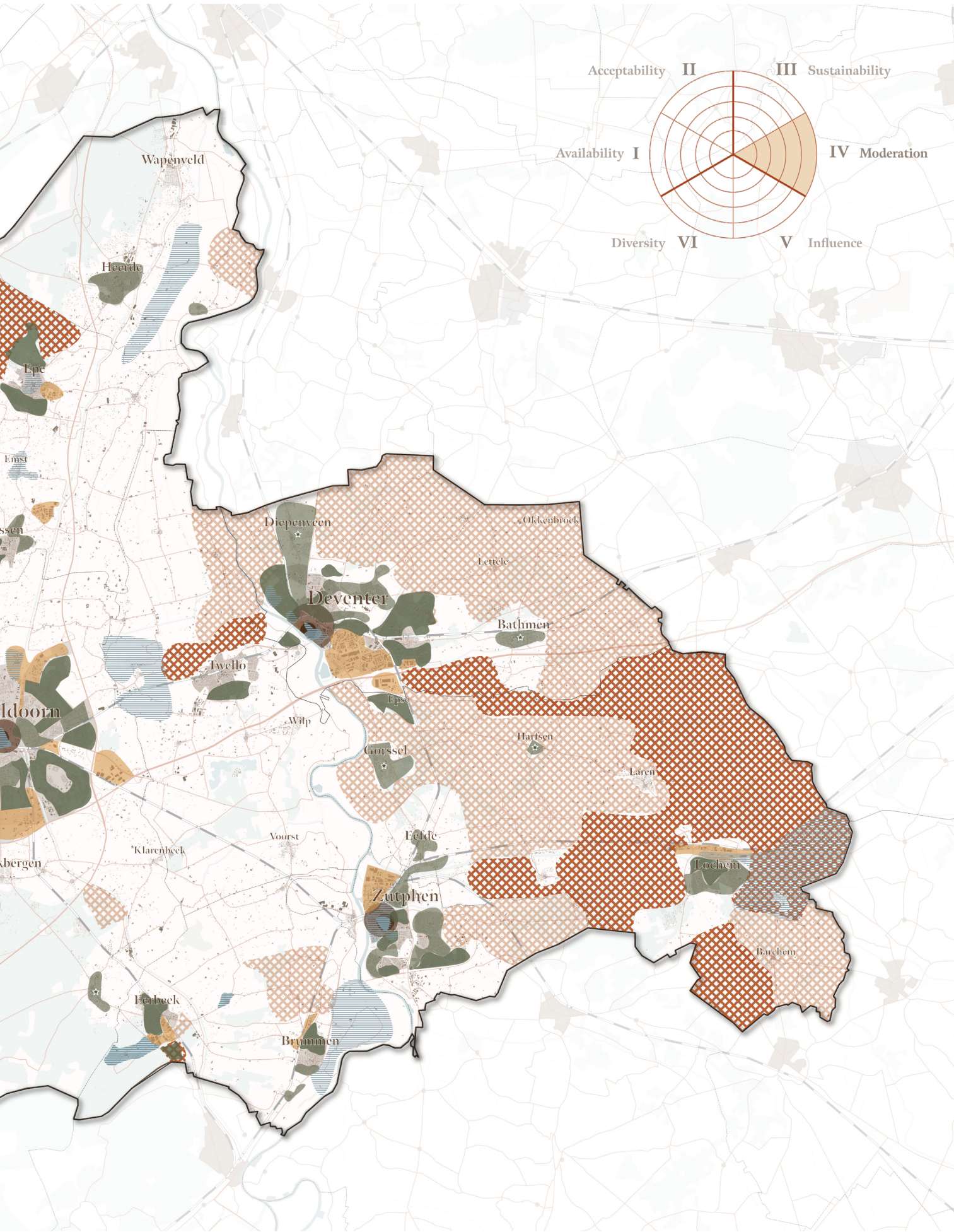


Figure 6.25: Synthesis of the analysis of the applied value of moderation, by author.



IV.A. Land use

When following the limitarian approach to justice, land use is excessive when it restricts others from obtaining sufficiency (Robeyns, 2019). This is for example the case when scarce land is divided in large plots, which limits the amount of dwellings. Ideally, an analysis would show the plot sizes of individual dwellings, but (a) this data is not publicly available and (b) large plots can also be used collectively or productively, for example for agriculture.

The analysis in figure 6.25 therefore shows two other types of land use: mixing and density. It is considered excessive if land is only used for one function and in low density. This is not an optimal use of land and will cause additional mobility.

This analysis shows that there is a low density in rural areas, but that there are multiple functions. Therefore it cannot be concluded that land use here is excessive. In several of the villages, there is functional zoning, with areas with high shares of living, combined with high shares of working. At medium density, this can be considered a healthy use of land. In some other villages, however, there is both a low density and little functional mixing, which indicates low-density housing. The land in these places is thus not used optimally, and could theoretically host more dwellings or employment options. In most areas in the cities there is a high density and work areas are nearby. Yet, particularly in the neighbourhoods closer to the edges of the cities there is a low density, with less functional mixing. Here as well, this combination points to excessive land use.

IV.B. Unused space

The inner cities of the three main cities all have relatively high vacancy of 4% or more of the total housing floor area. Similarly, the centre of the village Epe has a relatively high vacancy.

Figure 6.25 shows the vacancy in the housing stock. However, there is also vacancy of other types of buildings and of plots in the region. Figures 6.27 and figure 6.28 show how there is also other unused property in the centre of Apeldoorn, which could be used for housing.

Figure 6.25 shows two other types of areas with higher vacancies of 4%, which are a more industrial zone in the north of Apeldoorn and three rural zones, but these are not in a specific geographic pattern.

As a side note, in a few places there is overlap between large living space and vacancy: Berg en Bos, Hoenderloo and east of Lochem. The vacancy in these areas also contributes to a higher average living space per person, because vacant dwellings contribute living space, but no residents to this equation.

IV.C. Living space

The amount of individual living space is remarkably high in the more rural areas to the east of the river IJssel. This is particularly the case in the municipality of Lochem.

Besides the large average size of houses in this region, the household size is also small. This can be explained by the age profile in the municipality (figure 6.26), which reveals that roughly half of the population is above the age of 50. The higher the age, the less likely it is that children are part of the household. The large share of elderly above the age of 70 is also significant. Together, these figures indicate that there are many empty-nesters and elderly living in large houses in this part of the Stedendriehoek region.

In terms of living space, the villages are quite similar to the cities. The average individual living space is slightly larger in the villages, but not to a great extent.

The excessive living space in villa-neighbourhoods within the cities, particularly in Apeldoorn, does stand out compared to other parts of the cities, but are overshadowed by the rural areas, where living space is equally large, but in a much larger area.

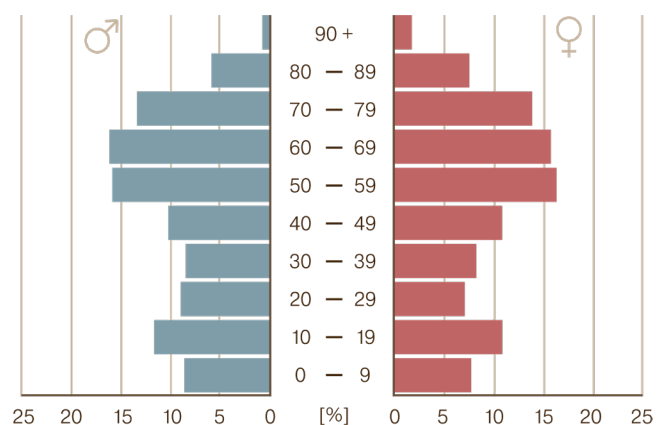


Figure 6.26. Population pyramid of Lochem, 2023 (CBS, 2023b)

The inner cities (in Deventer and Zutphen) and industrial areas also show larger individual living spaces. If this is actually the case, a reason could be that more people live alone or in couples, which results in more individual space. The share of families is not exceptionally low (figure B.27), but the share of single households is higher than average. Another explanation could be that some store and office area is counted within the category of dwellings (for

example because it is combined). This could also be an additional explanation for the excessive living space in rural areas. Finally, this could be explained by the large amount of vacancies in these areas. These properties do contribute towards the amount of living space in the area, but not to the amount of residents, which drives up the mean value of m²/person. A correction could be made for this, but it is not necessarily a problem for an analysis at this scale.



Figure 6.27. Vacant site in the centre of Apeldoorn. Photo by author.



Figure 6.28. The structuralist Hertzberger village in the station area of Apeldoorn, which has been vacant for years and targeted by vandalism. Photo by author.

Policy analysis moderation

This section explores in which way the dimensions of justice are discussed in two main policy documents: the *Woondeal* (Regio Stedendriehoek et al., 2023) and the strategic *Uitvoeringsagenda* (Regio Stedendriehoek, 2023a). To maintain legibility, these are referred to by their name and not the full citation.

IV.A. Land use

The *Uitvoeringsagenda* acknowledges that there is a scarcity of space, in face of all contemporary challenges (p. 10). Nonetheless, the regional plans in the *Uitvoeringsagenda* do not put any particular restrictions on excessive land use, such as restrictions in plot sizes or restrictions on certain types of land uses.

Both the *Woondeal* and the *Uitvoeringsagenda* promote a combination of living and working in central areas in cities. Strengthening the station areas is one of the three main pillars of the urbanisation strategy in the *Uitvoeringsagenda* (p. 16). Several key locations in the *Woondeal* also express this: the largest key projects concern inner city densification, particularly in station areas (p.36-37). The rest of the key projects mostly regard medium density developments in the smaller villages, where a very high density is not particularly fitting.

IV.B. Unused space

There is some acknowledgement of vacant buildings in the *Woondeal*. It mentions 'SteenGoed Benutten', a programme by the Province of Gelderland (p. 18). In 2019-2022, 1.600 dwellings were created by this programme, with the ambition to build another 1.500 in 2023. Then will also be decided if the programme continues (Regio Stedendriehoek et al., 2023, p. 18). Such transformations should be encouraged from a Limitation perspective, so this programme is very welcome. However, to be critical, this number of 3.000 dwellings is quite insignificant for a whole province, and none of the dwellings developed so far through the SteenGoed Benutten programme are in the Stedendriehoek. However, guidance by the Province through the programme is provided in the redevelopment of Hertzberger village in the Spoorzone in Apeldoorn (Provincie Gelderland, 2023; see figure 6.28), which might at a later stage result in new dwellings. Next to the SteenGoed Benutten programme, the *Woondeal* mentions there will be an exploration on the redevelopment of vacation

rental parks in Gelderland for dwelling (p. 19). These passages reveal that there is some attention for the topic of transformation in the *Woondeal* as a way to produce new dwellings. However, the impact of this is small, in light of the 17.000 dwellings the region wants to create.

Transformation is not mentioned in the *Uitvoeringsagenda*, which makes it seem like less of a priority.

Both documents do not mention regulatory policy for vacancy, such as fines or taxes, which could be a means to prevent long-term vacancy (Wever et al., 2020).

IV.C. Living space

In the *Woondeal*, nothing is mentioned about house or plot sizes. Because excessive use of space is generally expensive, the agreements on affordable housing in the *Woondeal* (p. 5) do guarantee some restriction on excessive living space in new construction.

The *Uitvoeringsagenda*, which generally contains more information about the quality of housing, only mentions living space briefly. It is mentioned in passing that adding new dwellings can help to create a 'right fit' of the supply and demand, and that adding housing for elderly, amongst others, can create a housing flow (p. 14). Such measures might help to get empty-nesters or elderly singles into smaller houses and free up larger homes for families, which is in essence a method to distribute floor area more evenly.

Analysis conclusion moderation

The regional policy documents mostly concern new buildings and not the existing built fabric. However, as the spatial analyses reveal, there is some excessive use of space. This surplus space comes from low-density, mono-functional areas, unused plots and high levels of vacancy. Policy could be targeted towards utilising these surpluses for unmet needs of others.

Large plot sizes exclusively used for housing can be considered excessive, because land cannot be used for the needs of others. This is not a black-and-white picture, because large plots could be a great contributor to nature and sustainability. However, there are other means for nature preservation as well when plot sizes are smaller.

Ideally an analysis would be based directly on plot sizes, but the proxy of density and mixing does reveal that there are areas with low-density dwelling. While these are places where land is not put to optimal use for the fulfilment of needs, policy is not focused on these locations. Both policy documents encourage densification, but mostly in central areas, where the density is already higher.

Interestingly, vacancy is highest in the city centres - the places where densification ought to take place according to the policies. There is a provincial programme that stimulates transformation, but the amount of dwellings added through this programme is minimal. The regional policies do not mention regulatory policy for vacancy, which could help minimise vacancy.

Excessive living space is primarily found in more rural areas in the East of the region. The ageing population is a contributor to this. The Uitvoeringsagenda does address creating a 'right fit' (p.14) in the housing stock by adding housing for elderly, but does not offer more solutions to address large living spaces.

Excessive living space shows a similar pattern with gas use (figure 6.25). This makes sense, because larger dwellings require more gas. An anomaly to this is Lochem, where gas use is not particularly high. This could possibly be explained by vacant dwellings that do not require gas use, or just more efficient use of gas.

V. Opportunity - Influence

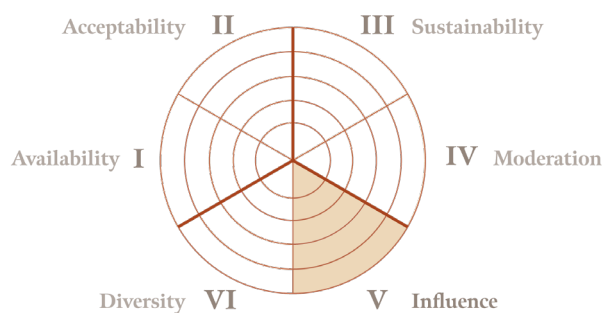
Referring to procedural justice. The value of influence asserts that individuals should have some power in how their environment is shaped.

Points of attention are influence during planning (participation), during development (as developer) and after development (right to the city).

The applied value of influence is divided over three dimensions:

- V.A. Collective housing / self development
- V.B. Right to the city (bottom up)
- V.C. Participation (top down)

These dimensions of justice deal with spatial processes, but unlike the other dimensions of the framework, there are no real spatial indicators for these dimensions. Hence, this section does not include an analytic map. Alternative methods to analyse this applied value include fieldwork, news analysis and policy analysis.



V.A. (Collective) private development

The large developments in the region concern mainly densification in urban cores. These projects are less likely to be developed by individuals or collectives. However, for the greenfield developments which are taking place, there are some opportunities for private development.

Figure 6.29 shows the neighbourhood 'Tuinen van Zandweerd' in Deventer which is currently in development. This little neighbourhood consists entirely of private developments. Most of these developments are by private individuals. Residents can even build dwellings with their own hands in this area. One plot here is developed by Rentree with eight collective tiny homes (figure 6.30). The inhabitants of these tiny homes were involved in the design of the dwellings, communal building and of the landscaping on the plot, but the housing association is the owner and investor of the project (Aedes, 2023; Rentree, n.d).

The fieldwork in the Stedendriehoek gave the impression that most of the new construction is initiated by institutional developers, because it often concerns multiple dwellings with the same design, such as row houses or a series of similar semi-attached dwellings.

V.B. Right to the city (bottom up)

The municipality of Apeldoorn has a special campaign that stimulates citizen initiative (figure 6.33). Residents can get help from an employee from the municipality to get their initiative started, which has for example resulted in a temporary communal garden in the centre of Apeldoorn (Gemeente Apeldoorn, 2023a).

Although such a programme is a formal procedure, it does help to give influence to residents outside of legally mandatory participation processes. An employee from the municipality that is dedicated to such initiatives can also help to speed up the process. This form of right to the city does not concern dwellings directly. Instead, its focus seems to be on public space. Other ways in which right to the city can be expressed is by adaptation of the own dwelling,



Figure 6.29. The new neighbourhood 'Tuinen van Zandweerd' in Deventer, containing privately developed homes. Photo by author.



Figure 6.30: communal tiny houses developed by housing association Rentree. Photo by author.

which is only possible for the (large stock) of owner-occupied housing. This opportunity is also taken by residents (see figure 6.34).

There are several parks and squares in the cities and villages. These can be used by individuals to claim public space as their own. Inside of the mainly residential neighbourhoods, the opportunities for appropriation are more limited. Such public spaces were barely used, as observed during fieldwork.

V.C. Participation (top down)

On the regional scale, there has been no formal residential participation. Participation does take place on a local scale in different forms.

Despite some participatory efforts, there can still be a lack of understanding amongst residents, as is shown in the example of Vaassen. Figure 6.31 shows an information session organised by the municipality of Epe to inform residents about the plan to temporarily house Ukrainian refugees in a closed-down holiday park (Deurloo, 2023). The participation in this case is what Arnstein (1969) would consider 'tokenism', where residents are solely informed of governmental plans. Disagreement with this decision and possibly feelings of powerlessness in the decision has led to arson in this holiday park twice already (Liethof, 2023).

This particular example is a difficult case where those most concerned with the decision (refugees), are not involved in the participation process. However, the question remains if acceptance of the situation would be different if residents were involved in a different way.

A good example of participation on a local level is the expansion of the village of Lettele in the municipality of Deventer. The residents of the village were involved in creating the plan of a small greenfield development. One of the reasons that this participation is successful is the strong community feeling and civic involvement in the village. Another reason is that the need for more dwellings for the inhabitants of the village is felt, which gives expansion broad support. The active involvement of residents also concerns a higher step on Arnstein's participation ladder, where citizens have actual power.

These examples are anecdotal, and not representative of the whole region. However, they do give an impression of the scope of participation in the region, from informative to direct involvement.



Figure 6.31. Information meeting in Vaassen on the fourth of July, 2023 (Omroep Gelderland, 2023).



Figure 6.32 Arson on third of October, 2023, of one of a cabin in the park where Ukrainian refugees would be housed (De Graaf, 2023).



Figure 6.33. Public campaign to stimulate citizen initiatives in Apeldoorn. "Build an outdoor cinema? Good idea? Do something with it!", photo by author



Figure 6.34: adaptation of the dwelling according to new user demands, photo by author.

Policy analysis influence

This section explores in which way the dimensions of justice are discussed in two main policy documents: the *Woondeal* (Regio Stedendriehoek et al., 2023) and the strategic *Uitvoeringsagenda* (Regio Stedendriehoek, 2023a). To maintain legibility, these are referred to by their name and not the full citation.

V.A. (Collective) private development

Both the *Woondeal* and the *Uitvoeringsagenda* do not mention participatory processes.

The *Woondeal* states that three times a year regional discussion takes place with housing associations and that local governments, housing associations and market parties involved in housing construction have meetings in a 'regional acceleration platform' (p. 22) multiple times a year. Such a construction gives priority to more traditional forms of housing development, and excludes private initiatives.

Individual municipalities do include (collective) private developments in their policy. The municipality of Apeldoorn for example mentions collective private development as a serious option for several zones, including the canal zone and southern edge (Gemeente Apeldoorn, 2022), also two key projects in the *Woondeal* (p. 8). The example of the 'Tuinen van Zandweerd' (figure 6.29) shows how the municipality of Deventer facilitates private development as well.

V.B. Right to the city (bottom up)

Both the *Woondeal* and the *Uitvoeringsagenda* do not mention this dimension of Influence, but some municipal policies exist. For example, the municipality of Apeldoorn has a public campaign to promote citizen initiatives, which is facilitated by a dedicated employee (Gemeente Apeldoorn, 2023). Additionally, the Municipality of Deventer mentions citizen initiatives as one of the important pillars of participation in the participation vision (Gemeente Deventer, 2023) and has a help desk that can help with developing the plan. Both these municipalities try to make citizen initiatives easier in this way. The municipality of Zutphen on the other hand has a more complicated procedure for citizen initiatives (Gemeente Zutphen, 2023), which does not seem very facilitating. This does leave room for improvement.

V.C. Participation (top down)

Both the *Woondeal* and the *Uitvoeringsagenda* do not mention participatory processes. The way these policy documents have come about themselves is not exemplary of participatory planning either.

The *Woondeal* mentions (p. 22) that the parties involved in dwelling construction, such as market parties, housing associations and care providers can put the bottlenecks they face on the agenda through the *woondeals*. Although this process assures that the government is not the only stakeholder involved in developing policy, the group of stakeholders that has the option to influence policy is limited. This process does not give a voice to inhabitants. Inhabitants are only represented if an organisation such as a housing association represents them,

The *Uitvoeringsagenda* policy document has also not come about completely democratically. Within the Regio Stedendriehoek, eight municipalities, two provinces, entrepreneurs and schools work together on societal challenges, often in collaboration with the State and water boards (p. 7). Residents can assert influence on government stakeholders through voting and through municipal participation processes. However, the other stakeholders in the arrangement of the Regio Stedendriehoek, entrepreneurs and schools are democratically chosen. These entrepreneurs and schools are able to co-create policy favourable for them, to which residents do not have a formal way to object, because formal participation is not a part of the development process of the regional policy.

Analysis conclusion influence

The applied value of influence is mostly procedural, which makes a spatial analysis rather difficult. The analysis has therefore been mostly qualitative.

We can learn from the policy analysis of the two regional planning documents that not much attention is paid to the applied value of influence on a regional scale. This conclusion aligns with the argument of Fainstein (2011) that participation in decision making is less successful on higher spatial scale levels. An analysis of several of the individual municipalities' planning documents reveals that participation is actually on the agenda on a lower scale level. There is a varying degree in which participation and citizen initiative is stimulated - from high up the participation ladder of Arnstein (1969) to lower on the ladder, with successful stories of co-creation with citizens, to less successful information sessions.

It appears that the larger municipalities have more resources to facilitate more elaborate forms of participation and citizen initiative.

Furthermore, most of the municipalities are willing to facilitate some (collective) private development. However, the constructions in which planning policy is made on a regional level does exclude this group of developers, which is not formally organised and therefore not part of the debate.

VI. Opportunity - Diversity

Housing policy should recognise different demands (recognition justice) from different user groups.

Points of attention are recognition of diverse wishes of groups and providing housing opportunities.




The applied value of diversity is divided over three dimensions:

- VI.A. Recognition
- VI.B. Spatial identity
- VI.C. Typologies

The analytic maps of individual indicators of these dimensions are included in Appendix B, in figures B.22-B.27.

Figure 6.35 on the right shows a synthesis of these analyses. This analysis is further discussed on the following pages.

Legend

-  Dominantly Dutch population
-  >30% Households with children
-  High share of single family dwellings (>80%)
-  High share of apartments (>80%)
-  Very high social cohesion score
-  High social cohesion score
-  Low social cohesion score

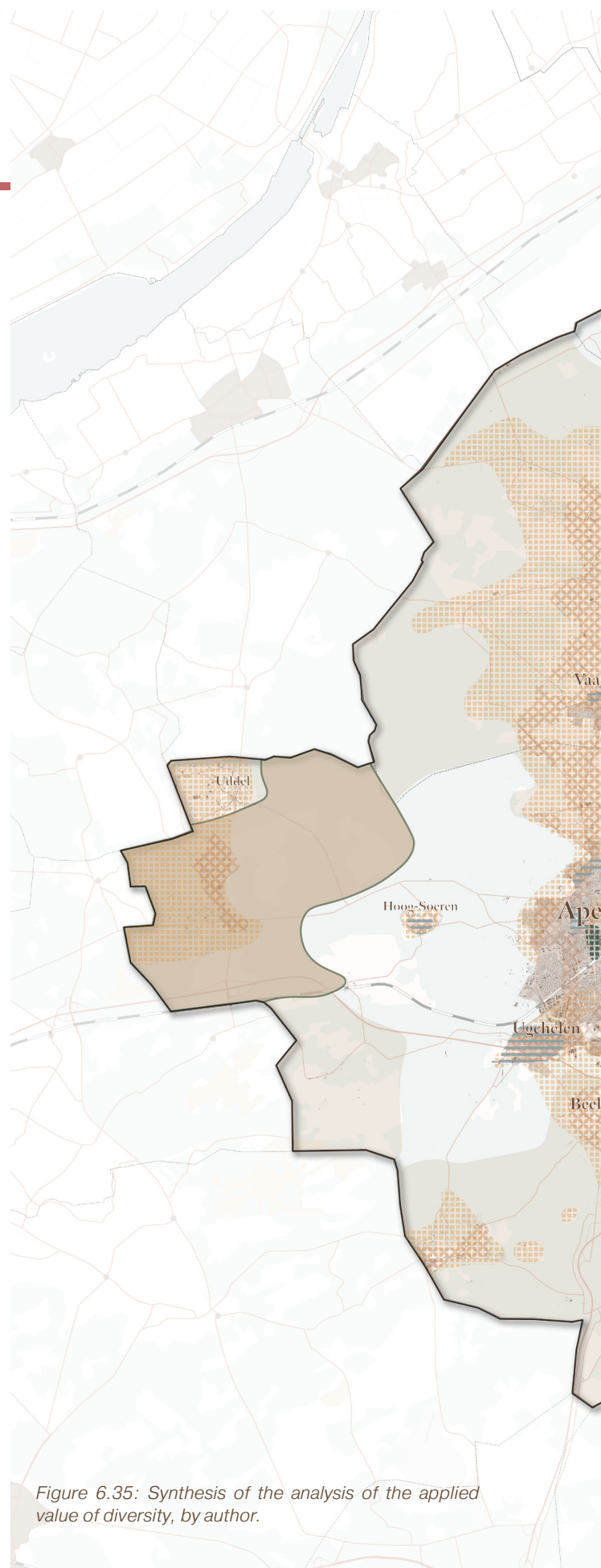
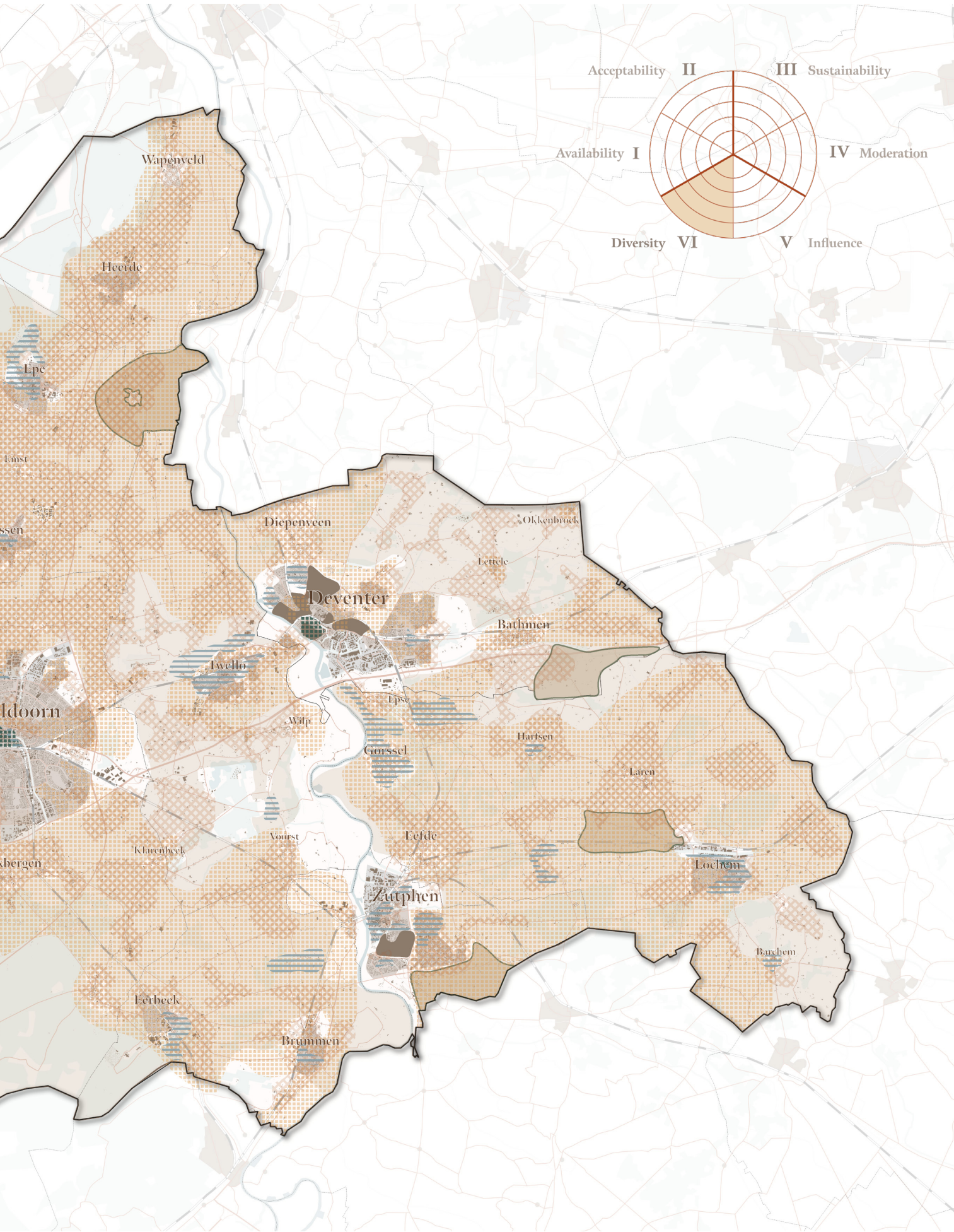


Figure 6.35: Synthesis of the analysis of the applied value of diversity, by author.



VI.A. Recognition

Figure 6.35 shows that in a large part of the region, the population is dominantly ethnically Dutch. The general picture for rural areas is that the majority is ethnically Dutch. In the villages, the situation is a bit more nuanced. Very few migrants are living in the villages close to the cities, such as Diepenveen, Schalkhaar, Gorssel, Eefde and Ugchelen. In the more autonomous villages, a large share of residents is ethnically Dutch, but there are some areas in these villages where the share of migrants is higher. This is the case in larger villages such as Epe, Eerbeek, Vaassen en Lochem. Although a decent share of migrants already lives in these villages, protests such as the one in Vaassen (figure 6.32), indicate that there is still resentment towards migrants within the community.

A specific form of recognition in housing is trailer home residency. Trailer home living has been officially recognised as immaterial heritage (Kenniscentrum Immaterieel Erfgoed Nederland, 2023). Yet, this housing culture and accompanying housing needs are not fully recognised. For example in Apeldoorn, trailer home residents have filed complaints about the restrictions on expansion of plots, which makes it impossible for young adults to get their own place (news article; source will follow after P4). Additionally, the locations which are available for trailers are often tucked away in sub-optimal locations, such as in industrial areas (see figures 6.36 and 6.37).

VI.B. Spatial identity

Cities, villages and regions each have developed their own spatial and social character over the years. Spatial plans should be aware of this diversity. It should not be a goal of spatial planning, nor of the justice framework, to create the same type of living environment everywhere. First of all because it would be detrimental to the heritage of places. Secondly, and more fundamental for the justice framework, is that individuals should have the opportunity to choose to live in different types of living environment.

Different living environments provide a range of options for people with different preferences, regarding the dwelling type, the amount of activity in their living environment and the sense of community in a place. These different living environments come with different trade-offs, such as a lower population which can enhance feeling of community, but limits the amount of amenities that can be sustained.

Sensitivity to differences entails that same strategies do not work everywhere and some places require specific strategies to maintain their spatial identity.

For the analysis of spatial identity the social cohesion score of the Leefbaarometer is used. This is a combination of different measures, including the population structure, mutation rate and micro-data from social cohesion questionnaires. Especially this last dimension is interesting, but cannot be used independently due to data unavailability. However, the combined indicator of the Leefbaarometer does give a decent impression of place-attachment as well.

In the analysis map we can see that the Leefbaarometer scores for the social cohesion dimension are generally higher outside of the cities and villages, and that the highest scores can be found in rural areas. This gives the indication that residents of these locations are attached to their (social) environment. Due to the low density of these areas and the lack of meeting spaces, it is less likely that neighbours have frequent contact.

The lowest social scores can be found in the cities, in Deventer and in Zutphen. The lower scores on this dimension show that a higher density of people does not automatically result in stronger social attachment.

VI.C. Typologies

Many areas in the region have a rather homogeneous dwelling supply, where at least 80% of housing is single-family homes. This is particularly the case in rural areas (with some exceptions), in neighbourhoods at the edges of cities and villages, and in some villages as a whole. This housing supply is not always suitable for people with motion disabilities, particularly elderly people. Additionally, this homogeneous supply gives individuals little opportunity for choice, particularly in rural areas and villages.

Interestingly, many of the neighbourhoods with the highest shares of households with children, are not neighbourhoods with a high share of single family housing.

The places with at least 80% apartments are in the city centres of Apeldoorn, Deventer and Lochem. These are all rather contained areas, which makes it less of a threat to diversity in typologies, because in the near vicinity other types of dwellings can be found.



Figure 6.36: Location of trailer park in Deventer, amidst (light) industry (Bing maps, 2023).



Figure 6.37: One of the trailers in the trailer park with a home depot store in the background. Photo by author.

Policy analysis diversity

This section explores in which way the dimensions of justice are discussed in two main policy documents: the *Woondeal* (Regio Stedendriehoek et al., 2023) and the strategic *Uitvoeringsagenda* (Regio Stedendriehoek, 2023a). To maintain legibility, these are referred to by their name and not the full citation.

VI.A. Recognition

In the *Uitvoeringsagenda* there is a very global recognition of the issues faced by starters and by middle income households. This is an indication that policy aims to help specific groups, but these groups are very general. More interestingly, the *Uitvoeringsagenda* also touches upon the specific needs of labour migrants, which is commendable. The objective is formulated that appropriate living space is available “for (temporary) labour migrants and other target groups” (p. 15). The formulation of the last part of this objective does devalue the whole. The generality of “other target groups” is not a convincing basis for policy. Lastly, the *Uitvoeringsagenda* contains the objective of realising enough housing for students and young adults (p. 17), which is another vulnerable target group.

The *Woondeal* (p.18) does recognise the specific needs of elderly. There are no specific plans for how to deal with this in the current version of the *Woondeal*, which is a weakness, but this task is supposed to be further developed regionally and locally in the second part of the *Woondeal* in 2023, which is a short time horizon.

VI.B. Spatial Identity

As has been touched upon in the discussion on availability, the majority of new construction takes place in Apeldoorn and Deventer (*Woondeal* p.5; table 6.quantity). This contributes to the more dense, urban character of these cities.

Apart from these and other key projects, the *Woondeal* mentions that there are several smaller developments in municipalities which are relevant for the regional balance and concern additions to the housing stock dwellings which are fitting the demand in the region. It is mentioned in the *Woondeal* that this often concerns smaller projects of less than 100 dwellings, which suggests that this concerns developments which contribute to the liveability in smaller cores (p.16). Current available subsidies, such as the *Woningbouwimpuls*, are mainly aimed at larger plans of at least 200 dwellings. The *Woondeal*

mentions that subsidies for less dwellings are necessary, but lacking. Therefore, the different levels of government will explore the possibilities for this (*Woondeal*, p. 9). This proves that there is sensitivity towards which scale of development is beneficial for different areas within the region.

There is also further specific acknowledgement that it is not possible to apply the same strategies throughout the whole region: the goal to have 30% social housing comes with the disclaimer that there is attention for the particular situations in municipalities, where it is not always feasible to obtain such a goal and that there is regional collaboration about this (*Woondeal*, p.13).

In the *Uitvoeringsagenda* a distinction is made between policies for the cities and the rural areas. Rural areas are portrayed as part of the DNA of the region. The document addresses (p. 24) that these locations require different strategies. With this focus, the necessity to maintain amenities and realise dwellings for both young adults and elderly in rural areas and villages is stressed, apart from this, there is no specific acknowledgement of spatial identity.

VI.C. Typologies

According to the goals in the *Woondeal*, 51% of new dwellings are in Apeldoorn, primarily in the key projects in the centre (p. 5, 8). It is likely that these developments concern apartments due to their density. This adds more diversity in the dwelling supply, considering that the majority of dwellings are single-family dwellings (figure 6.35). A disadvantage of this policy is that the choice of living location in the region is more limited to Apeldoorn (and to a lesser extent Deventer).

The goal to add at least 30% social housing throughout the region (p. 5) might be beneficial for people dependent on social housing, because it expands the opportunity to live in different places in the region, also in places where the social housing supply is currently low.

The *Uitvoeringsagenda* is not explicit about the diversity of dwellings. Only indirectly can it be distilled that there is a need for diverse typologies, through the wish to add dwellings that fit the demand of different target groups (p.14).

Analysis conclusion

Diversity is perhaps the most intangible applied value of the framework. Whereas the values of sufficiency and limitation are more black and white and represent thresholds, the core value of opportunity and in particular of diversity are there to bring nuance and greyness to the justice framework.

The housing dimensions show some inner tensions, with on the one hand the need for diversity and on the other hand the need for distinguishable spatial identity, which would require some form of coherence and homogeneity. Just like in reality such values can co-exist, but it is slightly more difficult to assess than thresholds.

In the spatial analysis it becomes apparent that the region is not very mixed and mainly consists of people with a Dutch background. This is especially the case in rural areas and in villages, with the exception of a few neighbourhoods. The cities are more mixed, but also at the edges, the population is more homogeneous.

This is perhaps beneficial for the dimension of spatial identity. The social cohesion in these places appears to be slightly higher, perhaps because of place attachment and a strong sense of community. Such communities are perhaps less welcoming to outsiders. The diversity in some inner city neighbourhoods is much higher, but the social cohesion is also lower. Both these observations reveal friction between promoting community as well as diversity.

Both the Uitvoeringsagenda and Woondeal have attention for the differences between cities and the surrounding area and acknowledge that these need different strategies. This results in that the quantitative assignment is mainly directed towards the cities, in particular in Apeldoorn and Deventer. This ensures a more urban character in these regions compared to more small-scale rural areas and villages.

National policies are also stimulating this difference, because it is more difficult to receive state subsidies for smaller projects, while small projects are often more fitting with the character of small villages.

Specific attention is drawn to the needs of specific groups. The fieldwork showed the lack of attention for trailer home parks, which are not allowed to expand and are sometimes located in inferior locations.

The Uitvoeringsagenda mentions another specific group that requires recognition of specific housing needs, which is the group of labour migrants. There are no real solutions provided for this group, but the fact that it is addressed is positive.

The groups that have specific concerns that get the most attention are starters on the housing market and elderly. As has been observed in the analysis of availability, these concerns are grounded, because there is indeed a lack of social housing, dwelling prices are high and the supply of elderly housing is not sufficient in many places.

Discussion of the justice framework as an analysis tool

The analysis of the case study region has been the first application of the justice framework. Not only is the application to a case study a way to demonstrate the use of the framework, it is also a means to evaluate it.

First of all, the application of the justice framework to the Stedendriehoek case study reveals that it can be an excellent guide for analysis. The justice framework combines different justice theories, which assures that a wide range of topics are analysed when using the justice framework. Because many different topics can be divided over six applied values with each their own analysis, the complexity of justice in housing is dissected in digestible bits.

While the applied values provide a clear structure for the analysis of different topics, the housing dimensions of the justice framework make the applied values tangible for housing. Although the housing dimensions themselves seem to be a good breakdown of the applied values, they do not directly correspond to a (quantitative) indicator, which can be seen as a downside of the justice framework. However, eventually at least one suitable indicator was found for each of the housing dimensions in this research. Other spatial planners could use the same indicators in different regions as well, because all indicators are available for the Netherlands as a whole.

The housing dimensions are clear topics which can be analysed in regional policy. About most of these housing dimensions information can be found in regional policy, and even nothing is published on the topic, exactly that it is informative.

Naturally there is nuance to the positive contributions of using the justice framework for analysis. The limitations and directions for further research based on the first analysis application of the justice framework are outlined below.

Minor changes to the framework

During the process of analysing, some gaps and overlaps between different dimensions came to light. These minor changes, particularly concerning the naming of dimensions were directly incorporated. In order to avoid confusion, only the revised names are used in this report.

Data

Data (un)availability

One reason for making several adaptations to the framework has been the unavailability of data. For example, zoning plans are not available on a suitable scale level.

Some dimensions have been kept in the framework, but with a sub-optimal data-indicator. For example, living expense ratio data is only available for social housing. This is the indicator that has been used in the analysis, but ideally there would also be an indicator for other tenancies, particularly for the private rental sector, where high housing costs are a known issue.

Some data is not on a useful scale-level for a regional analysis. Many indicators, such as population prognoses are only available on municipal level or higher, which gives some indication of differences, but is not very specific. Data about dwelling size, energy label and adaptability for use by elderly on the other hand is available on building level, but this is not distinguishable on regional level. This could be resolved with some computing steps, but this is outside the scope of the urbanism programme.

For a more streamlined use of the justice framework, more data would have to be available, preferably on a comparable, detailed scale, such as the 'CBS buurt' level.

Data in low density areas

If there are only a few people living in an area, data on the aggregate level (squares or neighbourhood statistics) could be traced to individuals. For this reason, much of the data in low-density areas is protected. The smaller the scale, the bigger the chances become that the population is below the threshold value and that the data needs to be protected. Areas with a low density might be vulnerable to some elements of injustice, such as low availability or insufficient access to amenities, but this might be invisible due to data constraints. When low density areas are included in a larger aggregate (neighbourhood or municipality), their small population might be marginalised compared to the

larger whole. Thus, qualitative knowledge of injustices related to the categories of the framework becomes more relevant in low-density areas.

Indicators in the justice framework

Not all housing dimensions have perfect indicators. They would preferably be quantitative and contain a norm against which the region can be tested. Because the indicators used for a housing dimension could change according to data availability over place and time, these have not been included in the framework. However, it could be useful to provide the specific indicators used to analyse the housing dimensions either within the justice framework or together with it, to save spatial planners the time of finding these indicators.

Sufficiency and limitation norms

The justice framework discusses both sufficiency and limitation. As shown in figure 5.3, these concern a lower and an upper limit. Ideally these limits represent democratically agreed upon goals of sufficiency and limitation. If there are such norms, it can be properly assessed if an area conforms to the norms and whether an area is far off from the norms or not. It has been attempted to find indicators which have such norms. For example for the share of social housing, there is a national goal of 30% social housing in every municipality. Such goals can be directly incorporated in the analysis. However, only several indicators have such norms. For other housing dimensions such goals do not exist, such as for the amount of livings pace per person, or the right data does not exist, such as for the affordability of housing.

When the right data is available and norms are established, the justice framework could be used to assess locations more directly and quantitatively, which would make analysis less ambiguous.

Interpretation

Representation: area versus density

The analysis maps are drawn on a regional scale. On this scale, areas with a low density cover the majority of the map, which makes them stand out more compared to high-density areas. This might inflate injustices that are prevalent in low-density areas, or conversely deflate issues in high-density areas. This issue could be resolved by using cartograms, where areas are scaled by population density (like is done in figure 1.5). However, this is not a very common way of mapping, and for readers it is harder to orient themselves, especially when they are not familiar with

a region. Another way to resolve this issue is to also show an enlarged version of the cities and villages in separate maps. However, this makes it harder to see the big picture. Instead, the choice has been made to exclude some of the lowest density areas in the synthesis maps and to enlarge the maps as much as possible.

Policy analysis

Policy analysis on the regional scale has its limitations. Some policies exist on the regional scale level, but 'the region' has little executive power compared to municipalities. Nonetheless an analysis of regional plans will reveal some information about the planning priorities in the region and which agreements are made between municipalities. Within the regions, municipalities can make binding agreements, so policy made on a regional level can be implemented on a local level. On top of this municipalities have their own planning documents. These can also provide input for policy analysis, but this soon leads to many documents to be analysed.

Influence

The applied value of influence is much more procedural in nature than the other applied values from the framework. Because this applied value is otherwise not represented, it is included in the framework and analysed as well. However, the analysis is less spatial and more anecdotal.

Because of the procedural nature of the applied value, the policy analysis of this applied value could be a bit more extensive, such as how participation has been dealt with in recent policy. Due to time constraints, such an analysis has not been done. A planning professional from the region might be much more familiar with the current situation state of the influence dimensions and be able to make a quick analysis of the situation with the help of the justice framework. Fortunately, developing a strategy for the applied value of Influence is not as dependent on the analysis of the current situation as the other applied values.

7. Cluster strategies

This chapter discusses the application of the justice framework to a case study of the Stedendriehoek region in Gelderland and Overijssel, in service of the third research question: *‘How can a framework based on justice values help spatial planners to develop a planning and design strategy for housing in a region in the Netherlands?’*

First, clusters with similar characteristics in the analyses are identified. Consequently, strategies are developed that respond to the issues that are particular to a cluster. This is done based on the outer ring of ‘strategy directions’ of the justice framework.

Because the aim of the application is not to develop a full strategy, but rather test how the justice framework works, strategies are made for two clusters, which together give an image of the full range of the framework. These strategies are then applied to one zoomed-in, illustrative location within the cluster.

This application demonstrates the working of the framework in practice, but also reveals limitations and opportunities of the framework. This is also evaluated in the final part of this chapter.



Figure 7.1: The city hall of Deventer. Photo by author.

Clusters in Regio Stedendriehoek

The analyses of the justice dimensions in the previous pages has revealed patterns in the region. These patterns are used to develop clusters of regions with similar characteristics. Based on the analyses, the following clusters have been identified:

1. Rural and Rich
2. Central Villages
3. City centres
4. Struggling Neighbourhoods
5. Suburbs

The distribution of these clusters is visualised in figure 7.2.

The clusters show a familiar distinction between rural areas, villages and cities. The city is roughly divided by their centres, neighbourhoods where there are mostly acceptability issues, and a more average cluster of suburbs. Similar clustering can be found in other studies and in literature such as the division of living environments by ABF Research into urban centre, non-centre urban, urban green, central village and country living (ABF, 2012). The fact that the analyses independently lead to similar clusters as in other studies is an affirmation that areas with different spatial characteristics are facing distinctly different justice issues.

This particular clustering should not be conceived as a prescription for other regions. This clustering is based on the results from the analyses maps presented in the previous pages. When this methodology is repeated for other regions in the Netherlands or in a different location, it is possible that a different cluster categorisation will be more suitable. Furthermore, the clustering is based on a subjective assessment of the analysis results. It is possible that others would come to a different clustering or that a quantitative analysis would yield a different result.

Structure

The characteristics of these clusters will be further elaborated upon in the following pages. This concerns similarities found in the analyses of the different applied values on the previous pages.

Wind roses

For each cluster a wind rose is shown which represents the need for action regarding each applied value. The higher the score, the greater the injustice in the corresponding category. Although it may seem counter-intuitive that a high score indicates more injustice, this representation makes it clearer where action needs to be taken. Because the figure gets wider with each step on the scale, high scores are emphasised more.

The applied value of Influence has not been analysed in a detailed spatial scale. Although some distinctions could be made between municipalities, such distinctions are not detailed enough to be differentiated in the different clusters. This category is therefore assigned a medium score in all clusters and coloured grey.

Wind rose scoring

The scale used for each applied value in the wind rose is 'very low' - 'low' - 'medium' - 'high' - 'very high'. A very low score means that the situation for the different dimensions of the applied value is very just. A very high score means the situation for the applied value is highly unjust.

A mixed approach is used to assign scores for each applied value in a cluster. The basic principle for scoring is comparative. In this case a medium score represents an average score for the region. The larger the deviation from this average, the higher or lower the score.

The final score for an applied value is a combination of scores on the different housing dimensions of said value. Dimensions within an applied value can cancel each other out. For example, the bad accessibility of amenities in rural areas does not directly translate to a very bad score on acceptability, because it is compensated by a decent quality of housing and environmental quality. This combination of indicator scores also means that there are not many extreme scores in the wind roses.

For some housing dimensions, such as land suitability, there is barely any difference between the clusters. Because the aim is to show differences

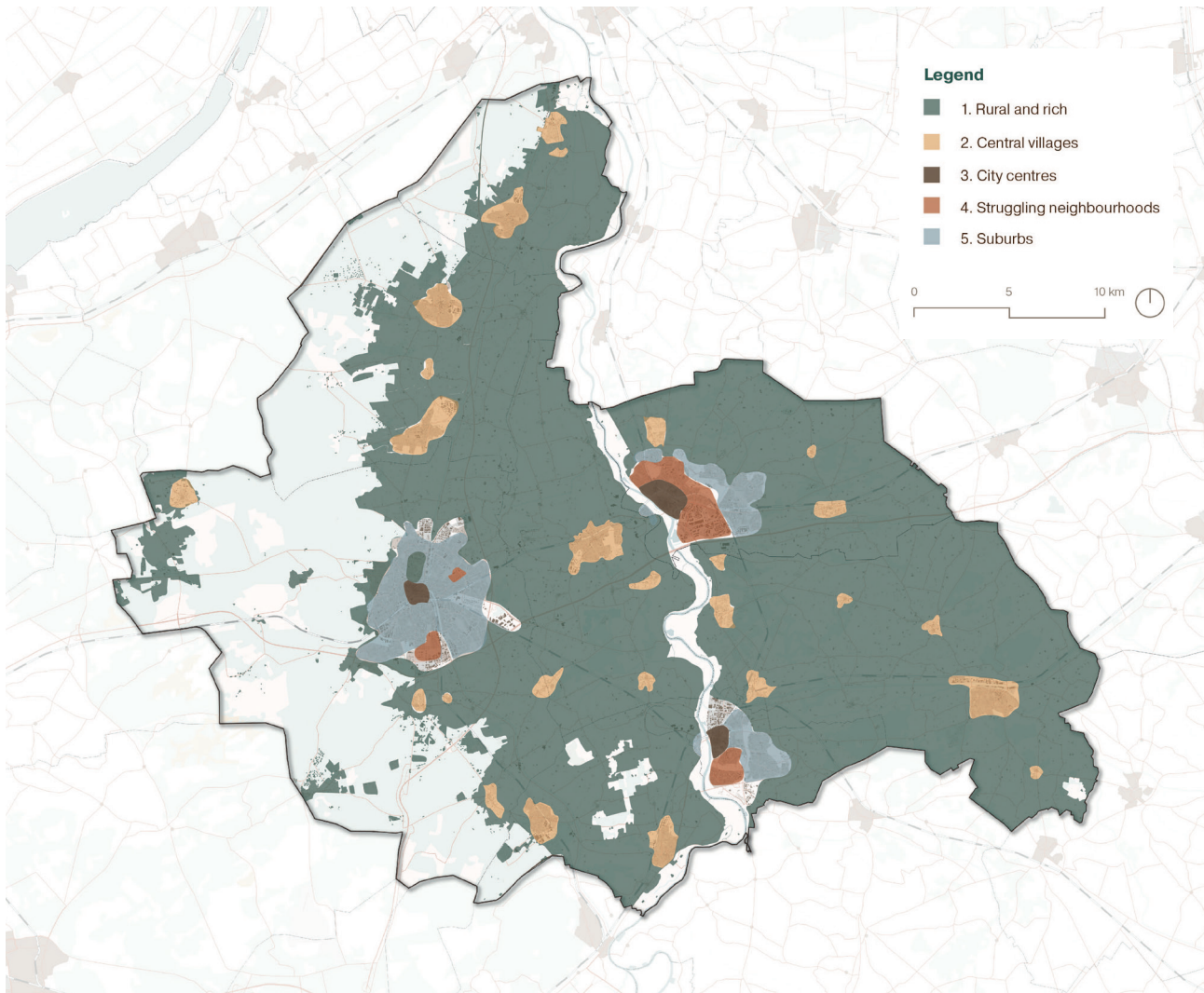


Figure 7.2: The different clusters together on one map. The areas which are not coloured are not inhabited. This concerns industrial areas and protected nature, by author.

