Post-Growth Planning: moving beyond (economic) growth as a driver for sustainable urban development in Dutch mid-sized cities.
A case study in Almelo and Hengelo, the Netherlands.

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Abstract

Although there is increasing debate about the organization of socio-economic relations in relation to climate change, North-western European planning practices are still predominantly based on a neoliberal approach, emphasizing and stimulating growth that is dependent on inexpensive, non-renewable resources. The efforts that are made within this neoliberal approach to mitigate ecological impacts through eco-efficiency measures, which aim to reduce impact per unit of GDP, fall short of meeting climate targets. Consequently, alternative socio-economic models such as post-growth, which prioritize social and environmental objectives while considering ecosystem limitations are being explored. The purpose of this thesis is to explore the presence of growth and post-growth perspectives in housing and mobility policies in Almelo and Hengelo, and the challenges that obstruct post-growth planning. Through a multiple case study with thematic analysis of policy documents and semi-structured interviews, it was found that whilst sustainability measures are dominant in housing and mobility, policies do not engage with strategies to limit growth. Practical implementation reveals that quantity, numerical targets, and cost-effectiveness take precedence as guiding principles. Furthermore, personal characteristics and the institutional structure impact whether sustainable practices are implemented into policies.

Key words: sustainable urban transformation, housing policy, mobility policy, post-growth planning, growth-oriented planning

Chapter 1: Introduction

Recent newspaper articles stated that ''The Netherlands is reaching the limits of growth. It is time for politicians to intervene'' (Volkskrant, 2022), the Netherlands may be the first country to hit the limits of growth (Financial Times, 2023). At the same time, governmental organizations continue to guide and facilitate the growth of the economy. In their Strategy on Spatial Planning and the Environment 2020–2030 (p. 12) Almelo addresses that it is their objective to create more space for the expansion of the economy, facilitating its further growth. Currently, urban changes are primarily driven by growth, as Sgovernmental institutions utilize growth as a means to achieve various objectives such as healthcare, infrastructure, housing, and retirement provisions (Barry, 2020). Additionally, Costanza (2022) argues that the initial focus on economic growth in policy was to generate employment and subsequently enable access to adequate food, housing, medical care, and other amenities for social well-being. According to Barry (2020), growth has become institutionalized within planning, with the market playing a key role.

Nevertheless, this growth relies on inexpensive, non-renewable resources, which causes damaging ecological effects (Barry, 2020; Lamker & Schulze Diekchoff, 2022). The growth orientation within the (urban) planning profession leads to environmental degradation, ecological vitality, and biodiversity degradation (Savini et al., 2022). The impact of unfettered growth exceeds planetary (environmental) boundaries. Moreover, the ambition to grow intervenes with the ambition to use the limited space for climate change adaptation and mitigation. Although efforts are being made to address ecological impacts through the implementation of eco-efficiency measures, which aim to reduce the environmental impact per unit of GDP, they are insufficient in achieving climate targets. The recent IPCC report in 2022 highlighted the connection between climate change and growth logic, which has created an opportunity to legitimize a different discourse or perspective within planning (IPCC, 2022). Lamker & Schulze Dieckhoff (2022) further argue that the growth-orientation leads to damaging social impacts, highlighting inequality in the use of land and scarce resources, along with the issues of housing and mobility as matters of justice.

Shifting urban perspectives towards a post-growth paradigm can significantly address the aforementioned societal issues. Post-growth planning can function as an alternative to growth-oriented planning, by injecting a sense of limits into societies and places (Savini et al., 2022). Social justice, redistribution, and humanitarian values are at the core of post-growth planning, whilst not trespassing on ecological planetary limits (Savini et al., 2022). Whilst the post-growth planning discourse is increasingly being acknowledged within the academic field of planning (Lamker & Schulze Dieckhoff, 2022; Barry, 2020), there is still a scarcity, or knowledge gap, in thinking of post-growth planning and transitioning towards a post-growth society. Similarly, Lamker & Schulze Dieckhoff (2022) argue that post-growth planning studies, and challenges that are presented to planners who attempt to implement post-growth ideas, are far too limited. This study can help add to the discourse, enriching the field of study.