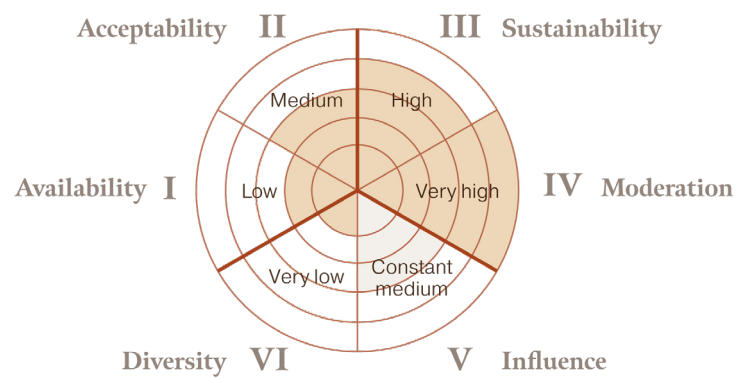


Figure 7.3: The wind rose which is be used on the following pages, by author

between the regions, these dimensions are given a smaller weight in creating the average scores.

For some indicators of the housing dimensions, there is a quantitative indicator, for which a norm is available. If this is the case, the quantitative scores can not only be compared to the other clusters in the region, but also be checked by the norm.

A shortcoming of a comparative approach is that if all clusters have a similar insufficient value, they would all have a medium score. If a norm is available, it makes sense to use it, to reveal such insufficiencies (e.g. a minimum share of social housing). Again, a comparative approach is used to indicate how far away clusters are from a particular norm. This latter, quantitative and normative approach to scoring is preferred. However, for many housing dimensions, indicators with such norms are not available. This has also been touched upon as a limitation in the regional analysis.

Two final limitations of this scoring method are that the nuance of the variation within a cluster is not captured, and that with comparative scoring, trade-offs between regions are not shown. For example, the soil and water conditions in the whole region are excellent, which is not the case in many other places in the Netherlands.

This scoring method has some degree of subjectivity to it; if others were to assign scores for each cluster, it could result in slightly different scores (e.g. a difference between medium or low). There is also a temporal component to the analysis and the scores: housing and spatial planning are not static. The situation may change over time, which might result in different analyses, clusters and wind rose scores.

These limitations are not critical for the use of the wind roses in the process of using the justice framework. The wind roses are mainly indicative. They have three purposes: first, they are a quick visual summary of the cluster; second, it can be checked if the clusters are distinct; third they give a prioritisation for strategies in each cluster. The same purposes could be served without these wind roses, based on a qualitative and quantitative description of the clusters.

Wind rose differences

The wind roses of the different clusters are outlined on the right in figure 7.4. The scores of each cluster are discussed in more detail on the following pages. Figure 7.4 provides a first impression of the differences between the clusters regarding justice.

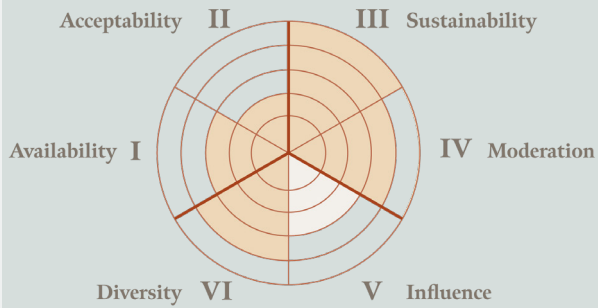
On the following pages, differences on descriptive statistics are discussed.

A first glance at the different wind roses reveals that the first cluster, Rural and Rich has the most extreme scores on the justice framework. This cluster is more unjust than the other clusters, especially regarding sustainability, moderation and diversity. The cluster performs decently regarding availability and acceptability, which are in turn the most prominent problems of 2. Central Villages and 4. Struggling Neighbourhoods respectively.

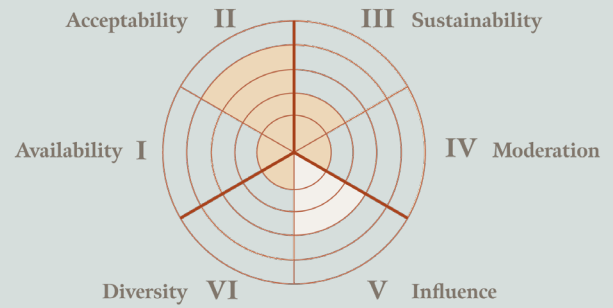
The cluster 3. City Centres is the most just according to this wind rose scoring and performs quite decently on all applied values. However, as has been touched upon before, the analysis of acceptability does not give a perfect representation of injustices related to affordability. The literature does indicate that unaffordable housing and gentrification are problems that are experienced more extremely in central urban areas (e.g. Hochstenbach & Musterd, 2018; Milikowski, 2018).

The suburbs represent a rather average score. This cluster does not particularly stand out compared to the other clusters. However, the neighbourhoods in this cluster still could be improved.

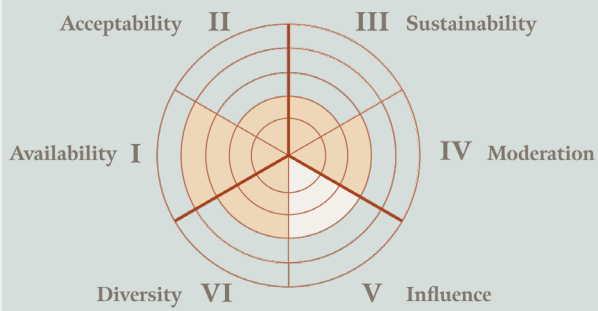
1. Rural and Rich



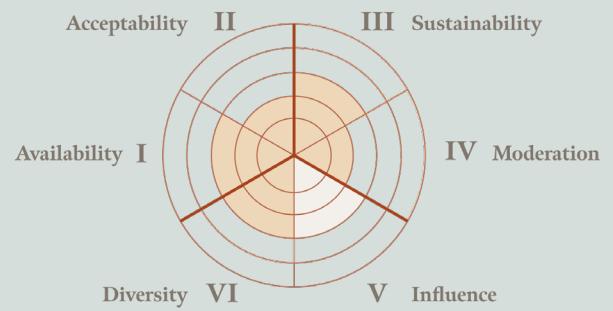
4. Struggling Neighbourhoods



2. Central Villages



5. Suburbs



3. City centres

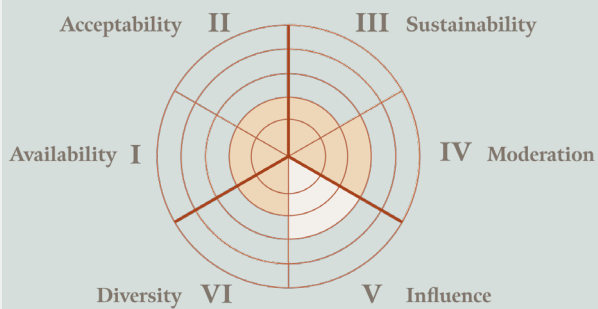


Figure 7.4: The wind roses for each cluster, by author

Descriptive statistics

Several statistics of the different clusters are presented in table 7.1 on the right. These statistics serve as a check for the distinction of the clusters that have been devised based on the analyses in the previous chapter. Even though these statistics have not been used to construct the clusters (with a few exceptions), the descriptive statistics do really show a distinction between clusters.

The clusters are not of equal size in terms of inhabitants, dwellings, households and land area, but each cluster represents a substantial share. The suburbs category is by far the largest cluster, but also rather average.

The main differences between clusters regarding inhabitants can be found in the division of elderly and young adults and the share of migrants. For the dwelling statistics there are stark differences in all categories. Notably, the clusters of Central Villages and Suburbs are quite similar in this aspect, although they are quite different in population structure. In the household statistics there are rather different household sizes and very different shares of single households. Lastly, the population density proves that the clusters represent very different environments.

Table 7.1 Descriptive statistics of the different clusters. Numbers are based on CBS kerncijfers wijken en buurten 2022. The percentages are a weighted average of the neighbourhoods in the cluster. Personal characteristics are weighed by the number of inhabitants, dwelling characteristics by number of dwellings and household characteristics by the number of households.

	1. Rural and Rich	2. Central Villages	3. City Centres	4. Struggling city neighb.	5. Suburbs	Region
<i>Inhabitants [n]</i>	62.170	109.085	36.250	61.065	176.930	445.500
<i>0-15 [%]</i>	14,1 %	14,5 %	9,8 %	16,0 %	16,7 %	
<i>15-25 [%]</i>	12,3 %	10,4 %	13,6 %	11,9 %	11,5 %	
<i>25-45 [%]</i>	17,3 %	19,0 %	28,2 %	27,1 %	23,0 %	
<i>45-65 [%]</i>	33,3 %	28,8 %	27,4 %	25,9 %	28,8 %	
<i>65+ [%]</i>	22,5 %	27,3 %	21,1 %	19,2 %	20,2 %	
<i>Western migrants [%]</i>	5,6 %	5,7 %	10,5 %	10,6 %	8,3 %	
<i>Non-Western migrants [%]</i>	2,3 %	5,3 %	11,4 %	19,2 %	10,0 %	
<i>Dwellings [n]</i>	23.848	49.576	20.716	29.585	77.265	202.016
<i>WOZ value [x 1.000]</i>	€ 451,9	€ 287,8	€ 227,3	€ 187,5	€ 261,5	
<i>Owner-occupied [%]</i>	80,7 %	63,0 %	44,0 %	41,6 %	64,0 %	
<i>Rental [%]</i>	19,1 %	36,9 %	55,9 %	58,2 %	35,9 %	
<i>Rental owned by housing association [%]</i>	3,6 %	30,6 %	25,1 %	44,6 %	27,5 %	
<i>Rental owned by other parties [%]</i>	15,5 %	6,4 %	30,5 %	13,4 %	8,5 %	
<i>Single-family homes [%]</i>	87,9 %	82,5 %	40,3 %	58,5 %	77,0 %	
<i>Apartments [%]</i>	11,9 %	17,4 %	59,7 %	41,5 %	23,0 %	
<i>Households [n]</i>	24.145	48.255	21.045	30.080	76.170	200.575
<i>Household size [n]</i>	2,57	2,26	1,72	2,03	2,32	2,23
<i>Single households [%]</i>	24,4 %	31,8 %	55,8 %	44,1 %	32,2 %	
<i>Households without children [%]</i>	38,6 %	35,6 %	26,3 %	25,2 %	31,1 %	
<i>Households with children [%]</i>	37,1 %	32,7 %	17,9 %	30,7 %	36,7 %	
<i>Land area [ha]</i>	68.244*	5.146	820	1.893	6.170	
<i>Population density [inh/km²]</i>	91	2.120	4.421	3.226	2.868	

*102.077 ha when the surface area of the Natura2000 areas are included.

Cluster 1. Rural and Rich

The first cluster consists of two types of areas with similar characteristics in the analyses of the applied values: rural areas and villa neighbourhoods. The spatial analyses of the applied values revealed many similarities between these areas.

In land area, this cluster is by far the largest. Due to a low dwelling density, this does not result in a high number of dwellings. The relatively scarce supply of housing is characterised by a large share of owner-occupied housing (table 7.1), with a low mutation rate (figure 6.17). The mutation rate in social housing is higher, but with less than 4% of dwellings, this tenure type is barely present. Despite the low mutation rates, higher vacancy levels can be seen in some rural areas. One possible explanation is the high average house value of € 451.900 (table 7.1), which decreases the pool of potential buyers when a dwelling becomes available.

The population in this cluster is quite homogeneous and predominantly consists of households with a Dutch origin. The population is relatively old, which makes greying a common problem in this cluster.

Households generally live in large houses (figure 6.25), which from the perspective of moderation can be considered intragenerationally unjust. The living space per person is particularly high east of the river IJssel. These large houses also require a high level of gas use, which makes this cluster stand out on

the value of sustainability. Dwellings in this cluster are generally remote; amenities are at a distance, which makes transport a requirement. However, the remote dwellings are not very well connected to public transport and car ownership is high, which indicates unsustainable transport to and from dwellings.

The bad access to amenities is the main problem regarding acceptability. The large dwellings offer an attractive place to live, but not all of them are fulfilling contemporary quality standards. Apart from this, the dwellings in this cluster are close to nature and wide landscapes, which makes for an attractive living environment. Some locations are constrained by this proximity to nature. Nitrogen emissions restrict construction near the multiple Natura 2000 areas bordered by this region, and some areas in this cluster are threatened by floods from the river IJssel. Of all clusters, the Rural and Rich cluster is most affected by nature constraints.

Figure 7.5 (below): Collage illustrating the environment in the cluster Rich and Rural, by author.



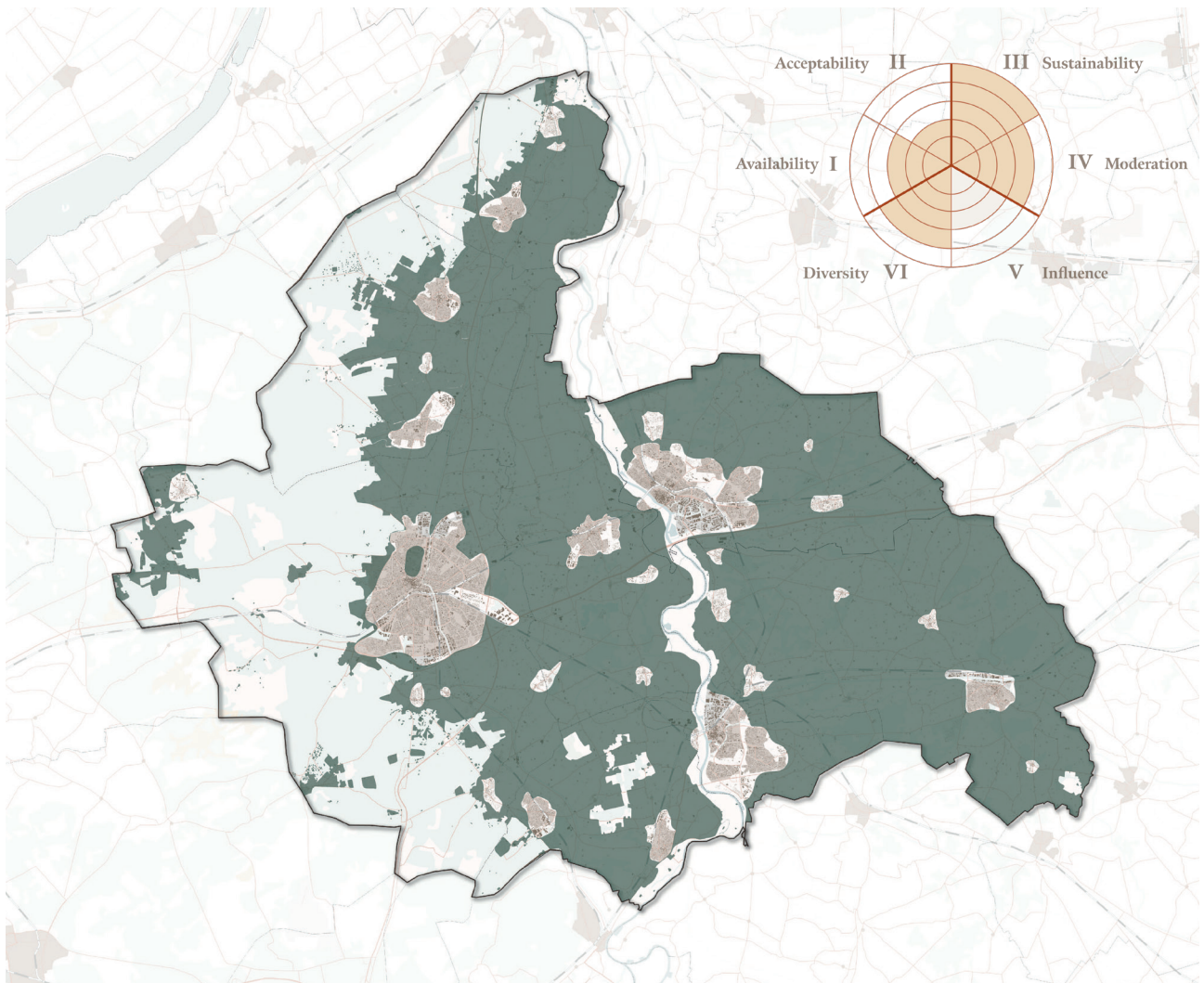


Figure 7.6: Map with the areas belonging to the cluster Rich and Rural, by author.



Cluster 2. Central Villages

Both the analyses of the applied values, summarised in the wind rose, and the descriptive statistics in table 7.1 show that the villages in the region are quite average and that injustices are not extreme. The Central Villages do not differ too much from the largest cluster, the Suburbs. However, the villages have some distinct characteristics which set them apart.

The availability of housing in the villages is not optimal. The housing density is quite low, which is not beneficial for the quantity. But more problematic in this cluster is the match of supply and demand. There is a high share of elderly in the villages and a low share of younger households. There is a homogeneous dwelling supply of mostly single-family homes, which are not all suitable for elderly or obtainable for younger people. This is also represented in the low flow of dwellings; the mutation rates in social housing and the owner-occupied segment are low in multiple villages. For the cluster as a whole, the share of social housing is adequate, but in smaller villages the share of social housing is low (see figure 6.17).

The lack of suitable housing for young adults and elderly contributes to a greying population of this cluster, which is an issue in the value of diversity. Regarding ethnicity, the population is also not very diverse, with a low share of migrants.

The acceptability in the cluster is decent, except for a relatively high living expense ratio in social housing and a limited supply of amenities. The

cores of the larger villages have a sufficient amenities level, but this is not reflective of the whole cluster.

Regarding limitation, the score on sustainability is low. The energy use of dwellings is not near zero, but also not extremely high. There is some dependence on motorised transport, because public transport is lacking in several places in the cluster. This dimension is very mixed, with some villages having access to trains as well as buses, and some villages which do not even have full coverage of bus stops. To access places within the villages, there is plenty of opportunity for non-motorised transport. The soil and water conditions in the villages are well-suitable for building. However, some villages are constrained by the Natura 2000 status of the Veluwe.

Moderation in this cluster is at a medium level. Some (parts of) villages have excessive use of land and living space, more similar to the rural areas. The cores of villages are more similar to the cities and not very excessive. There is generally a good share of functional mixing, but some villages have mainly a housing function.

Figure 7.7 (below): Collage illustrating the environment in the cluster Central Villages, by author.



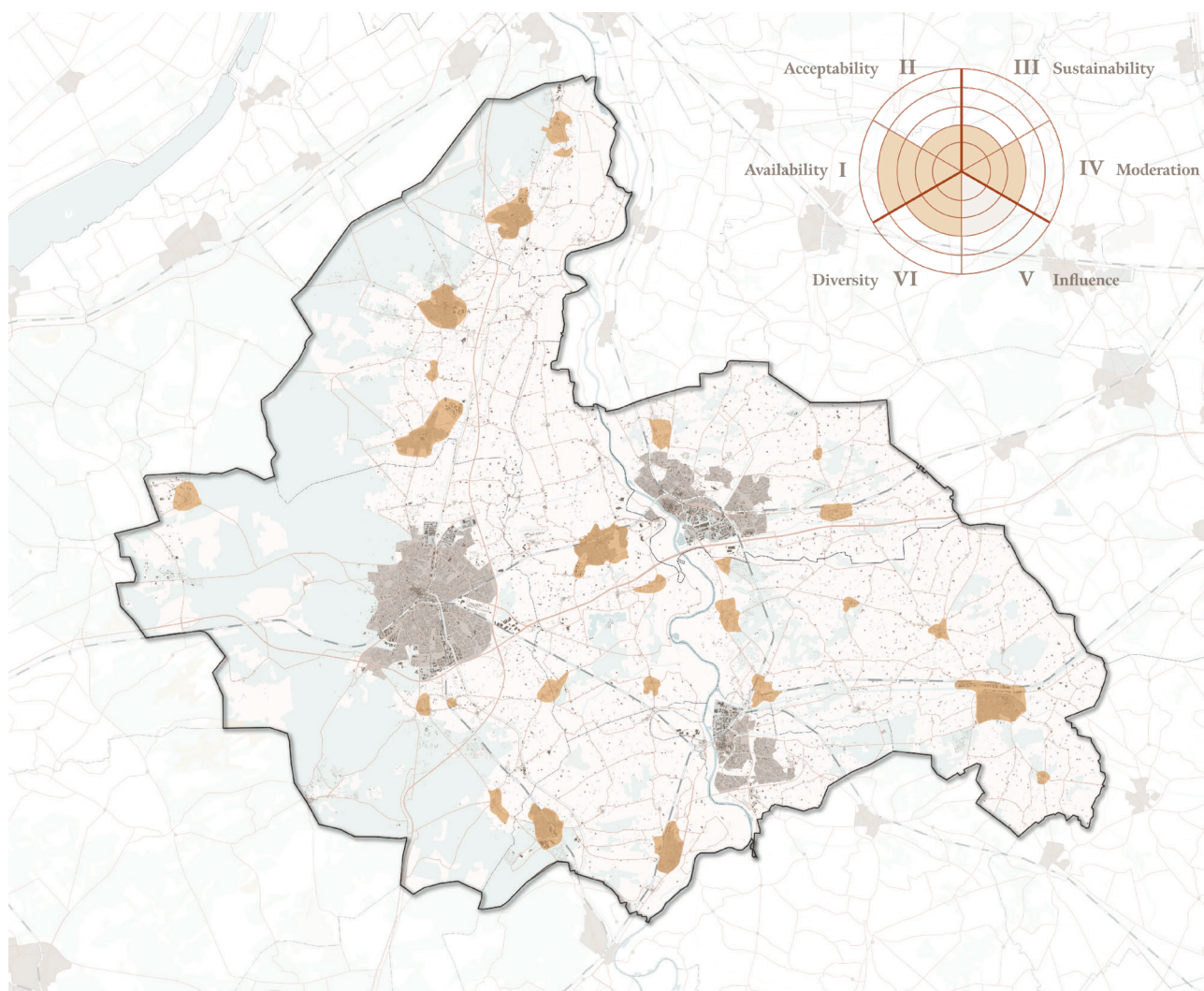


Figure 7.8: Map with the areas belonging to the cluster Central Villages, by author.



Cluster 3. City Centres

The city centres of the three main cities stand out in the region mainly due to their high density. This density will increase even more: several of the key projects of the Woondeals are located in the centres, which will add several thousand dwellings (Regio Stedendriehoek, 2023a; Provincie Overijssel, 2022).

The centres have a high share of apartment dwellings, in a region where single-family homes are common. There is a substantial amount of social housing, but not up to the desired level of 30%. This is combined with a high share of private rental (table 7.1). In the analyses, affordability does not stand out as a major issue. However, excessive rents are a common problem in the private rental sector (e.g. Hochtenbach, 2022; Langkeek et al., 2023), so this issue could be more pressing than illustrated.

There is a low share of families in the centres. The large share of single households can be explained by the relatively young population (table 7.1). The population and dwelling stock is very mixed, which reveals that there are different opportunities for different individuals.

The cluster scores quite well on the applied value of sustainability. Transport to and from the cluster is accommodated by public transport. Additionally, there is a healthy share of mixing in these areas, which - considering the high density - minimises the need for transport. The dwellings themselves are not

extremely sustainable, however. The energetic quality of many houses is not sufficient, which contributes to relatively high levels of energy poverty (figure B.5).

The most noticeable shortcoming is regarding moderation: the dwelling vacancy is high both in relative and absolute sense (figure 6.25). Dwellings in this cluster are thus not optimally used, despite shortages in the region.

Figure 7.9 (below): Collage illustrating the environment in the cluster City Centres, by author.



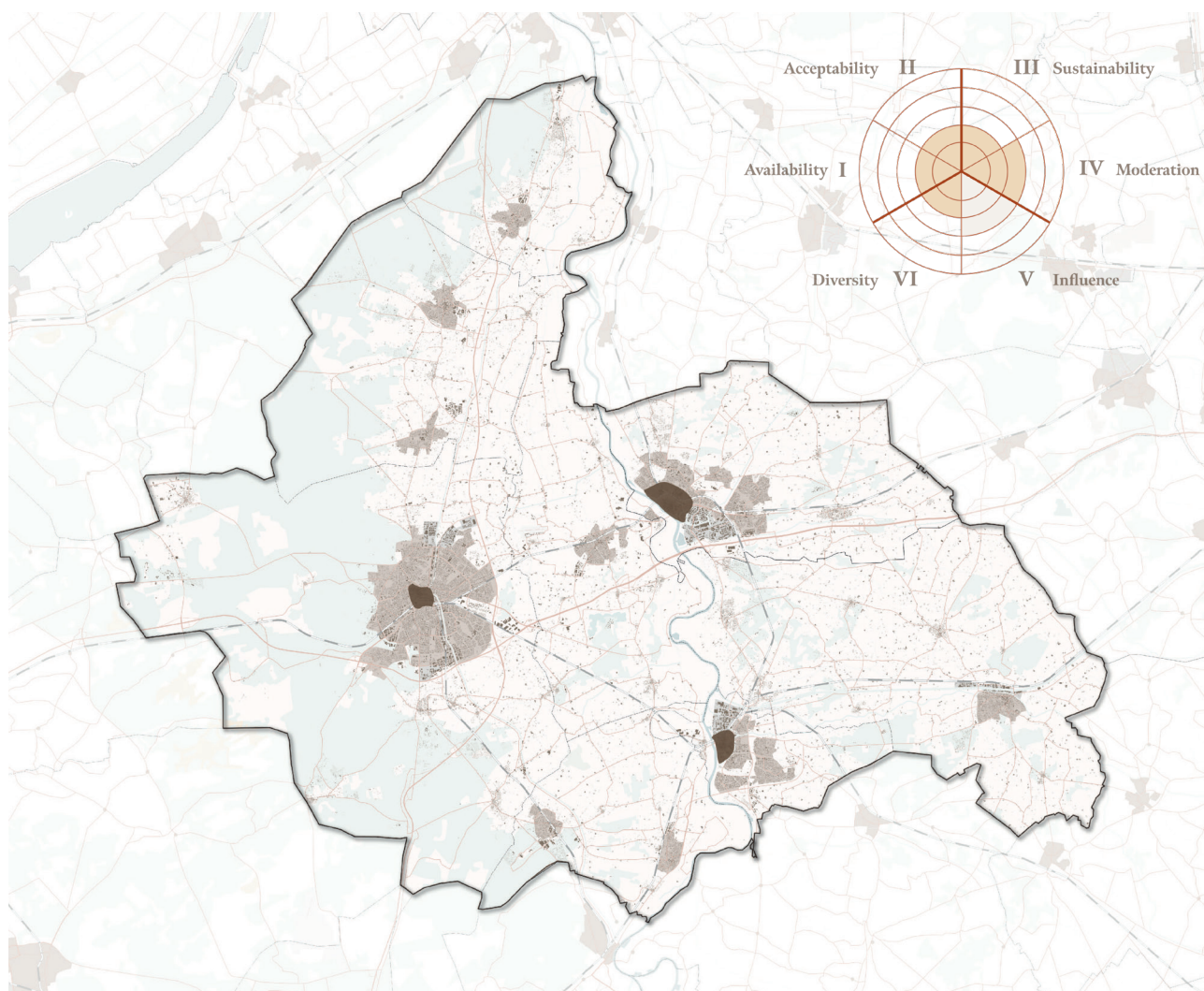


Figure 7.10: Map with the areas belonging to the cluster City Centres, by author.



Cluster 4. Struggling Neighbourhoods

The housing quantity in this cluster is decent. Although in absolute numbers it is not the largest, the density in the cluster is quite high (table 7.1). Additionally, there is a large share of affordable social housing and dwellings can generally be adapted to the needs of elderly (figure 6.17).

The main issue in this cluster is acceptability. The cluster includes several neighbourhoods where the housing quality is not sufficient. In addition, there is a relatively large share of households living in energy poverty (figure 6.19). Nonetheless, the WOZ value of the cluster is the lowest of all, which shows that the cluster is relatively affordable. This might also be a reason why there is a rather high share of young households within the cluster.

Although the level of amenities is sufficient, the environmental quality is not necessarily high (figure 6.19). These bad scores on several dimensions of acceptability lead to a high injustice score.

Despite the bad energetic quality of dwellings, gas use is not high (figure 6.22). The larger share of apartments (table 7.1) and little living space per person (figure 6.25) contribute to this. Improvements in sustainability of dwellings would therefore be more justifiable for the acceptability value than sustainability value. A part of the cluster is in an area with a higher

chance of floods, which could become a problem of durability.

Regarding moderation, the only injustice in the region is that housing is quite dominant (figure 6.25), which means that land is not used very effectively. However, there is a high population density in the area (table 7.1), which indicates the opposite.

Lastly, the diversity in this cluster is good: different types of tenancies are represented, there is a substantial share of families and a relatively high share of migrants (figure 6.35; table 7.1).

Figure 7.11 (below): Collage illustrating the environment in the cluster Struggling Neighbourhoods, by author.



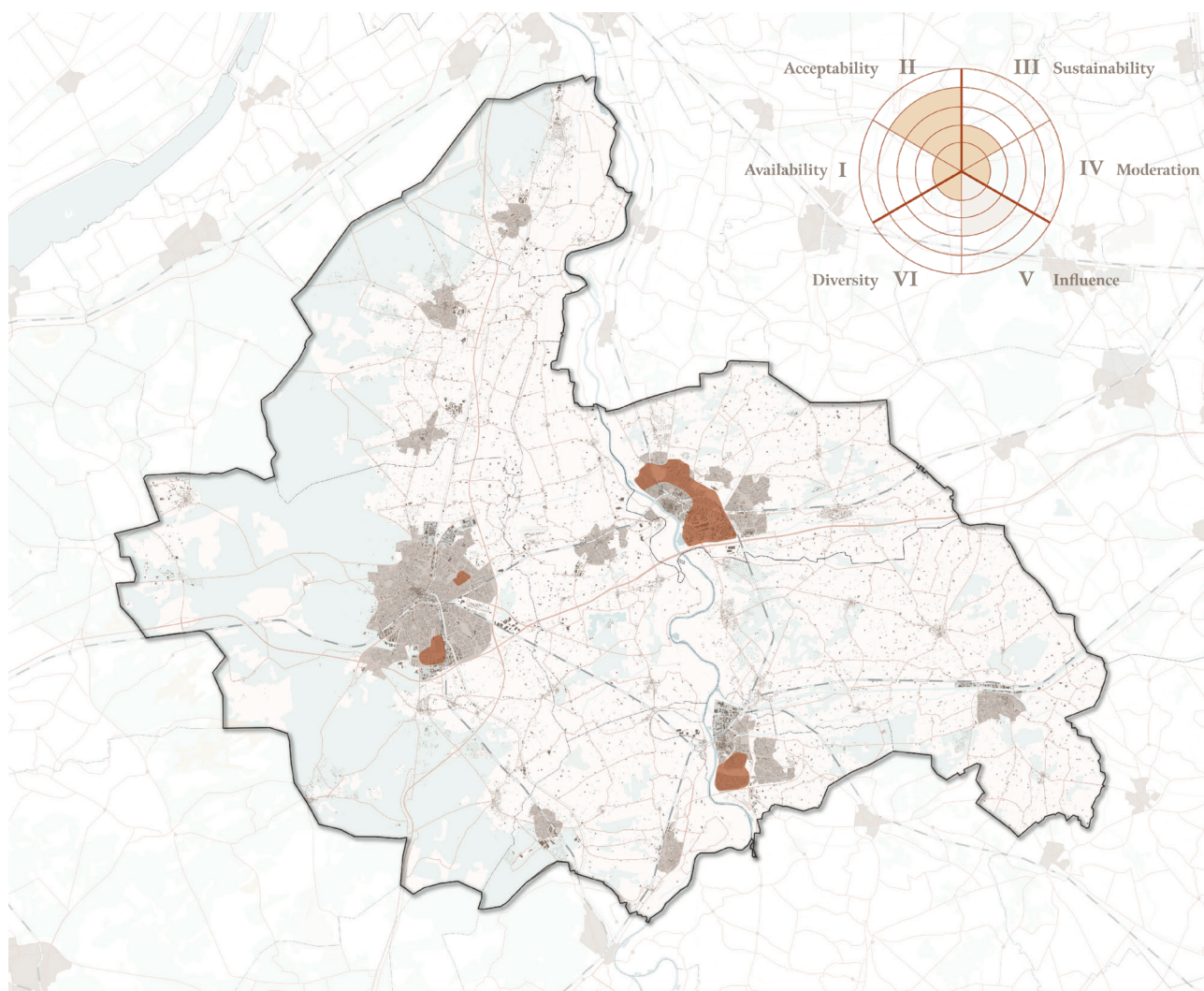


Figure 7.12: Map with the areas belonging to the cluster Struggling Neighbourhoods, by author.



Cluster 5. Suburbs

The availability of housing is at a medium level. The general quantity in the cluster is decent, but the supply is rather monotonous. There is a lack of differentiated housing, with a low share of social housing (table 7.1) and a demand for dwellings for people with a motion disability (figure 6.17).

The acceptability of housing in the suburbs is very good, with decent quality housing, which is relatively affordable. Many of the suburbs are from recent decades, when there have been higher standards for housing. However, some of the neighbourhoods in this cluster are at quite a distance from the centre and from work locations, which decreases acceptability.

Most neighbourhoods within the cluster are dominated by housing (figure 6.25), which encourages transport. In several parts of the cluster, especially at the edges of neighbourhoods, the accessibility by public transport is not optimal (figure 6.22). These two factors combined contribute to car use.

The living space per person in the Suburbs is high compared to the other city clusters, is similar to the cluster Central Villages, but is not as excessive as in the rural areas (figure 6.25).

The diversity of housing is not great in the suburbs. There are predominantly single-family homes and a relatively large share of owner-occupied housing,

especially considering the size of the cluster (table 7.1).

The population profile is somewhat diverse and quite similar throughout the cluster. The share of families is not extremely high, considering the large share of family housing, but among the highest of all clusters. The share of migrants is low compared to the other city clusters, but higher than the non-city clusters. Overall, this contributes to an average score.

Figure 7.13 (below): Collage illustrating the environment in the cluster Suburbs, by author.



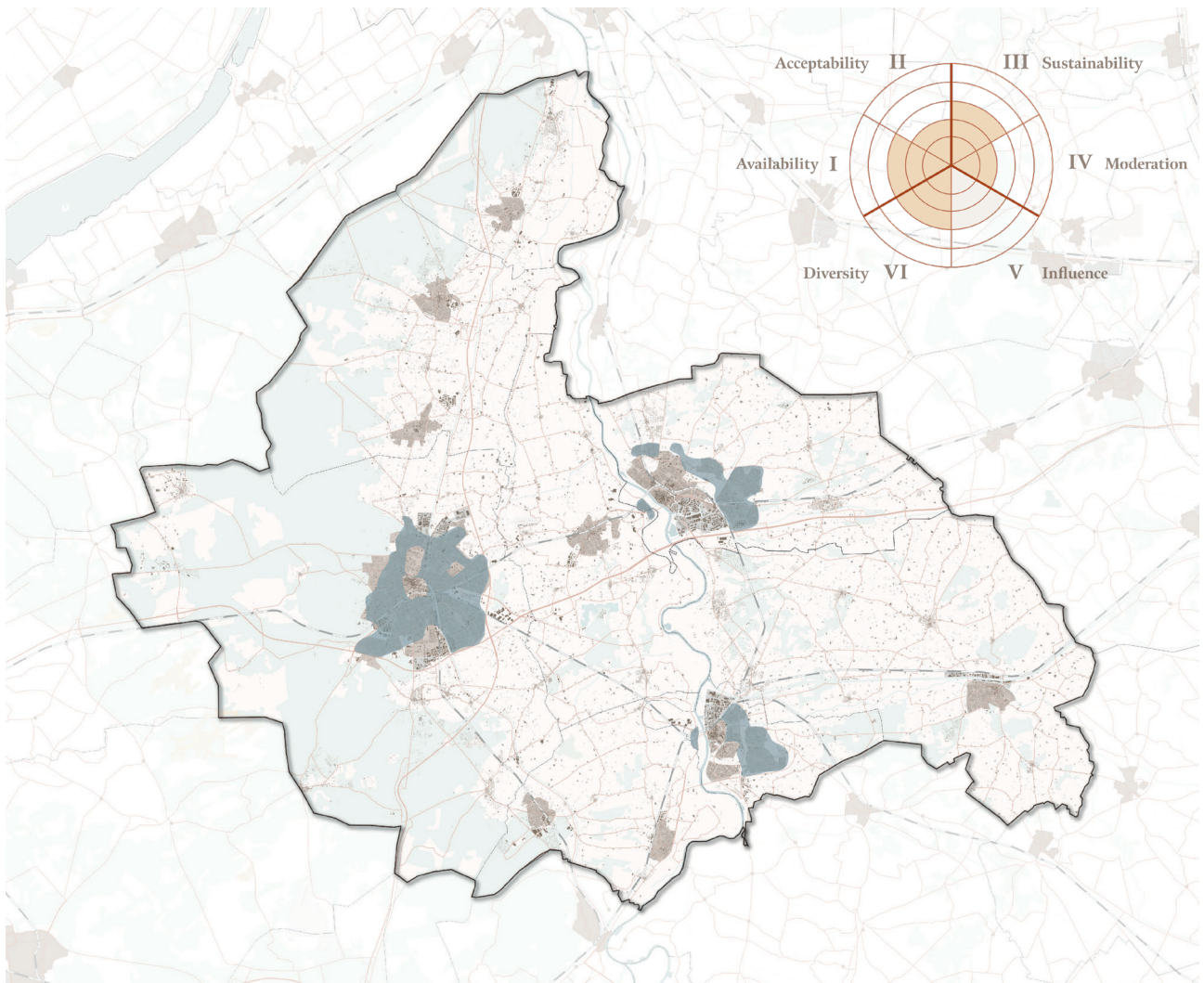


Figure 7.14: Map with the areas belonging to the cluster Suburbs, by author.



Cluster strategies introduction

In each cluster, there are specific challenges regarding justice. These specific challenges are represented by the wind roses accompanying each cluster.

These wind roses give an indication of which applied values from the justice framework should be prioritised in a cluster. The priority is indicated with an orange colour: the darker the column of an applied value, the more priority should be given to this value. This will generally entail that there are multiple pattern cards for an applied value that requires attention, while for an applied value which does not have priority, there are fewer patterns.

The pattern cards

Patterns respond to the specific justice issues faced within a cluster. These issues are uncovered through the site analysis on the different applied values. These pattern cards represent a strategy for a whole cluster. There are individual differences within the cluster too, so in a subsequent step, the translation has to be made from strategy to design.

Each strategy pattern is given a code, so that it is possible to make reference to the cards. Each card corresponds to one of the applied values from the justice framework. The Roman number of the applied value is followed by a letter, in alphabetical order.

Numbers 1-5: clusters
Roman numbers I - VI: applied values
Letters a-e: specific pattern.

The patterns all have a title which indicates the strategy. This title is supplemented with a small image, which gives a visual representation of the strategy. In each card, there is also a small text on why and how this pattern should be applied in the cluster.

The strategy patterns each have a coloured edge. The colour of the edge of the pattern card refers to the type of steering instrument associated with the strategy (figure 7.16). This relates to how the strategy should be applied. The categorisation of these steering instruments, as described by Heurkens

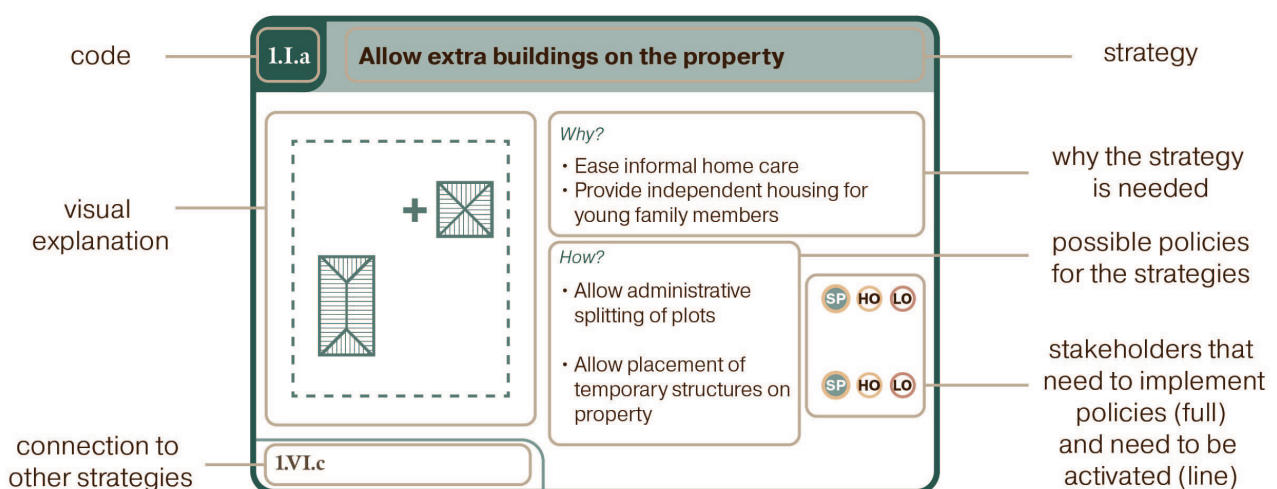


Figure 7.15: Structure of a pattern card, by author.

and colleagues (2015) is the same as those used to evaluate the effect of spatial planning policy on (in)justice in chapter 3 of this research. It concerns shaping instruments (such as visions and ambition documents), regulating instruments (such as zoning plans, contracts and laws), stimulating instruments (fiscal stimuli, such as subsidies and provision of infrastructure), and capacity building instruments (such as network events).

The patterns contain a short description of why and how the strategies should be applied. The 'why' often follows from the spatial analysis. The 'how' is connected to stakeholders which are involved in applying the strategy, as primary stakeholder and as secondary stakeholder.

The deliberate choice has been made to keep the strategy patterns concise, so they can be viewed in coherence. A further elaboration of the 'why' and 'how' of the patterns is given as well after the patterns have been presented.

Relations between patterns

The strategies related to the different applied values can reinforce each other, but can also be conflicting. It is also possible that one strategy can only be applied under the condition that another strategy is applied. These relations are shown in a separate figure, based on the wind rose of the cluster.

Applying the patterns

In the following step, the patterns are applied to a specific location, which is an example area from the cluster. The local context of this example site is used to make the strategy cards more concrete.

This step illustrates how the strategy cards can be guiding for a specific location in the region, which is part of a cluster. However, this design is not the goal of the research. There are several possibilities in which the translation from strategy to design can be made. The application in this research is just meant to illustrate this step. In reality, different iterations would be made, preferably involving residents as well.

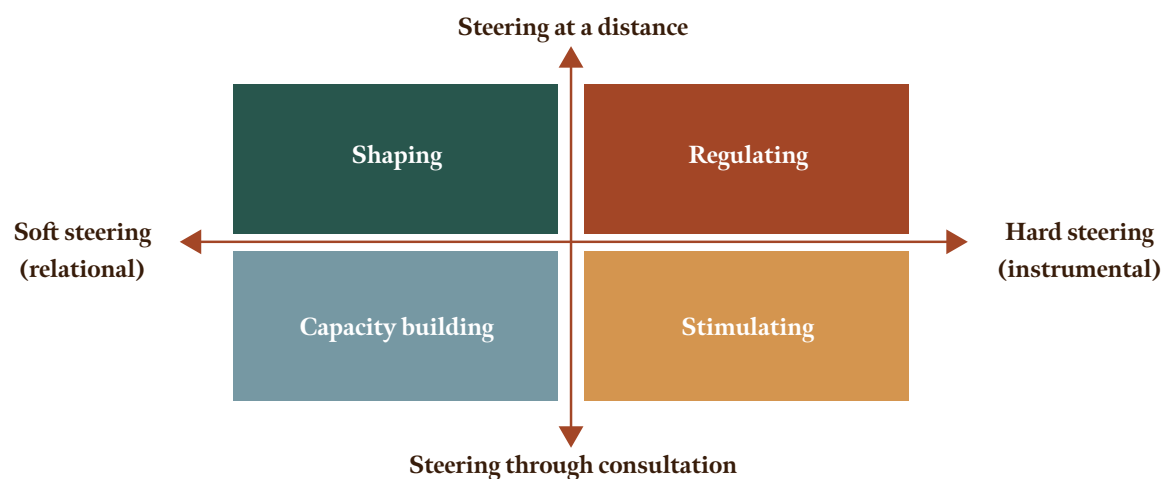


Figure 7.16: Colours associated with the different steering instruments

Cluster choice

The aim of making a design for the clusters in an example location is to exemplify how the justice framework can be guiding throughout the scales. The aim is not necessarily to make a detailed strategy for every cluster. Instead, to be able to show the whole process thoroughly, only two clusters are further detailed.

The choice for these clusters is based on the characteristics as described on previous pages. The two chosen clusters are '1. Rural and Rich' and '4. Struggling neighbourhoods'.

These two clusters show more extreme injustices regarding one or more applied values, as can be seen in the wind roses in figure 7.17. Thus, urgency is required for these clusters.

The population in both clusters is just over 60.000 inhabitants, which is roughly 14% of the population. Apart from this similarity, there are quite stark differences between these two clusters. In the Rural and Rich cluster, the density is very low, with mainly owner-occupied dwellings, whereas in the Struggling Neighbourhoods cluster density is high, with many social rent apartments.

The contrasts in the clusters make them complementary for the testing phase. With these contrasting characteristics it is possible to test the design relevance of the justice framework in different conditions. The different scores on the applied values make that the combination of the clusters provides insight in strategies for all applied values.

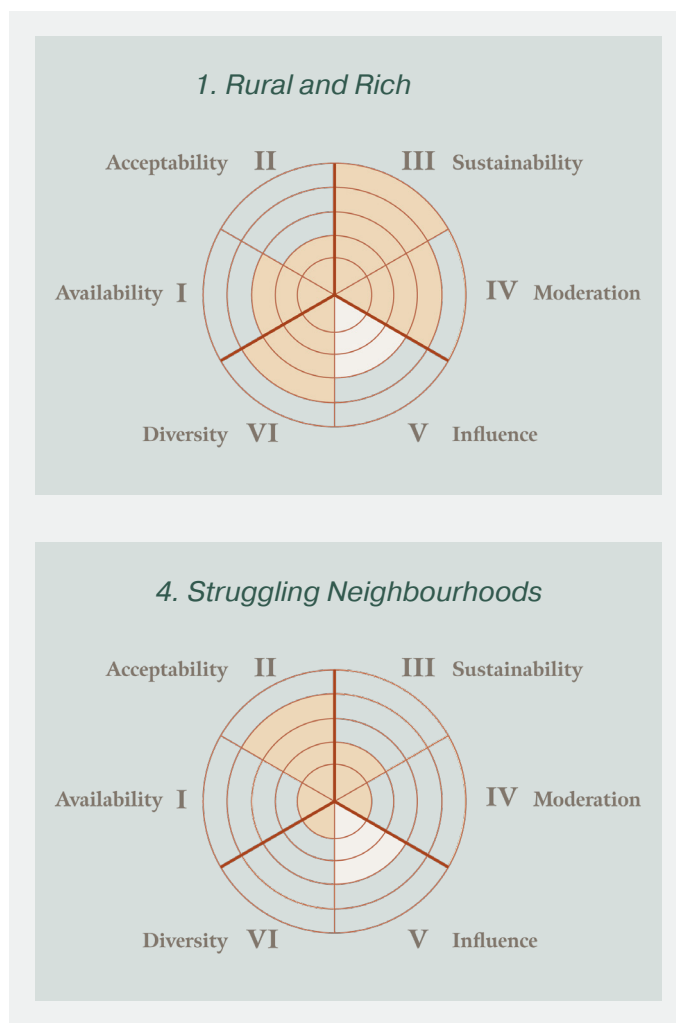


Figure 7.17: Wind roses of the clusters 1. Rural and Rich and 4. Struggling Neighbourhoods, by author

Recap of the applied values

From the core value of sufficiency:

I. Availability

The number of dwellings should be enough.

Points of attention are the total amount of housing, regional distribution of housing, availability of different tenures, and whether dwellings come available (the mutation rate).

II. Acceptability.

Housing should be of sufficient quality.

Points of attention are energetic quality, structural quality, environmental quality, at a price that is acceptable.

From the core value of limitation:

III. Sustainability

Referring to intergenerational justice: concerning the long term effect of contemporary planning choices.

Points of attention are durability of design and emissions originating from housing.

IV. Moderation

Referring to intragenerational justice: excessive use which limits sufficiency of others now and in the future.

Points of attention are excessive use of (floor) space and other resources.

From the core value of opportunity:

V. Influence

Referring to procedural justice. The value of influence asserts that individuals should have some power in how their environment is shaped.

Points of attention are influence during planning (participation), during development (as developer) and after development (right to the city).

VI. Diversity

Housing policy should recognise different demands (recognitional justice) from different user groups.

Points of attention are recognition of diverse wishes of groups and providing housing opportunities.

Inter-cluster regional strategies

On the following pages, the strategies for the two chosen clusters (1. Rural and Rich, and 4. Struggling Neighbourhoods) will be outlined. These two clusters each have specific challenges and a specific set of strategy patterns which address them. Naturally, there are some strategies which can be applied to multiple clusters, because many solutions are not specific to one cluster. As a consequence, some of the strategy patterns are repeated in multiple clusters. However, there are also some strategies which require interaction between clusters. Such patterns, with interdependencies between clusters are outlined on the right in figure 7.18 and further elaborated below.

0.I.a Balanced distribution of new dwellings

» Personal observation

The analysis of availability revealed that both absolutely and relatively the dwelling stock grows the most in the cities if the plans of the Woondeal get executed (Regio Stedendriehoek et al., 2023). Some efforts have been made to minimise differences between municipalities, because the municipalities of Brummen, Epe and Heerde have agreed to develop more dwellings than agreed upon earlier. In order to avoid that amenities disappear because the population is insufficient, and in order to assure a fair distribution between clusters, regional coordination is required.

0.II.a Determine a sufficiency level for amenities

» Advice from literature

The analysis on acceptability revealed that many places in the region have insufficient access to amenities, which can be leading to a downward spiral of deprivation (RLI et al., 2023). Knowing which areas have an insufficient amenities level is invaluable input for determining where dwellings are needed (0.I.a). But in order to know this, it is first necessary to establish what level of amenities is sufficient. There are norms, such as the response time of emergency services, but norms for many amenities are lacking and a matter of political scrutiny (Van Vulpen, 2023).

0.III.a Determine a norm for public transport coverage

» Advice from literature

The sustainability analysis revealed that several areas do not have proper access to public transport, but this is not measured according to a governmental norm. Similar to amenities, a norm for public transport can help decision making on where dwellings are possible within the existing public transport network. Because transport is organised on a regional level and a sufficiency line cannot be determined for a single cluster, this requires regional collaboration.

0.IV.a Set quantitative goals for dwelling creation within existing buildings

» Advice from literature; personal observation

The Woondeal (Regio Stedendriehoek et al., 2023) does briefly mention transformation of existing buildings, but no quantitative goals are stated. From different perspectives it can be beneficial to look for dwelling space in existing buildings (Xue, 2022; Platform Woonopgave, n.d.). In regional plans such as the Woondeal, targets can be set for which part of the demand should be realised with new construction, and which part should be found in the existing stock.