Moreover, Wagner & Grow (2021) argue that within the scientific disciplines of geography, such as urban geography or spatial planning, the focus has primarily been on large cities and metro areas, where small and medium-sized cities are mostly neglected. It is further argued that whilst small and medium-sized cities are under-researched, a significant part of the population within countries inhabits such a city (Wagner & Grow 2021). This research adds to the current body of literature on small and medium-sized cities, which currently lacks focus on scientific disciplines within the geography field.

This research aims to study post-growth planning concerning midsized cities in the Netherlands as midsized cities have to deal with the aforementioned social-ecological challenges. Almelo and Hengelo are both midsized cities (Platform 31, 2023). Schmid (2022) argues that cities can play a pivotal role in sustainability transformations. Similarly, Glaeser (2011) argues that cities have been praised for their capacity to find innovative solutions to socio-ecological challenges. Moreover, this research focuses on the examination of post-growth planning specifically concerning housing and mobility policies. Savini et al. (2022) argue that dwelling and mobility are two policy fields that have significant opportunities for post-growth urban transformation. Moreover, dwelling and mobility play controversial roles in contemporary planning (Durrant et al., 2023). Therefore, this study's relevance lies in fostering a discussion about post-growth planning, catalyzing implementing of new perspectives in the planning field, and enriching the discourse.

To further explore how (post-)growth orientation underlies housing and mobility in the cities of Almelo and Hengelo and which barriers are identified concerning post-growth planning, the following research questions are proposed:

"How is (post-)growth orientation underlying the (proposed) actions in housing and mobility policy in mid-sized Dutch cities?"

Secondary research questions

1. What are the obstacles for policymakers in Almelo and Hengelo to implement post-growth planning ideas?
2. In the literature, what are identified obstacles for policymakers to implement post-growth planning?
3. What are current (post-)growth planning practices identified by scholars in the field of housing and mobility, as highlighted in the literature?
4. What are the growth-oriented practices identified in the fields of housing and mobility in Almelo and Hengelo?
5. What are the signs of post-growth-oriented planning practices of housing and mobility in Almelo and Hengelo?

1.1 Reading guide

Chapter 2 outlines the theoretical framework, consisting of growth and post-growth-oriented housing and mobility practices. Thereafter, corresponding obstacles to implementing sustainable urban transformations that suffice to the post-growth premise as outlined in the theoretical framework are discussed. Chapter 3 elaborates on the methodology employed for the policy analysis and semi-structured interviews. Chapter 4 elaborates on the results of the policy analysis and semi-structured interviews. Chapter 5 consists of the discussion, where the results are reviewed in relation to the theoretical framework. In chapter 6 answers to the research questions, limitations of research, and recommendations for research are discussed.

Chapter 2: Theoretical Framework
This chapter encompasses the theoretical framework of this thesis, and a concise review of the key concepts of the research is presented.

2.1 Sustainable urban transformation
Schmid (2022) argues that cities can play a pivotal role in the transformation to a more sustainable society. In the same vein, Glaeser (2011) argues that cities have been praised for their capacity to find innovative solutions to socio-ecological challenges. Therefore, urban areas play a significant role in mitigating the effects of climate change. In the following paragraphs, two planning paradigms will be discussed, growth-oriented planning and post-growth planning. Empirical research from north-western European countries reveals that planning practices have taken a growth-oriented turn (Olesen, 2014), whilst post-growth planning is an alternative model of planning. The perspectives differ concerning the strategy for the transformation to a sustainable transformation.

2.1.1 Growth-orientation
The growth-oriented political agenda includes striving for economic growth and competitiveness (Olesen, 2014; Galland, 2012). The growth-oriented planning practice argues that open and competitive markets produce an efficient allocation of resources and stimulate innovation (Purcell, 2009; Sager, 2011). Boland (2014) further adds that the focus on economic growth in planning is characterized by free trade, a good business climate, privatization, private property rights, fiscal restraint, financial deregulation, welfare reform, and individual freedom. In the growth-oriented and market-based planning practice, the success of urban development is oftentimes measured in the growth of GDP (Barry, 2020). Moreover, the growth-oriented policy is characterized by: urban coalitions, a priority of economic policy, entrepreneurialism, deregulation, city marketing, targeted social policy, and producing rent (Swyngedouw & Moulaert 2000; Sager, 2011). Lastly, other terms associated with growth-dependent planning include: attracting foreign direct investment, promoting free trade, and competitiveness, increasing productivity, removing bureaucracy, cultivating entrepreneurship, and reducing regulation (Rydin, 2013).