0.V.a Organise regional participation for spatial plans

» Personal observation

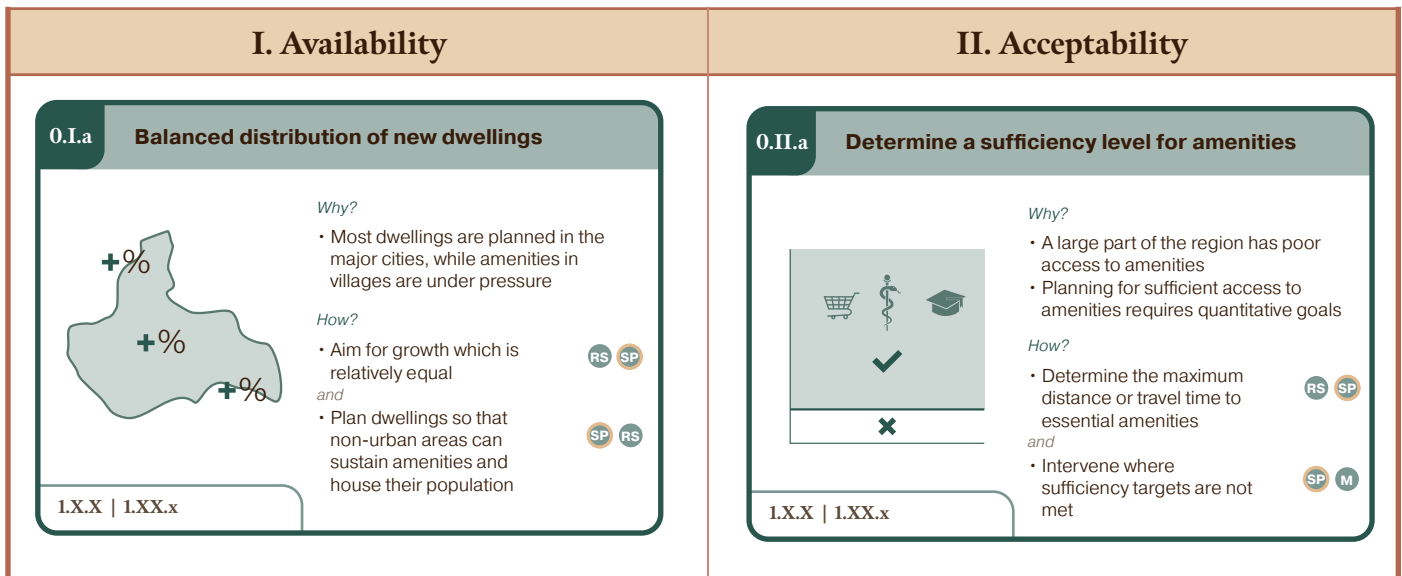
It is peculiar that participation is required for local plans, but regional dwelling plans cannot be influenced by residents. Although such participation is difficult for short-term processes such as the Woondeal, for plans such as the Uitvoeringsagenda, regional participation could be arranged, for instance through distributing questionnaires.

0.VI.a Maintain the distinct character of clusters

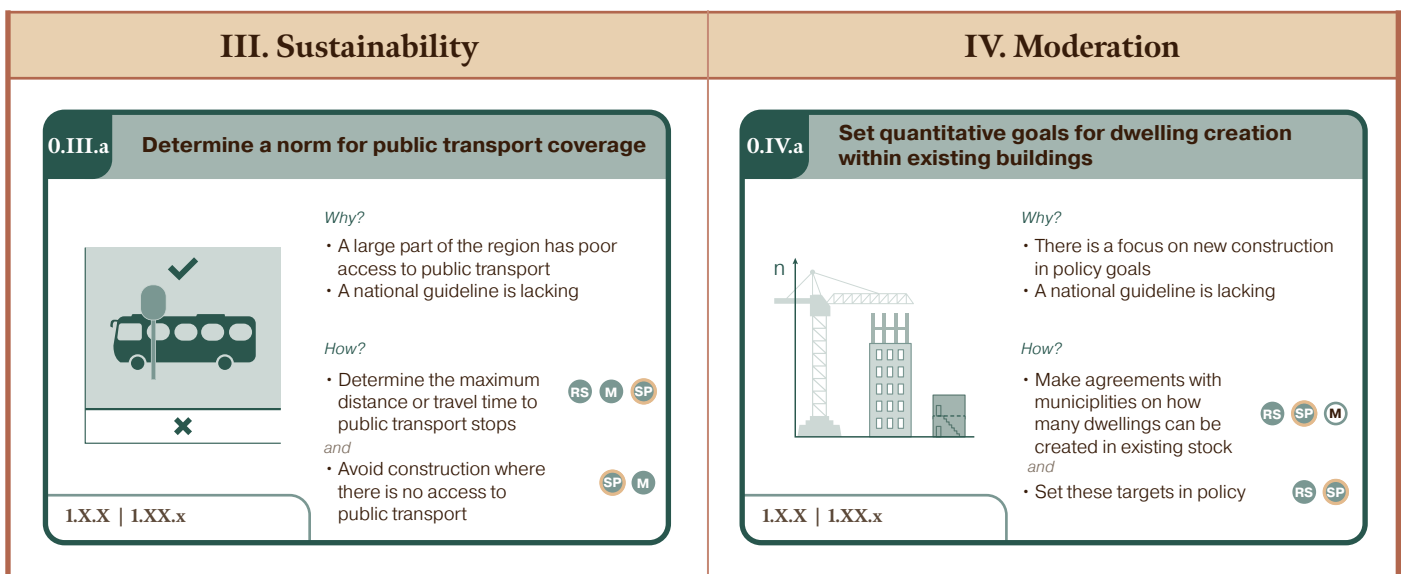
» Personal observation

The different clusters have different injustices, but also distinct spatial characters. Although the same strategies could possibly be applied in the different clusters, this is not desirable for the diversity of social and spatial living environments. Coordination of the regional cluster strategies is therefore required.

Sufficiency



Limitation



Opportunity

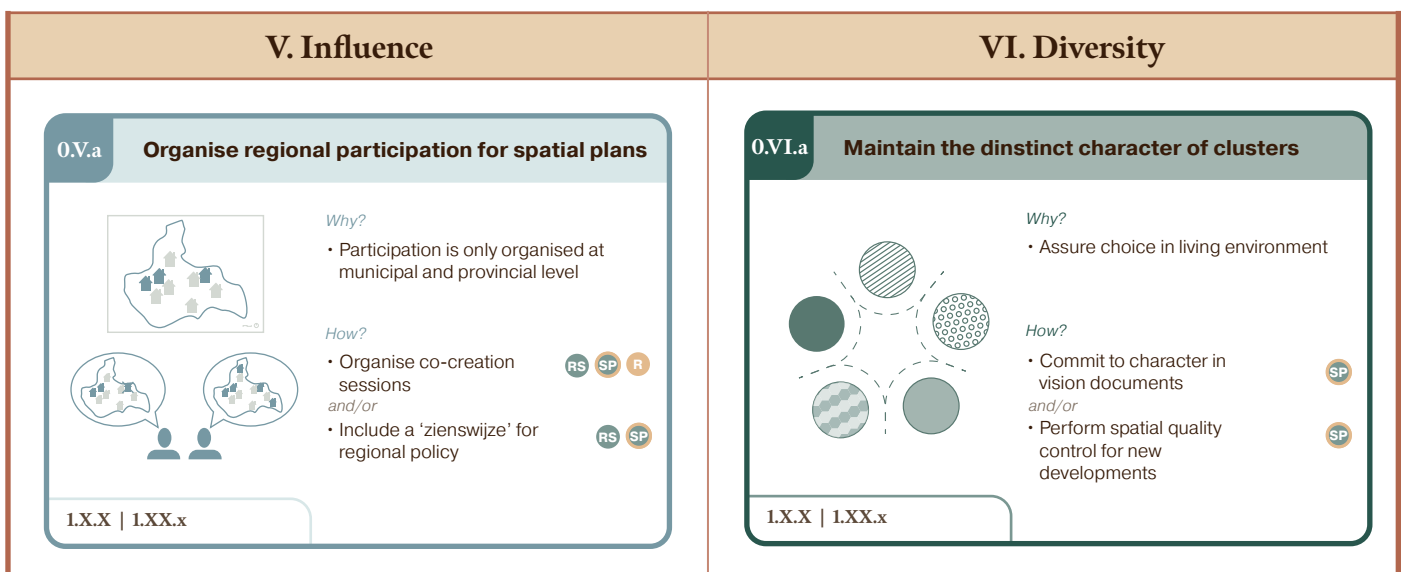


Figure 7.18: Inter-cluster strategy patterns for the Regio Stedendriehoek, by author.

1. Rural and Rich strategy patterns

The patterns for the cluster '1. Rural and Rich' are outlined on the right and on the following pages. These patterns represent the strategies which can be taken on a regional level to address the injustices in all areas which are part of the cluster. In the subsequent step, the effects of these strategies on a local level are explored for an illustrative location in the cluster.

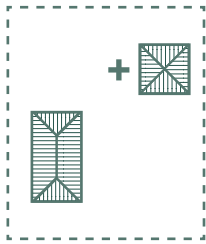
The patterns are structured in the order of the different instruments: shaping, regulating, stimulating and capacity building (see figure 7.16). There is no further hierarchy in the patterns; clusters explicitly require a combination of strategies and different strategies should be prioritised in different locations.

The strategies mostly consist of shaping instruments. These strategies are about 'changing the rules of the game' (Heurkens et al., 2015) and relate for instance to establishing policy goals and creating strategic plans. Strategies that have this colour require a specific change in policy goals. They are therefore classified as a shaping policy, but the instruments listed under 'how?' often contain regulating and stimulating instruments as well. The policy actions of the patterns listed as regulating or stimulating are explicitly focused on regulatory and stimulating measures respectively.

Figure 7.19, on the following four pages: strategy patterns for the cluster 1. Rural and Rich, by author.

I. Availability

1.I.a Allow extra buildings on the property



Why?

- Ease informal home care
- Provide housing for young family members

How?

- Allow administrative splitting of plots SP HO LO
- and/or
- Allow placement of temporary structures on property SP HO LO

1.II.c

1.I.b Add affordable housing



Why?

- Very high average house values
- Absence of social housing

How?

- Set goals in policy SP HA D
- and/or
- Requirements for permits SP D
- and/or
- Subsidies for unprofitable top M

1.II.c | 1.III.e | 1.IV.e

1.I.c Add housing for young adults and young families



Why?

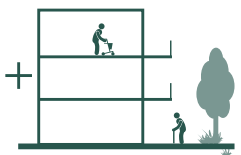
- Relatively old population
- High average home value unobtainable for young adults

How?

- Set goals in policy SP HA D
- and/or
- Requirements for permits regarding size and price SP

1.II.b | 1.IV.a | 1.IV.e

1.I.d Add housing that caters to the needs of elderly



Why?

- Relatively old population
- Many single-family dwellings
- Demand is higher than supply

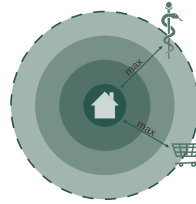
How?

- Set goals in policy SP HA D
- Requirements for permits SP HA D
- Preference for accessible locations in plans SP

1.IV.c | 1.IV.g

II. Acceptability

1.II.a Ensure access to basic amenities



Why?

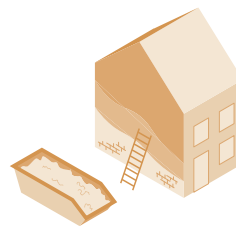
- Distance to amenities is the main shortcoming regarding acceptability

How?

- Plan amenity hubs in smaller cores SP E
- Create new dwellings to support amenities SP M D
- Improve connectivity to amenities SP M P
- Cover unprofitable part if exploitation is difficult M

0.II.a | 0.II.a | 1.III.a | 1.III.b

1.II.b Stimulate owners to renovate dwellings



Why?

- Low density and individually different dwellings
- Area-based approach is difficult due to low density

How?

- Provide subsidies M P S HO
- and/or
- Provide information on best practices M RS HO
- and/or
- Arrange collective action (municipal programmes) M HO E

1.III.c | 1.III.f

III. Sustainability

1.III.a

Ensure access to a form of sustainable mobility for all dwellings



Why?

- Bad access to public transport and distant amenities
- Concentration prevents transport

How?

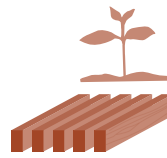
- Determine max. distance to public transport stops and make structure plans for the locations of hubs
- Public transport on demand
- Cover financial gaps



0.III.a | 1.II.a

1.III.e

Sustainable material targets for new construction



Why?

- Construction is a major polluter
- Regional ambition for circularity, but no concrete goals in regional policy

How?

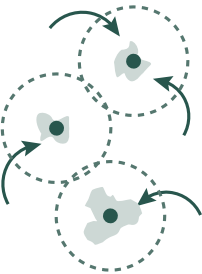
- Set target for sustainable material use (such as bio-based material)
- and
- Set targets for reusability of materials
- and
- Targets for modularity



1.II.d

1.III.b

Concentrate basic amenities and transport in villages



Why?

- Bad access to public transport and distant amenities
- Concentration prevents transport

How?

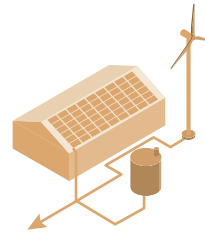
- Determine maximum distance to hubs
- Make structure plans for the locations of hubs
- Provide financial support for hubs



0.II.a | 1.II.a

1.III.f

Stimulate private and collective energy production and exchange



Why?

- Low density with large (roof) areas
- Agricultural function is an opportunity for bio-gas
- Area-based approach is difficult

How?

- Connect stakeholders
- and/or
- Provide subsidies
- and/or
- Relax permit procedures



1.II.b | 1.IV.b

1.III.c

Obligatory renovation



Why?

- High average gas use
- Majority of dwellings owner-occupied

How?

- Demand that dwellings are brought to a sufficient energy level upon sale or new rent contract
- or
- Set a target date after which taxes for bad-quality dwellings are introduced



1.II.b | 1.IV.g

1.III.d

Strict development requirements in flood-prone areas



Why?

- Realistic flood risk in several areas in the cluster
- Bad for acceptability if no construction is possible

How?

- Adaptation requirements in zoning plans
- and
- Adaptation requirements in construction permits



Limitation

IV. Moderation

1.IV.a Encourage splitting dwellings and plots



Why?

- Large living space per person (fig. 6.mod)
- Low density environment

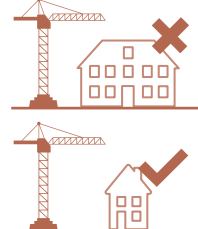
How?

- Relax permit procedures
- and/or
- Change zoning plans
- and
- Communicate possibility to split to residents



0.IV.a | 1.I.b | 1.I.b

1.IV.e Regulate size of new dwellings



Why?

- Overrepresentation of large dwellings
- Average household does not require a large dwelling

How?

- Agree on a maximum dwelling size for new construction
- and/or
- Refuse permits for large dwellings



1.I.b | 1.I.c

1.IV.b Encourage sharing living space



Why?

- Large average living space
- Using left-over spaces instead of new development for tourism industry

How?

- Grant permits for holiday rental in existing dwellings
- and/or
- Allow formal splitting
- and/or
- Allow extensions for shared living purposes



0.IV.a | 1.III.f

1.IV.f Regulate long-term vacancy



Why?

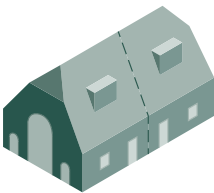
- Relatively high share of long-term vacancy
- Prevents others from using dwellings

How?

- Maintain a vacancy register
- and
- Forced rental for long-term vacancy
- and
- Fines for long-term vacancy and refusal to rent



1.IV.c Facilitate new living spaces in former agrarian buildings



Why?

- More efficient use of space
- Environmental quality can be used for different functions

How?

- Change of zoning plan to different functions
- and
- Financial stimulation of adding care functions



0.IV.a | 1.I.d

1.IV.g Stimulate flow of elderly to smaller dwellings



Why?

- Large living spaces
- Unattractive to move to a smaller dwelling

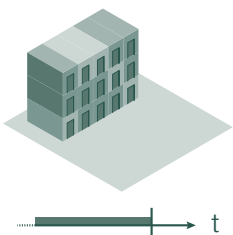
How?

- Ensure an attractive supply of elderly housing
- and/or
- Offer help from moving coaches
- and/or
- Give preference to elderly in new construction



1.I.d | 1.III.c

1.IV.d Temporary use of vacant plots



Why?

- Easier than permanent use
- Short term benefits for availability and sufficiency

How?

- Appoint space for temporary redevelopment
- and/or
- Provide temporary infrastructure
- and/or
- Connect stakeholders



1.V.b

V. Influence

1.V.a Encourage private / collective development



Why?

- Influence on living environment; avoid dependence on developers
- Lower density offers potential for experimentation

How?

- Lease land to collectives M LO
- Change of zoning plan to allow housing SP
- Dedicate space in vision documents SP

VI. Diversity

1.VI.a Maintain the distinct character of rural living



Why?

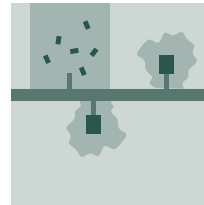
- Assure choice in living environment
- High environmental quality (fig 6.acc)

How?

- Commit to character in vision documents SP
- Restrictions for densification SP
- Spatial quality control SP

0.I.a

1.VI.b Provide space for different housing typologies (which fit the rural character)



Why?

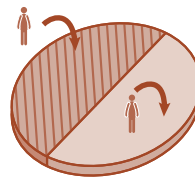
- Homogeneous housing supply
- Room for experimentation

How?

- Reserve space in plans SP
- Dwelling size limitations in zoning plans SP M

1.IV.d

1.VI.c Reserve space for current residents



Why?

- Scarce supply, but distinct wish to stay in familiar environment.
- Housing unaffordable to young adults

How?

- Give priority to local residents for new construction M D R
- Focus plans on affordable dwellings SP HA R

1.I.a

In the bottom left corner of the strategy cards, the relation to other patterns is referenced. Figure 7.20 below shows all these relations in one figure. These relations are not neutral, which is why the relations are displayed as a synergy, conflict or precondition for another pattern. If there is a relation with a non-cluster specific pattern, these patterns are added on the outside of the circle.

In this figure there is only one precondition, which is that there is a need for a sufficient supply of housing suitable for elderly (1.I.d) in order for elderly to be stimulated to move to a different dwelling (1.IV.g).

An example of a synergistic pattern is 1.IV.a, 'encourage splitting dwellings and plots', which can help to create housing which is affordable to young adults (1.I.b and 1.I.c). On the other hand, a conflict can emerge between the strategies of adding affordable housing (1.I.b) and circular, bio-based construction (1.III.e), which could either be expensive or limited by the availability of construction material.

Especially for conflicting patterns it is important to consider the effects on other justice values when applying them to a location. This issue is further elaborated on the next pages.



Figure 7.20: Relations between patterns; preconditions, potential synergies and potential conflicts for the cluster 1. Rural and Rich, by author.

Multiple needs (dis)satisfaction

In figure 7.20 the relations between strategy patterns has been visualised. That figure shows how the strategies themselves cooperate. However, strategy patterns do not give a full representation of the value they belong to.

Rather than just influence other strategies, each of the strategy patterns can potentially affect other applied values. How the strategies affect other applied values than the one they belong to is visualised in figure 7.21.

Before, the analogy with Max-Neef's human needs framework was drawn. Similar to the human-needs framework, one satisfier can potentially satisfy multiple needs (Cardoso et al., 2022). Likewise, satisfiers to one need, could dissatisfy another need. Multiple-needs satisfaction is evidence of a fruitful strategy. Dissatisfaction of other needs does not make a strategy useless, but it will require extra consideration in implementation in order to balance the negative effect on other domains.

In case there are conflicting satisfiers, a prioritarian justice approach can be applied to deal with this. Each cluster has specific problems, of which some are more pressing. When faced with a choice that causes conflicts, the strategy that targets the most pressing problem can be chosen. However, it is better to choose an alternative strategy with the same positive effect, and no or a reduced negative effect on other applied values.

A minor shortcoming of this visualisation is that some strategies are a potential dissatisfier of the applied value they belong to, because housing dimensions belonging to one applied value can be conflicting. An example of this is affordability and environmental quality, where affordable housing might not offer the best environmental quality.

Multiple-needs satisfaction

This matrix shows the importance of some patterns, which are not really negative for other justice values while also contributing to other values. Several of the moderation patterns have this trait. A pattern such as splitting housing (1.IV.a), can contribute to availability, because more dwellings are created, to sustainability, because limited construction material is needed, and to diversity, because smaller dwellings and apartments can be added to a monotonous supply.

These strategies do not require mitigation by other patterns and can be implemented without much

constraint. Of course there should be some qualitative check when these patterns are implemented, but this is inherent to the spatial planning process.

Mitigating needs dissatisfaction

Placing the different strategy patterns into the matrix reveals which patterns are a potential dissatisfier for other applied values than the one the strategy belongs to. These strategies can still be applied, but potentially measures need to be taken to mitigate negative effects on other values.

The first three potential needs dissatisfiers are 1.I.a-c. These three strategy patterns each propose to add dwellings. Adding dwellings could have a negative effect on sustainability. This is especially the case for new construction. Although there is strict regulation for the energy efficiency of buildings, the construction itself is a major contributor to emissions as well, through the use of materials like concrete (Zu Ermgassen et al., 2022). This also points to one mitigation measure, which is to obligate a minimum share of construction material to be circular (reused or bio-based), which is pattern 1.III.e. Alternatively, new dwelling construction can be contained by moderation patterns, such as splitting (1.IV.a) or sharing homes (1.IV.b), which can add dwellings without much material use.

Conversely, sustainability patterns can be a dissatisfier for availability. Flooding measures (I.III.d) and circular construction (III.e) can drive up construction costs, which might hinder new construction. Obligatory renovation (III.c) can be a problem for flow, as it might discourage people to move to a new dwelling if it is combined renovation work, costs and time.

Energy production and exchange (1.III.f) could affect spatial quality. These negative effect could be minimised by spatial quality control and requirements provided by spatial planners. Additionally, collaborative planning could contribute to acceptance and plan changes.

Reserving space for current residents (1.VI.c) could have a negative effect on the value of influence, because it is exclusionary to other potential future residents. A solution is to set a maximum to the share of dwellings that can be reserved.

	Availability I	Acceptability II	Sustainability III	Moderation IV	Influence V	Diversity VI
1.I.a				+	+	+
1.I.b		+	-			
1.I.c		+	-			+
1.I.d			-	+		+
1.II.a						
1.II.b			+			
1.III.a		+				
1.III.b		+				
1.III.c	-	+			-	
1.III.d	-					
1.III.e	-			+		
1.III.f		-			+	

	Availability I	Acceptability II	Sustainability III	Moderation IV	Influence V	Diversity VI
1.IV.a	+		+			+
1.IV.b	+		+			+
1.IV.c	+		+		+	+
1.IV.d	+					
1.IV.e			+			
1.IV.f	+	+				
1.IV.g	+					
1.V.a						+
1.VI.a		+				
1.VI.b					+	
1.VI.c		+			-	

Same applied value

+

 Additional needs satisfaction

-

 Additional need dissatisfaction

Figure 7.21: Matrix showing the relations between patterns and other applied values, which shows whether strategies satisfy multiple needs (applied values) or whether they have a negative effect on another need (applied values) the cluster 1. Rural and Rich, by author.

Rural and Rich strategy pattern elaboration

I. Availability

1.1.a Allow extra buildings on the property

» Applying a local policy in the whole region

This policy is already introduced in the municipality of Apeldoorn. Building additional dwellings on the same property is normally not allowed. In Apeldoorn an exception is made to make it easier to build a temporary home for family members on their own property. Target groups for this are elderly in need of informal care by family members and young adults who are facing a hard time on the housing market (Gemeente Apeldoorn, 2023b).

The conditions by the municipality of Apeldoorn are that the is a maximum size of 100 m², it can only stay for a maximum of 10 years and may only be used by close family members. Also for the placement of such a temporary structure, a permit must be granted (Gemeente Apeldoorn, 2023b). The same conditions could be applied in other municipalities in the region. Municipalities could also apply different conditions; for example a different time period or for other groups than family members. Additional stimulation of formal splitting of property is also possible, which is discussed under 1.IV.a.

1.1.b Add affordable housing

» Making regional policy place-based

The *Woondeal* (Regio Stedendriehoek et al., 2023) and the strategic *Uitvoeringsagenda* (Regio Stedendriehoek, 2023a) already stress the need to add affordable housing in the region. Around two thirds of new construction should be affordable. However, these documents are not specific on where this affordable housing should be located.

The analysis of the region and the descriptive statistics of the cluster show that the average dwelling value is very high in the cluster. Because of the under-representation of affordable housing in the cluster, it is important to make sure that affordable housing is not only added in other clusters.

The strategy pattern does not only refer to new construction. Also other ways in which dwellings are added (e.g. through transformation) are possible ways to address this strategy. Municipalities can support this by setting goals for adding a certain share of affordable housing in rural areas and providing subsidies when necessary.

1.1.c Add housing for young adults and young families

» Making regional policy place-based

The high average house values are unobtainable for young adults and young families. The *Uitvoeringsagenda* (Regio Stedendriehoek, 2023a) already mentions the need for housing for young adults who wish to remain in their childhood environment.

The strategy pattern is directed at ensuring that these categories of housing are added in this cluster. Addition of dwellings does not necessarily mean new construction, but can also entail other forms of creating new dwellings.

1.1.d Add housing for young adults and young families

» Making regional policy place-based

The analysis of the availability value showed that there is a higher demand for dwellings suitable for elderly than that there is supply. The need for housing suitable for elderly is also discussed in the *Uitvoeringsagenda* (Regio Stedendriehoek, 2023a), but it does not specify where.

Because the population is greying and elderly are expected to live independently for a longer time, strategic plans should ensure a sufficient supply of elderly housing, also in the familiar environment of people. Addition of dwellings does not necessarily mean new construction, but can also entail other forms of creating new dwellings.

II. Acceptability

1.II.a Ensure access to basic amenities

» Policy advice from literature

The analysis of the region showed that the majority of locations in the cluster have an insufficient amenities level.

Recent advice from three governmental advisory boards (RLI et al., 2023) pointed out that amenities are disappearing in rural areas and that the government is not sufficiently aware of the effects. The advice is given to ensure a basic access to amenities, for instance by setting a minimum norm for the accessibility of amenities.

1.II.b Stimulate owners to renovate dwellings

» Continuation of existing policy

This strategy is mainly focused on the indoor environmental quality and comfort. Policies for this strategy are already in place. The national government is already providing subsidies for insulation and sustainable installations, on top of fiscal benefits for solar panels (Rijksoverheid, n.d.).

Even in case the state would reduce these subsidiary initiatives, municipalities, the region or the provinces could continue this strategy. Municipalities could also organise collective action, where owners can join an initiative. For example, municipalities can bring residents in touch with companies that install heat pumps. This would be capacity building, by connecting residents to other stakeholders. This is not currently part of policy.

III. Sustainability

1.III.a Ensure access to a form of sustainable mobility for all dwellings

» Policy advice from literature

The analysis of the region showed that the majority of locations in the cluster do not have access to public transport.

Recent advice from three governmental advisory boards (RLI et al., 2023) pointed out that public transport access is decreasing in rural areas and that the government is not sufficiently aware of the importance this has for people's access to amenities and social life. The advice is given to ensure a basic access to amenities, for instance by setting a minimum norm for the accessibility of amenities.

Because bus stops cannot be placed everywhere in rural areas, there should attention to other forms of sustainable mobility as well, such as cycling and mobility on demand.

1.III.b Concentrate basic amenities and transport in villages

» Personal observation

Due to the density of rural regions it is not possible to provide amenities very close to dwellings. Smaller villages are often the nearest place with a slightly higher density, but especially in smaller villages amenities are under pressure (Milikowski, 2022).

While it is not possible to provide all types of amenities in villages, clustering some basic amenities and public transport in these villages can assure a wide coverage of accessible basic amenities in the region. By clustering these amenities in one place, there is less need for (long-distance) transport. The absence of public transport in these locations (6.sustainability; B.17) currently makes it nearly impossible to take a sustainable option to go to another part of the region.

These amenities might not provide a good business case, which is why municipalities, the province or the region might need to provide a subsidy. However, this is also for the sake of sufficiency (1.II.a).

1.III.c Obligatory renovation

» Best practice from another region

This type of policy is not yet applied in the housing domain in the Netherlands. However, it is already a policy for offices. The energy label for offices needs to be at least C; if this condition is not met, a building cannot legally be used as an office (RVO, 2018).

Apart from this policy for offices, a minimum energy label A for all buildings is pursued for 2030 (RVO, 2018). There are no consequences attached to this, but regional policy could use this national target as a justification for strict policy.

In Flanders, there is already a policy which obligates renovation of dwellings with a bad energetic quality (Vermeersch, 2021). It might be more difficult to apply this on a local scale, because buyers might opt for different municipalities instead. However, it could be applied in all municipalities in the region, and the Regio Stedendriehoek could advocate for this with the Province and State.

1.III.d Strict development requirements in flood prone areas

» Personal observation

Only a minor part of the Stedendriehoek region is endangered by the risk of floods, mostly in rural areas. Because the chances for flooding are relatively low and the water level is not likely to be very high in case of flooding (figure 6.22), a complete prohibition on building would be too extreme. In order to make building possible to sustain the amenities and infrastructure in these areas, construction could be allowed under strict conditions. Conditions such as placing installations on a higher level and creating building openings at a minimum height can be set for obtaining a permit. These conditions can vary depending on the flood risk.

1.III.e Sustainable material targets for new construction

» Sharpening of existing policy

The current average emissions of the construction sector are above the targets set for the industry and if this trend continues, the emission space for the construction sector is rapidly reached (Hemelaar et al., 2022; Zu Ermgassen et al., 2022).

The regional policy already addresses the need to build more with circular material, but the policy for this remains shallow and does not set any quantitative goals.

The Regio Stedendriehoek can therefore set these quantitative goals more explicitly. There is already national policy on how to measure the material footprint of buildings, the Milieuprestatie voor Gebouwen (MPG) (Rijksoverheid, 2021). The minimum standards set by the national government are still insufficient to address the deficit, shown by Hemelaar and colleagues (2022). However, municipalities in the Regio Stedendriehoek can require a better score on the familiar scale for construction projects to receive a permit.

1.III.f Stimulate private and collective energy production and exchange

» Best practice

The environment in the cluster gives several opportunities for larger scale energy production: space for windmills, large roofs and land area for solar panels, and livestock that could be used for biogas. Stimulating such energy production and exchange can help achieve sustainability goals and local production can help strengthen the local economy and community (Elzenga & Schwencke, 2015). In the meantime, the environmental conditions make the cluster less suitable for sustainable solutions such as heat networks. The regional policy favours city neighbourhoods for the first steps in the energy transition. It can be beneficial to simultaneously stimulate processes in rural areas.

A good example of this is the initiative Oxe Geeft Gas, which is a collective of farmers in Oxe, close to Deventer, which produces biogas from methane and supplies this gas to an industrial area in Deventer. This has been made possible with direct state investment from the municipality of Deventer and a subsidy from the province of Overijssel (CCS, 2021).

IV. Moderation

1.IV.a Encourage splitting dwellings and plots

» Sharpening of existing policy; advice from literature

The average living space per person is particularly high within the Rural and Rich (figure 6.25). This living space potentially could house many more households, which reduces the need for construction (Platform Woonopgave, n.d.; Xue, 2022). Equally, unused pieces of land on large plots could be used for new construction, without the need for greenfield development.

It is already possible to split dwellings, but it can be a long procedure. In order to encourage splitting, procedures should be simplified and owners could be guided in the process. A limitation is also the policy where no new buildings can be added unless it is compensated in another place (Boerderijmakelaar.nl; n.d.). Such local policies would need to be revised as well.

1.IV.b Encourage sharing living space

» Sharpening of existing policy; advice from literature

The average living space per person is particularly high within the Rural and Rich cluster (figure 6.25). This living space potentially could accommodate many more households, which reduces the need for construction (Platform Woonopgave, n.d.; Xue, 2022). A particular type of sharing which is interesting for the cluster is holiday rental. (Parts of) dwellings could be used for this purpose, which relieves pressure to build holiday parks in rural areas. Spatial planners can facilitate renovations for this purpose by granting permits which ensure this more efficient use of space.

There are already possibilities to share dwellings, but there are several fiscal regulations which often make it less attractive to do so. Partially this concerns national policy, but local governments and housing associations can also contribute by allowing sub-rental (Van Beek, 2021).

1.IV.c Facilitate new living spaces in former agrarian buildings

» Best practice

Due to scale-enlargement in the agrarian sector, different smaller agrarian buildings have lost their function. Instead of demolishing these buildings, the potential of their smaller scale and proximity to other buildings (which makes connection to infrastructure possible) can be utilised by transforming agrarian buildings to dwellings.

Spatial planners might need to adjust zoning plans in order to allow housing. If transformed dwellings are to be used for care functions, which is a best practice happening throughout the Netherlands (Federatie Landbouw en Zorg, n.d.), municipalities could also provide subsidy for this transformation, which then has a societal purpose.

1.IV.d Temporary use of vacant plots

» Best practice; personal observation.

The cluster is characterised by a high level of vacancy. This concerns dwelling in the first place, but in case plots as a whole are vacant, they could be temporarily used for other purposes such as temporary dwelling. Not all vacant plots are suitable for this purpose, so spatial planners can locate vacant plots that suit this need and connect owners to developers to see if there are possibilities for use.

It is dependent on the location whether the necessarily infrastructure is available. Municipalities could play an active role in stimulating temporary use of vacant plots by providing the basic infrastructure.

1.IV.e Regulate size of new dwellings

» Personal observation

In the cluster there is a very large average dwelling size (table 7.1) as well as a large average living space per person (figure 6.25). Several policies are proposed to reduce this space for the existing stock. On top of this there should be the aim to avoid excesses in the first place for new construction.

This policy might create some resentment. However, it is likely that a consensus can be found on what is considered really excessive (Robeyns, 2019). In order to avoid regional differences, a limitation on living space can be agreed upon on regional level.

This policy could be executed by refusing construction permits for new dwellings above this threshold. This policy should also be communicated, which can be done through the zoning plan or other policy documents.

1.IV.f Regulate long-term vacancy

» Best practice from another region; Sharpening of existing policy

The cluster exhibits a relatively high level of long-term dwelling vacancy, while there is a need for more housing. For the owners of vacant dwellings, there is not always incentive to use the dwelling or put it up for rent. One reason for this is that owners can wait for price increases in order to sell later (Hochstenbach, 2022).

This practice can be contested by sanctioning vacancy. The Dutch vacancy law can be applied by municipalities, but not all municipalities have to apply this law. If the law is put to use, owners of vacant buildings are obliged to notify the government. If a certain time has passed, the municipality can nominate a user to the owner, who must give this user a contract. If an owner does not comply, a fine can be given (Wever et al., 2020).

1.IV.g Stimulate flow of elderly to smaller dwellings

» Sharpening of existing policy; best practice

There are many large dwellings in the cluster which are occupied by small households (Regio Stedendriehoek, 2023a). The living space in these large dwellings could be used more efficiently if they were occupied by families. One target group that could be stimulated to move to a smaller dwelling is elderly, who do not generally have children living at home. By moving to a home that is suitable for an older age, elderly can also benefit. However, the supply of such dwellings is low.

The municipality of Brummen already has moving coaches, who help elderly find a suitable dwelling. This is a practice that can be extended to the region as a whole. Other initiatives from other municipalities can be adapted as well, such as giving moving allowances for moving to a smaller dwelling and giving elderly allocation priority to certain neighbourhoods (Moen, 2023).

V. Influence

1.V.a Encourage private / collective development

The dwellings in the cluster are mostly unique, consisting of old farms and more recent villas. This shows that there is already a culture of private development. This cluster can be promoted as a place where this is possible. This is particularly the case for collective and cooperative development.

Spatial planners can make it publicly known through plans that there is land available for collective or private development and change zoning plans accordingly. Municipalities can also help collectives to acquire the required land for collective development. Market prices can be an obstacle for collective housing groups. Land is commonly priced according to residual land value, which is based on the potential development profit. This is a disadvantage for groups that do not have the objective to make profit. If municipalities are land owners, they can for instance lease land to collective groups (Czischke et al., 2023).

VI. Diversity

1.VI.a Maintain the distinct character of rural living

» Personal observation

The rural and rich cluster is a very distinct type of living environment compared to the other clusters. The strategy as a whole should avoid changing the area into something it is not. Even though the cluster provides a lot of space, the openness could be cherished, and not be urbanised completely.

Spatial planners can take this into account in developing spatial plans and by performing spatial quality control when new plans are proposed.

1.VI.b Provide space for different housing typologies (which fit the rural character)

» Personal observation

The spatial analysis of diversity (figure 6.35) and the descriptive statistics (table 7.1) show that the predominant housing typology in the cluster is single-family homes. Although there are different dwelling typologies within this category, generally the supply consists of large detached dwellings.

Creating different dwelling typologies within the cluster assures choice in living environment as well as housing typology. The cluster can even accommodate completely new typologies, because it offers space for experimentation.

This strategy can be achieved by reserving space for different types of dwellings in development and zoning plans, setting requirements for permits, and indirectly by limiting the dwelling size, which brings diversity to the dwelling sizes. It should be avoided that developments interfere too much with the character of the clusters (as discussed in 0.VI.a and 1.VI.a).

1.VI.c Reserve space for current residents

» Sharpening of existing policy

The mutation rate of housing is rather low in the cluster, in combination with a limited supply (figure 6.17). This can make it difficult for local residents who wish to stay in their social environment to find a dwelling. Dedicating a share of available housing for such residents can contribute to maintaining the strong social cohesion in rural areas (figure 6.35).

It is already possible to assign up to 50% of new dwellings or social-rent dwellings to local residents who can prove they are attached to an area (source). Municipalities can determine the desirable share.

Illustrative case: Zwiep

The strategies presented on the previous pages for the cluster Rural and Rich are applicable to the cluster as a whole.

In order to show what the effects of such strategies are 'on the ground', the strategies are applied to one illustrative case for each cluster.

Location choice

The cluster 1. Rural and Rich is mostly characterised by injustices regarding the applied values of Sustainability and Moderation (both from the core value Limitation) and Diversity. Although there are also strategies for the cluster relating to the other applied values, it is of primary importance that the illustrative case shows how design solutions can respond to these three applied values.

The choice for the location is therefore based on overlaying the layers of these three applied values and checking which locations stand out on all three. After this act, only a few locations remain. Some of these locations are villa neighbourhoods near cities. Even though this is also typical for this cluster, preference is given to more rural locations to show a wider range than just urban places. This process led to the selection of Zwiep and surrounding area in the municipality of Lochem (see figure 7.22 and figure 7.23).

About Zwiep

Zwiep is a small village located southeast of the city of Lochem. The area is located in the southeast of the Stedendriehoek region (see figure 7.22).

The chosen region consists of two CBS buurten: the village 'Zwiep' and the surrounding rural area 'Verspreide huizen Nettelhorst, Langen en Zwiep'. This area is highlighted in figure 7.23. The area has quite well defined borders. On the west side of the area is the city of Lochem, separated by the river Berkel. On the north side, the area is bordered by the Twentekanaal and the railway, which are both a connection between Zutphen and the cities of Almelo, Hengelo and Enschede. The train station of Lochem is located on the north side of the canal.

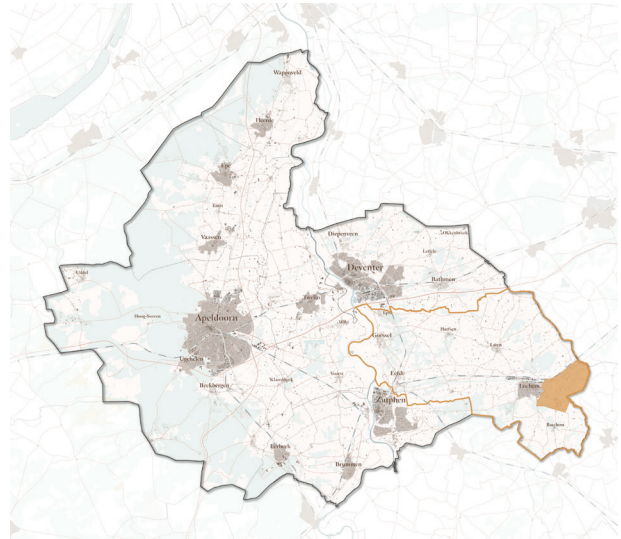


Figure 7.22: Location of Zwiep within the Regio Stedendriehoek. By author.

The eastern border of the area is partially formed by the Bolsbeek. This eastern border is also an administrative boundary, forming the municipal boundary of Lochem, as well as the Stedendriehoek.

The Lochemse Berg in the south of the region forms a natural border to the area. This Lochemse Berg is a recreational attraction; several camp grounds, holiday rental parks, hotels and B&B's can be found in the vicinity.

Within the area, the structure is provided by the canal, with alongside it a provincial road. A secondary road passes through Zwiep, around the Lochemse Berg, towards the villages of Barchem and Ruurlo. In east-west direction the river Berkel divides the area in two, with only three bridges connecting the two parts. In the northeast, a long straight road (Broekstraat) cuts through the agricultural landscape. The location of the school and former church along this road is known as Nettelhorst and is a focal point for the wider area.

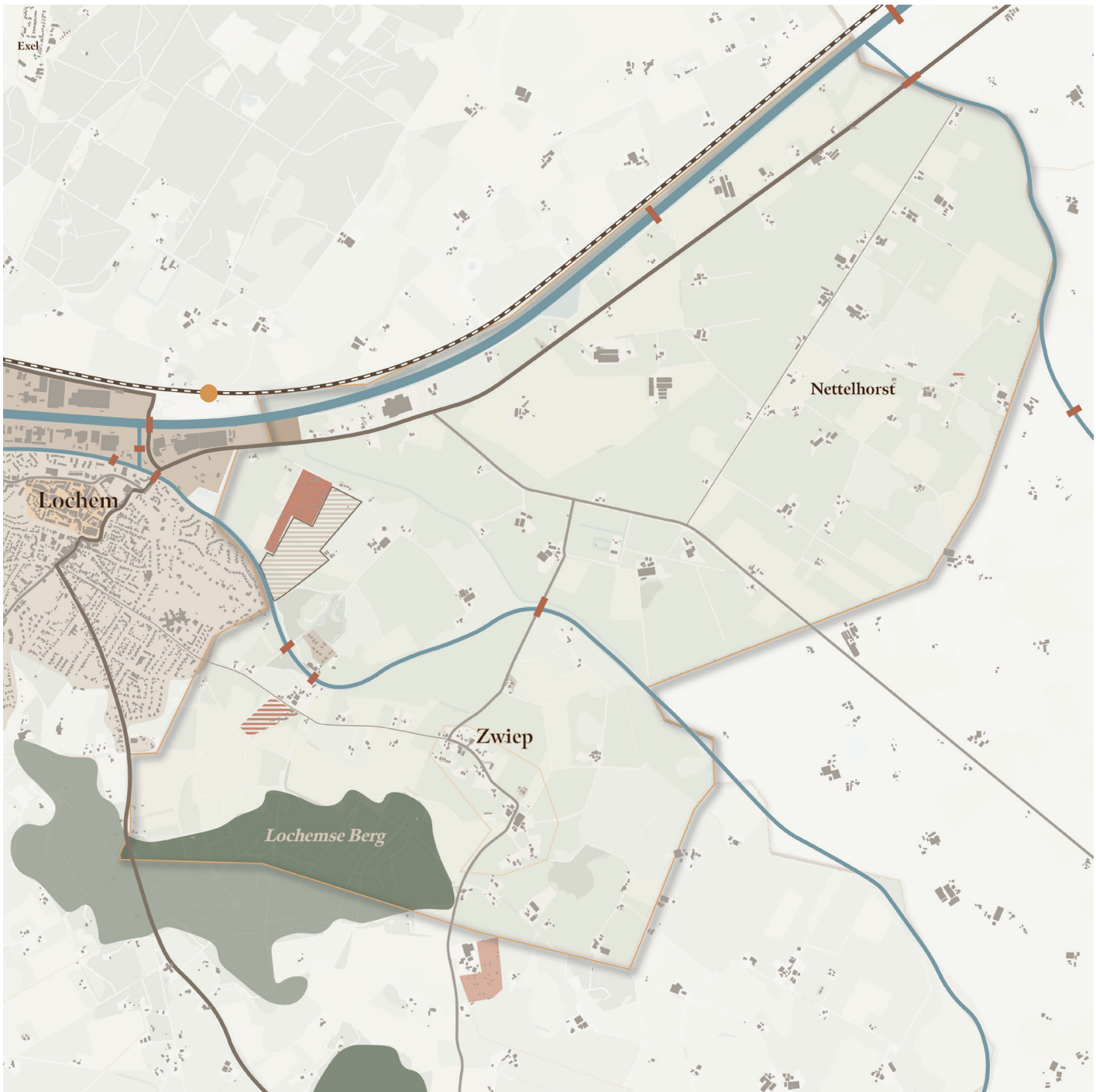
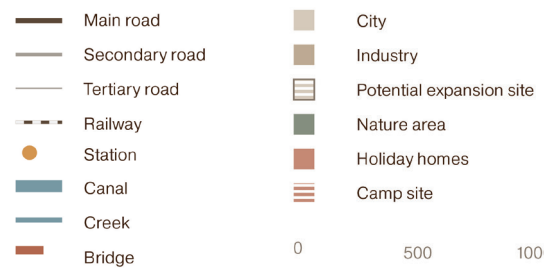


Figure 7.23: Map of Zwiep showing the main structure and the location of buildings



Zwiep statistics

The justice framework has already been used to analyse the region on all applied values. In table 7.2 the scores for the two administrative 'buurten' of Zwiep are shown. This concerns the same indicators as used in the regional analyses. A much more detailed analysis is impossible. For most indicators the buurt level is the most detailed indicator. For some indicators there are also statistics on squares of 100x100 m or 500x500 m., but these are not disclosed in case of low density, which is the case in this area.

These scores show mostly similarities between the two CBS buurten, with the main difference in the share of families. When looking at the descriptive statistics (table 7.3), this difference also becomes clear. In the village of Zwiep, there is a relatively large population of elderly and a large share of households without children. Apart from this population characteristic, the dwelling characteristics are quite similar.

On average the two buurten combined (Zwiep and surroundings in table 7.3) do prove to be a relative close approximation of the cluster as a whole.

Table 7.2: Scores for the indicators of the housing dimensions of the justice framework

	Zwiep	Verspreide huizen Nettelhorst, Langen & Zwiep
I. Availability		
Share of social housing	0 %	0 %
Ownership mutation rate	No data	No data
Demand > supply elderly housing	100 %	400 %
Dwelling density [dwelling/ha]	1	0,14
Key projects	No	No
II. Acceptability		
Energy poverty [% of households]	5,9 % (wijk)	5,9 % (wijk)
Living expense ratio social housing	n/a	n/a
Housing dimension Leefbaarometer	No data	7 (good)
Amenities dimension Leefbaarometer	No data	2 (very insufficient)
III. Sustainability		
Average gas use, 2020 [m ³]	1.670 m ³	2.030 m ³
Average electricity use, 2020 [kWh] - extra	4.110 kWh	4.450 kWh
Soil conditions	Sand	Sand, light and heavy loamy soil
Flood risk	None	None
Public transport access	'haltetaxi'	None
IV. Moderation		
Living space total m ² (2022)	8.530 m ²	148.500 m ²
Living space per person (2022)	122 m ²	101 m ²
Vacancy absolute, m ² (2022)	No data	1.330 m ²
Vacancy relative, 1 Jan 2022 (2022)	No data	3 %
Mixing	20-80%	20-80%
VI. Diversity		
Dutch population	97 %	96 %
Households with children	22 %	52 %
Social dimension Leefbaarometer	No data	7 (good)
Single-family homes [%]	79 %	81%

Table 7.3: Descriptive statistics of the two CBS 'buurten' of Zwiep (CBS, 2021)

	1. Rural and Rich cluster	Zwiep and surroundings	Zwiep	Dispersed homes Zwiep
<i>Inhabitants [n]</i>	62.170	550	75	475
<i>0-15 [%]</i>	14,1 %	15,3 %	17 %	15 %
<i>15-25 [%]</i>	12,3 %	13,5 %	4 %	15 %
<i>25-45 [%]</i>	17,3 %	14,4 %	17 %	14 %
<i>45-65 [%]</i>	33,3 %	33,2 %	22 %	35 %
<i>65+ [%]</i>	22,5 %	22,7 %	40 %	20 %
<i>Western migrants [%]</i>	5,6 %	3,86 %	3 %	4 %
<i>Non-Western migrants [%]</i>	2,3 %	0 %	0 %	0 %
<i>Dwellings [n]</i>	23.848	211	33	178
<i>WOZ value [x 1.000]</i>	€ 451,9	€ 487,4	€ 452	€ 494
<i>Owner-occupied [%]</i>	80,7 %	75,5 %	73 %	76 %
<i>Rental [%]</i>	19,1 %	24,5 %	27 %	24 %
<i>Rental owned by housing association [%]</i>	3,6 %	0 %	0	0
<i>Rental owned by other parties [%]</i>	15,5 %	24,5 %	27 %	24 %
<i>Single-family homes [%]</i>	87,9 %	80,7 %	79 %	81 %
<i>Apartments [%]</i>	11,9 %	19,3 %	21 %	19 %
<i>Households [n]</i>	24.145	210	40	170
<i>Household size [n]</i>	2,57	2,6	1,9	2,8
<i>Single households [%]</i>	24,4 %	22,7 %	30 %	49 %
<i>Households without children [%]</i>	38,6 %	32,0 %	49 %	28 %
<i>Households with children [%]</i>	37,1 %	46,3 %	22 %	52 %
<i>Land area [ha]</i>	68.244	1.301	33	1268
<i>Population density [inh/km²]</i>	91	42,3	227,3	37,5

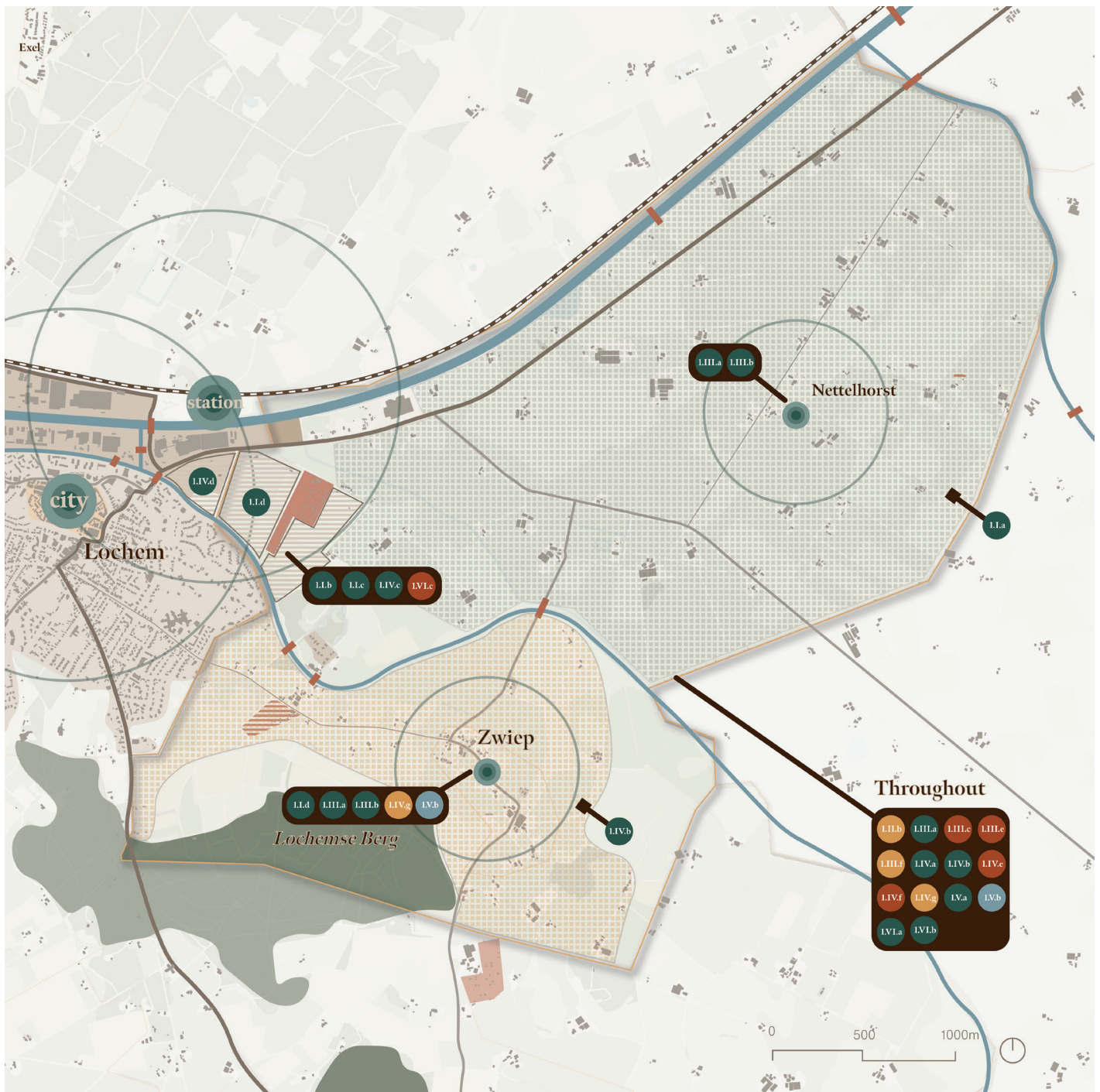


Figure 7.24: Map of Zwiep showing the strategic plan for Zwiep, with some interventions on regional scale

The map above show a possible strategic intervention for the illustrative case of Zwiep.

This map shows how some of the strategy patterns can have a different spatial scope. Some patterns are applicable to a specific location, some are applicable to a larger sub-region, and others are relevant throughout the illustrative case area as a whole.

The different spatial conditions within the illustrative case lead to different strategic responses. The part of the area which is close to the city of Lochem is

influenced more by this city, with pressure to develop agricultural plots, as well as opportunities because of this possible development and its proximity to amenities and transport.

Description of the strategic map

Place-specific patterns

In the strategic map we can see a circle around two focal points in the area. These areas with their central location and slightly higher density can accommodate several specific patterns. Because these two places already have a more central function, they can accommodate patterns 1.III.a and 1.III.b, which advocate access to amenities and public transport. The central function of these areas can be enhanced.

In the little village of Zwiep there is a particularly high share of elderly. For this reason, the two patterns which focus on housing of elderly are applied here in combination: adding housing suitable for elderly (1.IV.d) and stimulating elderly to move to a smaller dwelling (1.IV.f)

In the north-west corner of the region there are three sites indicated. The site on the right, east of the holiday rental park, has been appointed by the municipal council as future building site (Gemeente Lochem, 2022). This area has therefore also been included in this strategic plan. Because the plans for this area are in a very early stage, there is still the possibility to influence the plans for this location in a way that is beneficial for achieving the strategies for this cluster.

The area to the west of the recreation park has not yet been dedicated as a building site, but is viewed as a possible building site for after 2030 (Gemeente Lochem, 2022). Connecting the strategies to such existing plans makes implementation theoretically more feasible.

The very north-western tip of the area is just not part of the official CBS neighbourhood anymore, but does provide a good example for the pattern 1.IV.d of using vacant plots for temporary buildings.

Region-specific patterns

There are two regions indicated on this map. The first is a zone to promote sharing living space (1.IV.b) in the zone around the Lochemse Berg and close to the river Berkel, specifically focused on tourism. The zone north of the Berkel is more focused on agriculture than on tourism. In this agrarian setting, there can be more focus on promoting building (temporary) dwellings on farmyards (1.I.a).

Patterns throughout

There are also several patterns which can be applied in the whole region, and where there is no particular location where these patterns do not apply. This

concerns patterns such as requiring a certain share of circular material (1.III.e) and regulating the size of new dwellings (1.IV.e).

Although many patterns appear here, not all patterns of the cluster strategy are applied to this illustrative case. Because there is no particular flood risk in this location, pattern 1.III.d is not applied.

Apart from this, there are no existing building plans for the Zwiep area (Gemeente Lochem, 2022). The patterns which are focused on adding dwellings are therefore not applicable to the whole area. Instead, there is a focus on adding dwellings through splitting and sharing. If new dwellings can be created through splitting plots anywhere in the area, these patterns could be applied nonetheless.

Creating conditions

As discussed previously, spatial planners have a limited amount of power. In spatial strategies, the main objective of spatial planners is to influence market development with the steering instruments at their disposal. The strategy patterns provide the conditions for change, but especially in the Rural and Rich cluster, we are dealing with an environment where dwellings and land are in private possession. The strategies can be implemented, but the execution of several strategies is dependent on the cooperation of land and house owners.

In the next pages, the three locations Nettelhorst, Zwiep and Lochem-Oost are discussed in more detail. In these locations, potential changes in the built environment are visualised. Strategy patterns are applied in places where they make sense to implement - a pattern such as stimulating renovation (1.II.b) is applied when the energy label is low. Whether this pattern is executed in this way ultimately depends on the actions of residents and market parties. The zoomed-in interventions illustrate an ideal scenario, where multiple strategies are implemented that help improve the scores on the different applied values in the justice framework, and ultimately make the region more just.



Figure 7.25: Map of Nettelhorst showing possible and desirable strategic interventions, by author

Nettelhorst

The density in the Nettelhorst region is clearly low. The area is dominated by agrarian land use. A school is located in the centre of this rural area and is a focal point in the area as the only public amenity. This central function can be expanded by making this location a public transport stop for a shuttle bus and integrating other amenities, such as a parcel pickup point in the school building.

The nearby farms could potentially provide energy for the school and dwellings by producing bio-gas

from cow manure, something which is happening elsewhere in the region in Oxe.

Near the school a farm building offers the potential for a second dwelling on the property, for which the plot would need to be split.

Other possible interventions include stimulating renovation (for a dwelling that currently has energy label F), encouraging the sharing living space, and building temporary dwellings on the property.



1.II.b

Subsidies encouraged residents to apply new insulation and get PV panels, bringing the dwelling from label D to A

Administrative splitting of a dwelling of 419 m² into two

1.IV.a

The volume of a derelict shed has been transformed to a temporary dwelling. The son of the household now lives in this dwelling, until he can find an affordable home elsewhere

1.I.a

1.I.c

1.IV.a

Strengthening the central position of the school by adding basic amenities and a bus stop

1.III.a

1.III.b

Like in nearby Oxe, bio-gas is produced from cow manure, which supplies the school and dwellings in the area with a sustainable heat source

1.III.f

Figure 7.26: Isometric of possible and desirable strategic interventions in Nettelhorst, by author



Figure 7.27: Current situation (Google maps, 2023)



Figure 7.28: Application of strategy patterns, by author

The school is already the focal point of the region, but its importance has only grown. The spatial planning department of the municipality recognised the strategic location and large public that the school attracts. The municipality decided to transform the storage space of the school to a neighbourhood living room with some basic amenities: residents of the area cannot only meet with each other, they can also collect their packages, exchange books and visit a walk in hour of a general practitioner in the building. Several parents can now bring their children to school by bike and directly take the rush-hour bus to the city of Lochem to go to work.

Contributions to justice

I. Availability	x
II. Acceptability	Increased environmental quality
III. Sustainability	Less (motorised) transport needed
IV. Moderation	x
V. Influence	x
VI. Diversity	Meeting spaces which are beneficial to social cohesion



Figure 7.29: Current situation (Google maps, 2023)



Figure 7.30: Application of strategy patterns, by author

One of the teachers of the school just went through a divorce and could not find a dwelling. One of the elderly neighbours of the school was living alone in a large dwelling of 150 m². Because several restrictions on home-sharing were recently relaxed, the neighbour can now rent a part of the dwelling to the teacher. Not only does the teacher have an accommodation, both the teacher and the neighbour enjoy each other's company and take care of each other.

Contributions to justice

I. Availability	One less household in need of a (new) dwelling
II. Acceptability	x
III. Sustainability	Dwelling is heated for 2 instead of 1
IV. Moderation	Excessive living space used for urgent unmet needs
V. Influence	x
VI. Diversity	x



Figure 7.31: Current situation (Google maps, 2023)



Figure 7.32: Application of strategy patterns, by author

The son of the household really wants to live together with his girlfriend somewhere close to his friends and family. However, finding a house in the Nettelhorst area is not an easy feat. Because he wants to have some privacy and not live together inside his parents' house with his parents, the couple is glad that the option exists to place a temporary dwelling on the property. The condition set by the municipality is that it should be removed in fifteen years, but by then they will sure have found a place of their own. But for now, they don't have to mingle on a crazy housing market.

Contributions to justice

I. Availability	One less household in need of a (new) dwelling
II. Acceptability	x
III. Sustainability	x
IV. Moderation	Use of unused land
V. Influence	Self-initiated development
VI. Diversity	Possibility to stay withing social environment



Figure 7.33: Current situation (Google maps, 2023)



Figure 7.34: Application of strategy patterns, by author

The municipality of Lochem had started a campaign to motivate home owners to renovate their dwelling. Due to the clear information provided by the municipality of Lochem on the possibilities for national subsidies for solar panels, they installed a fair amount of solar panels on the roof of the stable. The municipality also advertised the subsidy they give on eco-friendly insulation in the campaign, which made the owners of this dwelling on the Broekstraat decided to insulate their roof as well. With these changes, the energy label of their dwelling went from D to A!

Contributions to justice

I. Availability	x
II. Acceptability	Improved indoor climate; lower energy bill
III. Sustainability	Better energetic quality
IV. Moderation	x
V. Influence	x
VI. Diversity	x

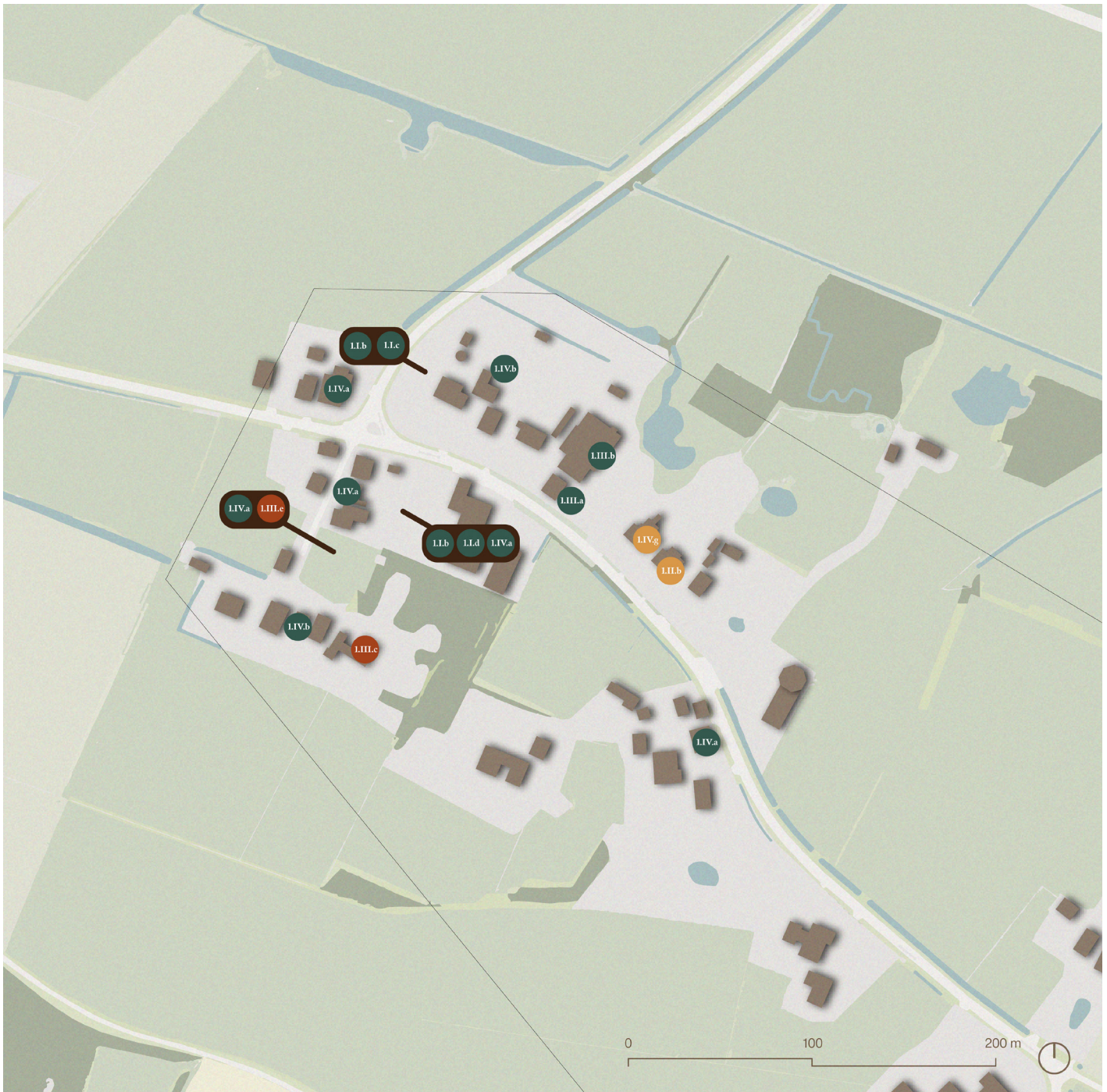


Figure 7.35: Map of the village of Zwiep showing possible and desirable strategic interventions, by author

Zwiep

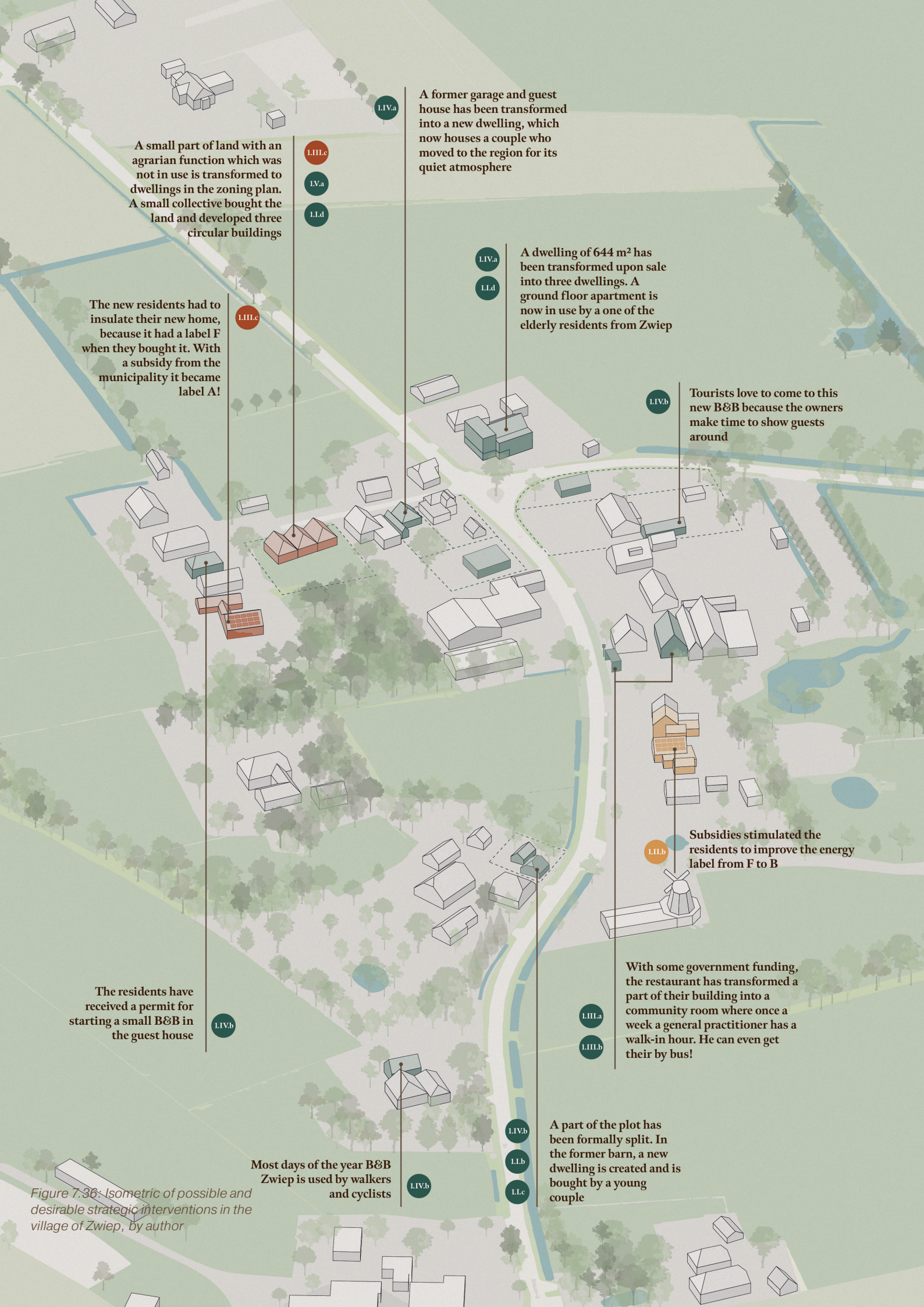
In Zwiep there are many opportunities for implementing the strategies for the cluster. Several of these options are visualised in the map and isometric drawing.

Like in the rest of the cluster, Zwiep is characterised by a large living space per person, which is unjust from the perspective of moderation. Different moderation strategies can be applied, which can create affordable dwellings for young adults (1.II.b, 1.II.c) and dwellings which are suitable for elderly (1.II.d). The group of elderly is over-represented, but there are not many single-storey dwellings where these residents can

move to. Figures 7.38 and 7.40 show two solutions for this issue.

Apart from this the justice profile of Zwiep could be improved through intervention which ensure access to amenities (1.III.a and 1.III.b), which are planned around the restaurant. Also there are several large dwellings which could benefit from renovation through patterns 1.II.b and 1.III.c.

The particular location of Zwiep between the river Berkel and Lochemse Berg make it a suitable location for using left-over spaces in buildings for the exploitation of Bed & Breakfasts or other forms of overnight stay (1.IV.b).



A small part of land with an agrarian function which was not in use is transformed to dwellings in the zoning plan. A small collective bought the land and developed three circular buildings

A former garage and guest house has been transformed into a new dwelling, which now houses a couple who moved to the region for its quiet atmosphere

The new residents had to insulate their new home, because it had a label F when they bought it. With a subsidy from the municipality it became label A!

A dwelling of 644 m² has been transformed upon sale into three dwellings. A ground floor apartment is now in use by one of the elderly residents from Zwiep

Tourists love to come to this new B&B because the owners make time to show guests around

Subsidies stimulated the residents to improve the energy label from F to B

With some government funding, the restaurant has transformed a part of their building into a community room where once a week a general practitioner has a walk-in hour. He can even get their by bus!

A part of the plot has been formally split. In the former barn, a new dwelling is created and is bought by a young couple

Most days of the year B&B Zwiep is used by walkers and cyclists

The residents have received a permit for starting a small B&B in the guest house

Figure 7.36: Isometric of possible and desirable strategic interventions in the village of Zwiep, by author



Figure 7.37: Current situation (Google maps, 2023)



Figure 7.38: Application of strategy patterns, by author

Like many of the residents of the close-knit community of Zwiep, the residents of Zwiepseweg 154 were ageing. Although they are still fit, they wanted to be prepared for the moment they could not walk the stairs in their two-storey home anymore. They really wanted to stay in Zwiep, but there are barely any dwellings suitable for old age, so they decided to take matters into their own hands. The municipality allowed them to split the large plot of their dwelling into two, which enabled them to build an age-proof dwelling in their former garden from the profits of the sale of their house. They saw in the municipal environmental vision that the municipality wanted to revive the bus service to Zwiep, so the amenities in Lochem will stay accessible for a long time.

Contributions to justice

I. Availability	One extra dwelling added; more supply of elderly dwellings
II. Acceptability	The new dwelling fits the personal housing needs better
III. Sustainability	New construction is partially from bio-based material
IV. Moderation	More efficient land use
V. Influence	Self-initiated development
VI. Diversity	Introduction of elderly dwelling



Figure 7.39: Current situation (Google maps, 2023)



Figure 7.40: Application of strategy patterns, by author

Although the widow living in the dwelling on the left has always enjoyed living in Zwiep, the house just feels too big and empty now that she is living alone. When the moving coach of the municipality pointed out the new construction project in Lochem-Oost to her, she was immediately sold. Because she lived in Zwiep for more than 10 years, she could even get priority on buying an apartment in an urban villa.

The residents in the dwelling on the right still live with pleasure in Zwiep. And their comfort is even greater now that they renovated their dwelling. Isolating all the walls of the dwellings was quite expensive, but luckily they were eligible for a subsidy. Their gas use has gone down drastically after this. Perhaps they can even go all-electric in the near future?

Contributions to justice

I. Availability	x
II. Acceptability	Improved indoor climate; lower energy bills
III. Sustainability	Less energy use
IV. Moderation	Better match of household size and living space
V. Influence	x
VI. Diversity	x



Figure 7.41: Current situation (Google maps, 2023)



Figure 7.42: Application of strategy patterns, by author

Quite a lot has changed around the house of Martin and Annet. The biggest change is that they have new neighbours: Martin and Annet sold a part of their property and a new dwelling has been built there. Annet had the idea to sell this part of their property for a long time already, but this used to be difficult – at least, up till recently. A couple of years ago, the municipality became more accommodating of splitting plots because of the scarcity of building land and dwellings. A great opportunity for Martin and Annet. Because they profited on the land sale, they both decided to work one day a week less and instead spend more time on their passion: giving tours in the Achterhoek nature and preparing locally sourced food for guests of the Bed & Breakfast in their garden.

Contributions to justice

I. Availability	One extra dwelling and one extra holiday home
II. Acceptability	x
III. Sustainability	New construction is partially from bio-based material
IV. Moderation	Vacant land gets used; more structural use of existing guest house
V. Influence	Self-developed house
VI. Diversity	Smaller dwelling (but not much different from the existing stock)

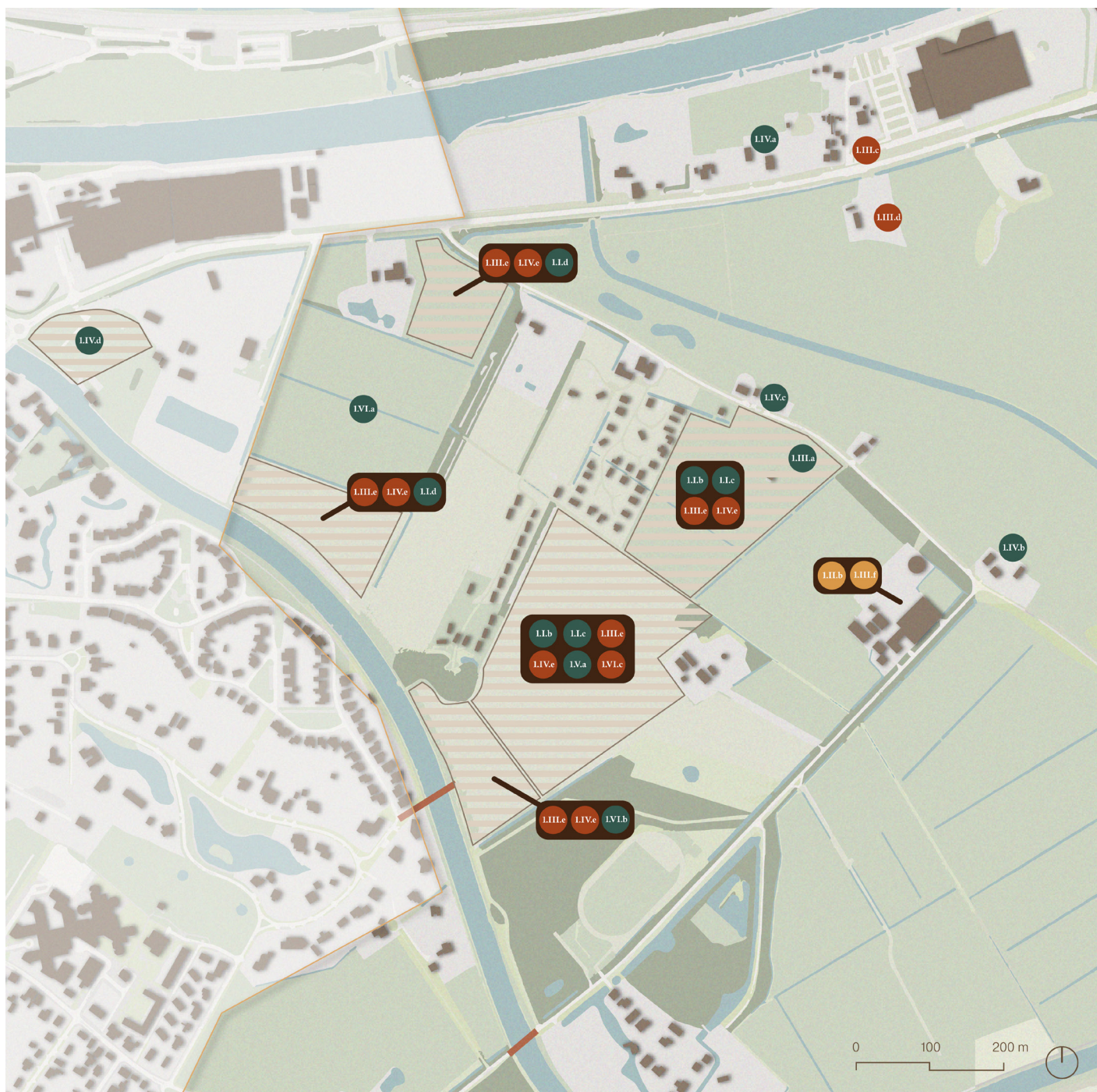


Figure 7.43: Map of the Lochem-Oost expansion site, showing possible and desirable strategic interventions, by author

Lochem Oost

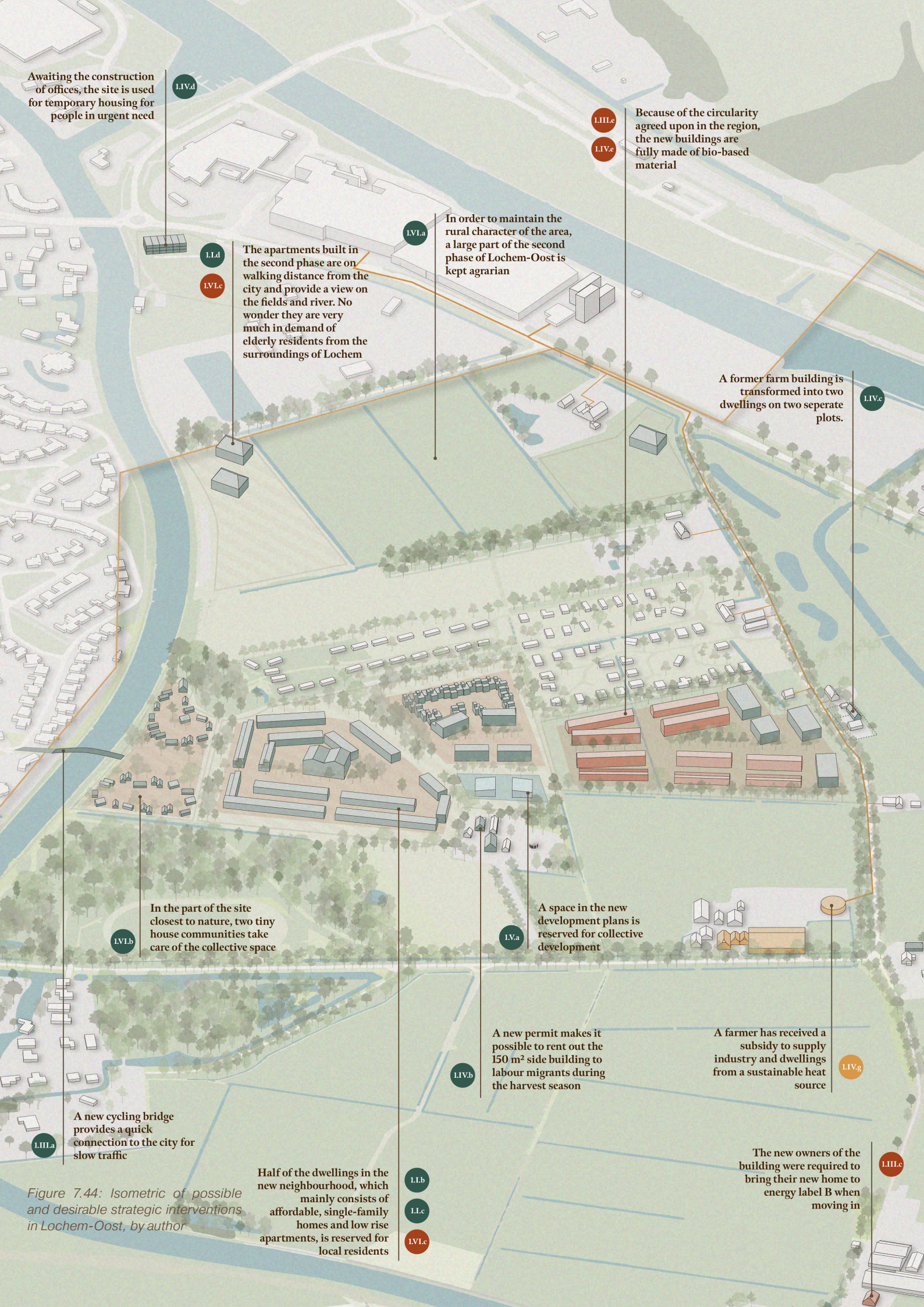
The municipality of Lochem has declared the site of Lochem Oost a future building site (gemeente Lochem, 2022). This concerns the plots indicated with the numbers 1, 2 and 3.

In the map we can see that patterns 1.III.e (sustainable material targets) and 1.IV.e (size regulation) are applicable to all new construction sites. Apart from this, these places provide space for affordable housing and housing for young adults and young families, as well as some more experimental dwelling options, with collective development (1.V.a) and different housing typologies (1.VI.b). Figure 7.*RIGHT* shows a possible configuration, based on the contours from the existing

plan. The dedicated building site could benefit from a public transport connection in the north, which can also help to make public transport to the village of Zwiep more feasible. The site to the west of the holiday rental park has a shorter walking connection to the centre and to the station, which makes this a more suitable location for elderly (1.I.d). In order to preserve the rural character, not this whole site is dedicated to housing (1.VI.a).

Awaiting construction of offices, the site in the north-west can be used temporarily for housing (1.IV.d).

In the area surrounding these sites, several other strategies could be applied as well, which have been discussed in the previous examples.



Awaiting the construction of offices, the site is used for temporary housing for people in urgent need

1.IV.a

1.III.e

1.IV.e

Because of the circularity agreed upon in the region, the new buildings are fully made of bio-based material

1.VI.a

1.II.d

1.VI.c

The apartments built in the second phase are on walking distance from the city and provide a view on the fields and river. No wonder they are very much in demand of elderly residents from the surroundings of Lochem

In order to maintain the rural character of the area, a large part of the second phase of Lochem-Oost is kept agrarian

A former farm building is transformed into two dwellings on two separate plots.

1.IV.c

1.VI.b

In the part of the site closest to nature, two tiny house communities take care of the collective space

1.V.a

A space in the new development plans is reserved for collective development

1.IV.b

A new permit makes it possible to rent out the 150 m² side building to labour migrants during the harvest season

A farmer has received a subsidy to supply industry and dwellings from a sustainable heat source

1.IV.g

1.III.a

A new cycling bridge provides a quick connection to the city for slow traffic

Figure 7.44: Isometric of possible and desirable strategic interventions in Lochem-Oost, by author

Half of the dwellings in the new neighbourhood, which mainly consists of affordable, single-family homes and low rise apartments, is reserved for local residents

1.II.b

1.II.c

1.VI.c

1.III.c

The new owners of the building were required to bring their new home to energy label B when moving in



Figure 7.45: Current situation (Google maps, 2023)



Figure 7.46: Application of strategy patterns, by author

The new neighbourhood Lochem-Oost really is a transition between the city and the rural surrounding. The lush collective and public spaces in the neighbourhood create a smooth transition to the fields and the river. Because of the circularity goals of the Regio Stedendriehoek, all dwellings in the neighbourhood are constructed from at least 80% bio-based material, which suits the location in between the trees very well.

The neighbourhood does not really have tall buildings, but it is still quite dense, because dwellings and gardens are a bit smaller than in the rest of Lochem. The neighbourhood is bustling with energy from young adults and young families from Lochem, Zwiep and surroundings, who are finally able to obtain an affordable dwelling.

Contributions to justice

I. Availability	Many new dwellings
II. Acceptability	High spatial quality, but some distance to amenities; affordable
III. Sustainability	New construction from bio-based material
IV. Moderation	Dense development; dwellings with a maximum size
V. Influence	Participation for new plans
VI. Diversity	Part of the dwellings reserved for local residents



Figure 7.47: Current situation (Google maps, 2023)



Figure 7.48: Application of strategy patterns, by author

If you ask the residents, the group of tiny houses along the Berkel in the new Lochem-Oost neighbourhood are a great addition to the housing supply of Lochem. There really was not anything like this around. The residents share some common facilities, but all of them have their own space. They enjoy living with like-minded individuals who all wish to live in harmony with the surrounding rural area and nature. The location has the advantages of the open landscape, but with the new cycling bridge, you can get into Lochem in a heartbeat.

Contributions to justice

I. Availability	Addition of dwellings
II. Acceptability	Affordable dwellings
III. Sustainability	Small dwellings that do not require much energy
IV. Moderation	Small living space
V. Influence	Self-developed housing
VI. Diversity	Different types of dwelling than currently available



Figure 7.49: Current situation (Google maps, 2023)



Figure 7.50: Application of strategy patterns, by author

Although Lochem has been discovered by new residents from the Randstad, the population of the municipality is still ageing. In order to assure enough suitable dwellings for the ageing population, the second development stage of Lochem-Oost included two urban villa's for elderly. The location is at walking distance from the centre, but provides a peaceful environment: the one-level apartments each have a large terrace from which the residents have a great view on the fields behind. This space has intentionally been left agrarian by the planners of the municipality, in order to preserve the character of this area east of the river. The new dwellings are in demand: within a week, the apartments were sold, mostly to residents from Lochem and Zwiep, who enjoy the familiar view.

Contributions to justice

I. Availability	Better balance in the supply and demand of elderly housing
II. Acceptability	Housing that suits the wishes of elderly residents
III. Sustainability	New construction partially bio-based
IV. Moderation	Limited dwelling size; helps flow of elderly residents
V. Influence	x
VI. Diversity	Rural character is maintained through open vision lines

Impression of the Rural and Rich cluster

The focus of the justice framework is on the housing domain. However, housing remains to be a subordinate function in the Rural and Rich cluster. Figure 7.51 below gives an impression of the Rural and Rich cluster where the relations of housing to multiple domains is integrated. This concerns several assumptions for other domains.

Even though dwellings are fitted with solar panels whenever possible, there is still an additional need for energy. The open space in the cluster is therefore likely used for energy production, but in a way which does not disturb spatial quality too much. This is for instance done by placing solar fields further away from roads and dwellings.



Figure 7.51 : An integral vision for justice in the Rural and Rich cluster, by author

Requirements to use bio-based material for housing also have a direct impact on the landscape. The cultivation of bio-based building materials such as flax offers new economic opportunities for farmers and businesses in the area. This aligns with the objectives to enhance bio-based material production and use in the Stedendriehoek region (Boeren voor biobased bouwen, n.d.). A less intensive form of livestock agriculture can remain to exist and is combined with more care for natural systems and water management, which in the meantime improves biodiversity.

The care for nature and biodiversity also becomes apparent at the sides of the roads and at the edges of agricultural fields. Not only does this make

the cluster more ecologically diverse, it also improves spatial quality.

The roads which these ecological sides adjoin are still used by (electric) cars, but also made to be more inviting for cyclists and are used incidentally by small-scale public transport. This inviting landscape will continue to be attractive for tourism.



4. Struggling Neighbourhoods strategy patterns

The patterns for the cluster '4. Struggling Neighbourhoods' are outlined on the right and on the following pages (figure 7.52). These patterns represent the strategies which can be taken on a regional level to address the injustices in all areas which are part of the cluster. In the subsequent step, the effects of these strategies on a local level are explored for an illustrative location in the cluster.

The patterns are structured in the order of the different instruments: shaping, regulating, stimulating and capacity building (see figure 7.16). There is no further hierarchy in the patterns; clusters explicitly require a combination of strategies and different strategies should be prioritised in different locations.

The strategies mostly consist of shaping instruments. These strategies are about 'changing the rules of the game' (Heurkens et al., 2015) and relate for instance to establishing policy goals and creating strategic plans. Strategies that have this colour require a specific change in policy goals. They are therefore classified as a shaping policy, but the instruments listed under 'how?' often contain regulating and stimulating instruments as well. The policy actions of the patterns listed as regulating or stimulating are explicitly focused on regulatory and stimulating measures respectively.

Figure 7.52, on the following four pages: strategy patterns for the cluster 4. Struggling Neighbourhoods, by author.

I. Availability

4.I.a Add dwellings for medium income groups



Why?

- Large share of social housing
- Create some diversity in income groups



How?

- Incorporate affordability goals in strategic plans

SP M RS

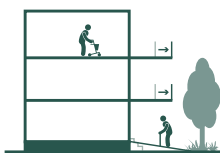
and/or

- Request housing associations to develop medium-rent dwellings

SP HA

0.I.a | 4.II.b

4.I.b Adapt apartments to make them suitable for elderly



Why?

- Many apartments with decent amenities could expand the regional supply

How?

- Set goals in policy

SP HA D

and

- Subsidies to help dwelling associations and other landlords make adaptations

M HA

4.IV.b

4.I.c Assist starters in buying a dwelling



Why?

- Relatively affordable dwellings
- Frequent sales by housing associations

How?

- Offer formal social rent dwellings to starters first

HA SP

and/or

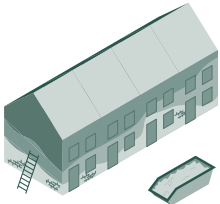
- Provide a buy-back guarantee

M HA

4.II.c

II. Acceptability

4.II.a Plan collective renovation



Why?

- Low housing quality
- Large dwelling share owned by housing associations

How?

- Renovate the exterior of blocks
- and
- Change installations
- and/or
- Provide subsidies



4.III.a | 4.IV.a | 4.V.b

4.II.e Self-occupancy obligation



Why?

- Prevent affordable dwellings to be turned into unaffordable rental dwellings

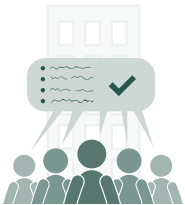
How?

- Adopt self-occupancy law
- and
- Dedicate neighbourhoods where the law applies



4.I.c | 4.II.c

4.II.b Encourage cooperative housing



Why?

- Could provide affordable housing for a longer period

How?

- Give preference of sale of plots to cooperatives
- and/or
- Connect stakeholders
- and/or
- Dedicate space for cooperatives in spatial plans



4.I.a | 4.V.a

4.II.f Stimulate and support owners to renovate dwellings



Why?

- Population with less financial capacity to do investments in dwellings

How?

- Provide subsidies
- and/or
- Provide information on best practices
- and/or
- Arrange collective action (municipal programmes)



4.II.a

4.II.c Encourage sharing living space



Why?

- Currently discouraged
- Could decrease costs
- Could improve well-being

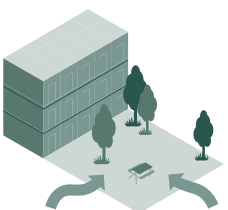
How?

- Make agreements with housing associations to allow sharing in social housing
- and/or
- Include shared dwellings as a possibility for new construction



4.II.e | 4.V.a

4.II.d Ensure access to public and collective space of sufficient quality



Why?

- Suboptimal environmental quality
- Smaller dwellings, of which many apartments with small private space
- Provide affordable meeting space

How?

- Create affordable meeting space in buildings
- and/or
- Create attractive public space
- and/or
- Prioritise improving public space in deprived neighbourhoods



4.V.c

Limitation

III. Sustainability

4.III.a

Use new construction for making the existing stock more sustainable



Why?

- Create scale for larger investments
- Sustainable solutions already required for new construction

How?

- Require developers to explore the possibility for heat networks

and/or

- Climate adaptation in public & collective space

and/or

- Plan dwellings near existing buildings

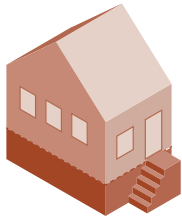
SP A

SP D

4.II.a

4.III.b

Development requirements in flood-prone areas



Why?

- Realistic flood risk in several areas in the cluster
- Bad for acceptability if no construction is possible

How?

- Adaptation requirements in zoning plans

and

- Adaptation requirements in construction permits

SP P WB

SP D

IV. Moderation

4.IV.a

Prevent vacancy in restructuring



Why?

- Several neighbourhoods have restructuring plans, including demolition

How?

- Maintain a vacancy register

and

- Forced (anit-squat) rental for long-term vacancy

and

- Fines for long-term vacancy and refusal to rent

SP M

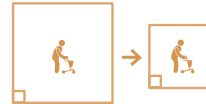
M HA HO

M HA HO

4.II.a

4.IV.b

Stimulate flow of elderly to smaller dwellings



Why?

- Large share of social housing, where there is more influence on allocation

How?

- Ensure an attractive supply of elderly housing

and/or

- Give priority to elderly that leave a large dwelling behind

and/or

- Offer help from moving coaches

SP

HA

M

4.I.b

V. Influence

4.V.a Encourage collective development



Why?

- Influence on living environment; avoid dependence on developers
- Larger plots owned by housing associations could provide scale

How?

- Dedicate space in vision documents
- and
- Connect land owners to collectives

SP

SP LO R

4.II.b | 4.II.c

4.V.b Co-creation for restructuring plans



Why?

- Give power to citizens
- Prevent long legal procedures for top-down decisions

How?

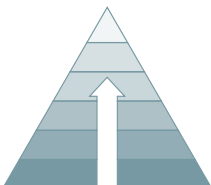
- Involve residents in early planning phase
- and
- Create flexibility in plans, to allow changes by residents

SP M

SP

0.V.a | 4.II.a

4.V.c Support bottom-up initiatives



Why?

- Give power to citizens
- Use organisational power from outside the government

How?

- Connect initiatives to other stakeholders
- and
- Provide subsidies

SP RS

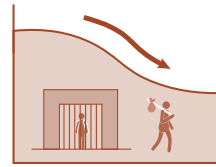
M R

M

4.II.d

VI. Diversity

4.VI.a Restrict inflow of vulnerable groups



Why?

- Low social cohesion scores
- High concentration of vulnerable groups due to residualisation and high share of social housing

How?

- Make agreements with housing associations about the share of vulnerable groups per neighbourhood
- and
- Provide enough social housing in other clusters

SP HA

SP HA RS

In the bottom left corner of the strategy cards, the relation to other patterns is referenced. Figure 7.53 below shows all these relations in one figure. These relations are not neutral, which is why the relations are displayed as a synergy, conflict or precondition for another pattern. If there is a relation with a non-cluster specific pattern, these patterns are added on the outside of the circle.

In this figure there is only one precondition, which is that it is only necessary to prevent vacancy in restructuring (4.IV.a) if there is a collective renovation (4.II.a) taking place which requires residents to move out. The strategy to encourage cooperative housing

(4.II.b) is a good example of a synergistic pattern, because it can help achieve adding dwellings for medium income groups (4.I.a) and be developed by collectives (4.V.a). An example of a potential conflict in the patterns is the stimulation of renovation (4.II.f), which might make collective renovation (4.II.a) difficult or unnecessary. The other way around, collective renovation might make stimulation unnecessary, or individuals might postpone action.

Especially for conflicting patterns it is important to consider the effects on other justice values when applying them to a location. This issue is further elaborated on the next pages.

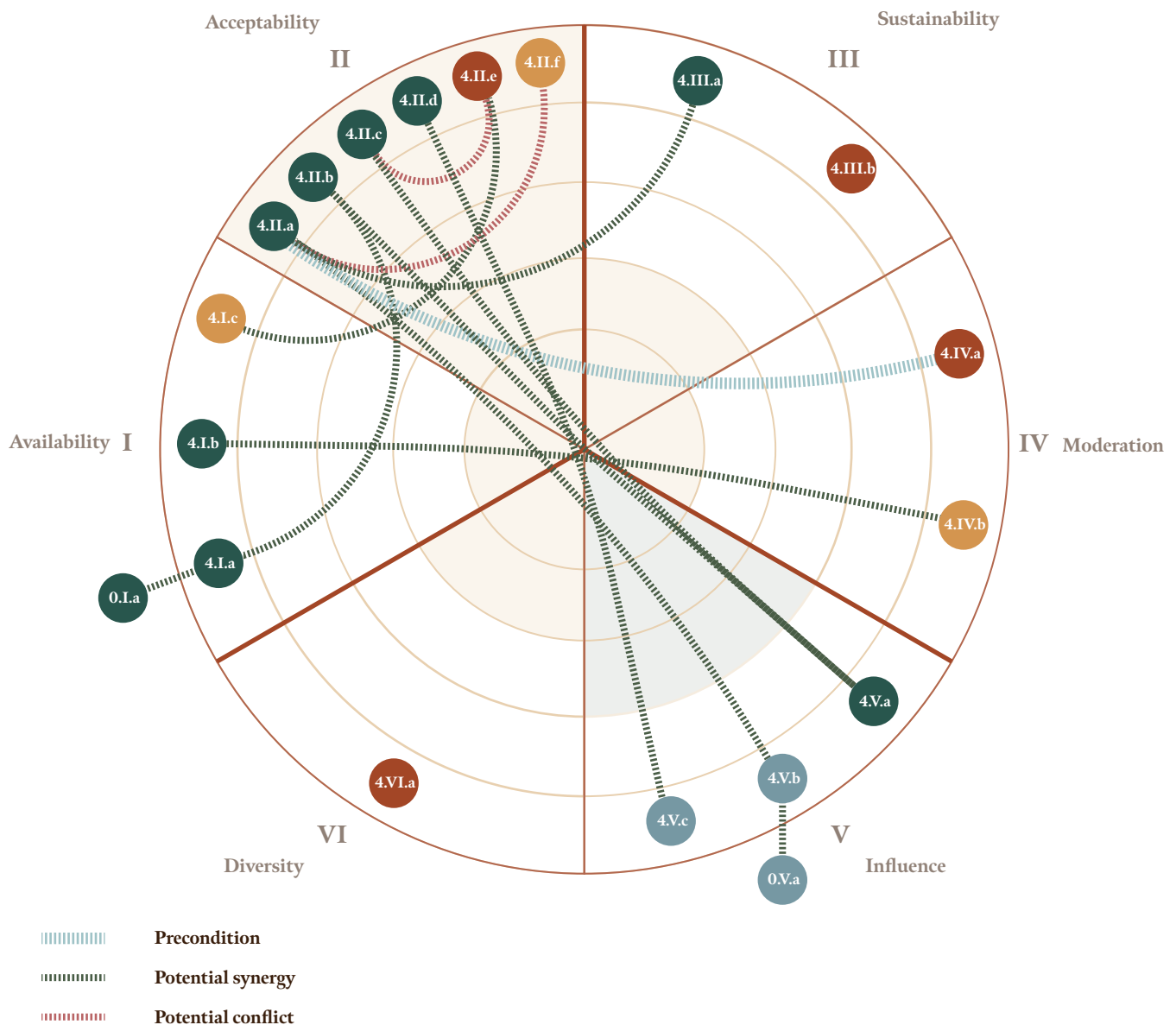


Figure 7.53: Relations between patterns; preconditions, potential synergies and potential conflicts for the cluster 4. Struggling Neighbourhoods, by author.

Multiple needs (dis)satisfaction

In figure 7.53 the relations between strategy patterns for the Struggling Neighbourhoods cluster has been visualised. For a more detailed explanation, see page 176.

Multiple-needs satisfaction

This matrix shows the importance of some patterns, which are not really negative for other justice values while also contributing to other values. This is the case for most of the acceptability patterns, which together help to satisfy all applied values. For instance the strategy of planning collective renovation (4.II.a) not only improves the housing quality for its residents, but can also contribute to the sustainability value.

These strategies do not require mitigation by other patterns and can be implemented without much constraint. Of course there should be some qualitative check when these patterns are implemented, but this is inherent to the spatial planning process.

Mitigating needs dissatisfaction

Placing the different strategy patterns into the matrix reveals which patterns are a potential dissatisfier for other applied values than the one the strategy belongs to. These strategies can still be applied, but potentially measures need to be taken to mitigate negative effects on other values.

The first potential needs dissatisfier is 4.II.e, the self-occupancy obligation. This strategy might have a negative impact on the availability of private rental dwellings. Municipalities can decide to which neighbourhoods this law applies, which can give them some influence on this problem. Another way in which this issue can be dealt with is by providing other alternatives for private rental than dwellings of private landlords. For this mitigation measure, alternative housing could be provided by housing associations or cooperatives.

Measures for building in flood-prone areas (4.III.b) might drive up construction costs and limit the amount of dwellings that can be built. As a response, building sites can be chosen where this issue is less of a problem. Potentially, the government would need to cover a part of the costs for making the dwelling stock future-proof.

Organising co-creation sessions for restructuring plans (4.V.b) might have a negative effect on availability because residents have an opportunity to object building plans. However, this is also the case if residents object to plans in formal procedures. Therefore, collaborating with residents in

an early stage might prevent surprises in afterwards. In either case it can contribute to acceptability, which is a bigger issue in the cluster than availability.

Lastly, restricting the inflow of vulnerable groups might be beneficial to the acceptability of the neighbourhood, but it will be a problem for the availability of dwellings for the groups whose access is restricted. If this policy is applied, it must be assured that these groups will be able to get a dwelling in a different cluster or different neighbourhood within the struggling neighbourhoods cluster, which requires regional collaboration.

	Availability I	Acceptability II	Sustainability III	Moderation IV	Influence V	Diversity VI
4.I.a		+				+
4.I.b						+
4.I.c		+				
4.II.a			+			
4.II.b				+	+	+
4.II.c	+			+		
4.II.d					+	
4.II.e	-					
4.II.f			+		+	

	Availability I	Acceptability II	Sustainability III	Moderation IV	Influence V	Diversity VI
4.III.a		+				
4.III.b	-	-				
4.IV.a	+	+				
4.IV.b	+					
4.V.a	+	+				+
4.V.b	-	+				
4.V.c		+				
4.VI.a	-					

Same applied value

+

 Additional needs satisfaction

-

 Additional need dissatisfaction

Figure 7.54: Matrix showing the relations between patterns and other applied values, which shows whether strategies satisfy multiple needs (applied values) or whether they have a negative effect on another need (applied values) the cluster 4. Struggling Neighbourhoods, by author.

Struggling Neighbourhoods strategy pattern elaboration

I. Availability

4.1.a Add dwellings for medium income groups

» Making existing policy place-based; personal observation

There is quite a high concentration of social rent dwellings in the cluster. In order to avoid isolation of lower-income groups, dwellings for medium income groups can be added. Providing housing for starters and medium income groups in general is a priority in the regional policy (Regio Stedendriehoek, 2023a). This cluster might benefit from such groups, which creates a win-win situation.

Spatial planners can set the goal to add dwellings for medium income groups. This can then be used as a criterion for granting construction permits.

Spatial planners can reach out to housing associations and request them to develop medium-rent dwellings. Another option is to encourage other forms of dwelling developments, such as cooperative housing (4.II.a).

4.1.b Adapt apartments to make them suitable for elderly

» Best practice

The Struggling Neighbourhoods cluster has a large share of apartments (41,5%; see table 7.1) and a decent access to amenities. Single-story apartments have potential to be used by people with a motion disability. Although not all apartment buildings can be made accessible, for instance because it is not possible to add an elevator, a share of the buildings could be adapted. Not only does this make apartments more suitable for elderly, but also more inclusive to other groups.

Spatial planners must first set the ambition in policy adapt buildings. Because adapting apartments can be expensive, municipalities can offer subsidies themselves or help developers apply for provincial or national subsidies. More extensive renovations might require that permits are granted by spatial planners to developers.

4.1.c Assist starters in buying a dwelling

» Best practice from other regions; existing policy

The regional policy has specific attention for starters who are not able to find a dwelling (Regio Stedendriehoek, 2023a). Dwellings in this cluster are relatively affordable, with an average value of €187.500, which bring them more in the financial range of starters. Also, a fair share of dwellings is owned by housing associations. Spatial planners can assert more influence on housing associations wishing to sell dwellings than on private parties.

Spatial planners can therefore make arrangements with housing association about the requirements they set when selling dwellings. This can help assure that dwellings get in the hands of starters. The same accounts for allocation policies for new construction.

Another way in which municipalities can assist starters is through fiscal measures. It is for example possible to give discounts to starters (which they need to return when reselling), providing a buy-back guaranty, or have lease constructions for the land (DoI et al., 2023). This is outside of the scope of spatial planners, but can be done by the municipality.

II. Acceptability

4.II.a Plan collective renovation

» Best practice; personal observation

The housing quality in the cluster is below average. Simultaneously, a large part of the dwelling stock in the cluster is owned by housing associations. Many of such dwellings are row houses or apartments. For such dwellings which have the same interior, exterior and similar deficiencies, it makes sense to renovate multiple dwellings at the same time. In this way the same type of intervention can be repeated multiple times, which can reduce costs and create a consistent spatial quality.

This is primarily a task for housing associations. Spatial planners can facilitate this by indicating changes in spatial plans and granting permits. For private dwellings, municipalities can also initiate collective action, by connecting residents to renovation companies or providing the opportunity to collaborate with renovation by housing associations.

4.II.a Encourage cooperative housing

» Advice from literature

One of the main problems regarding acceptability is unaffordable housing. This is particularly the case in private rental housing and owner-occupied housing. (Hochstenbach, 2022). Although social housing options are supposed to be fitting for the income of residents, even this housing segment can be too expensive, as is also indicated by the living expense ratio which is often higher than 30% of the income (figure 6.19). Another solution for affordable housing for different income groups, aside from housing associations, is cooperative housing. Likewise, for this housing form the goal is not to make profit, but to provide affordable housing (Czischke et al., 2023).

Spatial planners can stimulate this form of housing, by making it publicly known through plans that there is land available for cooperative development. Municipalities can also help cooperatives to acquire the required land. Market prices can be an obstacle for collective housing groups. Land is commonly priced according to residual land value, which is based on the potential development profit. This is a disadvantage for groups that do not have the objective to make profit, but just have the wish to dwell. Municipalities that own land can for instance lease land to collective groups (Czischke et al., 2023).

4.II.c Encourage sharing living space

» Advice from literature; personal observation

A large average living space per person is not an urgent problem in the cluster. However, sharing living space can be a good means to lower costs and counteract loneliness amongst single households. Despite these benefits for costs and well-being, sharing living space is discouraged by policy, especially for less affluent households (Van Beek, 2021).

While fiscal policies cannot be changed by spatial planners, the spatial restrictions could be lifted. A first step for this is to encourage housing associations to allow sub-rental and sharing (Van Beek, 2021), and to offer group contracts. Making such regulatory changes can also be applied to regulation which discourages new construction of shared dwellings.

4.II.d Ensure access to public and collective space of sufficient quality

» Personal observation

The environmental quality in the cluster is not optimal (figure B.8). On top of this, there are many apartments (which do not often have gardens) in the cluster and a small average living space, which make residents more dependent on public and collective space for interaction with others and for their well-being. Considering the more deprived position of the neighbourhoods in this cluster, ensuring access to public and collective space of sufficient quality should be a priority, whereas currently the focus of public space improvements might be on the centres of the cities.

Spatial planners can further contribute to this strategy by including a sufficient amount of public and collective interior and outdoor public spaces in spatial plans and assuring quality by directing public space renovation resources to this cluster.

4.II.e Self-occupancy obligation

» Best practice from another region

One of the reasons that dwellings can become unaffordable is the commodification of housing (Van Loon & Aalbers, 2017; Hochstenbach, 2022). It is a lucrative market to renovate and resell dwellings or to buy dwellings and charge high rents. The reduction of supply through this practice might also drive up prices (Germeraad Makelaars, n.d.). Although such issues mainly play out in the Randstad, it can also be an issue for other regions. At least 130 municipalities have already applied a self-occupancy obligation for existing dwellings (Germeraad Makelaars, n.d.). The municipalities in the Stedendriehoek can apply this too, for which they need to set a threshold price and designate neighbourhoods for which it applies.

4.II.f Stimulate and support owners to renovate dwellings

» Continuation of existing policy

This strategy is mainly focused on the indoor environmental quality and comfort, but can also contribute to sustainability. Renovation can require significant investments. These investments can be earned back through lower energy expenses and a higher sales price. However, not all home-owners in this cluster have the financial capacity to do such investments, nor the knowledge on how to improve their dwelling. Policies for this strategy are already in place. The national government is already providing subsidies for insulation and sustainable installations, on top of fiscal benefits for solar panels (Rijksoverheid, n.d.).

Even in case the state would reduce these subsidiary initiatives, municipalities, the region or the provinces could continue this strategy. Municipalities could also organise collective action, where owners can join an initiative. For example, municipalities can bring residents in touch with companies that install heat pumps. This is not currently part of policy, but could be the extra support that convinces residents to improve their dwelling.

III. Sustainability

4.III.a Use new construction for making the existing stock more sustainable

» Best practice

The housing quality in the cluster is not optimal, as analysed in figure 6.19. Many of the neighbourhoods in the cluster are in neighbourhoods that were built multiple decades ago, which indicates that not all dwellings are very sustainable.

In the meantime there is a demand for extra housing (Regio Stedendriehoek et al., 2023). This can be used as an opportunity. New dwellings have high sustainability standards, so sustainable solutions are required for new construction. The combination of new construction and old dwellings together can provide the required scale for larger projects, such as heat networks and underground thermal storage. On a smaller scale, addition of dwellings can be combined with renovation, as has been proven by the SUM project of TU Delft (Communication BK, 2022).

This requires from planners that they plan dwellings near buildings that are in need of renovation and to combine the challenges of renovation and new construction. New construction can as well be an opportunity for improving the climate adaptability of public space.

4.III.b Development requirements in flood prone areas

» Personal observation

A part of the cluster is located in flood prone areas. In most parts of the cluster, the chances for flooding are relatively low and the water level is not likely to be very high in case of flooding (figure 6.22). Forbidding construction all together as a strategy would therefore be too extreme. In order to make construction possible to in these areas, construction could be allowed under strict conditions. Conditions for obtaining a permit can be set, such as requirements for placing installations on a higher level and creating building openings at a minimum height. These conditions can vary depending on the flood risk.

IV. Moderation

4.IV.a Prevent vacancy in restructuring

» Best practice from another region; Sharpening of existing policy

As described in the sustainability strategies, many dwellings in the cluster are in need of renovation. A large part of the dwelling stock is owned by housing associations. These housing associations regularly demolish and rebuild dwellings or drastically renovate dwellings.

Because all dwellings in a building or block need to be empty when such a restructuring starts, dwellings can be left empty awaiting renovation. In order to make good use of these dwellings, they could be temporarily used, for instance by encouraging housing associations to offer anti-squatting contracts.

4.IV.b Stimulate flow of elderly to smaller dwellings

» Sharpening of existing policy; best practice

While on average there is certainly no abundance of living space per person in the cluster, there is a particularly high share of social housing. A part of the social housing dwellings concerns single-family homes. These dwellings are generally larger and are not suitable for residents of older age because they usually have multiple floors. Thus, a target group that could be stimulated to move to a smaller dwelling is elderly living in single-family social rent dwellings. By moving to a home that is suitable for an older age, elderly can also benefit. However, the supply of such dwellings is low.

The municipality of Brummen already has moving coaches, who help elderly find a suitable dwelling. This is a practice that can be extended to the region as a whole. Other initiatives from other municipalities can be adapted as well, such as giving moving allowances for moving to a smaller dwelling and giving elderly allocation priority to certain neighbourhoods (Moen, 2023). On top of this, neighbourhoods should have sufficient supply of social rent dwellings suitable for elderly, which can be a part of spatial plans.

V. Influence

4.V.a Encourage collective development

» Personal observation

Developing an own dwelling can give residents influence on their own living environment and adapt it to their needs. The cluster is already quite dense and when space is available it is likely that this will concern multiple plots at once, or a building that requires redevelopment. This makes collective development a more reasonable option than private development.

Spatial planners can make it publicly known through plans that there is land available for collective development. Municipalities can also help collectives to acquire the required land. Market prices can be an obstacle for collective housing groups. Land is commonly priced according to residual land value, which is based on the potential development profit. This is a disadvantage for groups that do not have the objective to make profit. Municipalities that own land can for instance lease land to collective groups (Czischke et al., 2023).

4.V.b Co-creation for restructuring plans

» Personal observation

Several neighbourhoods from the cluster are relatively old and have a large share of social housing. A common government response is large-scale restructuring of neighbourhoods, often paired with demolition and rebuilding. This can have quite some impacts on residents of a neighbourhood, while sometimes the intention of the government is not even to improve the neighbourhood for existing residents, but to make them more attractive for new residents (Uitermark et al., 2007).

Co-creation is a step higher on the participation ladder than information sharing (Arnstein, 1969). By directly involving citizens in the development of restructuring plans, residents can assert more influence in an early stage, which increases the likelihood that it is to the benefit of them. For spatial planners this means that they must engage with the population and create flexibility in goals and plans, so that there is room for adjustment to the wishes of the population.

4.V.c Support bottom-up initiatives

» Best practice from the region

Bottom-up initiatives empower residents and allow them to shape their (social) living environment. It can be difficult to initiate or scale up developments, due to regulatory constraints, lack of funding or knowledge or because residents are not in touch with the right stakeholders.

Municipalities and spatial planners can facilitate such bottom-up initiatives by connecting residents to stakeholder or giving assistance in the procedures, which is already done in the municipality of Apeldoorn by an 'initiatives broker' (Gemeente Apeldoorn, 2023a). Other municipalities in the region can do the same and exchange knowledge.

VI. Diversity

4.VI.a Restrict inflow of vulnerable groups

» Personal observation based on literature

The social cohesion scores in the cluster are below average. Concurrently, the Struggling Neighbourhoods cluster is the cluster with the highest share of social housing in the region.

Mostly because of policy changes on the national level, the social housing sector has residualised: a smaller sector houses a larger concentration of lower income groups (Hoekstra, 2017). Additionally, de-institutionalisation increased the influx of vulnerable groups to the lowest segments of the social housing sector. These changes lead to an accumulation of problems in certain neighbourhoods with a larger share of social housing (Hoekstra, 2017). This problem accumulation is not beneficial to current residents as well as new vulnerable residents.

Spatial planners can aim to limit the influx of the most vulnerable groups, such as inmates, homeless people and refugees in order to contribute to a more socially coherent. Spatial planners can make arrangements with housing associations to adapt their allocation policy. In the mean time, spatial planners should assure that the other clusters provide enough social housing for these groups by cooperating with housing associations.

Illustrative case: Oranjekwartier

For the illustrative case of the Struggling Neighbourhoods, the neighbourhood Oranjekwartier in Deventer has been selected.

Location choice

The Struggling Neighbourhoods cluster is only represented in the three major cities of the Stedendriehoek. The largest share of neighbourhoods within this cluster are located in the city of Deventer (see figure 7.12). Therefore, an illustrative case from this city has been selected.

Some of the neighbourhoods in Deventer have had thorough redevelopments and restructuring in the last two decades already. The Rivierenwijk and Landsherenkwartier have been the focus of the 'krachtwijken' policy in Deventer (gemeente Deventer, 2020).

The neighbourhood Oranjekwartier is an interesting case, because the municipality of Deventer intends to redevelop the neighbourhood, but no large-scale intervention has taken place yet (Gemeente Deventer, 2020; Oranjekrant, 2023). The redevelopment of the Oranjekwartier has been initiated and a plan has been made by the municipality of Deventer (Gemeente Deventer, 2020). Some of these developments, such as the renovation of roads, have already started, but other plans are awaiting execution. For instance, a plan to develop dwellings on the municipal land in the centre of the neighbourhood requires a change of the zoning plan, to which a neighbouring party has objected (Oranjekrant, 2023).

About Oranjekwartier

The Oranjekwartier neighbourhood has largely been built in the 1960's and consists of a mix of single-family homes and apartments. The neighbourhood is located on the north side of Deventer in the district (*wijk*) Keizerslanden. The heart of this district, the shopping centre Keizerslanden, is located just to the west of the neighbourhood, separated by a main road, the Margijnenek. This is a main road which acts as a ring road for the city of Deventer and forms the western border of the neighbourhood.

The neighbourhood is bordered by wide two-lane roads and the amount of entrances to the neighbourhood by car from these roads is limited.



Figure 7.55: Location of Oranjekwartier within the municipality of Deventer. By author.

The three large gallery flats in the north-east and the primary schools in the north are slightly isolated from the rest of the neighbourhood, separated by a larger road. The Koningin Wilhelminalaan runs through the middle of the neighbourhood from north-west to south-east. The Koningin Julianastraat runs parallel to this road.

A piece of land in the centre of the neighbourhood, in between the Koningin Wilhelminalaan and Koningin Julianastraat is owned by the municipality. There used to be primary schools on a part of this property. Two school buildings have been demolished and one former school building is temporarily used by an art collective. A temporary building on the site is used by an oncology centre and a part of the land is used as a community garden. In the redevelopment plans from the municipality, this piece of land will be redeveloped. The existing buildings and garden would be replaced by 64 single-family homes (Gemeente Deventer, 2020). However the future of this plot is currently unsure, because of the plan has been objected to by the owners of the adjacent building.



Figure 7.56: Map of Oranjekwartier showing the main structural elements of the neighbourhood, by author

Oranjekwartier statistics

The justice framework has already been used to analyse the region on all applied values. In table 7.4 the scores for the administrative 'buurt' Oranjekwartier are shown. This concerns the same indicators as used in the regional analyses.

These scores fit the characteristics of the cluster as described on page 162. The main injustice in the cluster concerns acceptability. As expected, there is a significant share of households living in energy poverty and the living expense ratio is above the target of 30% in Oranjekwartier. However, the latter score is not extremely high compared to the rest of the region. Also the housing and amenities scores

are not great. The scores on the other indicators are not particularly bad, except for a small chance of flooding, a relatively dominant housing function (which is not very problematic because of the high density), and a bad social cohesion score.

The gas use in the neighbourhood is very low, despite a large share of dwellings with a bad energy label. This is first explained by the small living space per person on the one hand, which requires less heating. Next to this, there is a heat network in the neighbourhood, to which the majority of the apartments are connected (a total of 32% of dwellings (RVO, 2017); for which buildings see figure 7.56). This district heating system is fuelled by fossil energy,

Table 7.4: Scores for the indicators of the housing dimensions of the justice framework (For sources see table x.x)

	Oranjekwartier
I. Availability	
Share of social housing [m ²] (2021)	56 %
Ownership mutation rate (2021)	4,5 % (wijk)
Demand > supply elderly housing	80 %
Dwelling density [dwelling/ha] (2021)	32,5
Key projects	No, but the 'wijk' Keizerslanden is a key project
II. Acceptability	
Energy poverty [% of households] [2022]	7,5 % (wijk)
Living expense ratio social housing (2021)	31,8 % (wijk)
Housing dimension Leefbaarometer (2020)	4 (weak)
Amenities dimension Leefbaarometer (2020)	5 (sufficient)
III. Sustainability	
Average gas use per household, 2020 [m ³]	550 m ³
Average electricity use, per household 2020 [kWh]	2.310 kWh
Soil conditions	Sand, loam (probably)
Flood risk	Small chance and shallow depth
Public transport access (2023)	Yes, two lines. Northern edge not completely covered
IV. Moderation	
Living space total [m ²] (2022)	112.950 m ²
Living space per person [m ²] (2022)	47 m ²
Vacancy absolute [m ²](2022)	1.650 m ²
Vacancy relative [%], 1 Jan 2022 (2022)	1 %
Mixing	80-90 % dwelling
VI. Diversity	
Dutch population (2021)	63 %
Households with children (2021)	29 %
Social dimension Leefbaarometer (2020)	4 (weak)
Single-family homes [%] (2021)	32 %

so the emissions in the neighbourhood are actually higher than the 550 m³ in table 7.4, but this does probably not bring it to an excessive total use.

Despite some minor differences, the Oranjekwartier neighbourhood gives a relatively good approximation of the cluster as a whole.

Table 7.5 shows that the population and household characteristics of Oranjekwartier are very similar to the cluster as a whole. The dwelling characteristics do show some differences. There is an even higher share of apartment and rental dwellings than in the cluster as a whole. The average dwelling value is slightly lower as well, which might be explained by the higher share of apartments and social housing.

Table 7.5: Descriptive statistics of the CBS 'buurt' Oranjekwartier compared to the cluster as a whole, CBS (2021)

	4. Struggling Neighbourhoods	Oranjekwartier
<i>Inhabitants [n]</i>	61.065	2.465
<i>0-15 [%]</i>	16,0 %	16 %
<i>15-25 [%]</i>	11,9 %	13 %
<i>25-45 [%]</i>	27,1 %	30 %
<i>45-65 [%]</i>	25,9 %	23 %
<i>65+ [%]</i>	19,2 %	18 %
<i>Western migrants [%]</i>	10,6 %	15 %
<i>Non-Western migrants [%]</i>	19,2 %	22 %
<i>Dwellings [n]</i>	29.585	1.301
<i>WOZ value [x 1.000]</i>	€ 187,5	€ 153
<i>Owner-occupied [%]</i>	41,6 %	26 %
<i>Rental [%]</i>	58,2 %	74 %
<i>Rental owned by housing association [%]</i>	44,6 %	56 %
<i>Rental owned by other parties [%]</i>	13,4 %	18 %
<i>Single-family homes [%]</i>	58,5 %	32 %
<i>Apartments [%]</i>	41,5 %	68 %
<i>Households [n]</i>	30.080	1.310
<i>Household size [n]</i>	2,03	1,9
<i>Single households [%]</i>	44,1 %	47 %
<i>Households without children [%]</i>	25,2 %	24 %
<i>Households with children [%]</i>	30,7 %	29 %
<i>Land area [ha]</i>	1.893	40
<i>Population density [inh/km²]</i>	3.226	6.162,5



Figure 7.57: Map of Oranjekwartier showing possible and desirable strategic interventions, by author

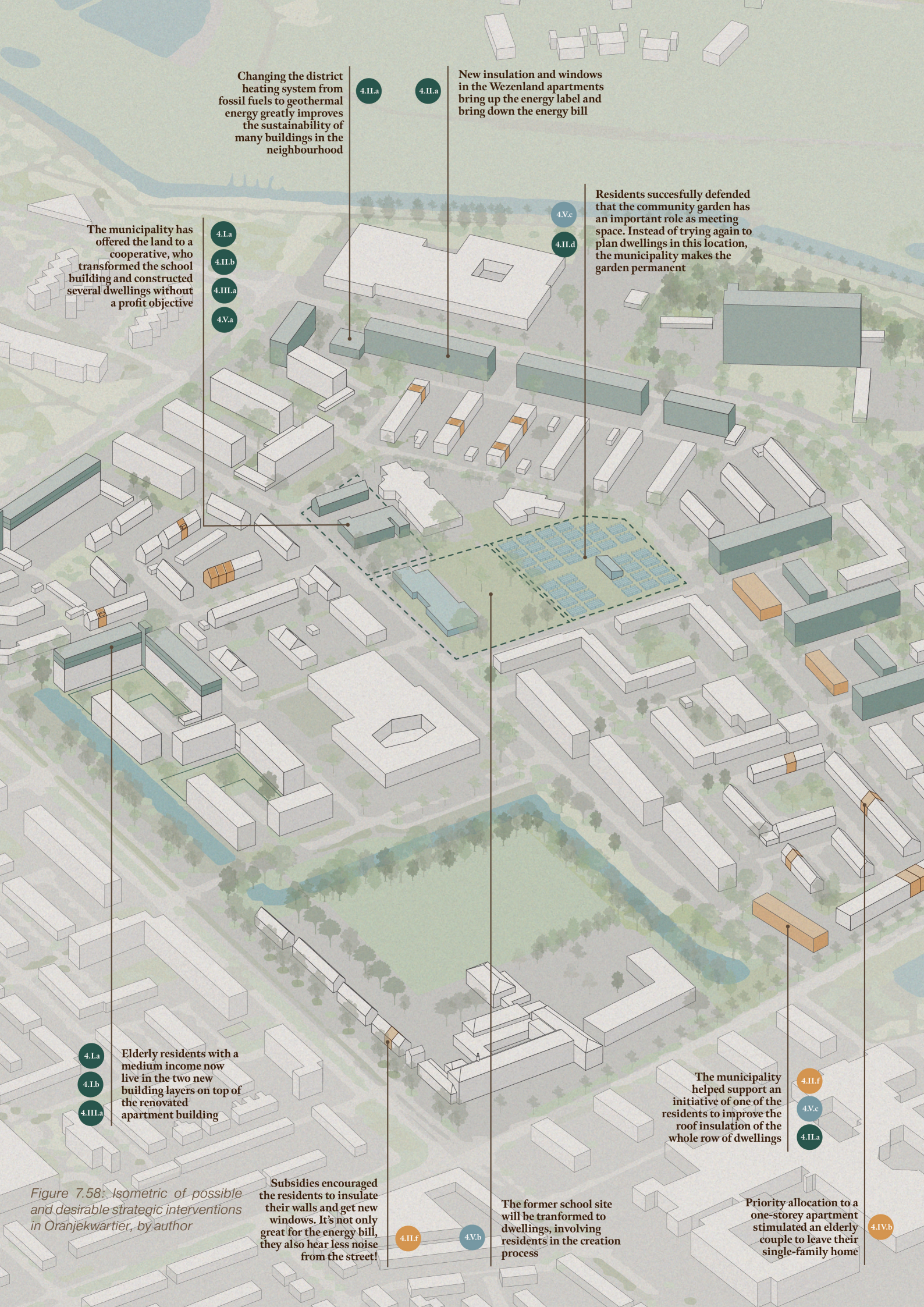
Oranjekwartier

The map above shows a possible strategic intervention for Oranjekwartier. This map shows how some of the strategy patterns can have a different spatial scope. Some patterns are applicable to a specific location, some are applicable to a sub-area, and others are relevant throughout the area as a whole.

The different spatial conditions within the illustrative case lead to different strategic responses. The different ownership conditions and building typologies require different strategies, but also the environmental conditions, such as access to shops

and public transport make areas in the west of the region more suitable for stimulating transformation of apartments to elderly dwellings (4.I.b). Existing plans also offer input for location-specific strategies. The plan of the housing association to sell rows of dwellings on the Koningin Julianalaan (figure 7.59 and 7.60) is an opportunity for assisting starters (4.I.c) in combination with a self occupancy obligation (4.II.e).

Some patterns, such as supporting bottom-up initiatives (4.V.c) can be place-specific (in the case of the community garden on the former school site), but are equally applicable throughout the area.



Changing the district heating system from fossil fuels to geothermal energy greatly improves the sustainability of many buildings in the neighbourhood

4.II.a

4.II.a

New insulation and windows in the Wezenland apartments bring up the energy label and bring down the energy bill

Residents successfully defended that the community garden has an important role as meeting space. Instead of trying again to plan dwellings in this location, the municipality makes the garden permanent

4.V.c

4.II.d

The municipality has offered the land to a cooperative, who transformed the school building and constructed several dwellings without a profit objective

4.I.a

4.II.b

4.III.a

4.V.a

Elderly residents with a medium income now live in the two new building layers on top of the renovated apartment building

4.I.a

4.I.b

4.III.a

Subsidies encouraged the residents to insulate their walls and get new windows. It's not only great for the energy bill, they also hear less noise from the street!

4.II.f

4.V.b

The former school site will be transformed to dwellings, involving residents in the creation process

The municipality helped support an initiative of one of the residents to improve the roof insulation of the whole row of dwellings

4.II.f

4.V.c

4.II.a

Priority allocation to a one-storey apartment stimulated an elderly couple to leave their single-family home

4.IV.b

Figure 7.58: Isometric of possible and desirable strategic interventions in Oranjekwartier, by author



Figure 7.59: Current situation (Google maps, 2023)



Figure 7.60: Application of strategy patterns, by author

The row of dwellings on the Kon. Julianastraat was in desperate need of renovation. Because the housing association could not renovate the dwellings anytime soon, they decided to sell the dwellings as fixer-upper. The municipality bargained with the housing association that the dwelling would be sold to starters and bought back by the housing association when they would move out. This was great news for Jeffrey and Danique, who had great trouble setting foot in the housing market. Jeffrey works as an electrician and has two right hands, so he was willing to get his hands dirty on such a project. With the help of friends who work in construction, they were able to renovate the house pretty quickly. Without the low sales price and the buy-back guaranty, they would never have been able to find a house within their budget. Luckily the construction is finished now, because Danique and Jeffrey want to start a family soon in this home.

Contributions to justice

I. Availability	Policy makes the dwelling attainable for for starters
II. Acceptability	Renovation of outdated dwelling; improved spatial quality
III. Sustainability	Old dwellings are renovated; demolition prevented
IV. Moderation	x
V. Influence	Possible to adjust the dwelling to wishes when doing it yourself
VI. Diversity	x



Figure 7.61: Current situation (Google maps, 2023)

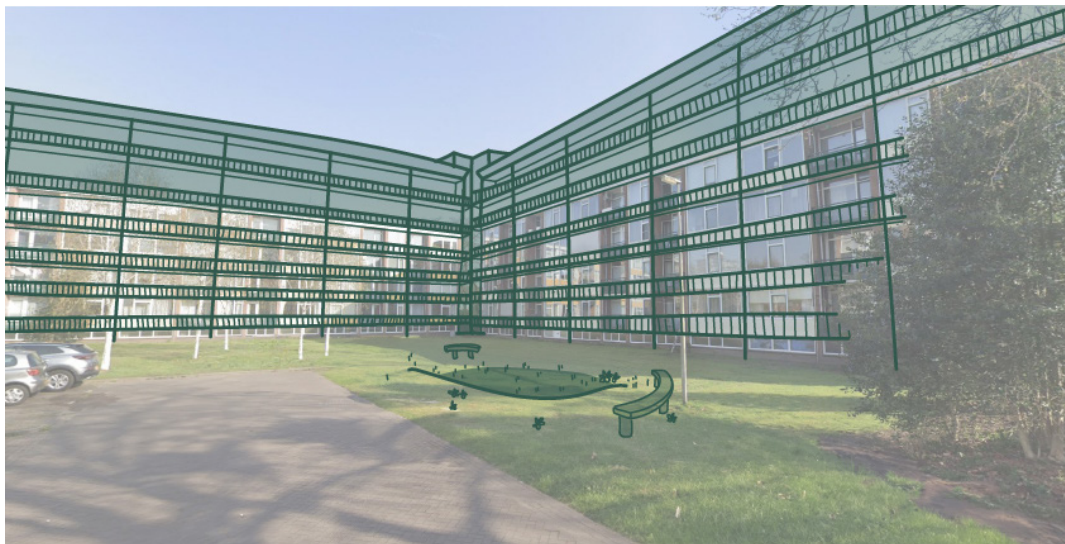


Figure 7.62: Application of strategy patterns, by author

Marja and Dennis moved into a single-family home in the Prinses Marijkestraat in the 1970's as a young family expecting their first child. They were glad the housing association decided to renovate the apartments near the Keizerslanden shopping centre, because they could move to a different dwelling in a familiar social environment. The municipality allowed the housing association to add two layers of medium rent dwellings, which paid for the renovation. The apartments are now accessible by elevator, so Dennis does not have to worry about going up and down the stairs. The renovation also assures a great indoor climate. And the energy bill is so much lower! Although the rent has increased a bit, at the end of the month Marja and Dennis are left with more of their pension money to spend on things that make them happy. And how beautiful is it that a new young family has moved into their previous dwelling!

Contributions to justice

I. Availability	Extra dwellings for medium-income households; extra dwellings suitable for elderly
II. Acceptability	Renovation improves housing quality
III. Sustainability	Renovation improves environmental quality
IV. Moderation	Could help the flow of elderly to smaller dwellings
V. Influence	x
VI. Diversity	New space for under-represented medium-income groups



Figure 7.63: Current situation (Google maps, 2023)



Figure 7.64: Application of strategy patterns, by author

Coöperatie Horizon has been established in the former Horizon primary school. The collective (consisting of a range of different individuals with different ages and incomes) was already looking for years for a place where they could develop a housing cooperative according to their own wishes. It is notoriously difficult to find land for such an endeavour, because Coöperatie Horizon does not have the objective to make profit, but land prices are based on that assumption. They were very grateful that the municipality of Deventer decided to lease the land to the collective for an attractive price. This was under the condition that they would reuse the old school building, but they were only glad they could move into a place with character.

Contributions to justice

I. Availability	New dwellings added
II. Acceptability	Long-term affordable housing
III. Sustainability	Reuse of the school building saves material
IV. Moderation	x
V. Influence	Collective development; residents have influence on the policy of cooperation
VI. Diversity	x

Impression of the Struggling Neighbourhoods cluster

The focus of the justice framework is on the domain of housing. However, there is a lot more going on in different spatial domains within the cluster. Figure 7.65 below gives an impression of the Struggling Neighbourhoods cluster where several assumed interventions for multiple domains are integrated.

The main injustices of the cluster relate to acceptability. The impression below shows interventions which improve the housing quality and environmental quality. Collective renovations improve the housing quality and can reduce burdens of energy costs. Affordable solar energy production does not just take



Figure 7.65: An integral vision for justice in the Rural and Rich cluster, by author

place in rural areas, but also in available space in cities.

Addition of green in the neighbourhood creates places to play and connect, but also reduces the urban heat island effect and improves water management.

This green space replaces a part of the parking spaces, which is made possible by the transition from private ownership to collective ownership and sharing of cars. Individual car mobility is still required for several people and remains available, but public space is less supportive for this. Instead space is made more encouraging for walking and cycling,

which can improve sustainability as well as health of residents.

Housing associations in Deventer already want to use the garages they offer for dwellings (Rondhuis, 2021). This scarce space in high density neighbourhoods can be used by people instead of cars. Housing associations can also offer former garages as affordable places for small businesses and community functions. This adds indoor collective spaces to neighbourhoods where these are lacking. This has the potential to strengthen the social fabric in neighbourhoods as well.



Discussion of the justice framework as a design tool

The justice framework developed in this research can be applied both as a guide for analysis and for design. At the end of the previous chapter, the justice framework as an analysis tool has been evaluated. In this paragraph its functioning in guiding strategy and design is evaluated, which helps to answer the final sub-question of the research, *'How can a framework based on justice values help spatial planners to develop a planning and design strategy for housing in a region in the Netherlands?'*

There are several benefits for spatial planners in using the justice framework. First of all it helps to structure analyses, which give input for strategies and design. The consequent step of clustering is made possible by these analyses. The analyses of the applied values can help structure the comparison between clusters and give an indication of which type of injustices strategies should respond to.

Developing strategies is not directly a part of the justice framework, but the strategy development is guided by the applied values of the justice framework and the outer ring of the framework provides input for strategies. Structuring the strategies along the line of the applied values also is an interesting contribution of the justice framework to strategy development. Multiple-needs matrices help with assessing whether strategies can contribute to solving injustices for different applied values than the ones they are developed for.

The justice framework provides valuable input for developing planning and design strategies for housing, but it also has some limitations. Several elements of the process of application to the case study require a more nuanced discussion. This nuance and directions for further research is discussed in the rest of this paragraph.

Clustering

The first step of the strategy and design in the case study application has been clustering. This makes development of a strategy easier, because each cluster has a specific set of problems to which a strategy can respond. However, this approach has two pitfalls. First, clustering is a process of generalisation. As a

consequence, special or 'other' areas, such as trailer parks and mixed-use areas, which stand out because of special characteristics, tend to be ignored. Special housing needs of marginalised groups, such as trailer park residents, are likely to be ignored. This threatens recognitional justice, which is included in the core value of opportunity. Secondly, while developing strategy patterns is easier using clusters, the actions associated with these patterns become more fuzzy. The administrative boundaries do not follow the same boundaries as the clusters and while the strategies for the clusters are on a regional level, implementation of most strategies should be done on a municipal level. In reality this would likely lead to different forms of implementation across municipalities. However, it would be possible to exchange knowledge and best practices between the municipalities.

Regional scale

The previous point raises the question whether the region is the right scale for using the justice framework. On a regional scale it is possible to compare local scores on justice indicators to a larger set of other places in the vicinity, which is an advantage for analysis. The case study region also shows that the housing systems of different municipalities are intertwined. For example, the western villages in the municipality of Lochem act as suburbs for Deventer and Zutphen. There are also several strategies that need to be agreed upon on regional level (figure 7.18), which pleads for a regional approach. This concerns only a few strategy patterns, but it could be argued that the patterns that are discussed under the separate clusters also require some regional coordination; it would perhaps be good if circularity goals and the exact share of affordable housing per cluster are coordinated on a regional level.

As pointed out in the previous point, the implementation should be done on a local level, because the power of the region is mainly limited to developing common policy goals and organising collaboration between different parties on a regional level. Regulatory and stimulatory measures are restricted to municipalities. For these reasons it is very interesting to test the use of the justice framework on just the municipal level.

Strategy directions

The outer ring of the justice framework is the 'strategy directions' ring. The first three rings of the justice framework have had a direct application in the analysis and design process, topics of analysis and discussion. The strategy directions ring is not used as explicitly. Instead, a number of strategies are developed in the example clusters, for which the applied values provide a core structure. Considering that these strategies can be developed independently from the outer ring of the justice framework, it can be questioned whether this ring needs to be included in the justice framework.

A first reason to keep this ring in the justice framework is that it makes the justice framework more self-explanatory. It gives an indication of the step that comes after the analysis. The pattern language is too location-specific to be included in the justice framework. Additionally, this outer ring already gives a first indication of possible strategies to spatial planners. This guidance can help spatial planners to develop specific strategies for the location to which the justice framework is applied.

The role of the planning professional

Both the process of clustering and of scoring the clusters using wind roses are quite qualitative processes. It has been attempted to make this quantitative, but the appropriate indicators are lacking. The analysis using the justice framework therefore remains indicative. But even if there were upper and lower boundaries, spatial planners should still have to be mindful to propose appropriate interventions; for example a share of 30% social housing might be redundant in some places or too little in other places. Instead there might be a need of private rental dwellings in some areas.

Thus, the justice framework is not a holy grail, nor should it be. Developing a strategy and design also requires other forms of analysis and creativity of spatial planners to find appropriate strategies. The justice framework can be a useful addition to the toolbox of the planning professional.

Proportionality and priorities

The justice framework itself is not judging. For that, the professional view of a spatial planner is needed. The benefit of the justice framework is that is generic to a certain extent, which makes it adaptable to different circumstances. It contains a wide range of topics related to housing justice which can be analysed and designed for. However, in this generality and in its application to the regional scale there is less room

for nuance. It can be questioned whether excessive living space in rural areas really is an issue, because if this space would be shared with more people, it could mean that more people have insufficient access to amenities and it could also lead to more car traffic.

The justice framework does not really differentiate between these issues. It is also beneficial however that the justice framework does not prioritise any particular value. This avoids that the focus of planning policy is only on pressing short-term issues of specific groups, such as high housing prices.

Lastly the justice framework does not offer directions on which cluster to prioritise. Only the wind rose scoring gives an indication of which cluster has the most extreme issues, but not necessarily which clusters and which issues are the most urgent. However, it is likely that attention is divided over all clusters and all values, which is the daily job of spatial planners.

Colour coding

Applying the strategies to the two clusters showed that there are many different possible strategies. Around twenty strategy patterns have been developed for both clusters, which is already a selection of possible strategies. In order to keep these patterns organised, they are given a code, as well as a colour. A code is essential in order to refer back to the different strategies, which has been done in the wind rose figures, multiple-needs matrix and in the illustrative cases. Colour coding on the other hand is not essential, but instrumental. The colours provide a structure for categorising the patterns for each applied value. The categorisation of shaping, regulating, stimulating and capacity building creates consistency. Because there are so many strategy patterns, different colours also help to distinguish between the different patterns and give an overview.

The different steering instruments at the disposal of spatial planners has been used to categorise the strategy patterns. This can give a quick indication of the type of strategies that can be implemented and whether the focus in a cluster is more general on changing strategies and ambitions, introducing new regulation, providing subsidy or connecting stakeholders. A disadvantage is that many strategies are still rather general and require a combination of measures, such as establishing policy goals, as well as setting requirements for permits. This requires different steering instruments, but only one dominant instrument determines the colour of the pattern. This could be resolved by using multiple colours for

a strategy that requires different instruments, but this can be at the expense of giving a clear visual overview. Another option is to use a different method for categorising different types of strategies. One such option is whether a strategy is applicable to all places in a cluster or to particular places only. A different categorisation is possible within the structure that the justice framework provides. This can be adapted to the need of the place and organisation where the justice framework is applied.

Domain focus

In order to delimit the scope of the research, the choice has been made to focus on the housing domain. This focus on a single domain has a clear advantage in the analysis phase, because analysis requires a topical focus. However, for the design application of the framework in spatial planning, this focus can be limiting. A core part of spatial planning is guiding different spatial trade-offs (Storper, 2014). In the design application, there is a necessity to make certain trade-offs within the housing domain, for instance when different strategies are conflicting. However, spatial questions that deal with making trade-offs between different domains cannot fully be answered with the justice framework. For example, the question often arises in the housing domain whether it should be possible to build in greenfields or in industrial areas. Such choices interfere with the domains of nature, agriculture and employment. Although these dilemmas are dealt with in some way by the justice framework - through strategies such as maintaining the character of clusters, ensuring access to amenities, and using land modestly - there is not an element in the framework which inherently deals with these trade-offs between domains. It is therefore up to spatial planners to make these decisions in spatial designs.

It can be a benefit that the justice framework does not prescribe such choices; different circumstances require different trade-offs and the openness of the justice framework grants the freedom to spatial planners and designers to make appropriate trade-offs. Either way it is necessary to have an idea of the strategies that are required for justice in the housing domain before trade-offs with other domains are made. Nonetheless, different domains always need to be combined in spatial planning. A first impression is given for this combination of domains for both clusters. Still, the interaction between different spatial planning domains is an interesting topic of further research, particularly the synergy between domains.

8. Conclusion & Reflection

In this chapter the answers to the research questions are discussed by means of the sub-questions of the research. The discussion of the research question points to limitations, recommendations for future research and policy recommendations. Afterwards, the research is reflected upon. This is first done individually. In the last section of this research, the justice framework is discussed in together with spatial planners to reflect on the implementation in a real life context.



Figure 8.1: Woman on a bench in Keizerslanden, Deventer, photo by author.

Conclusion

Answering the research question

The main question throughout this research has been:

‘To what extent can a framework based on justice values help spatial planners design for justice in the housing domain in Dutch regions?’

In order to structure the research for this question, the main research question is approached with three sub-questions:

1. To what extent are socio-spatial injustices in housing a result of contemporary planning practices?
2. What are the values behind different approaches of spatial justice and how can these values be operationalised for spatial planning?
3. How can a framework based on justice values help spatial planners to develop a planning and design strategy for housing in a region in the Netherlands?

In order to provide an answer to the main research question, the sub-questions are discussed first.

To what extent are socio-spatial injustices in housing a result of contemporary planning practices?

The introduction to the research has highlighted several socio-spatial injustices in the housing domain. Some of these problems include displacement, commodification of housing, disparities in well-being and unsustainable construction. The analysis in the first research question revealed that spatial planning can only be held partially responsible for socio-spatial injustices. Several trends and processes can be traced back to other causes. For example, demographic changes and national fiscal policies have a notable effect on the housing market, but are outside of the scope of spatial planning.

Spatial planners do not influence outcomes directly, but operate in a governance setting and deploy

instruments to motivate private actors to execute public policy. With steering instruments (shaping, regulating, stimulating and capacity building instruments), spatial planners aim to influence market actors (Heurkens et al., 2015). Even though the influence of spatial planners has limitations, there is some evidence that spatial planners have contributed to socio-spatial injustices by applying these instruments.

Spatial planning practice has been spatially and socially selective and focuses on the short-term. Shaping instruments have been employed to promote growth and market activity, mainly in central areas. This shaping policy has been paired with stimulating measures focused on making stronger regions more attractive for high-income groups, which indicates both social and spatial selectiveness. Additionally, a lack of spatial planning regulation can contribute to the perpetuation and exacerbation of injustices, for example a lack of sustainability regulation which can become a burden for future generations.

The influence of spatial planners in perpetuating and exacerbating socio-spatial injustices should not be overestimated, but neither should it be disregarded. Spatial planning instruments can influence developments by deliberately putting steering instruments to use. This also means that these steering instruments can be implemented for the goal of justice.

What are the values behind different approaches of spatial justice and how can these values be operationalised for spatial planning?

Spatial justice is a specific focus on the spatial components of social justice, which combines both perspectives of distributive and procedural justice (Soja, 2010; Madanipour et al., 2021). Justice can be described as “the principle of moral rightness” (Buitelaar et al., 2017, p. 110). Justice deals with fairness, but it does not describe what is fair. It is a normative concept which should be given meaning. Different ethical disciplines provide different interpretations of what a just distribution or just procedure entails. These different approaches emphasize different values. For each of these values

it can be argued that they are just, but policies based on these values can result in very different outcomes.

Five distributive justice approaches and three procedural justice approaches and their values have been discussed in the research.

The first approach to distributive justice is based on egalitarianism. An egalitarian approach has the aim that everyone has the same, for which equitable policies are required. The distribution says little about the level of well-being. A utilitarian approach to justice aims for the biggest utility for the biggest possible group. This allows inequalities, even if that means deprivation for some (Buitelaar, 2020). A sufficientarian approach proposes that there are certain thresholds which everyone needs to achieve. Above that threshold the distribution is irrelevant (Rawls, 1971). This approach aligns with the literature on well-being and human needs - particularly human needs theory stresses the need for a base line of need fulfilment (Max-Neef, 1991; Cardoso et al., 2022). Where the sufficientarian approach only suggests a minimum threshold for spatial goods, it is posited in the limitarian approach to justice that consumption above a certain level does not contribute to well-being, so must be redistributed to achieve unmet needs of others (Robeyns, 2019). This redistribution towards urgent unmet needs encompasses some sufficiency thinking. This conjunction is further explored in the consumption corridor model (Di Giulio & Fuchs, 2014; Gough, 2020). This model can be seen as a first step towards operationalisation for spatial planning.

The capabilities approach is a distributive justice theory concerned with *what* is distributed. It stresses that it is not goods or satisfaction that are important measures of justice, but opportunities (Sen, 1985). This relates to human needs-theory, which posits that individuals have different satisfiers for their needs and are independently able to make trade-offs between needs and between satisfiers (Gasper, 2022).

For procedural justice, three approaches have been identified. The liberal approach to planning argues that if the process of acquisition and transfer are just, the outcome should be considered just. The theory on the communicative turn in planning (Healey, 1996) promotes the inclusion of stakeholders in the planning process. Advocacy planning acknowledges that some groups are not able to represent themselves properly. Planners can serve as an advocate to represent the needs of marginalised groups (Ntiwane & Coetzee, 2018).

Each of these justice approaches could be defended as suitable entry points for operationalisation, but it should be considered that the values should be appropriate for the Dutch context and should respond to the problems of social and spatial selectiveness and short-termism.

The justice approaches and associated values deemed most suitable in response to these criteria are sufficiency, limitation, the capabilities approach, the communicative turn and advocacy planning. These justice approaches and values serve as input for the first main design product of this research: the justice framework (figure 8.3). A schematic representation of the justice framework is shown in figure 8.2. It shows a lower and an upper limit to (spatial) resource use, which represent a sufficientarian, as well as a limitarian approach to justice. The space in between these limits can be recognised as a consumption corridor (as developed by Di Giulio & Fuchs, 2014; Gough, 2020). The opportunities between this lower and upper limit are related to the capabilities approach.

The justice framework developed in this research (figure 8.3) is based on the three core values of Sufficiency, Limitation and Opportunity. Unlike egalitarianism and utilitarianism, the value of Sufficiency is expected to receive wide support from the population. The core value of Sufficiency is made concrete through two applied values: I. Availability, which deals with sufficient quantity and II. Acceptability, which deals with sufficient quality. The limitarian approach to justice is the only one explicitly concerned with the issue of short-termism. Limitation represents the boundary of excess, which may detect and respond to issues of intergenerational justice (III. Sustainability) and intragenerational justice (IV. Moderation). The value of Opportunity combines the communicative approach and the capabilities approach. It represents the opportunity to influence the spatial environment (V. Influence) and the opportunity to choose different housing options (VI. Diversity).

Together, these three core values and six applied values are the core of the justice framework and provide a basic structure through which spatial planning can operate. In order to aid analysis and design, these six values are made concrete through three housing dimensions each, which can structure research and strategy development. The outer ring of the justice framework is connected to these housing dimensions and provides possible strategies to address injustices related to the housing dimension.

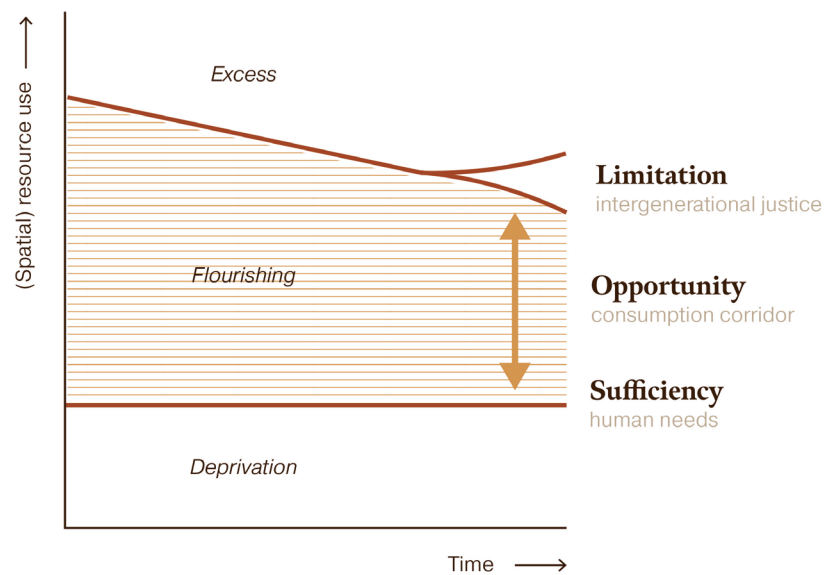


Figure 8.2: Schematic representation of the justice framework, by author.

How can a framework based on justice values help spatial planners to develop a planning and design strategy for housing in a region in the Netherlands?

In order to test how the justice framework (figure 8.3) is actually useful for spatial planners to develop strategies and design that addresses injustice, the justice framework has been tested in the case study area of the Regio Stedendriehoek.

The justice framework has proven to be a very useful instrument for analysis. For analysis it is beneficial that the justice framework is focused on the housing domain, because analysis requires isolating elements. The different housing dimensions in the third ring of the justice framework provide a clear structure on topics that can be analysed.

The presence of the housing dimensions in policy can be reviewed. For this particular case study it is useful that there are multiple policy documents on a regional scale. If this is not the case, policies of municipalities can be analysed, but this is more time consuming. The translation of the housing dimension to spatial analysis is less straightforward. Not all the housing dimensions have an indicator that directly represents them. Therefore, without further guidance on which indicators should be used, the justice framework on itself might not be sufficient for helping spatial planners. However, these indicators have been selected for the case study application in this research, so these could be re-used by others. There is also

good reason to not include these indicators in the framework. It could make the framework even larger, but indicators are sensitive to change because of data availability as well. One limitation in the analysis is that only very few indicators have sufficiency and limitation thresholds. Right now it is up to the spatial planner to determine the thresholds in the analysis. Ideally, these boundaries are established democratically.

For the use of the justice framework as strategy and design tool, the analysis provides invaluable input. The consequent step of clustering is made possible by these analyses. The analyses of the applied values can give an indication of which type of injustices strategies should respond to per cluster.

The step of developing strategies is not directly a part of the justice framework, but the applied values, as well as the outer ring of the justice framework provide guidance and input for strategies. Structuring the strategies along the line of the applied values also is an interesting contribution of the justice framework to strategy development. A multiple-needs satisfaction matrix can help to assess whether strategies contribute to multiple applied values, or can be conflicting with other values. In this way, fruitful strategies which have a wider impact can be prioritised, and potential conflicts can be dealt with immediately.

It remains difficult to develop a detailed design for illustrative cases in the cluster, because spatial planners do not have a direct influence on the

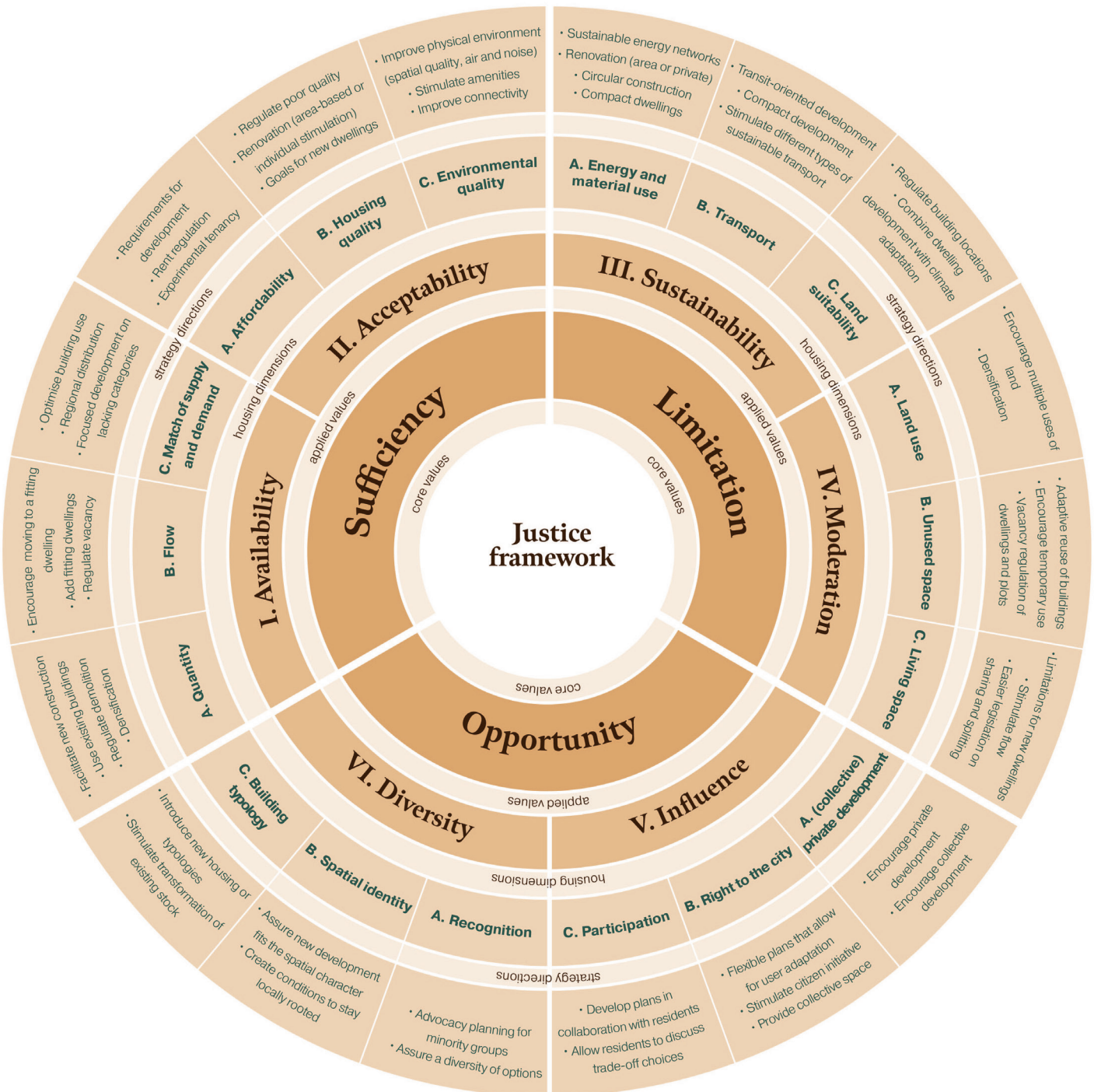


Figure 8.3: Complete justice framework, by author.

execution of many strategies. However, the illustrative cases have shown that when the strategies are applied and executed, they respond well to the issues of the clusters, which is the goal.

Main question

To what extent can a framework based on justice values help spatial planners design for justice in the housing domain in Dutch regions?

Spatial planners operate in a governance setting, which make them dependent on other actors for execution of plans. Thus, spatial planners can develop strategies and apply the instruments at their disposal to the best of their ability and with the intention to contribute to justice, but they do not have absolute power over whether outcomes will be just. That said, spatial planners do have a certain degree of influence, and the justice framework developed in this research can be a useful tool for spatial planners to assert that influence for the purpose of housing justice.

A first benefit of the justice framework for spatial planners is that it summarises and combines different justice theories. In this way, spatial planners that are not familiar with justice literature are given a practical guide which summarises several theories without the need for much further research. The benefit of combining different justice theories is that it allows for a range of different solutions between the thresholds of sufficiency and limitation. The justice framework forces to consider different values and strategies can be assessed on this with the justice framework.

Apart from the summarising role, the developed justice framework helps to structure regional spatial analysis and policy analysis on a wide range of justice values, which can bring to light different types of injustices. Because the justice framework can reveal a wide range of injustices, it can be used in different regions which have different justice issues.

Based on the analysis, clusters can be made of areas that have similar justice issues related to an applied value. This clustering can help reveal which applied values require priority in different areas. Then, based on these priorities, strategies can be developed using the outer ring of the justice framework. The justice framework also provides a structure for strategy development through the applied values. The clusters are described using these applied values, which can indicate priorities. While strategies can be developed for single applied values, an important step in strategy development is assessing how the

strategy performs on different applied values. In this way fruitful strategies can be prioritised and interventions that create conflicts between different values can be avoided or mitigated. This again shows a benefit of combining different justice approaches in one framework.

Although the applied values of the justice framework provide a clear structure for strategy and design, an intermediary step of developing strategy patterns is required. These strategy patterns can be developed with help of the outer ring of the justice framework and based on the policy and spatial analysis. However, this step still requires input from spatial planners themselves. For this, they need to draw from personal observations, best practices, literature and existing policies. Here it becomes clear that the justice framework is not a prescription, but indeed should be seen as a tool that can be helpful to spatial planners for analysis and developing just housing strategies.

Limitations

As has been demonstrated through the application to the Regio Stedendriehoek, the justice framework provides a valuable input for developing planning and design strategies for housing, but it also has some limitations.

First, the justice framework has been developed and tested only by the author. This gives limited insight in the extent to which the justice framework can help spatial planners. This point is further discussed in the epilogue.

Second, the justice framework includes affordability as a housing dimension, because housing injustices such as gentrification and wealth inequalities are related to the affordability of housing. However, the lack of a proper indicator for these complex injustices means that the analysis of this dimension is limited to energy poverty and living expense ratio for social housing. Because of this limited set of indicators, the analysis with the justice framework does not fully expose injustices such as gentrification. Spatial planners should gain information on this from different sources.

Similarly, for several other analyses supplementary knowledge is required, for example about the availability of specific types of housing with care functions. It requires from planning professionals that they look beyond the justice framework.

Thirdly, the use of the justice framework is quite a qualitative process due to the lack of thresholds for

the values of sufficiency and limitation. It would be more likely that strategies get implemented if such norms are established. For controversial or expensive interventions, it is beneficial if it can be supported by evidence that an intervention is necessary. It could be better justified for instance to spend government money on public transport in rural areas if a norm for accessibility is established and analysis shows that this is not sufficient.

Future research

The limitations could be addressed through future research.

First of all, the justice framework can be further developed. It has been mentioned that the justice framework has some qualitative components. It could be further revised by input from other researches, who might wish to include or exclude other justice values or housing dimensions. This accounts for application to the housing domain, but it is also interesting to test if the justice framework can be adapted to other domains than housing, or to a combination of domains including housing. This could be helpful in developing an integral spatial strategy.

There are two specific improvements that could be made to the justice framework. First, the framework could be made more objective. Especially the analysis could be more standardised so that results are comparable between regions. Secondly, the application of the framework revealed that there are no real good indicators for assessing affordability, even though this is an important aspect of sufficiency. The framework could thus still be supplemented with a revealing indicator for this.

Lastly, an interesting direction for further research is the application of the justice framework to a actual practice. Although the strategy patterns for the case study clusters are developed with implementation in mind, the reality of practice might reveal new challenges and opportunities for the application of the justice framework. Challenges might occur due to financial capacity or opportunities because strategies can help address other domains. These type of insights can be revealed through application in practice.

Policy recommendations

A first advice for policy makers is that they should be explicit about the values that guide policy. The research revealed that there are many different approaches to justice, which can also be conflicting.

Clarity in policy avoids conflicts within policy and can create transparency in decision-making.

The most important policy recommendation from this research is that baselines and limits for spatial primary goods should be established. This insight is not novel and for instance recommended by Van Vulpen (2023) as well. However, it is essential for underpinning strategic choices that address injustices. Directing resources towards staying between sufficiency and limitation lines can much better be justified if these lines are established. In order to have support for these thresholds and policies that address them, it is best to establish these thresholds democratically, and that they are not only developed by spatial planning professionals.

Lastly, the application to the case study revealed that there are several very fruitful strategies for addressing injustices which are currently barely applied and sometimes face hindrance from the government itself. Several moderation strategies have a positive contribution to multiple applied values from the justice framework. Making efficient use of the existing dwelling stock might help to create new dwellings, minimise impact on sustainability and create diversity in the dwelling supply, but there are several policies that currently hinder this. Policy could focus more on reaping the benefits offered by moderation strategies, which offer an alternative for 'bouwen, bouwen, bouwen!'. Similarly, cooperative housing has the potential to assure affordable housing where people also have influence on their environment. However, this form of housing requires active stimulation, because it is difficult to obtain financing for such non-profit initiatives.

Reflection

Transferability

The goal throughout the thesis has been to develop a framework which can be applied to different regions in the Netherlands, so transferability has been an important objective. Although I have only tested the justice framework which I developed for this purpose in one case study location, I believe it has good potential to be applied in different places.

The main reason for this is that the core of the framework combines different justice approaches. The core values and associated applied values each have a specific focus and relate to different justice issues. Together this gives a wide range of issues which can be analysed and addressed. In different regions there might be a different combination of challenges, which are likely to fall within the scope of the justice framework. The application in the Stedendriehoek also showed that different areas within a region have a different combination of injustices and that these can be detected and addressed using the justice framework.

The indicators used for the analysis with the justice framework cover the whole of the Netherlands, which is also beneficial for transferability. As has been addressed as a point of further research, the indicators used in this research do not give a perfect image of affordability. This might be more problematic in regions where this is the biggest issue.

The outer rings of the framework are more specific towards the domain of housing, so the framework cannot be directly transferred to other domains. I do believe the core of the justice framework provides a structure that could be applied to other domains. The core of the justice framework could already be used as an assessment tool different domains.

For strategy development, the applied values would need to be connected to different dimensions and strategies for other domains. These outer rings would also require some adjustments in the future or if the justice framework is applied outside of the Netherlands, because the spatial and temporal conditions determine which strategies are necessary. For instance, I developed strategy patterns for the application to the Stedendriehoek. Some of these

strategies could be repeated for other areas, but some of them could be transferred. This part of the research has been more demonstrative and has less transferable results. However, the application process, using strategy patterns and a multiple-needs matrix, can be repeated.

Appropriateness in different socio-political contexts

I have tried to make a justice framework which can be adapted in different socio-political contexts. At least for the value of sufficiency, broad support should be found in the Netherlands, with a strong welfare history. Also for sustainability there is some widespread support. My general impression for all three core values is that people do support these values, and that they can be accepted by politics and residents. Preferably interventions would have minimal negative effects on people's personal life.

It is a blessing and a curse that the lower and upper limit of the core values of sufficiency and limitation are flexible. It is a blessing because this means it can still be applied in a context where there is more resentment towards certain justice values. In the current context, there might not be a widespread acceptance of moderation strategies for example, so the limitation 'ceiling' could be a bit higher. As society transitions, acceptance might grow and the limitation ceiling might be lower (see also figure 8.2). Ideally the limits would be democratically determined to assure appropriateness. However, flexibility is a curse here, because adjusting the limits too much might mean that justice values will be compromised on too much. I would therefore argue that there is a need for some higher level goals which are non-negotiable. When sufficiency and limitation goals are (democratically) adopted on national level, these cannot be negotiated on local level. This prevents the issue of 'not in my backyard' from occurring, while still leaving some room for adaptation of floors and ceilings to the local contexts. For the analysis using the justice framework, these limits have been roughly set by myself. In practice there would have to be more democratic discussion. However, I do believe that the example strategies for the clusters are quite reasonable

strategies, that could get support. Especially because spatial planners are mostly guiding development and cannot force other stakeholders to do things these strategies are not too extreme.

Apart from this, spatial planners are professionals who have a certain amount of independence. This enables them to propose strategies that they believe can contribute to justice. I firmly believe that spatial planners have the obligation to attempt to at least try to develop policy and plans that contribute to justice and well-being of all (future) residents, instead of focussing on enabling growth. Some strategies are prone to more criticism from residents or the municipality, which will require from planners that they take on more of an advocacy role.

Academic and societal value, scope and implication

Academic value

Combining several justice approaches in a framework for spatial planning is quite novel. Although I am not the first to do this, the particular combination of justice values in my justice framework is new. Particularly the justice approach of limitarianism is not often included as an underpinning of justice strategies. The strategies developed for these values are therefore also more unique.

Societal value

My graduation project discusses a very relevant issue. Many people are affected by housing injustices and there is increasing awareness in the country that there is a need for more justice in housing, as well as more recognition for regions outside of the Randstad. In the very recent Contourennotitie Nota Ruimte these points are concluded. This Nota Ruimte is still in development. Awaiting these documents, my graduation projects contributes to the debate on how spatial justice should be given shape in the Netherlands.

This research is primarily valuable to the spatial planning profession. The research has been focussed on developing a tool which can be used by spatial planners in practice. Making it easier for spatial planners to develop just strategies could consequently be beneficial to society.

Scope

The scope of this research has been on housing. The main design results of this research, the justice framework and the application to the Stedendriehoek

are also most relevant to the housing domain. However, I think the research on justice also contributes to a more general social and political debate on the values which drive societal development.

Implication

If the justice framework would be applied to practice, there would unmistakeably be practical limitations. For example, building with bio-based materials is important for the dimension of material use, but the supply of materials is scarce. Apart from this there are economic uncertainties and political goals that may be constricting.

Ethics

There are some steps in this research which are more subjective, such as which indicators to include in the justice framework. The composition of the justice framework is also subjective in the sense that I was the one who chose the combination of justice values. However, this is typical in both design and research. By giving transparency in the way it was developed and which sources are used, I hope this issue is resolved.

Relation between research and design

My graduation project has a strong research component. There are two main design products in my graduation project: the justice framework itself and the strategy and design for the Stedendriehoek case study area.

The first design product, the justice framework, is developed through research. A more applied analysis of current injustices in spatial planning in the Netherlands, based on scientific literature, popular literature, planning policy and data analysis, gave context to the development of this framework. The framework itself is a response to these injustices in planning and is devised based on literature research. This literature is mostly not directly from the discipline of Urbanism, but rather from philosophy, economics and geography. Translating this research to spatial planning, in particular to the context of housing has been a part of the design process, as it requires creativity to combine these disciplines to something practical for analysis and design.

This first design product, the justice framework, guided the further analysis of a case study region. This is again more of a research step. For this context-specific site analysis, there was less literature available. Instead,

I did this research based on analytical mapping and policy analysis. The justice framework did provide a structure for the research, which made it grounded in research to some extent. Nonetheless, this step could have been more rigorously supported with external sources.

The step that followed in the graduation project was again design. This design is a response to the analysis based on the justice framework. In this later stage, in the design application to the Stedendriehoek, there could be a stronger integration of research. I have used the method to refer back to the justice framework (which is in its core based on literature), and for the proposed strategy references to example projects, policy and literature are given, but not all of these sources are scientific. Similarly, analysis of policies and site analysis is more anecdotal. This is to some extent unavoidable, because not all of such strategies are described in scientific literature.

Approach and methodology

My wide scope in the beginning of the process made it difficult for me to formulate an appropriate research question. If the research question is unclear, it is even harder to devise a proper method to address the research question. I thought I had found a good strategy by using foresight methodology. However, visioning gradually became less relevant, especially after P2, so this method did not fit my purpose anymore. Instead, I used a more loose collection of methods to address the research questions. I think these methods are and have been appropriate for my research questions, but I do think that a robust methodology from the start could have given me more guidance throughout the project, because I was quite lost in the possibilities for a long time.

I am happy with the retake for P2, because it forced me to reconsider my research question, approach and methods. In hindsight I should have done this much earlier, but I found it hard to make choices in all the interesting possibilities and was unrealistic about what I could achieve within the time frame.

I started with the Netherlands as a whole as scale of analysis. It was quite difficult to get a grip on this scale, because so much is happening in different locations. Some analyses, such as a stakeholder analysis would be more tangible if they were related to a smaller scale. On the other hand this scale of analysis was very informative for a framework which

should be transferable to different locations within the Netherlands and gave an overview of the different injustices in the country.

While starting without a case study might not have always been optimal, I think the general method to first devise a justice framework which could guide analysis of a case study has been a useful strategy. The complexity of the topic of justice makes it very difficult to apply directly to analysis and design. The intermediary step of a justice framework makes research on justice tangible and operational. I am not sure how I would have analysed a region on different facets of justice without this guidance.

In the end the influence of the regional scale has been limited. In hindsight it could have given more depth to the research if I used the municipal scale instead of the region. It would enable a more detailed analysis, which would perhaps have resulted in more contextualised strategies.

There is also some form of pattern language in my research. I think this step worked well for this research, because it helped to translate the case study analysis to strategy and design. Solutions for justice in housing do not necessarily have a particular shape or form of typical design solutions, so it was helpful that I could combine more abstract policy with more concrete design in the pattern language. When others would use the justice framework I would also advise them to take this intermediary step. In spatial planning practice it might also be possible to do this in a more hands-on way, where the applied values provide a structure for strategy development which is slightly less detailed.

The role of the urbanist

Like many others, I had some difficulty in transitioning from research to design. I might have initially approached the research a bit too much from a Human Geography perspective, where usually the end goal is a better understanding of a spatial problem. But making a design and coming up with solutions is an extra step which has to be made by the urbanist. This end goal is something that I should take into account in the research.

In the research I refer to the 'spatial planner', which might give the impression that it only refers to the governance aspect of spatial planning. However, I also specifically mean the urbanist, the 'stedenbouwkundige' who takes the extra step to present pathways to a desirable future. The application of the justice framework to the Stedendriehoek has

shown that the justice framework can be a useful tool, but the urbanist still has an important role in using their professional experience in developing strategies. I think here lies the importance of the profession of urbanism: translating complex analyses to tangible strategies for a desirable future.

Relation with the studio, master track and master programme

In the Planning Complex Cities studio one of the main drivers for research is “the observation of disparities and conflicts from the distribution of spatial resources across communities and territories.” This studio deals with the larger scale levels and the type of design assignment in this studio generally relate to governance and the way to influence governance. Both are present in my graduation project. The type of problem that I work with is wicked (solutions will generally reveal more questions), which is also particular for this studio, whereas other studios could offer more concrete design solutions.

My graduation topic has several alignments with the rest of the master track of Urbanism. The type of scale, complexity and topics (governance, spatial justice) and associated products (policy changes, strategic plans) align with the courses given in Q3 of the Urbanism track. The improvement of well-being, one of the theory lenses, is central in the second design course of the track. Although the elective ‘Urban Geography’ is not a part of the standard track, the topics addressed in this elective course also relate to understanding the social processes in cities, regional geographies and post-growth planning.

There is also a relation with the master programme as a whole, in particular a strong relation with MBE. In my graduation topic I have focus on the planning of housing, on which a lot of research is done in the MBE department. I use several papers from researchers from this department. In my graduation I introduce a spatial dimension and application to spatial planning, which is not so much part of the MBE research.

My research does not deal with the design of buildings directly, but in my justice framework I do make judgements about the type of developments which are desirable: strategies to make housing more just often relate to more collective, smaller and accessible housing. This would influence the type of design assignments in the discipline of Architecture. The core value of limitation in the justice framework, points to strategies related to transformation, flexibility

and biobased materials. This relates to some of the current research themes in the track of Building Technology.

Finally, there is a relation with other studies, such as Human Geography and Spatial Planning. In particular there is a strong relation with the research on housing inequality and on planning that is carried out in the University of Amsterdam.

Personal reflection

Already before starting the masters in Urbanism I had the idea to explore different justice perspectives in my graduation research. I held on to this idea, but also gradually I got more interested in national spatial planning, as well as post-growth, which I then all tried to integrate in the research project. Frankly, this was a bit too ambitious. I thoroughly enjoyed exploring the literature on these topics in the beginning of the process. As a consequence I kept reading and widening the scope up to a point where I got lost on what the intention of the research was and the product that should result from the research.

I am grateful for being given the opportunity to do a retake at P2. In hindsight I very much agree that the intended outcomes at P2 were not clear enough and I believe that this drastically improved in the four weeks between the P2 and P2 retake. I have tried to make the work I had done up to that point into a coherent story by removing some elements, and reshaping other elements, but this required quite some effort. Having a clearer focus from the beginning might have prevented this. Therefore, a lesson for myself is that I should take more time in the beginning of a project to work on delimiting the research. In order to prevent myself from wandering, I need a clear aim and methodology and to keep the project aim in mind during the process. If I had narrowed down my research earlier, the period up till P2 would have been used more effectively and the narrative of the research would have been more coherent in an earlier stage.

It took some time after a summer break to get back into the rhythm while most students were still enjoying their break. Luckily I did start again early, because I spend a bit too much time looking for quantitative indicators for the analysis before moving on to the actual analysis. The analysis has been extensive and took quite some time, but did help me to get good grip on the region. In the end this left less time for the development of strategy and design. I do think the strategy and design turned out well, but if I had taken a bit more time for this step I could have discussed it more during meetings.

After a year of working on an individual project, I must say I look forward to working in an office where I can collaborate on projects. I am grateful for the assistance given to me by my mentors and by others with whom I could discuss my project, but working alone on the project for a full year, being in charge of all the planning and working on a single project has been quite demanding and stressful at times.

In the end, I have learned a lot; factually, about housing injustices, about the different approaches to justice, about the discipline of spatial planning and its contemporary debates, as well as about the Stedendriehoek. I have been inspired as well by the literature on planning for well-being and post-growth. Although I have confined the role of these topics in the research, these topics will surely remain to have my interest for time to come, as an urbanist and as a person. Lastly, I have learned more about doing research and designing. My main personal lessons are to make effort in distinguishing main and secondary issues, focus on the main issues, and to take the reader and listener along in the narrative.

9. Epilogue

The aim of the justice framework I developed in this thesis research is to help spatial planners develop more just housing strategies. However, in order to limit the amount of elements informing my research, I decided to develop the justice framework without involving spatial planners in that process.

It still remains interesting, however, to get an idea of how and to what extent the justice framework can help spatial planners in practice. I therefore involved spatial planners in the final phase of the research process by reflecting together with them on the finished products. I have spoken to four practitioners in separate semi-structured interviews of roughly one hour long. At the beginning of the interview I gave a presentation to explain the research. To prepare these practitioners I have also sent a short document in advance with an explanation of the research, as well as a list of questions and a consent form for the use of their insights in this publication.

This epilogue discusses the results of these reflections with practitioners.



Figure 9.1: A rural road in the municipality of Epe. Photo by author.

Public sector interviews

I spoke to two different municipal employees who are working in the Stedendriehoek. First I spoke to an employee of the municipality of Deventer, who is involved in the Oranjekwartier neighbourhood and second to an employee active in the spatial domain within the Stedendriehoek. Both wish to remain anonymous, but their name and function are known by the author.

General reaction

After giving an introductory presentation, I asked both interviewees about a first reaction to the values of the justice framework. Both of them appreciated that the justice framework has a wide scope which forces you to consider broader goals and values. The first interviewee liked that the justice framework touches many aspects of well-being and includes a diversity of choices. The second interviewee valued that the justice framework includes a future perspective and mentioned that daily business is focused on sufficiency. Currently sustainability is addressed by using the 'ladder van duurzame verstedelijking', which is a more indirect and limited application of sustainability.

I personally drew a similar conclusion and see the broad combination of values as an advantage of the justice framework. Them independently mentioning this advantage can be seen as a verification of this conclusion.

In line with this, the employee from Deventer mentioned that looking at the core and applied values in coherence forces you to look beyond short-term goals, which can be helpful for analysing and visioning. The values raise the question of 'where do we want to go as a municipality?', which is a question which is not asked enough according to her.

An important point of attention brought up in both interviews is that the justice framework as a whole is quite complex to apprehend upon first view, because it contains several abstract values. However, with the explanation I provided it was clear to both government employees. A possible improvement could be to connect the justice framework more directly to an explanation, for example with an infographic. More importantly, a direction for improvement is to simplify

the justice framework and its explanation to make it easier to understand and use. Language plays an important role in this. The fact that it is now in English is not helpful, but also when translated to Dutch the justice framework and its explanation should be in understandable language. This could also be helpful when discussing the justice framework with councillors, or potentially with residents. The standard within the government is that documents need to be on a B1 language level, which could also be a goal for the justice framework.

Political environment

Both of the interviewees brought up to me that the residents and politics are mainly concerned with the short term. There is a demand to make policy for issues from recent years - even when they are now less problematic, such as buy-to-let practices by investors -, and not so much to make policy based on for instance demographic prognoses. Urgent problems tend to trump potential future problems in this political environment, so policy gets made for these urgent problems. As a response to the housing shortage, new dwellings are prioritised over other spatial functions. The employee from Deventer also mentioned that another factor that contributes to for instance the community garden in the Oranjekwartier disappearing is the necessity for the municipality to make money from development. This shows that also in this location spatial planning is growth-dependent. Equally in the second interview, the financial aspect was pointed out as a leading element of development.

The first municipal employee recognised that the debate on justice can be sensitive, but she mainly saw the justice framework as an opportunity to make the discussion more objective. When the justice framework would be used in policy making, it would force policy makers to consider multiple values in spite of political views. For spatial planners it would be something to fall back on when proposing policies. However, the challenge remains to implement the justice framework in the first place.

Another issue brought up in the second interview is that policy and strategies need to be communicated to residents. Residents often stick up for their own personal interest and have not-in-my-

backyard reactions to proposals. It can be difficult to explain these proposals if they are based on abstract goals.

Application

According to the employee from Deventer, the justice framework could play a role in visioning; for general visions or housing visions, which could be made on the municipal scale level as well as neighbourhood level. The justice framework could be part of a larger set of methodological tools, next to for instance national policy goals, data and participation, which can be used together to develop policy. Nonetheless, both interviewees viewed the justice framework primarily as an assessment framework, where the core and applied values force to consider a broad set of values.

Also the second municipal employee I spoke to saw best use in an assessment function and believed the step to strategies was quite sudden, which would make it more difficult to explain to residents. This employee would therefore only use the justice framework as an internal tool and not for communication with residents. For this internal use, the second interviewee thought employees in the spatial domain (in municipalities as well as the region) would be interested to use the justice framework in a short workshop-setting. In this form it would be a refreshing way to disrupt daily business.

Influence of spatial planners

The employee from Deventer I spoke to has an advisory role to the government. Municipal employees have specific knowledge which they provide to the government. This knowledge can then be used for decisions. According to her there is a good cooperation between officers and the municipal government in Deventer, where many policies made by employees are implemented by the government. She was unable to say to what extent the suggestions made by employees challenge current policies, or whether they are already adjusted to the political views of the government. The second interview shed more light on this: employees do consider the political desires of their government when drafting policies, but also make their own considerations and do advocate for the groups that suffer most from scarcity; in fact advocating is the core of the work. It can be helpful to plead for more vulnerable groups if there are some objectives for them from a higher level of government.

Something that is constraining the use of the justice framework in a municipality is that the justice framework has quite a broad scope. Many employees

or departments are more focused on a single topic and do not have such an integral view. However, this is something that the municipality of Deventer is working on by appointing area managers. These kind of individuals are more aware of the trade-offs that are made in an area and such people could be using the justice framework to assess these trade-offs.

The second municipal employee pointed out that the housing domain is never an isolated domain, so policy-makers already take a broader perspective into account there.

Evaluation

Overall, the interviewees think that the broad view offered by the justice framework is useful and often overlooked. The justice framework would mainly have an internal function and not necessarily be used to communicate with residents. For both of them, the broad view makes the justice framework useful as an assessment tool. For that, the core is the most important, so the justice framework could be slimmed down to make it easier to understand directly for a wider group of people.

Nonetheless both employees thought that the possibility to develop strategies with the justice framework is interesting, because it allows the translation from abstract goals to insightful strategies. Perhaps the justice framework could therefore also be used in a workshop-like setting.

Private sector interviews

Secondly I spoke to two people of the office RUIMTEVOLK, which is a multidisciplinary office working on several facets of spatial planning. In their work they primarily assist governmental bodies on developing policy and design. I spoke to the director, Sjors de Vries, who has been educated as a human geographer and in his work has specialised in spatial strategies and governance. Secondly I spoke to Janneke Rutgers. She studied Urbanism in Delft and obtained a PhD on regional collaboration in shrinking regions at Radboud University and is active as researcher, adviser and board member at RUIMTEVOLK.

First impression

Sjors could personally affiliate with the values of the justice framework. He saw a connection between the core values of the justice framework and some commonly used phrases in spatial planning: he hears and uses phrases himself such as 'getting the basics right', 'opportunities for everyone' and 'not everything is possible in scarce space' to indicate the values behind sufficiency, opportunity and limitation. At least within the spatial planning domain these phrases and values are widely accepted, which makes him believe that the justice framework could be accepted by policy makers.

He did agree with me that policy makers can get less enthusiastic about these values once costs and efforts need to be made.

Demand for the justice framework

Although in practice municipalities are already dealing with many elements of the justice framework, ideological ideas are not usually the driver for policies. Instead, the starting point for policy is often concrete questions like 'what do starters need?' or 'what do seniors need?'. An office such as RUIMTEVOLK therefore does not get approached with the more abstract question to develop justice strategies for a municipality.

RUIMTEVOLK does get asked to co-develop environmental visions and housing visions for municipalities. Such vision documents are logical places to implement the justice framework and its strategies, because in such policies it is more common to discuss values. Although clients do not always use

the term 'justice', it is often something they indirectly mean (such as a combination of the phrases above). As an advisor you can subsequently draw attention to the value of justice. It is then very helpful if you already have a set of strategies developed, so that you can immediately discuss and propose solutions.

According to Janneke, the influence you have as an external spatial planner is mostly indirect. External advisers provide possible solutions, which is the best advice possible based on the knowledge they have. They can provide guidance and put forward dilemma's, but ultimately it is up to politics to decide. After all, this makes the process more democratic.

As an advisor you can also discuss the desired type of governance with clients, to propose strategies which fit the governmental strategy. The colour coding of the strategy patterns can help with this, but also a different similar classification could be used.

Using the justice framework in practice

The most interesting parts of the justice framework to both Sjors and Janneke were the ring of strategy directions and the pattern language. They think it is useful that the justice framework translates abstract values to concrete interventions. In Sjors's experience, "policy makers want to have things as concrete as possible.", so it helps to immediately make the jump to strategies. Both Sjors and Janneke brought up that municipalities who come to a private office are looking for strategies, not theories and extensive time-consuming analyses. Janneke did believe that the theoretical angle from the justice framework helps to depoliticise strategies, while still being recognisable for different political parties. Also Sjors saw the value of a theoretical underpinning to the strategic solutions they offer, so he would include the justice framework as a source in the appendix.

In Janneke's experience policy making is dominated by daily business and products should be finished sooner rather than later. There is not often time to follow extensive procedures, so it is unlikely that the same process could be followed as I did in my research. Janneke therefore sees most use in a more standard set of strategies which can be used in multiple projects. It would be helpful for an office

like RUIMTEVOLK to have a set of strategies ready which also take the long term into account. The kit of strategies could gradually be expanded in an office to be used in different locations.

Apart from making the jump from values to concrete strategies, Sjors believes the strategy patterns also have the potential to be developed into a visually enticing product, which can help convince clients to adapt strategies. Different patterns could be combined in an image to showcase different possibilities simultaneously. His suggestion would therefore be to further develop the outer ring of strategy directions or the pattern language. In my research I made a set of strategy patterns to respond to the challenges in the clusters, but he thought it can be interesting to make this pattern language more general so that it can be applied to different projects. As has been pointed out in the research already, the clusters which I made based on the analyses are more or less similar to the clusters in other research. Using such standard clusters could be a way to make these strategies transferable, while still responding to injustices which are more specific to different environments.

The place where these strategies would most likely be applied according to Janneke is in housing or environmental visions. This could be in the form of a one-directional advice from the office, but Janneke also saw potential in the use of the pattern language as way to make discussions interactive. This type of game-like participation could be done with residents but also with policy-makers only. By allowing participants to only choose a couple of strategies, a prioritisation could be made. Using the strategy patterns as cards could also be insightful for the different preconditions, synergies and conflicts, because you can force participants to also choose a mitigating pattern when a strategy has a negative influence on another justice value.

I think this is also a very interesting way to use the justice framework and the pattern language in practice. It would require a minor adaptation of the strategy pattern cards to also show the multiple-needs (dis)satisfaction on the strategy patterns themselves, whereas that is currently visualised in a separate figure.

Regional scale

I was also curious about Janneke's opinion on the regional perspective I used for developing the justice framework. Her idea about this was that whether application is possible on a regional scale really depends on the existing structure. If there is already

regional collaboration, it can make sense to use a tool like the justice framework on regional scale. If there is no established collaboration the regional scale will only add more complexity to policy-making, which decreases the likelihood of implementation. However, it did not appear to Janneke as if the justice framework is only specific to the regional scale. Because policies regarding housing are already mostly made on the municipal scale, perhaps that would be an even better scale of application.

As a side-note on the aspect of regional collaboration: each municipality already has some regional policy in the form of the obligatory Woondeals, so there is always some policy which can be analysed.

Language

A very fair point made by Sjors is that the justice framework is developed for the Dutch context, but that the justice framework itself, as well as my research to support it are in English. In his experience, "English stories do not catch on" in the Dutch spatial planning practice. In order for the justice framework to be applied in the Netherlands, it would be important to have a version in Dutch.

According to Sjors, the way in which language is used is also important, for instance for the strategies. He stresses that strategies should not be formulated in a moralistic and directive way. Instead, they should be written and visualised in such a way that they are aspirational and guiding. Upon his first glance the justice framework is not too directive, because it proposes rather than prescribes possible strategies and these strategies are formulated in such a way that they do not invoke immediate criticism.

Application to the housing domain

The justice framework is focused on the housing domain, but in contemporary planning practice the goal is often to make integral plans. Asked about her view on this, Janneke said she saw mainly benefits in this domain isolation. Even for the development of environmental visions, which are supposed to combine all spatial domains, domains are often isolated in order to assure profoundness. These environmental visions also often result in several 'programmes' for execution and housing is often one of those programmes. A practical challenge that arises in this process is that not all strategies and programmes for the different domains have a similar development path, which often means that strategic plans for domains that are finished first create conditions for the strategic plans that follow in other

domains. Such effects from other domain policies are not taken into account in the development process in the justice framework. Testing whether strategies are preconditions, synergies or conflicts between different domains would be very interesting as well. Because such multiple-domain integration was not part of my thesis research, this step would require extra research.

Evaluation

Both interviewees thought the justice framework is a comprehensive product which can be connected to common goals and can help to depoliticise strategies. It allows to make the jump from goals to strategies, which is exactly what is requested from an advisory office. Therefore the strategies that follow from the justice framework are most relevant for a commercial office. But they would develop a standard set of patterns which they could use in different projects, because of time restrictions in projects. These strategies are more tangible and can immediately be discussed with clients. A benefit which I did not touch upon in my research is the way in which such strategy patterns could be used interactively in spatial planning. It is more likely that this would be done on a municipal level than on a regional level, because this decreases complexity. Perhaps this municipal level is also more democratic, because elected officials would make the final decisions.

A standard categorisation of clusters can be used for this and some further development of strategies would be necessary to cover all clusters. If an extensive set of strategies is already developed, the outer ring of the justice framework loses a part of its function and could be removed from the justice framework, which has the benefit that it would make the justice framework less overwhelming. If the justice framework is adapted, it should be made in Dutch as well and use clear language.

Discussion

Common

All respondents could affiliate with the justice values in the justice framework and believed they were relevant to spatial planning. They appreciated the comprehensive scope from the combination of values. The interviewees also expressed that the justice framework is quite theoretical and abstract, which is not usual in spatial planning practice. This theoretical angle makes the justice framework somewhat difficult to understand immediately, although it is clear with some explanation. The theoretical nature makes the justice framework mostly relevant to internal use or as source for strategies. In order to use the justice framework for a wider audience it is important to use clear and positively formulated language. There are already several phrases common in practice, which could connect the justice framework to current debates.

A common notion is that the justice framework is applicable to multiple scales, not just the region. Implementation would be more likely on the municipal scale. All interviewees pointed to housing visions and environmental visions as areas for application, because discussions of values are more common in the development of such documents. The discussion of values in the justice framework is not so much part of daily practice in municipalities, which is more concerned with urgent short-term problems.

Differences

Because there is often a short-term focus in daily practice, there is not much time for extensive analyses. The interviewees would therefore be less likely to use the justice framework for analysis. A clear difference between the public sector interviewees on the one hand and the private sector interviewees on the other hand is which part of the justice framework they would use. Both public sector employees viewed the justice framework as an assessment tool, for which the core of the justice framework is most valuable. The interviewees from the private sector had a clear interest in the strategies following from the justice framework. They would be interested in a standard strategy pattern language which can be used in multiple places, possibly as an interactive discussion tool.

This distinction makes sense, because such a standard toolkit is only relevant to private offices who work in multiple locations and not for municipalities who cannot reuse strategies in a different place. It also aligns with the nature of the work, because private offices usually get approached with the question to develop strategies.

Possible improvements and further research

The last point leads to a first direction of further research, which is to create a full pattern language based on the justice framework, to be used in different projects. This could be a useful way to discuss strategies with policy-makers and potentially with residents. In order to make such a pattern language, standard clusters could be used.

A second improvement is to make the justice framework more easily understandable for a wider audience. The justice framework should be in Dutch, be connected to a concise explanation, should limit information density and should be in understandable language.

With these improvements, the justice framework could be used as an assessment tool, a discussion and participation tool and be used for strategy development in different places and for different scales. In this way, the justice framework is a useful tool for spatial planners from both the public and the private sector, which maximises its impact.

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Appendix A

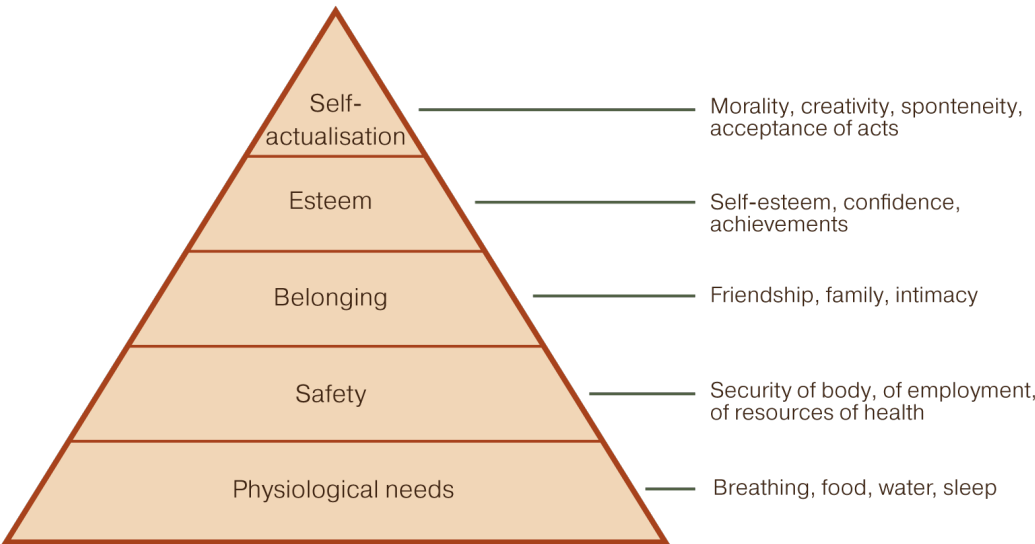


Figure A. 1: Maslow's pyramid of needs, adaptation from Maslow (1943)

Appendix B

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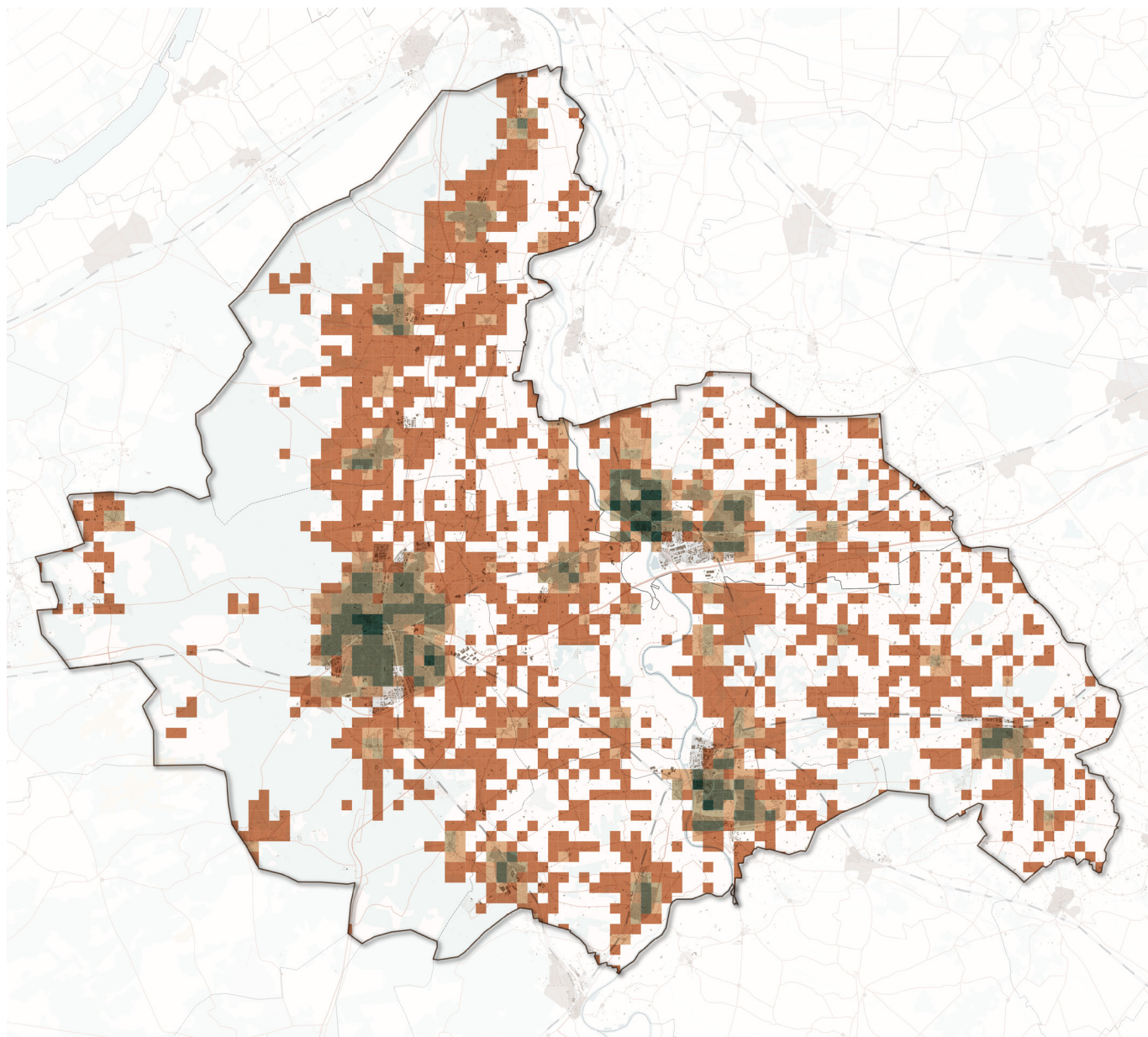


Figure B.0: Number of dwellings per 500x500m square (CBS, 2021)

Dwelling density

Legend

Number of dwellings, 2021,
500x500m squares

- 0 - 50
- 50 - 200
- 200 - 500
- 500 - 1.000
- 1.000 - 1.285

0 5 10 km



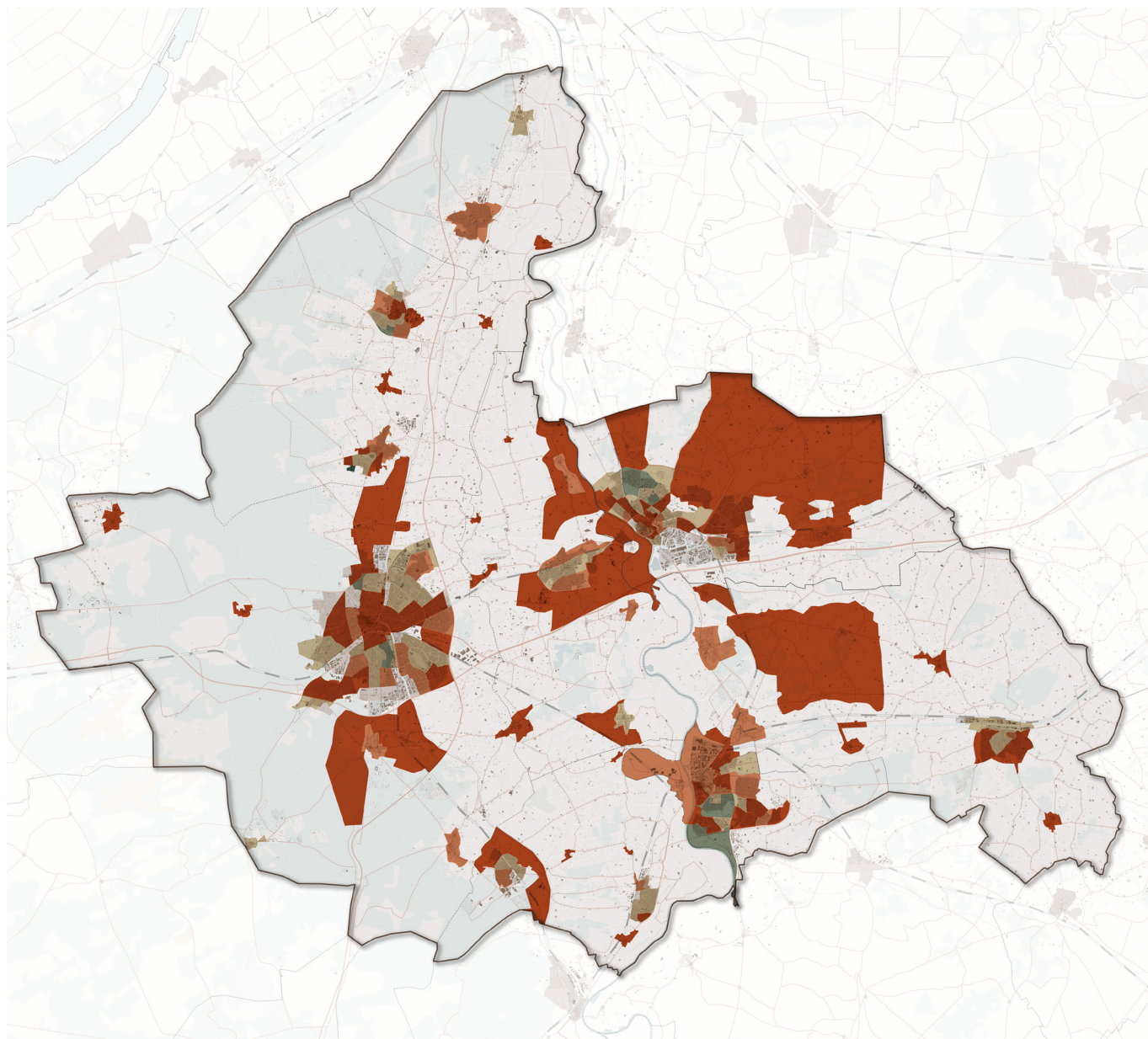


Figure B.1: Share of dwellings owned by housing associations, buurt level (CBS, 2021b)

Share of dwellings owned by housing associations

Legend

Housing association [%], 2021, buurt

- No data
- 0 - 25
- 25 - 35
- 35 - 60
- 60 - 80
- 80 - 100



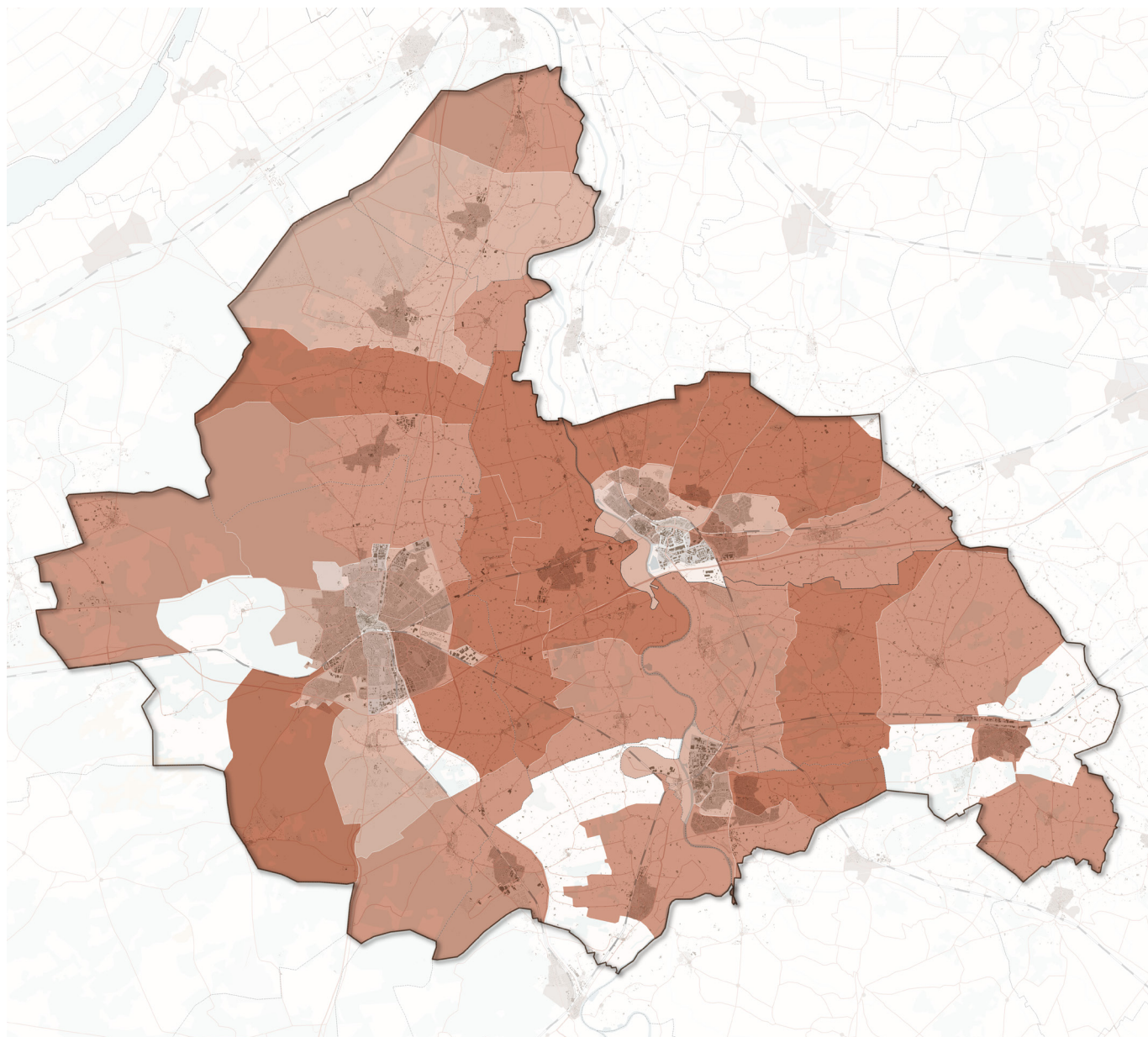


Figure B.2: Mutation rate of owner-occupied housing, wijk level (ABF Research, 2023)

Mutation rate of owner-occupied housing

Legend

Mutation rate owner-occupied housing [%], 2021, wijk

- 2 - 3
- 3 - 4
- 4 - 5
- 5 - 6
- 6 - 7,2

0 5 10 km



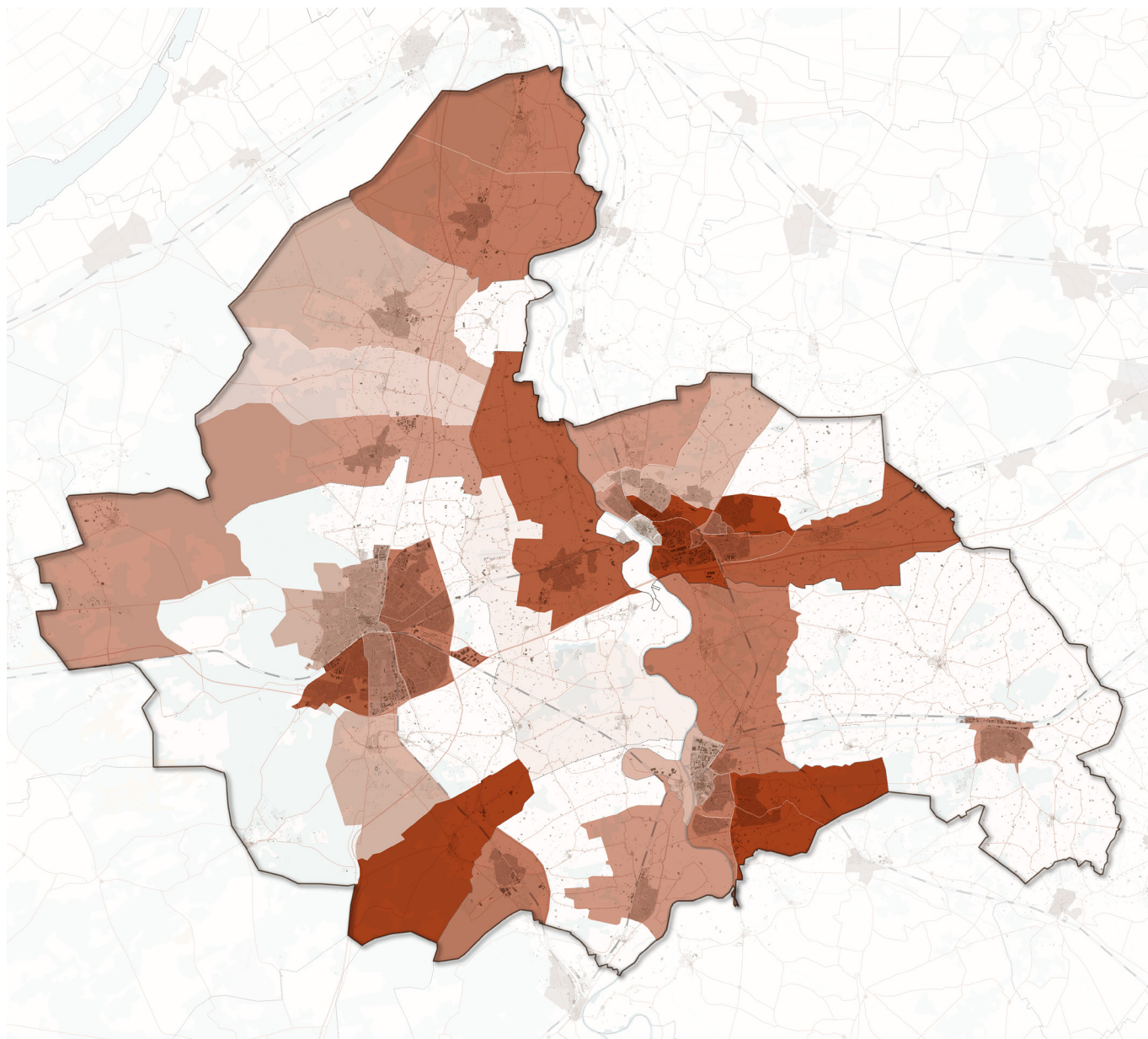


Figure B.3: Mutation rate of social housing, wijk level (ABF Research, 2023)

Mutation rate of social housing

Legend

Mutation rate social housing [%],
2021, wijk

- 4 - 5
- 5 - 6
- 6 - 7
- 7 - 8
- 8 - 9
- 9 - 10
- 10 - 10,7

0 5 10 km



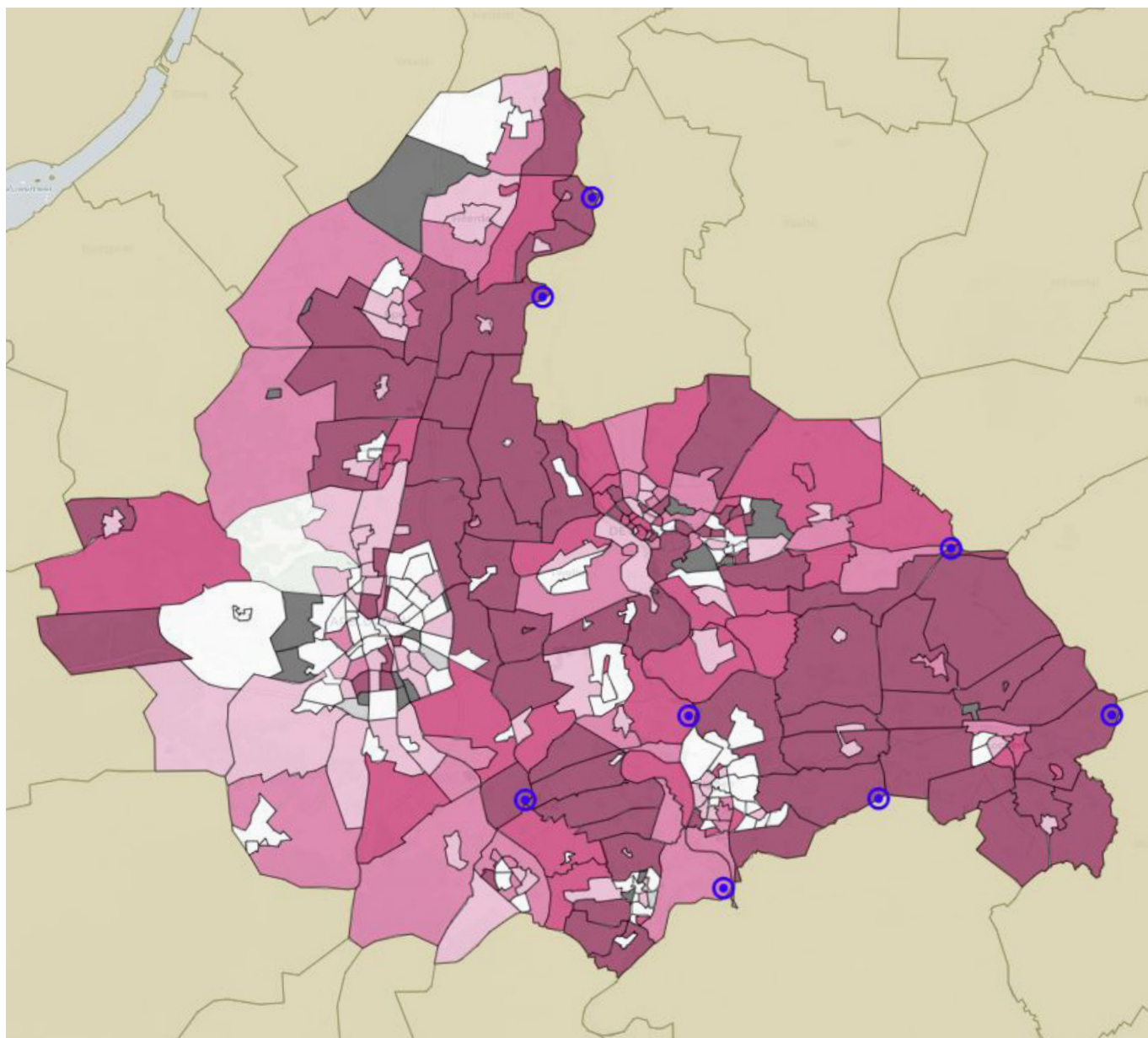


Figure B.4: Supply relative to demand of elderly housing (Zorgopdekaart, n.d.)

Supply relative to demand of elderly housing

The expected demand of dwellings suitable for elderly, based on demographic characteristics, compared to the share of housing that has the potential to be adapted to the needs of elderly.

Legend

Biggest demand compared to supply of dwellings suitable for elderly

- Onbekend
- 0%-27.5%
- 27.5%-55%
- 55%-82.5%
- 82.5%-110%
- >110%



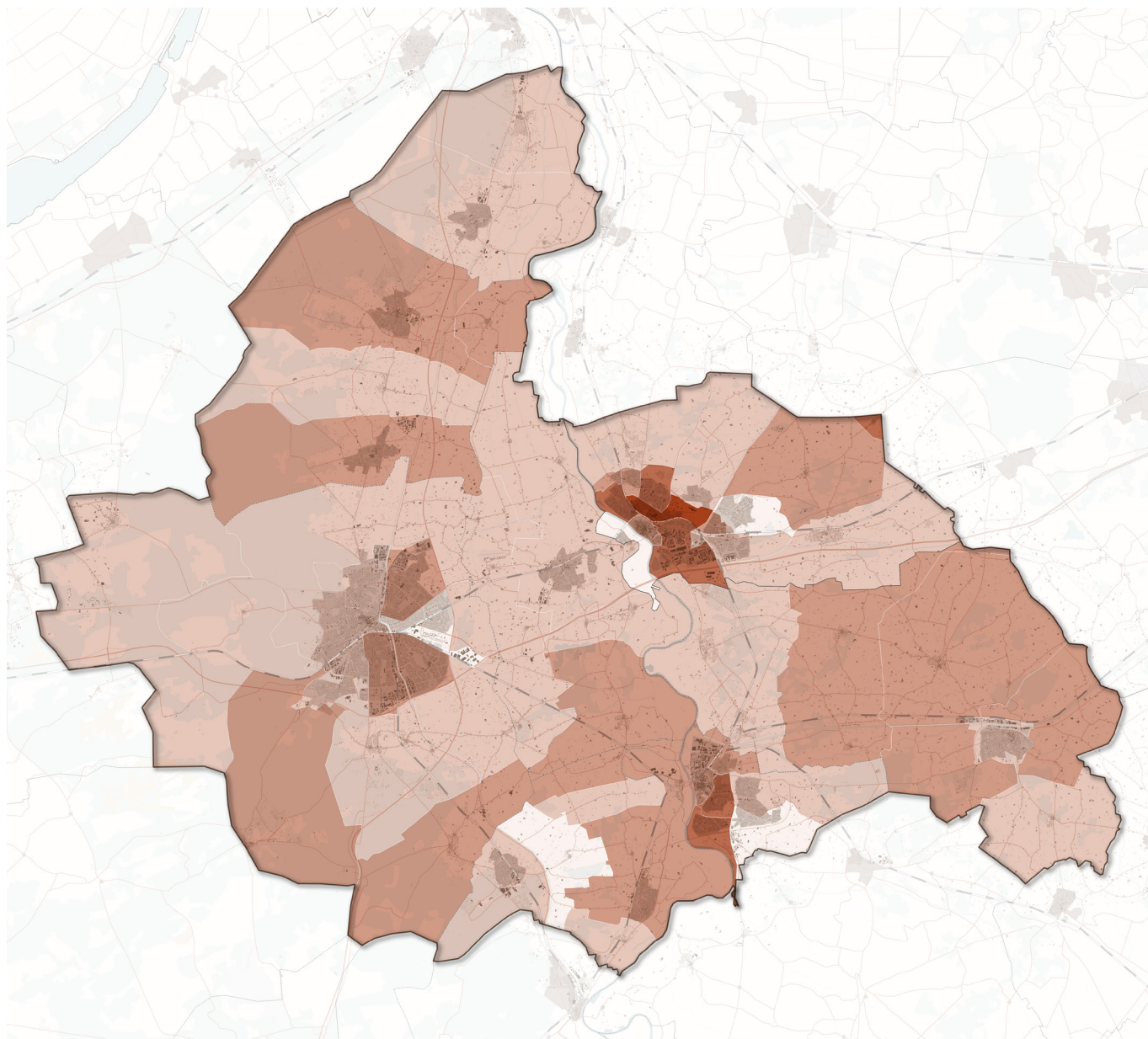


Figure B.5: percentage of households experiencing energy poverty, wijk level (TNO, 2022)

Energy poverty

Estimated share of households with a low income and a dwelling with a very bad energetic quality per district.

Legend

Energy poverty, TNO, 2022, wijk
[% of low income households with
high energy costs or housing of
very bad energetic quality]

- 0 - 3
- 3 - 5
- 5 - 7
- 7 - 9
- 9 - 11



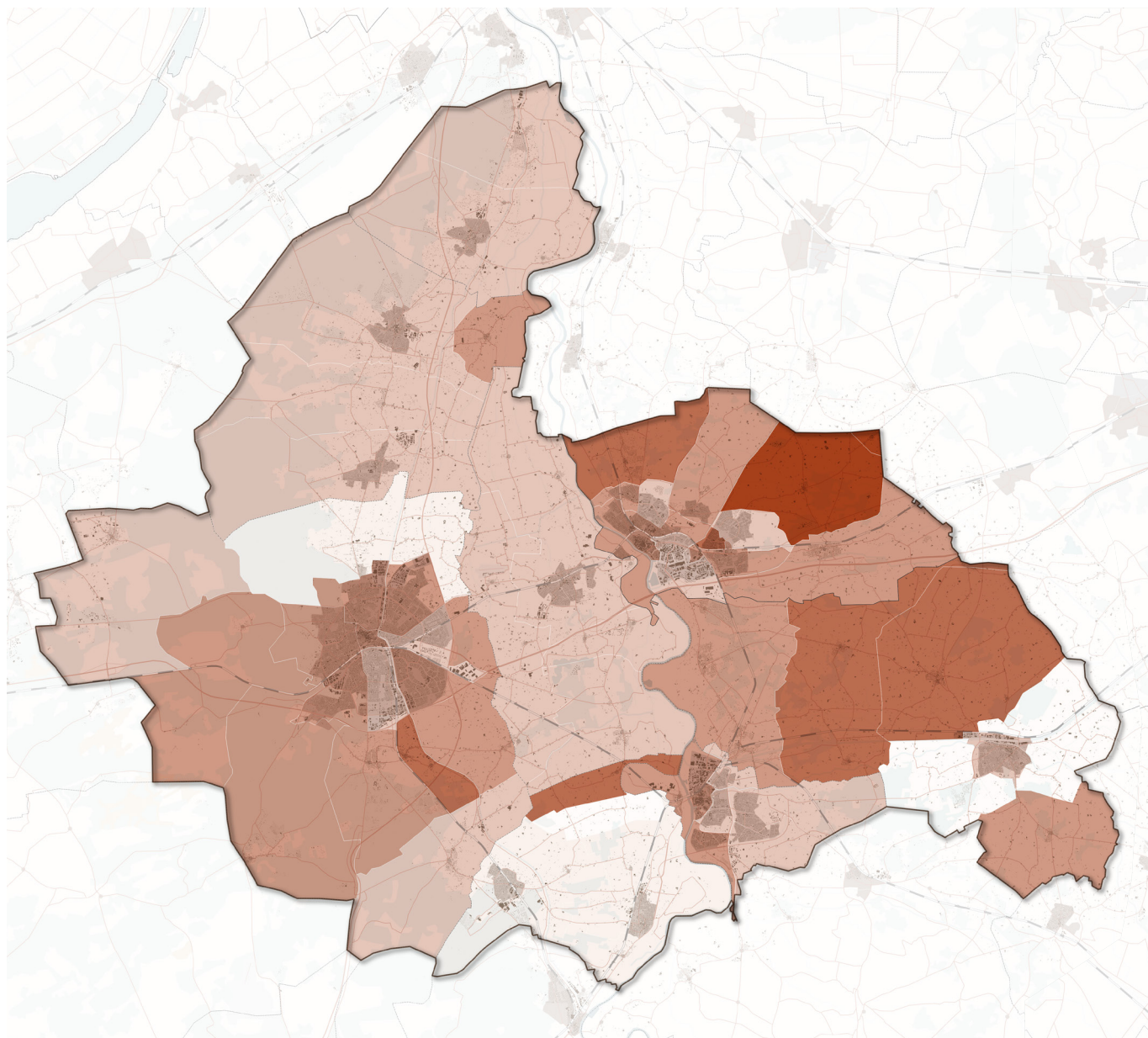


Figure B.6: Net living expense ratio in social housing (ABF Research, 2023)

Net living expense ratio in social housing

The living expense ratio is the total share of housing expenses (rent, energy, service costs and municipal taxes, reduced by the rent allowance) in relation to the net household income.

Legend

Netto Living Expense Ratio,
Wijk, 2021

- 20 - 30
- 30 - 32
- 32 - 34
- 34 - 36
- 36 - 38,4



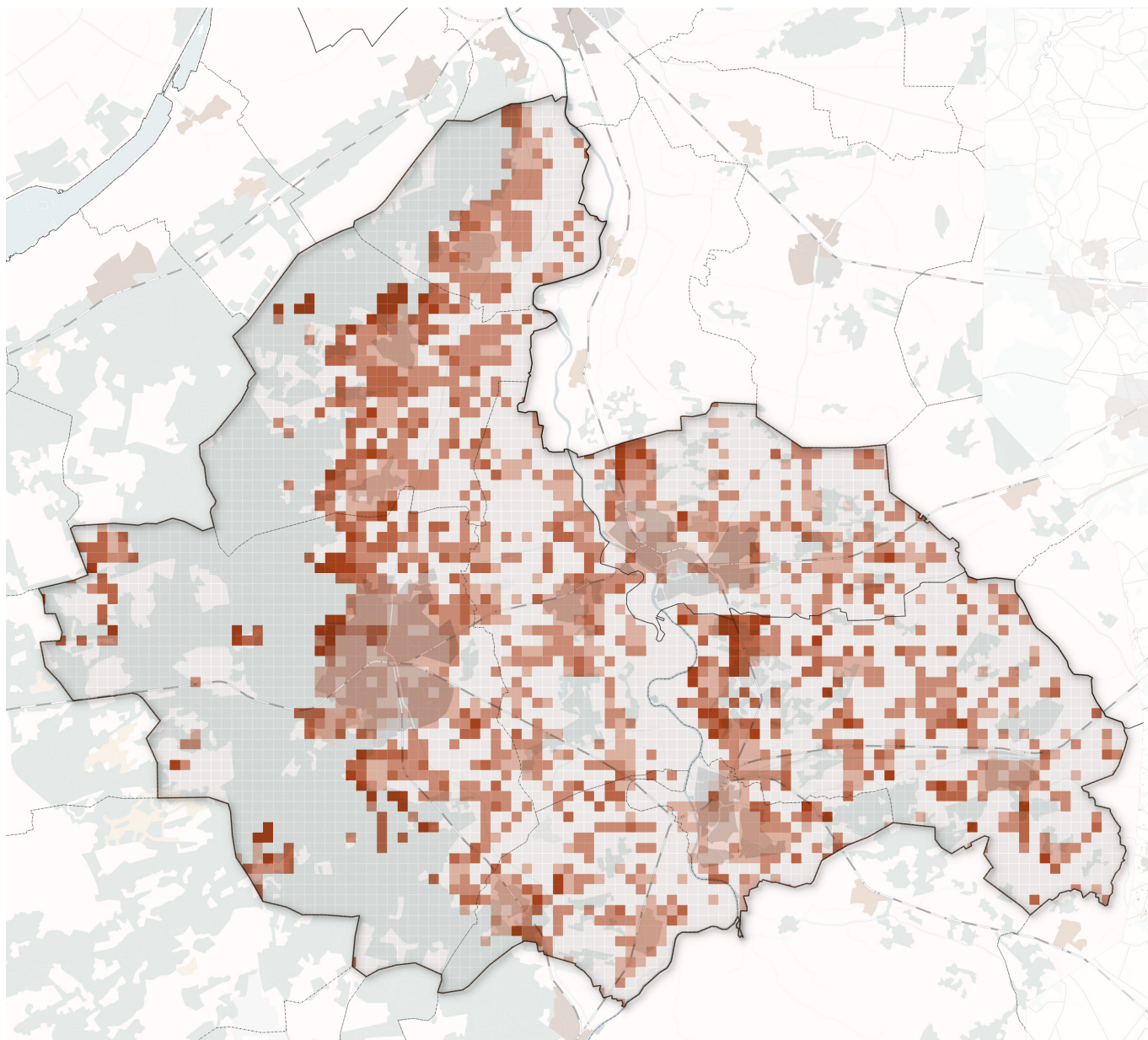


Figure B.7: Average WOZ value per 500x500m square (CBS, 2021)

Average WOZ value per 500x500m square

Legend

Average gas use per household [m3], 2020

- No data
- 0 - 500
- 500 - 1.000
- 1.000 - 1.500
- 1.500 - 2.000
- 2.000 - 2.500
- 2.500 - 3.000
- 3.000 - 3.320

0 5 10 km

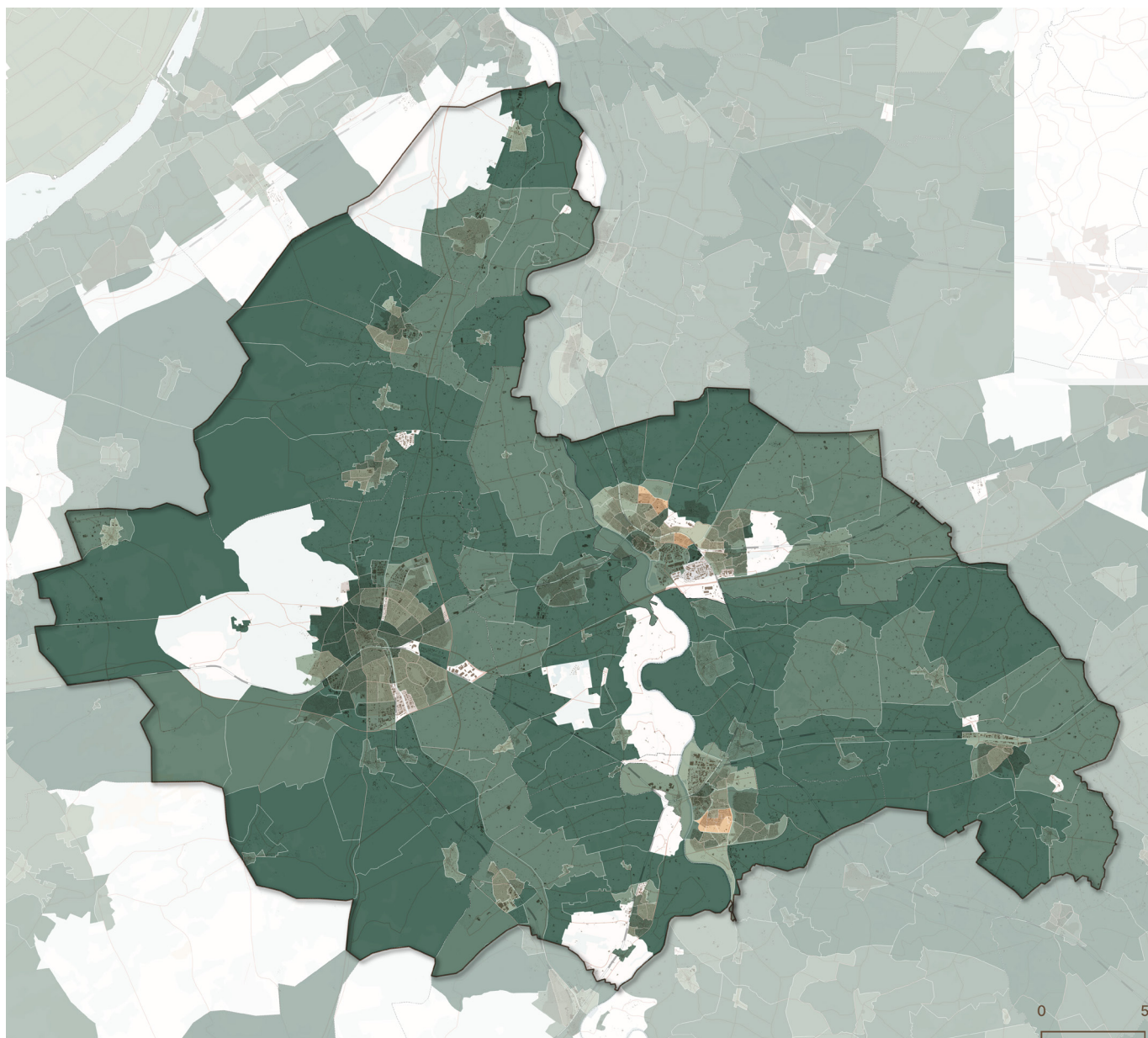


Figure B.8: Leefbaarometer 2020 total score (Leefbaarometer, 2022)

Leefbaarometer 2020 final score

Legend



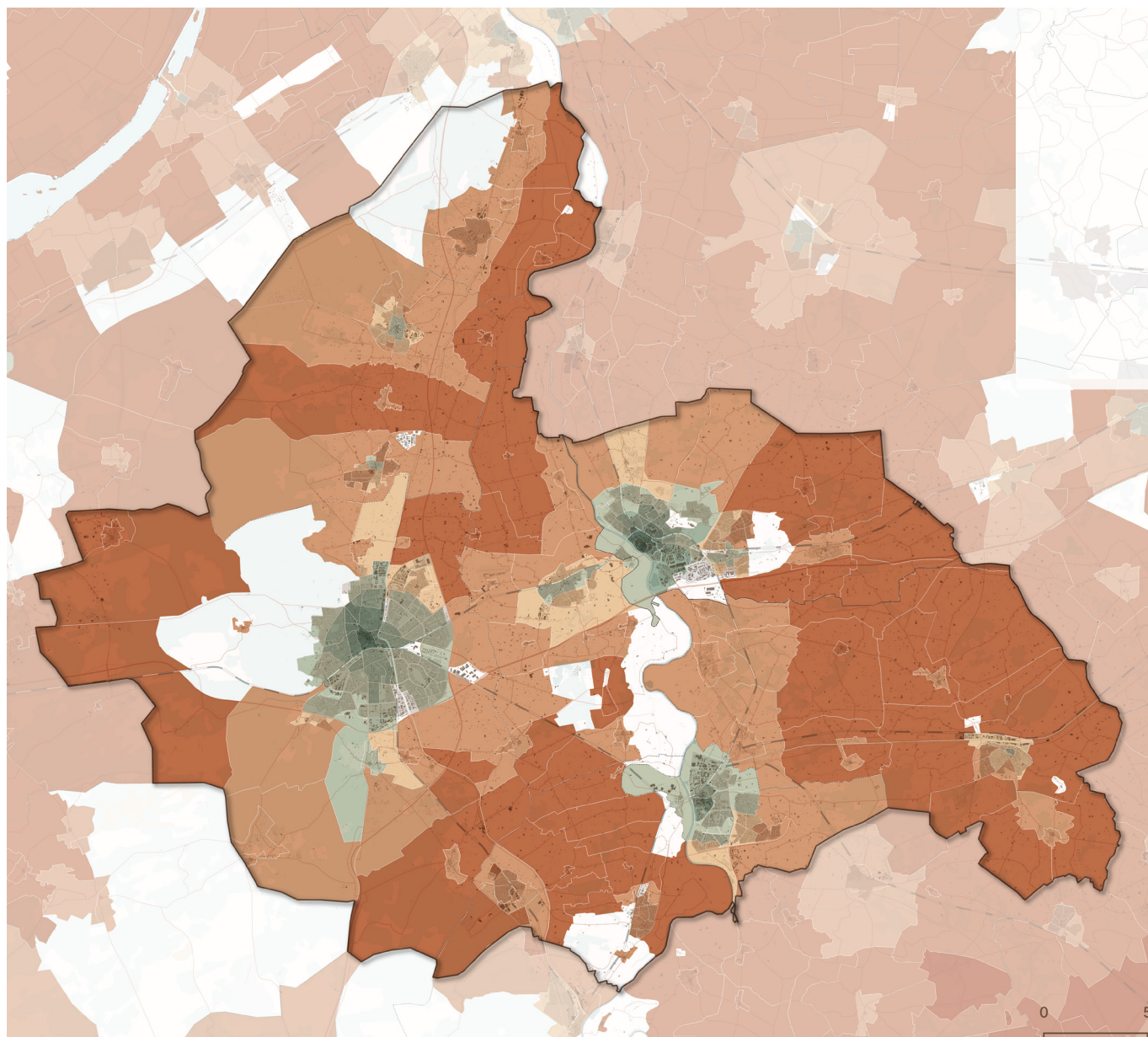


Figure B.9: Leefbaarometer 2020 score for the amenities dimension (Leefbaarometer, 2022)

Leefbaarometer 2020 amenities score

Legend



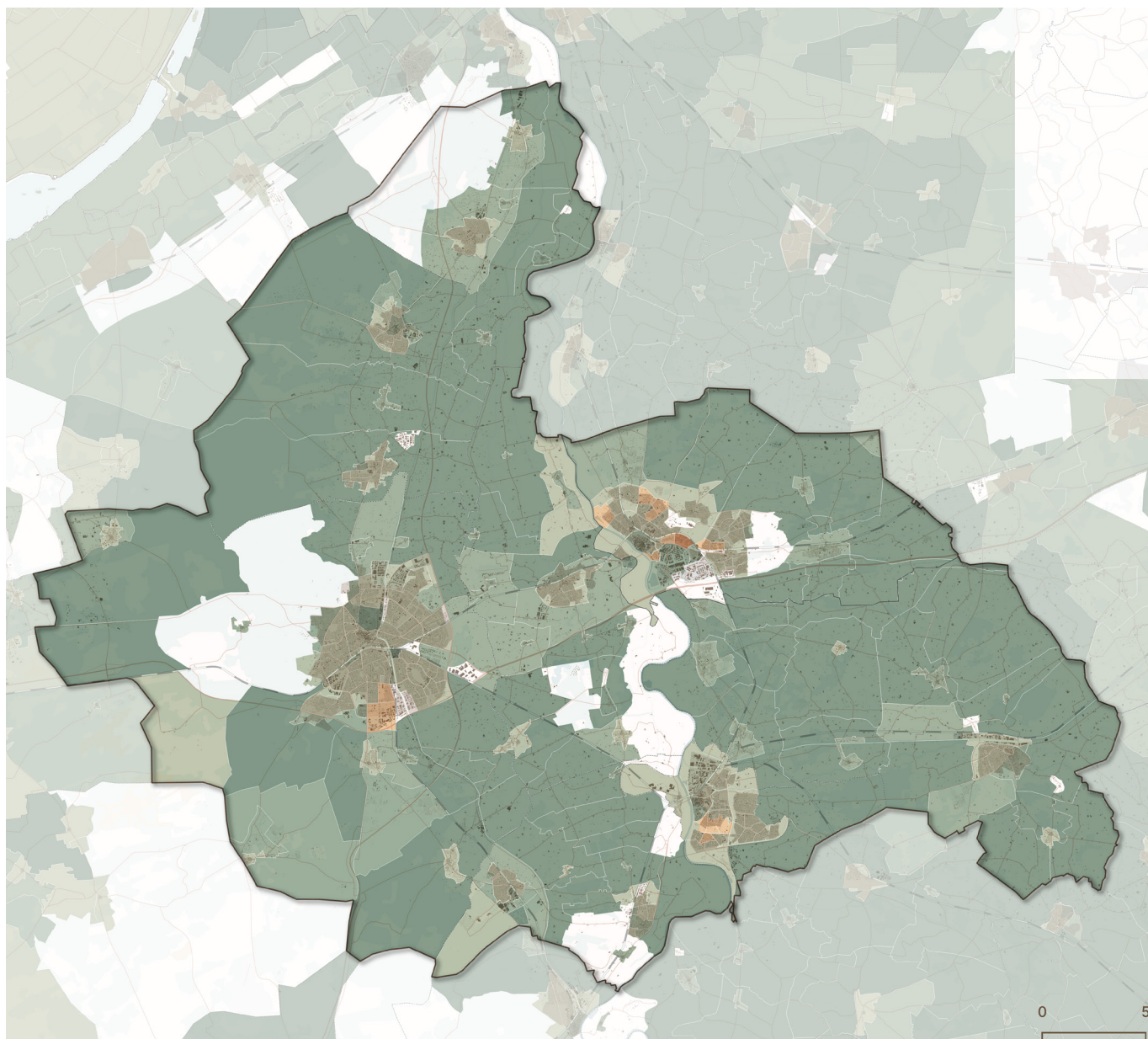
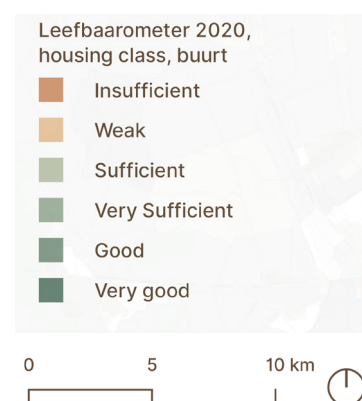


Figure B. 10: Leefbaarometer 2020 score for the housing dimension (Leefbaarometer, 2022)

Leefbaarometer 2020 housing score

Legend



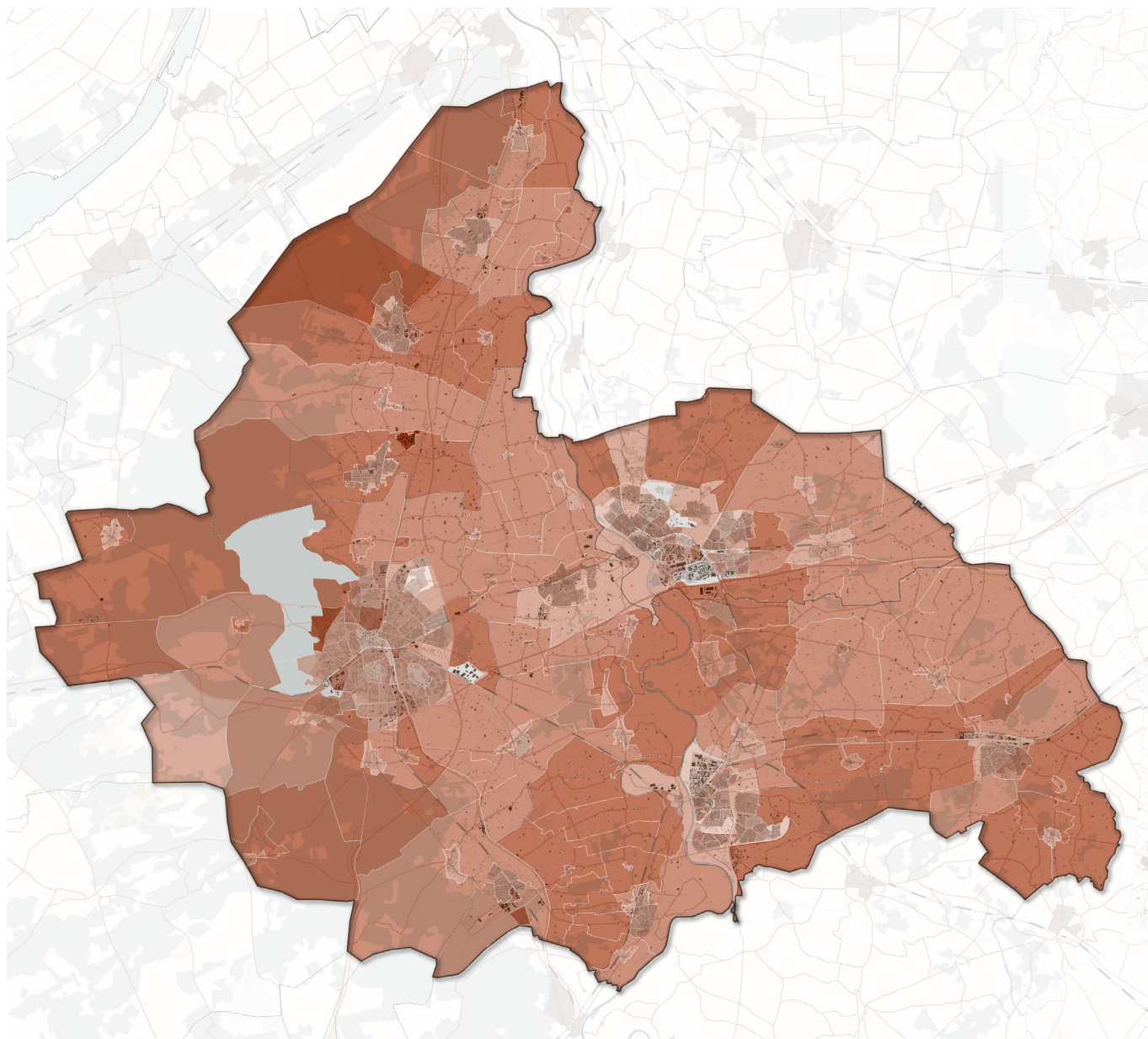


Figure B. 11: Average gas use per household, buurt level (CBS, 2020)

Average gas use per household

Legend

Average gas use per household [m3], 2020

- No data
- 0 - 500
- 500 - 1.000
- 1.000 - 1.500
- 1.500 - 2.000
- 2.000 - 2.500
- 2.500 - 3.000
- 3.000 - 3.320

0 5 10 km



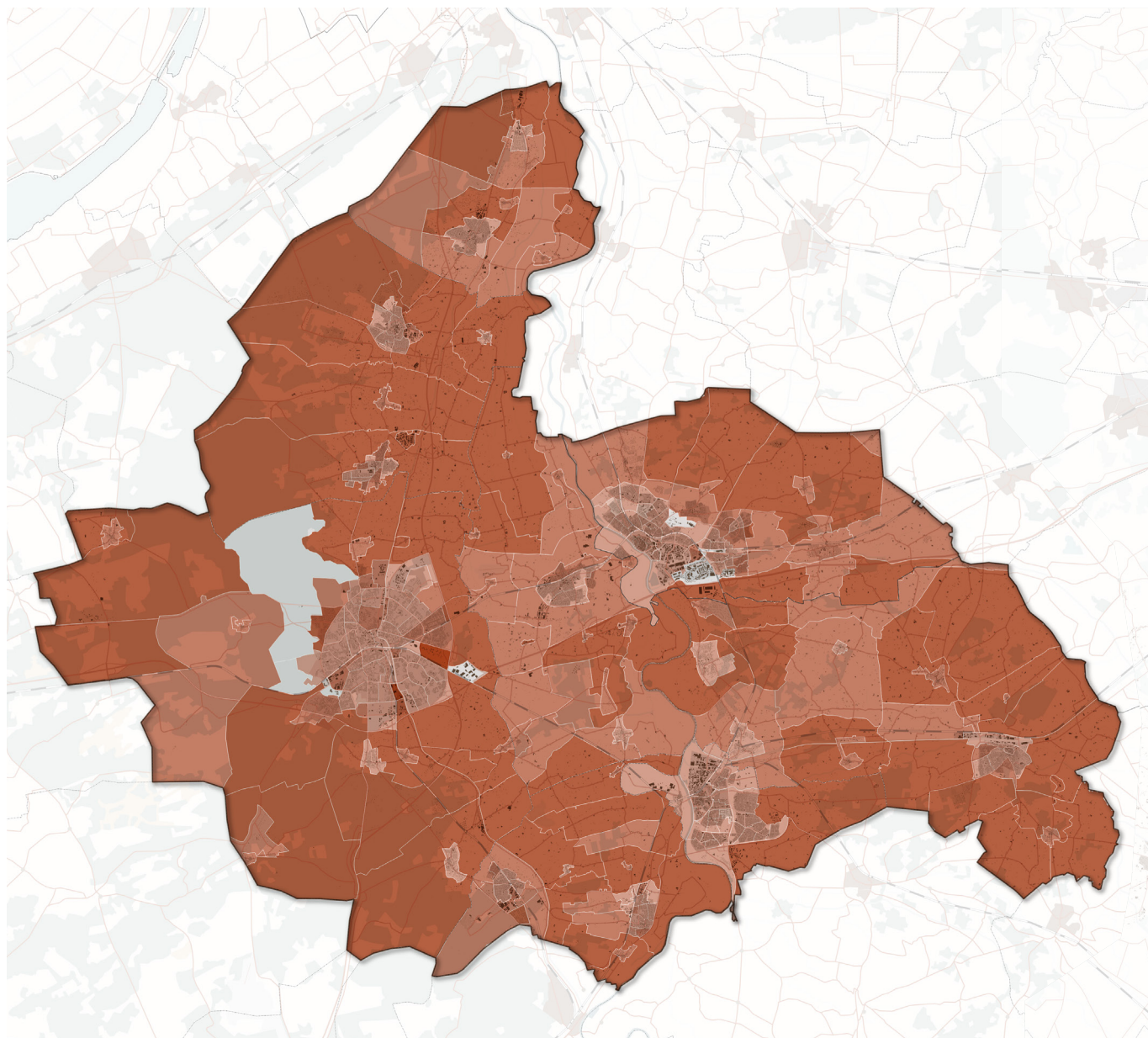


Figure B. 12: Average electricity use per household, buurt level (CBS, 2020)

Average electricity use per household

Legend

Average electricity use
per household [kWh], 2020

- No data
- 1.000 - 2.000
- 2.000 - 3.000
- 3.000 - 4.000
- 4.000 - 5.000
- 5.000 - 5.380



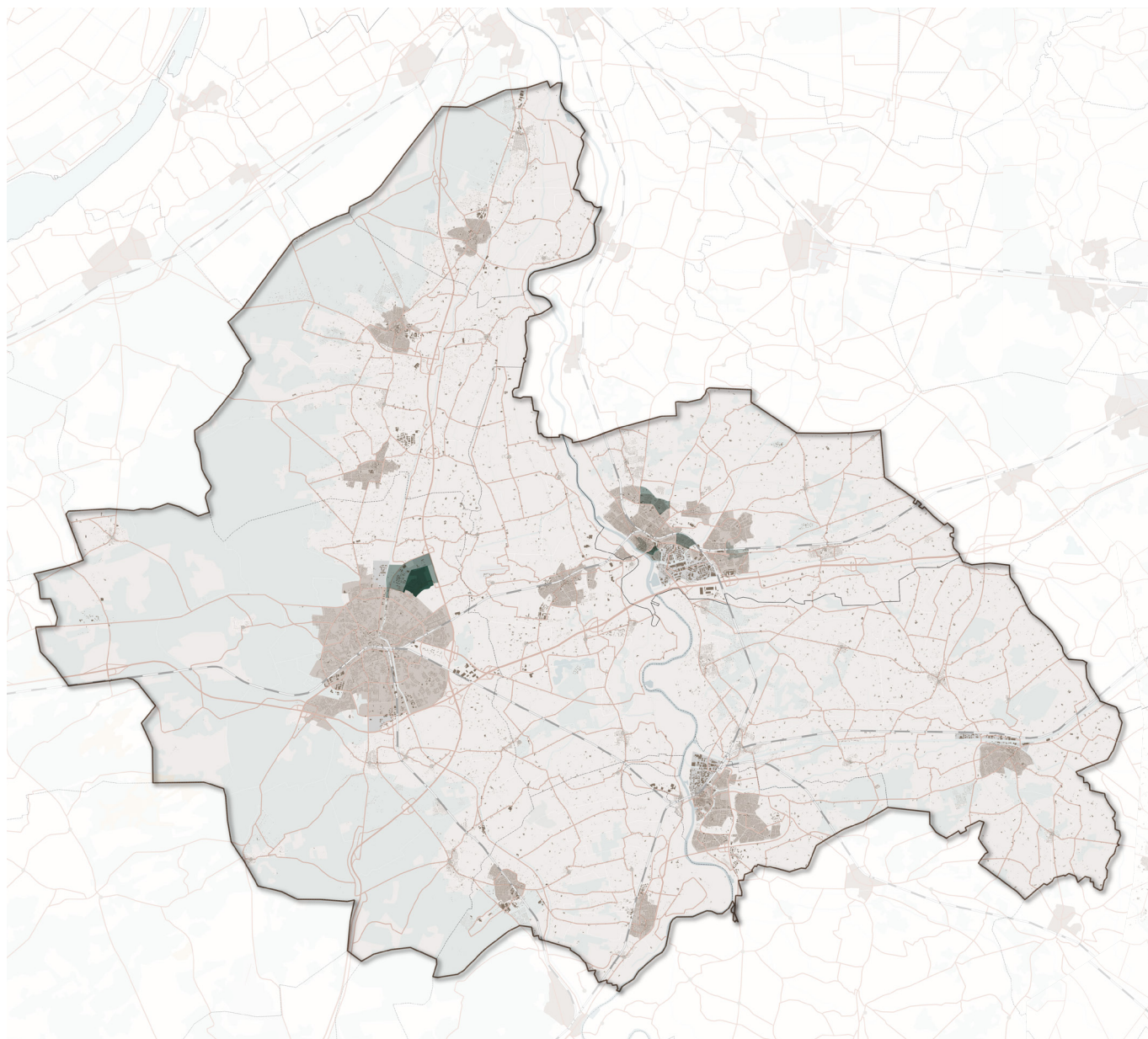


Figure B.13: Percentage of dwellings on district heating (CBS, 2021)

Share of dwellings on district heating

Legend

Houses on district heating [%]

- 0 - 10
- 10 - 30
- 30 - 50
- 50 - 70
- 70 - 100



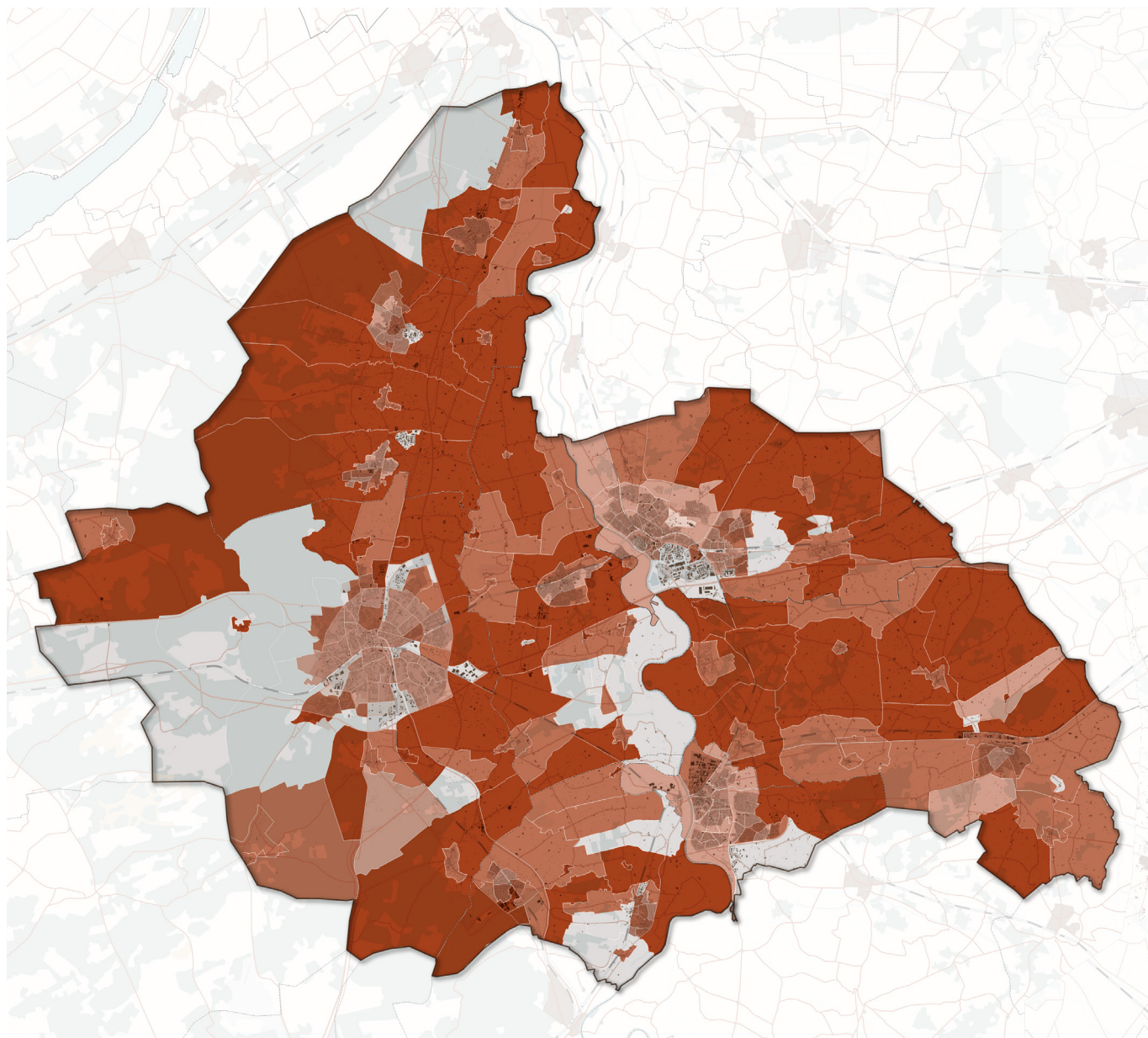


Figure B. 14: Average number of cars per household, buurt level (CBS, 2020)

Average number of cars per household use per household

Legend

Average number of cars
per household, 2020

- No data
- 0 - 0,5
- 0,5 - 1,1
- 1,1 - 1,5
- 1,5 - 2,4



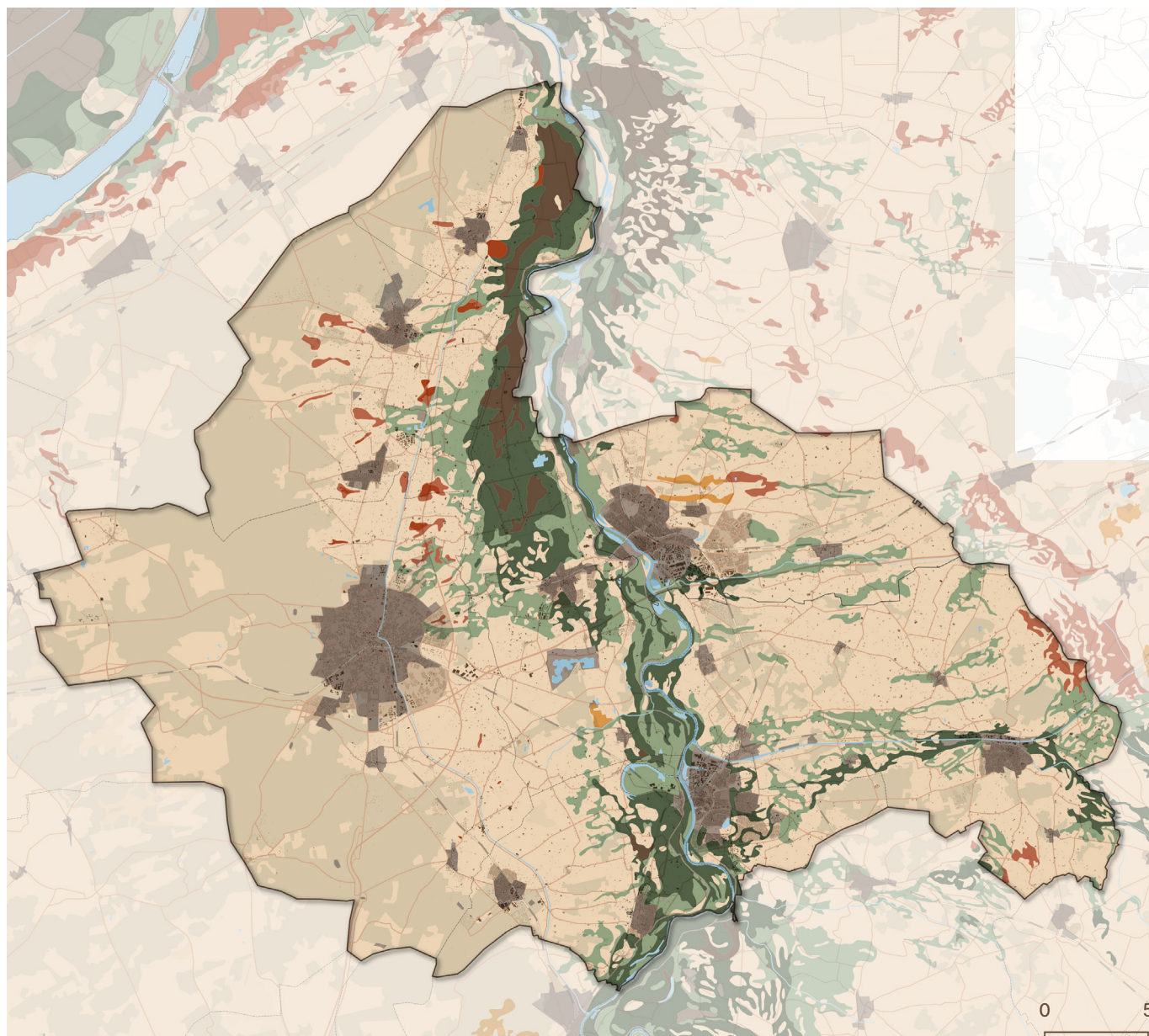


Figure B.15: Soil type (WUR, 2006)

Dominant soil type

Legend



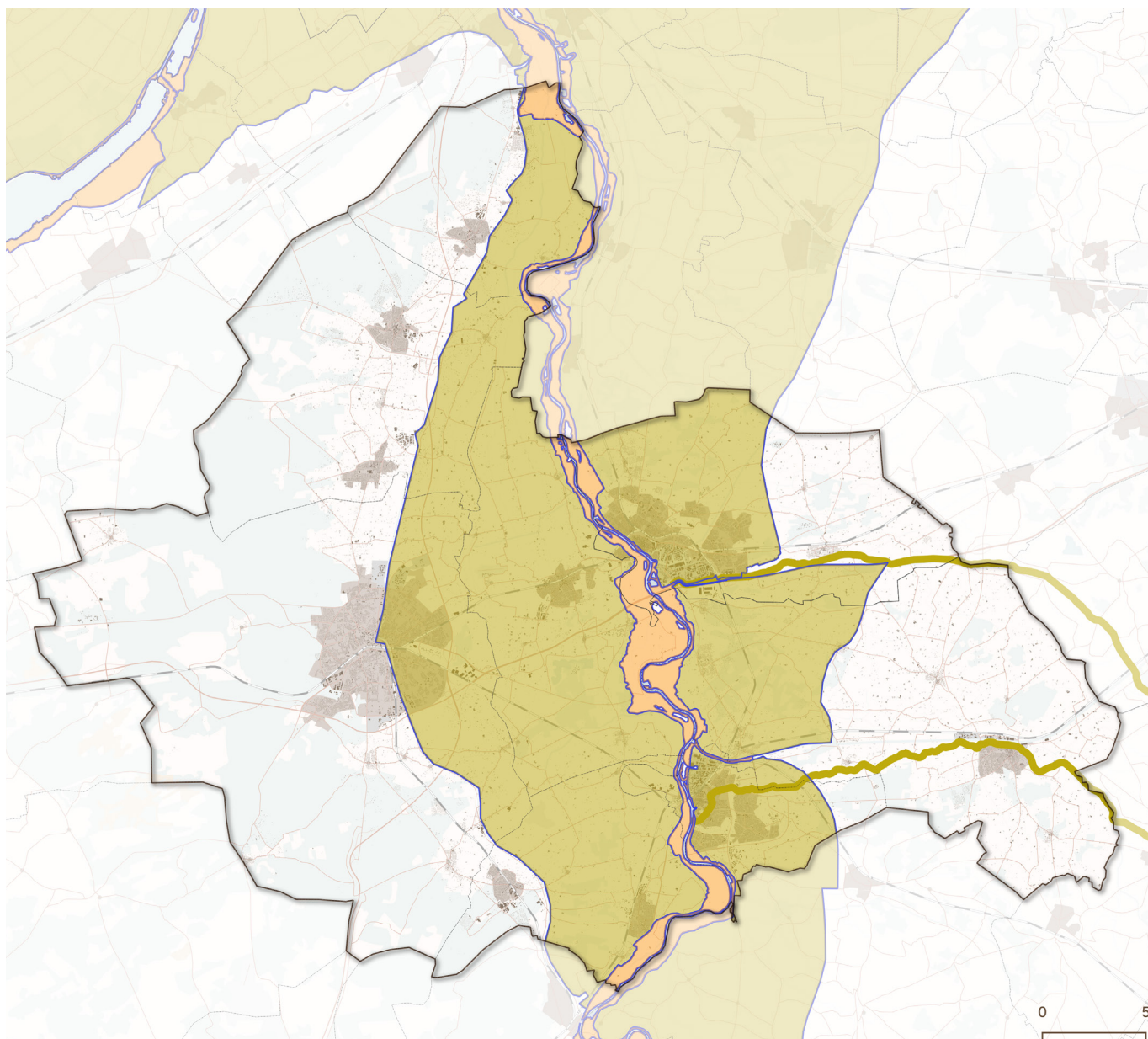


Figure B. 16: Flood risk

Flood risk map

Legend



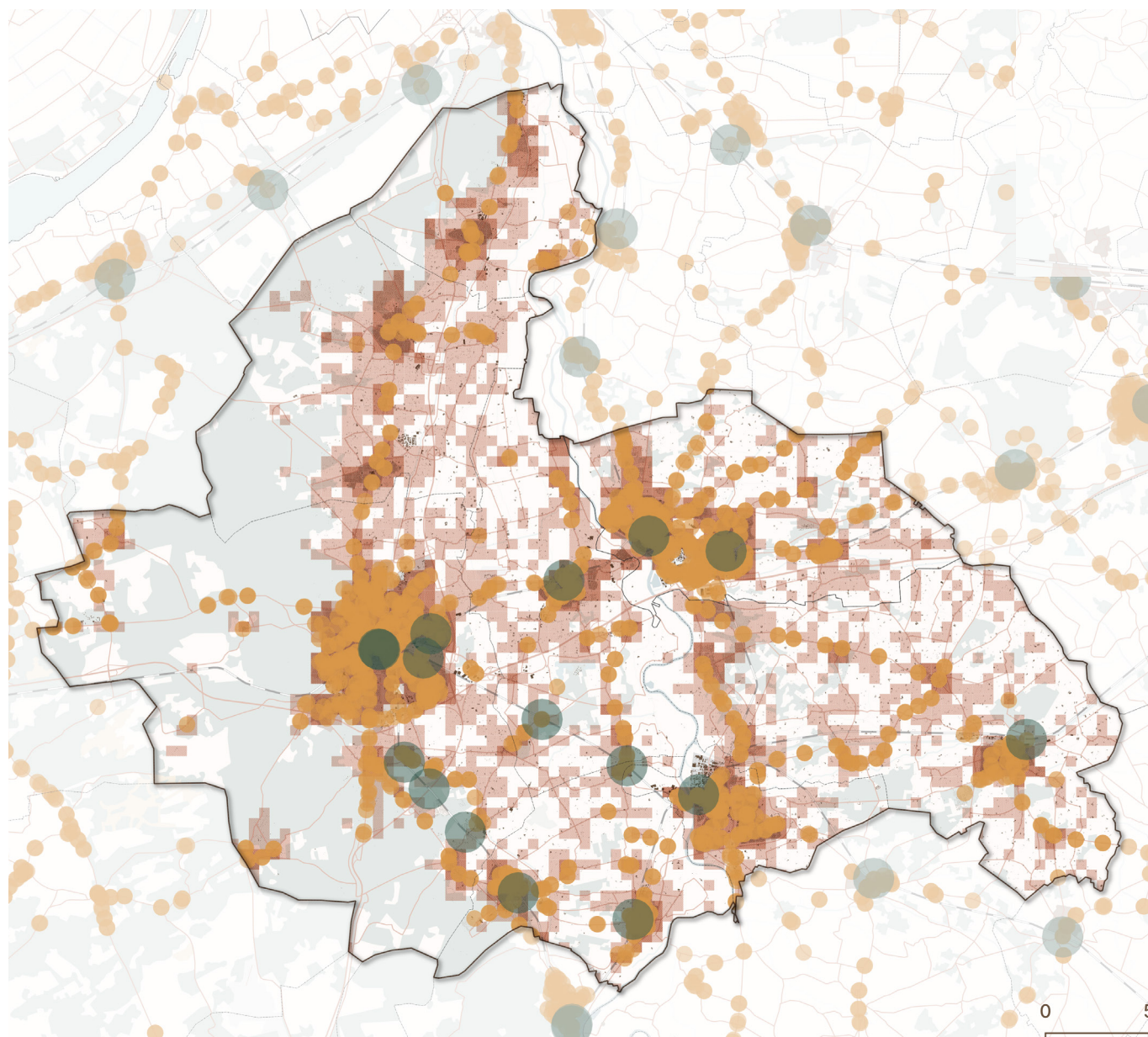


Figure B. 17: Coverage of public transport network (Open Street Map 2023; CBS 2021)

Public transport accessibility

The map shows the coverage of public transport. A radius of 400 m has been used around bus stops; a radius of 1000 m has been used around train stations.

Legend

- Bus stop radius 400 m
- Train station radius 1000 m
- 500x500 m dwellings [n]
- 0 - 25
- 25 - 1.285



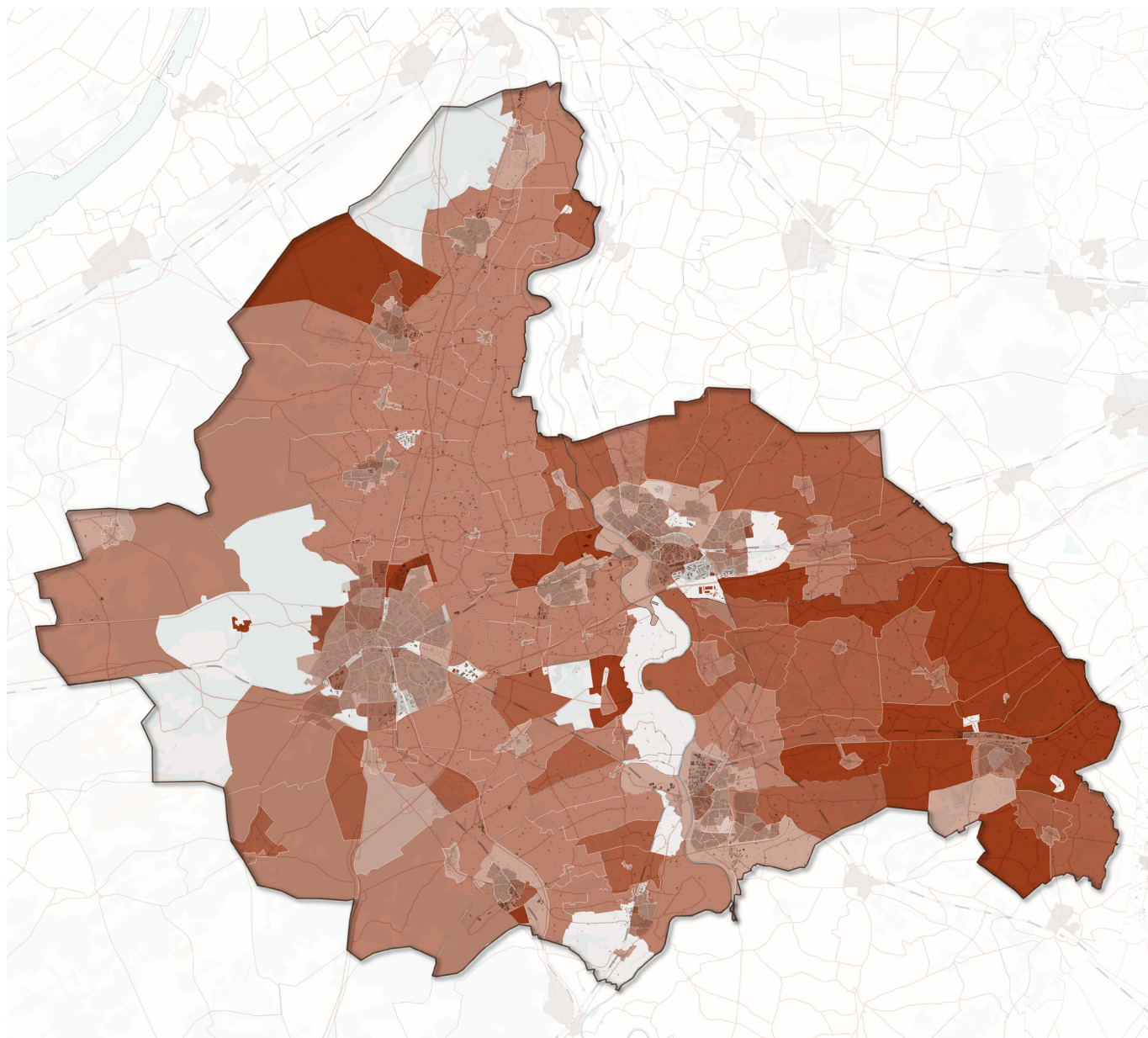


Figure B. 18: Living space per person (CBS, 2022)

Living space per person

The total floor area for dwelling in a neighbourhood has been divided by the number of residents in the neighbourhood.

Legend

Living space per person [m²],
2022, buurt

- 20 - 40
- 40 - 60
- 60 - 80
- 80 - 100
- 100 - 220

0 5 10 km



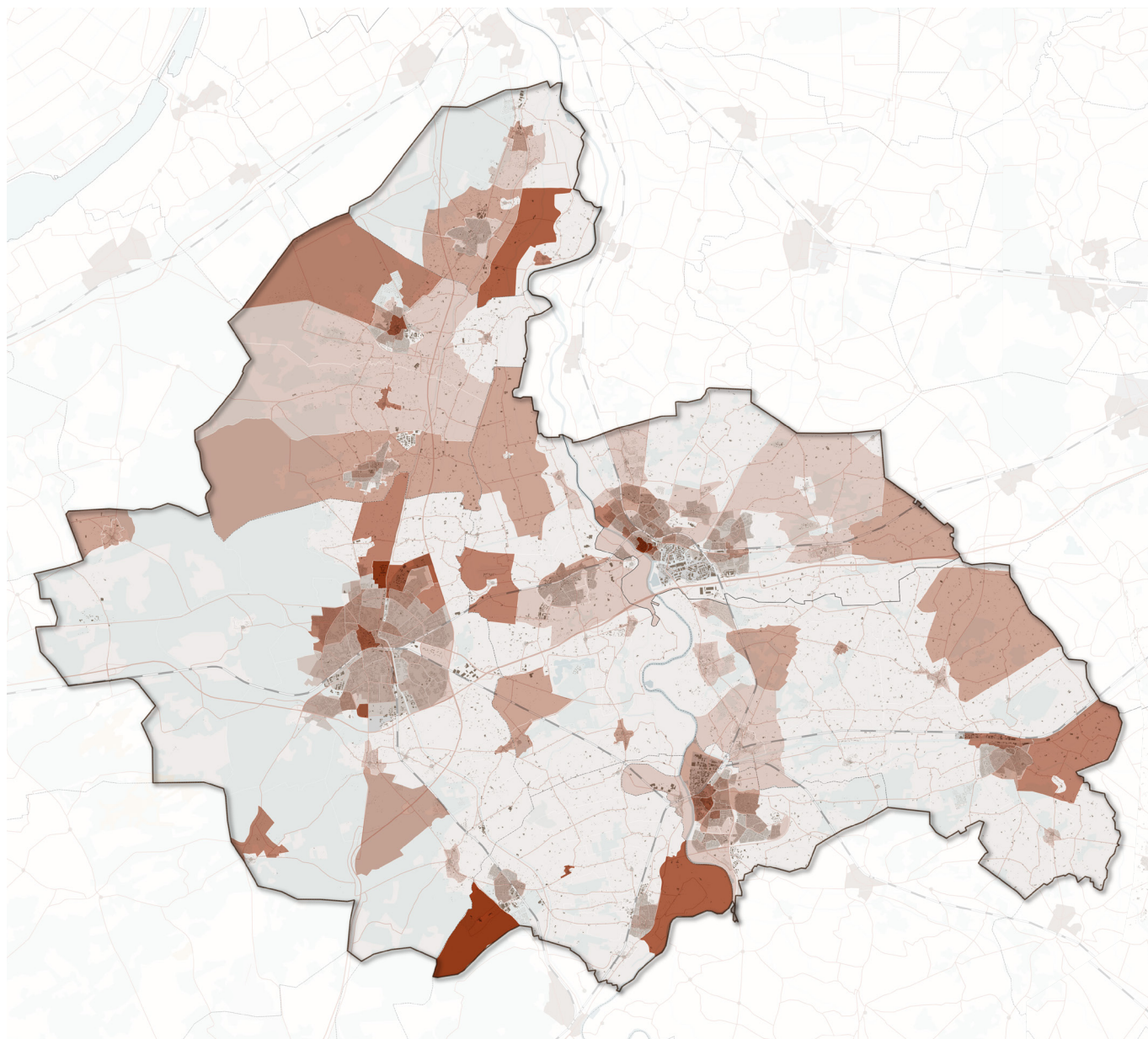
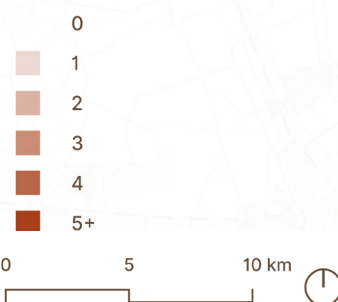


Figure B. 19: Living space per person (Landelijke Monitor Leegstand, 2022)

Vacancy [m²] per neighbourhood

Legend

Vacancy relative [% of m2],
2022, buurt



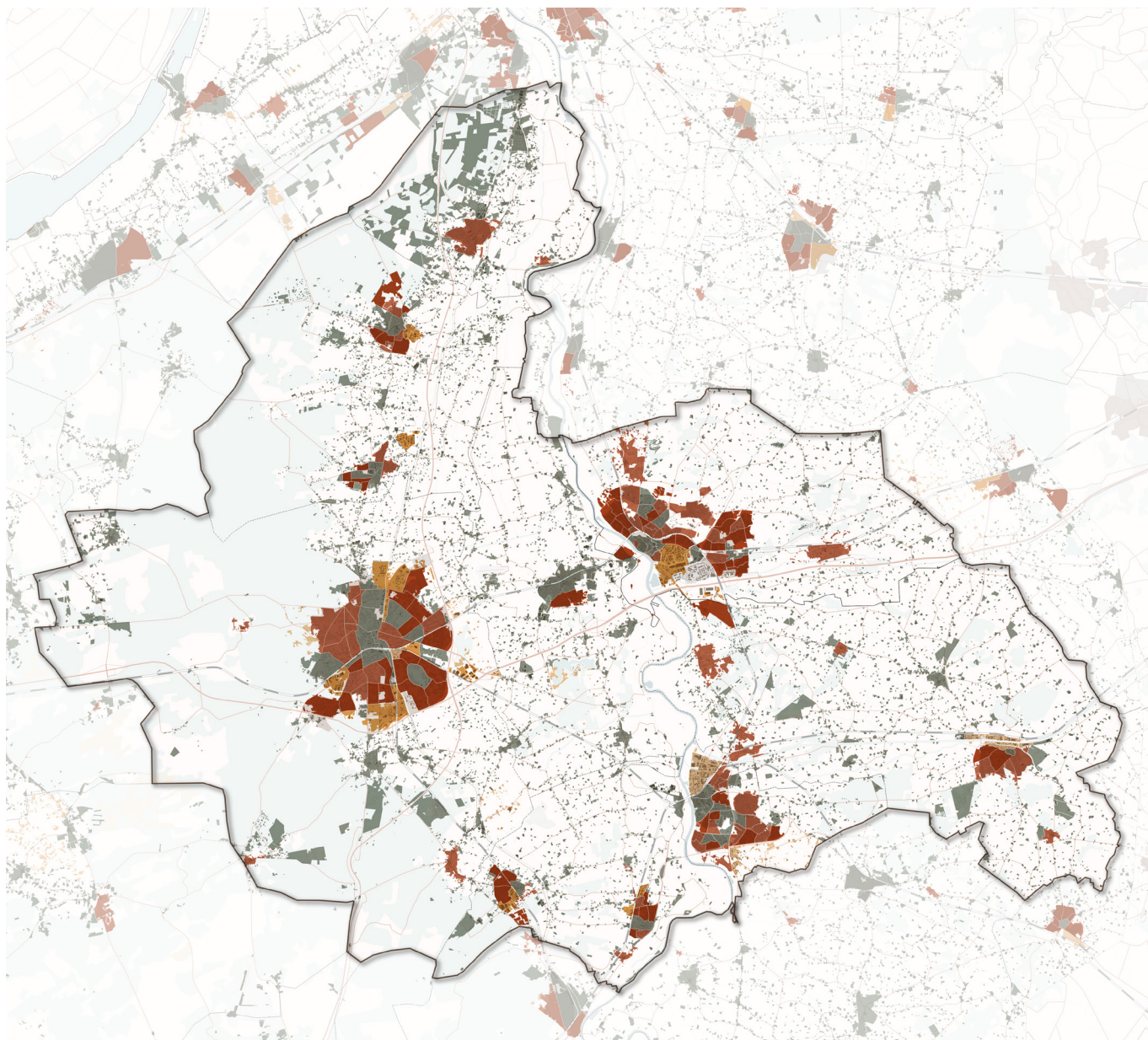
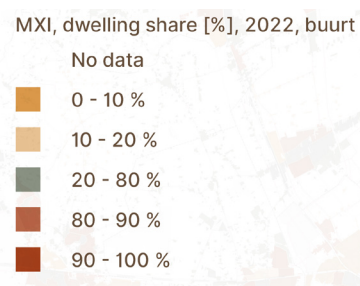


Figure B.20: Mixed Use Index, buurt level (PBL, 2022)

Mixed Use Index (MXI)

The Mixed Use Index shows the share of dwelling floor space in relation to the total floor space in an area. A high percentage means that housing is dominant; a low percentage means that other functions are dominant.

Legend



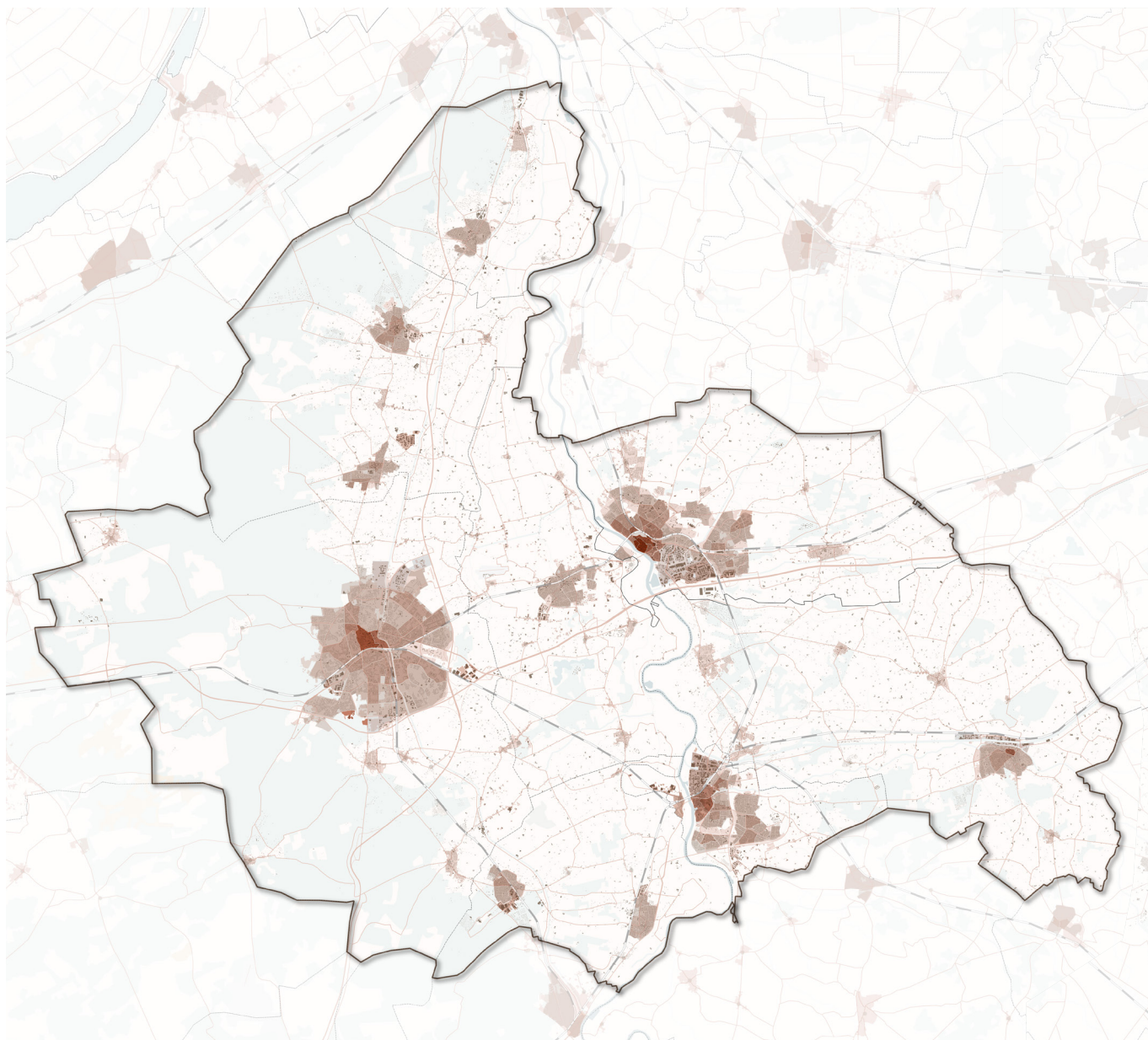


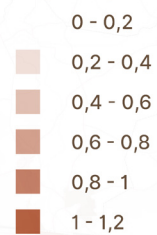
Figure B.21: Floor Space Index, gross buurt level (PBL, 2022)

Floor Space Index (FSI)

The Floor Space Index is the ratio between the total floor space in an area compared to the land area. A higher number indicates that the land is used more intensively for buildings.

Legend

FSI, 2022, buurt



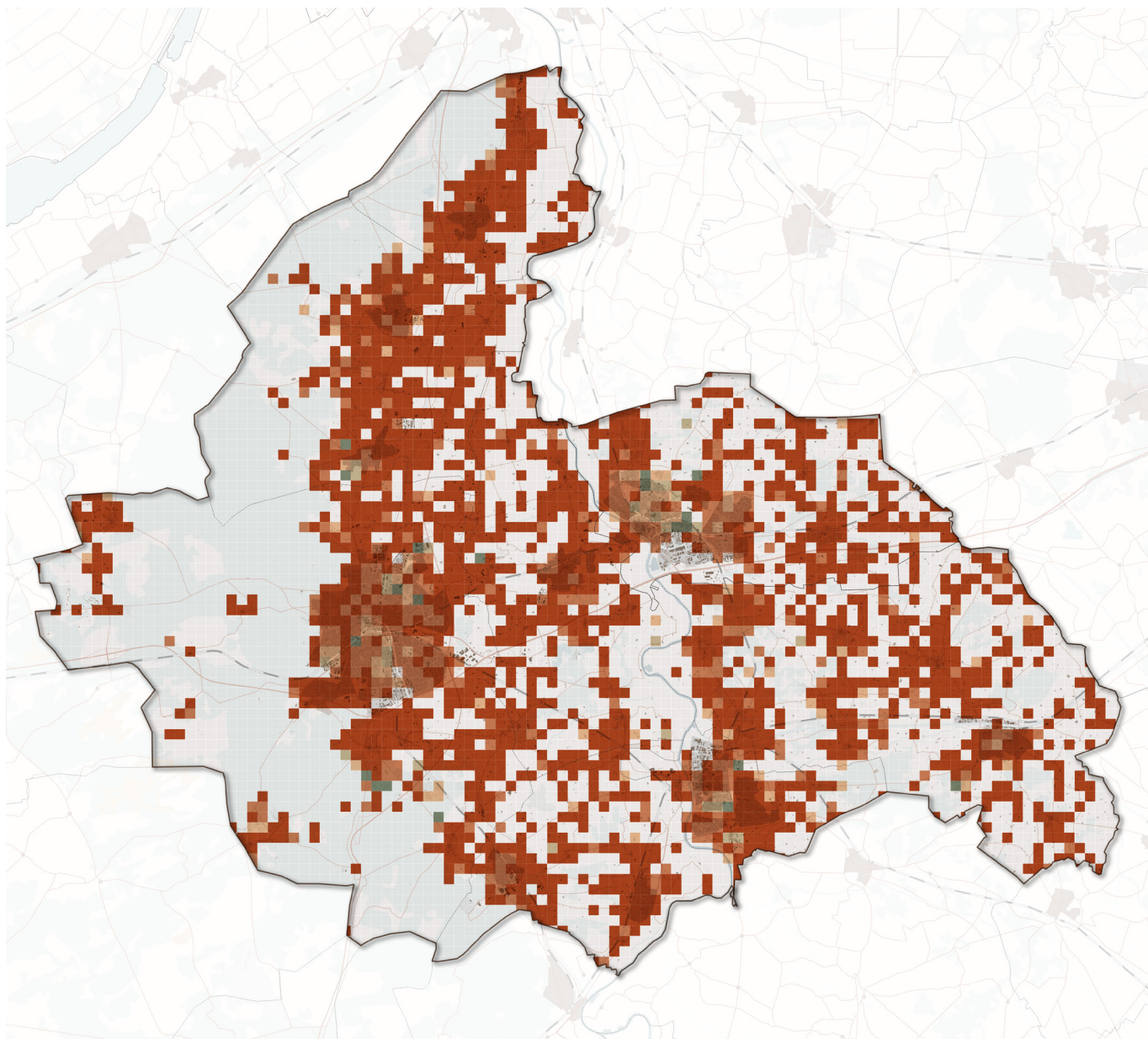


Figure B.22: Population with Dutch origin per 500x500m square (CBS, 2021)

Population with Dutch origin

Legend

Population with Dutch origin [%],
2021, 500x500m squares

- No data
- 0 - 50
- 50 - 60
- 60 - 70
- 70 - 80
- 80 - 100

0 5 10 km

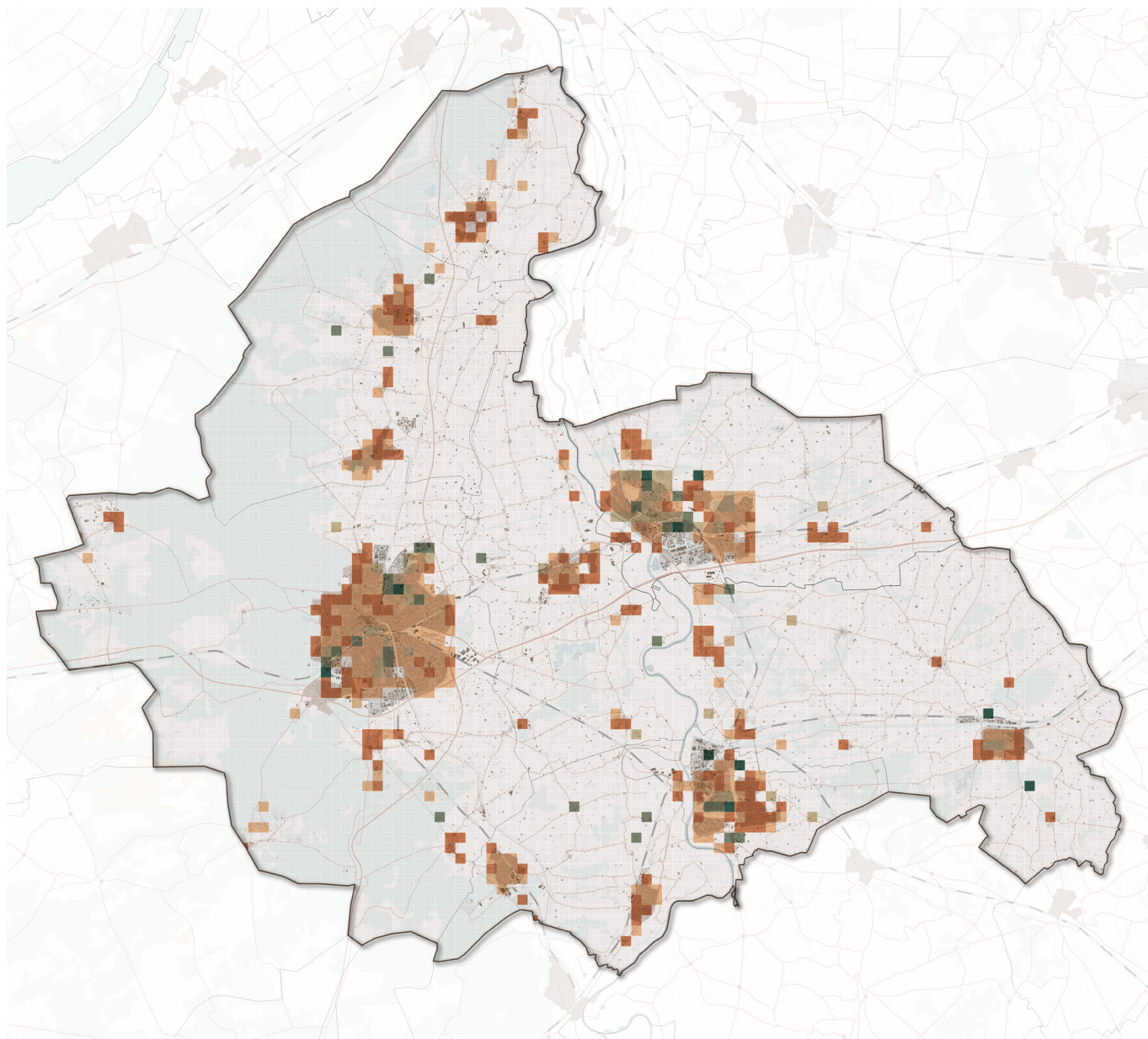


Figure B.23: Non-Western migrant population per 500x500m square (CBS, 2021)

Non-Western migrant population

Legend



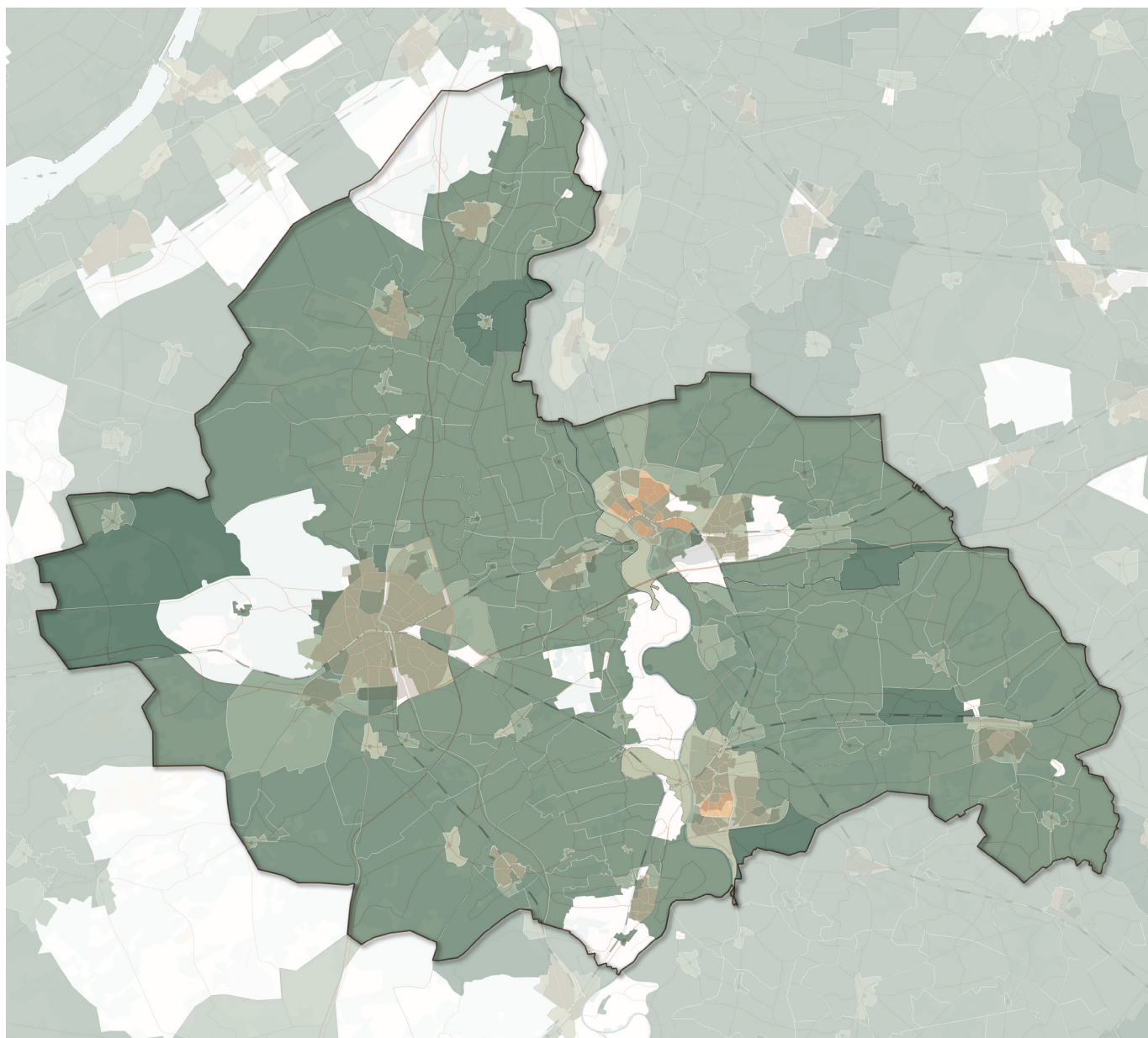


Figure B.24: Leefbaarometer 2020 score for the social dimension (Leefbaarometer, 2022)

Leefbaarometer 2020 social dimension

Legend

- Weak
- Sufficient
- Very Sufficient
- Good
- Very good



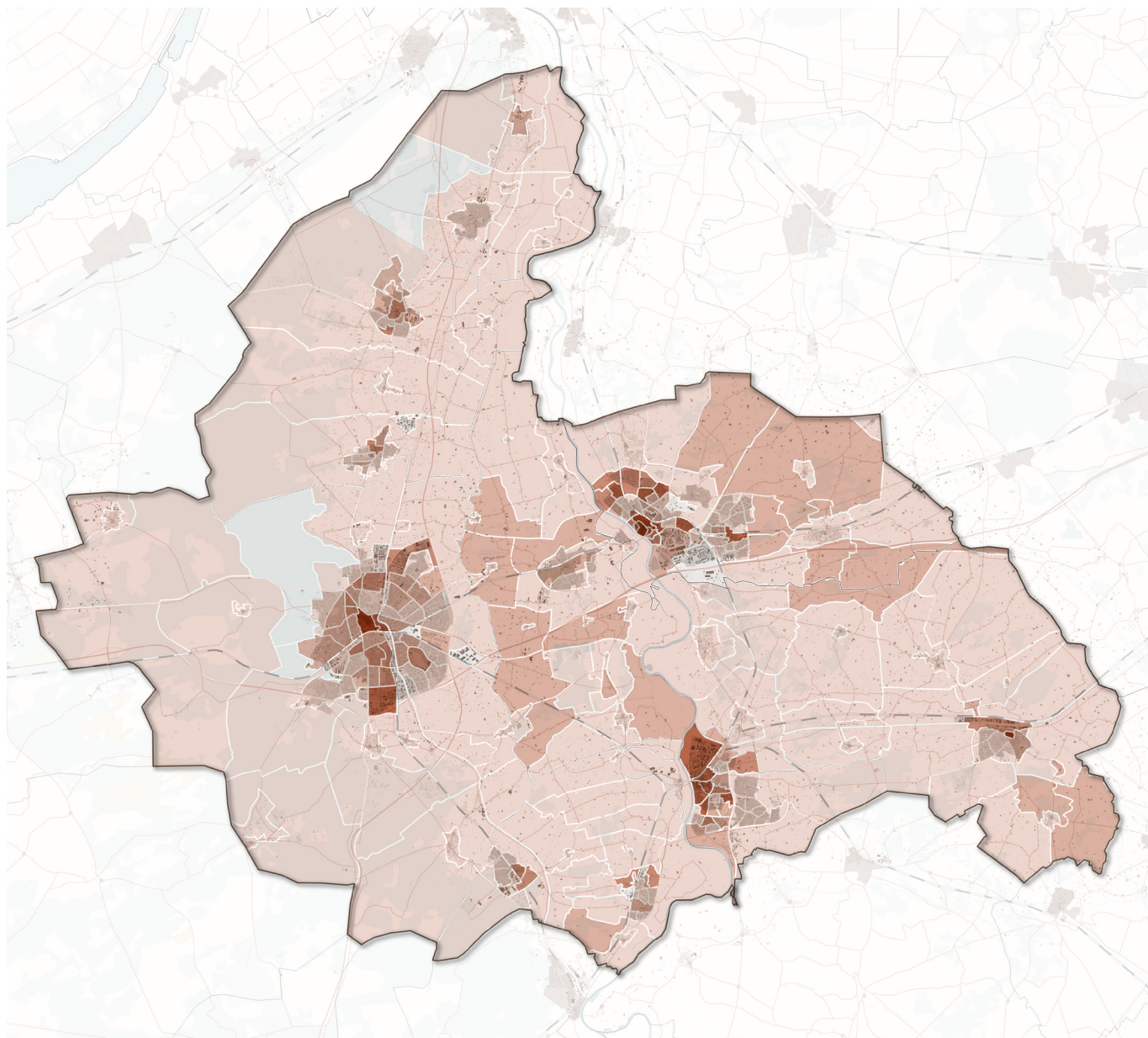


Figure B.25: Share of apartments, buurt level (CBS, 2021)

Share of apartments

Legend

Apartments [%], 2021, buurten

- No data
- 0 - 20
- 20 - 40
- 40 - 60
- 60 - 80
- 80 - 100

0 5 10 km 

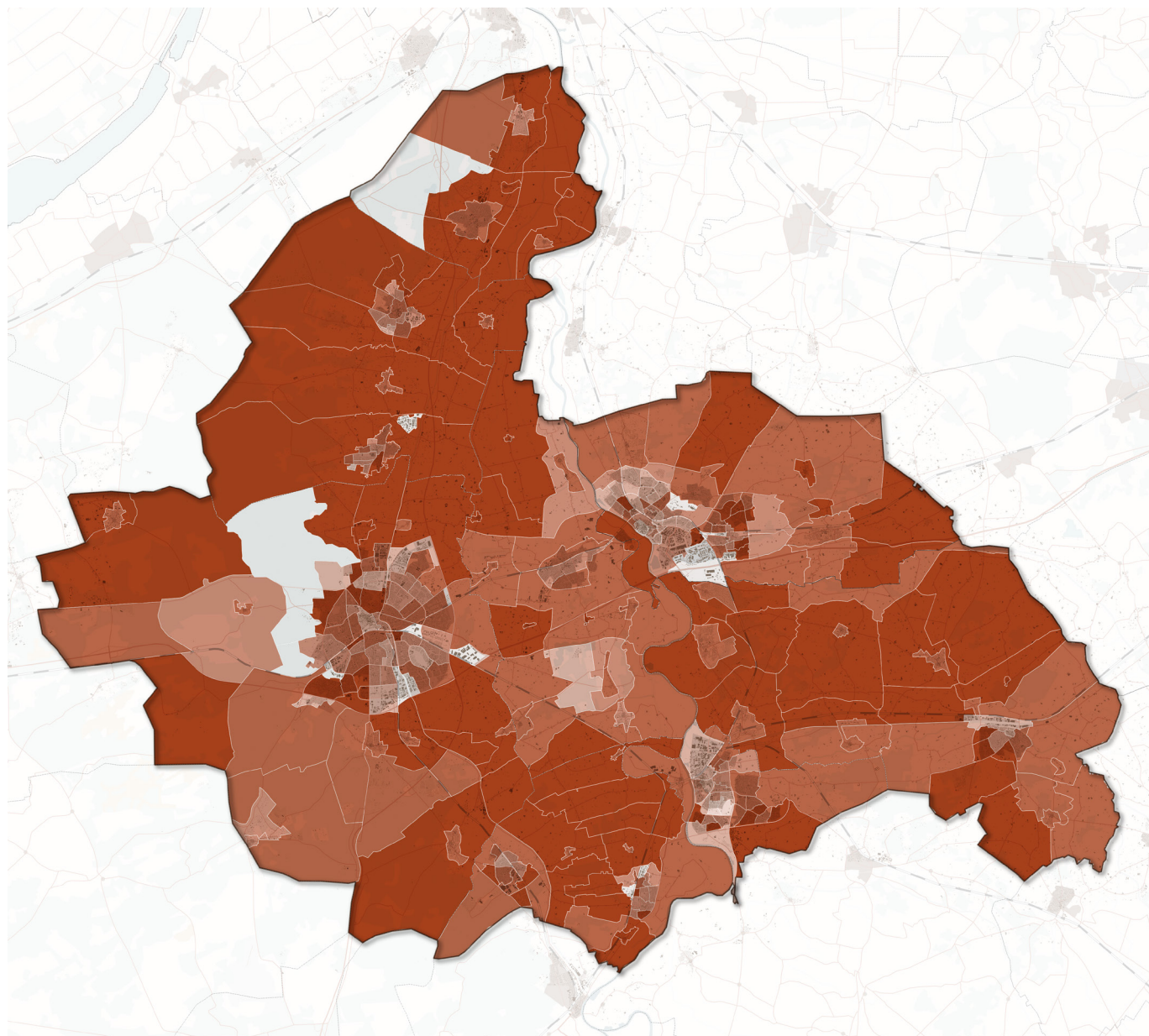


Figure B.26: Share of owner-occupied dwellings, buurt level (CBS, 2021)

Share of owner-occupied housing

Legend

Owner-occupied [%], 2021, buurt

- No data
- 0 - 20
- 20 - 40
- 40 - 60
- 60 - 80
- 80 - 100



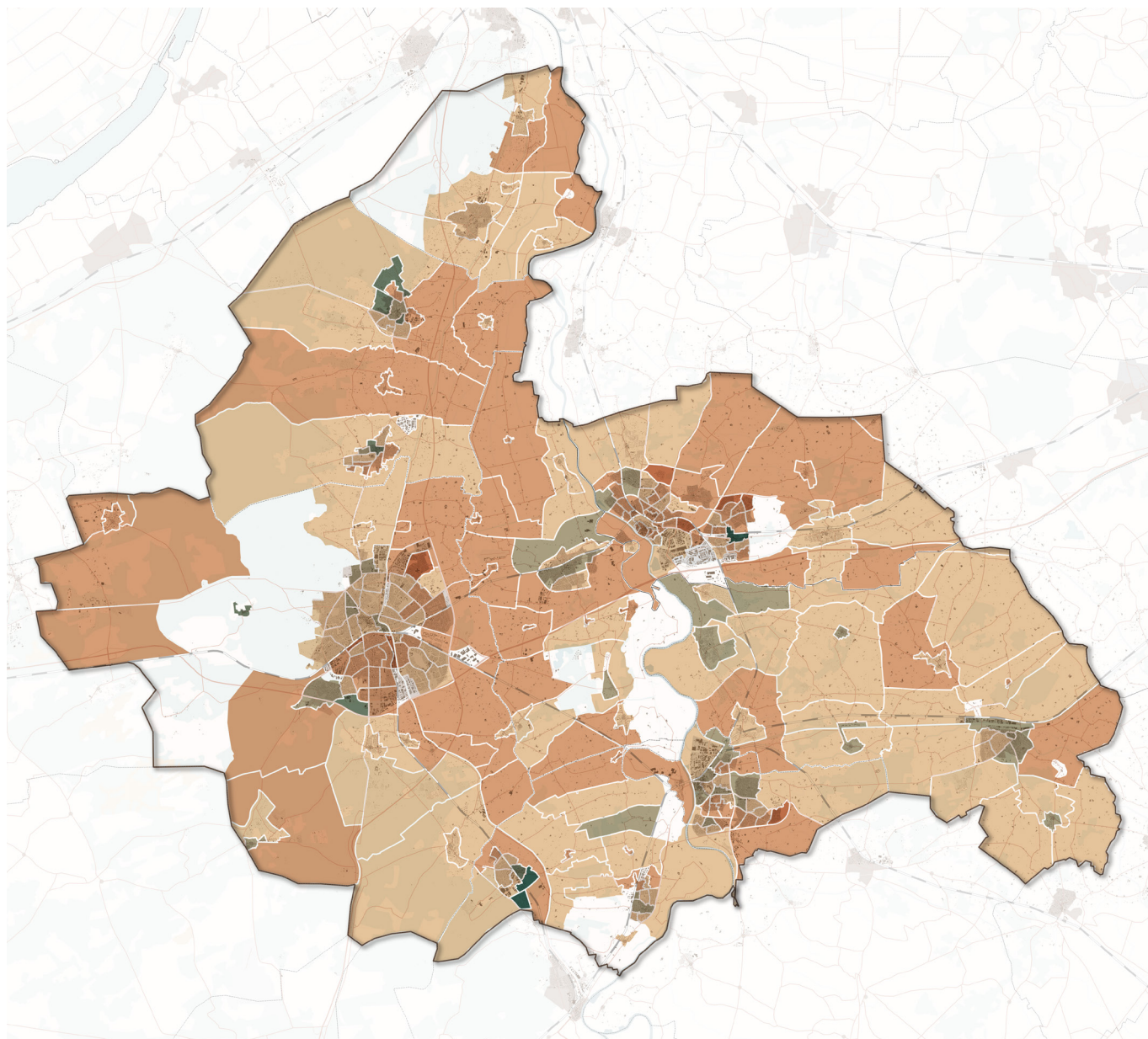


Figure B.27: Share of households with children, buurt level (CBS, 2021)

Share of households with children

Legend

Households with children [%],
2021, buurt

- 0-10
- 10 - 20
- 20 - 30
- 30 - 40
- 40 - 50
- 50 - 100

0 5 10 km





MSc Architecture, Urbanism and Building Sciences (Urbanism track)
Delft University of Technology