Housing
Throughout the past decades, housing policy evolved and has known various regimes and paradigms. Housing policy is dependent on the current political landscape and previous events. Housing policy has operated within a housing growth paradigm, within the growth paradigm of the wider economy (Martinez-Alief et al., 2015, Kleinman, 2007; Salet, 1999 & Mete, 2022). Deregulation, financialization, and privatization are common features of growth-oriented housing policies (Mete & Xue, 2021). The market provides the mechanisms and supply and distribution of housing, whereas the state only provides correctives to it (Mete & Xue, 2021).

Nonetheless, Kleinman (2007) identified various issues in market-oriented housing policies, which include: unmet housing needs; problems of indebtedness; limits to the expansion of owner-occupation; problems of financing social housing, and concerns about the private rented sector. In the same vein, Kadi & Muster (2014) argue that the neo-liberalization of the housing market has decreased accessibility and affordability. The provision of de-commodified, or social housing has lost appeal because of the retreating welfare state (Dieleman, 1996). Therefore, the social housing stock available for the poor is being reduced (Kadi & Muster, 2014). In the private rental market, the poor are locked out, as the rents have increased due to high demand (Kadi & Muster, 2014). Thus, the government is failing to provide affordable housing for those with low socioeconomic backgrounds entering the housing market. Vogelpohl & Buckholz (2017) argues that the earlier-mentioned phenomenon leads to population displacement and socio-spatial polarization. In addition to the affordability and accessibility critiques, the current housing policies to satisfy housing needs are an expansionary, high environmental resource consumption pathway, detrimental to the environment (Ermgassen et al., 2022). In the same vein, Mete & Xue (2021) argue that the current housing sector represents a challenge in terms of energy consumption, greenhouse gas emissions, and deterioration of land.

Mobility
The local built environment affects travel mode choice (de Vos, 2015). Therefore, by altering the built environment planners can attempt to influence the mode of transportation of the citizen. Consequently, mobility and transportation play a controversial role in current-day planning (Savini et al., 2022). Current

mobility policies are focused on experimentation and facilitation of (technological) innovation through markets (Loorbach et al., 2021). Moreover, Ferreira & von Schönfeld (2022) argue that the current transport narrative is characterized by values such as economic growth and capital accumulation, efficiency, time value, travel time savings, innovation, and techno-centrism. Bertolini & Nikolaeva (2022) argue that the aim to increase mobility is often proposed with the underlying premise that it supports economic growth

A sustainable mobility future is presently incited by innovation and accelerated by markets (de Vos, 2015). Nevertheless, this is critiqued by post-growth scholars for various reasons. Bertolini & Nikolaeva (2022) argue that the current sustainable mobility paradigm is not achieving its goals. Furthermore, there is not yet enough evidence that mobility practices are becoming sufficiently sustainable or that citizens are becoming less dependent on mobility (Holden et al., 2019).

As mentioned in the previous paragraph, the car is still a dominant modality in urban mobility systems. The dominant narrative regarding a transition towards a sustainable mobility future seems to be electrification in combination with more space for walking, cycling, and green (Loorbach et al., 2021). The use of the car still is central, as the use of the car is the norm and normal (Loorbach et al., 2021). However, the use of cars (and the current transport system) causes congestion, air pollution, energy use, and CO_2 emissions (Geels, 2012). Furthermore, Ferreira & von Schönfeld (2022) argue that there are 6 reasons why the pro-growth mobility narrative is no longer preservable:

- Economic growth is reaching its threshold where its produced benefits are no longer outweighing the costs.
- Transport growth does not necessarily lead to economic prosperity. For example, added mobility can cause congestion, which can ultimately hinder mobility in some links of the transport network.
- Innovation comes with risks and costs.
- Mobility growth will cause proportional environmental impacts.
- Due to mobility growth, amenities can be concentrated and displaced, leading to more distant travel distances to reach said amenities.
- Mobility growth and dependence lead to collective and individual vulnerabilities.

Sustainability

The market and economic policy are prioritized. Sustainable innovations only take place if they are financially feasible and reinforce growth-oriented urban planning principles (Cease et al., 2019). Therefore, growth orientation within the (urban) planning profession leads to environmental degradation, and a lack of ecological vitality and biodiversity (Savini et al., 2022; Barry, 2020). Similarly, Lamker & Schulze Dieckhoff (2022) argue that unrestricted growth has damaging ecological impacts. These ecological impacts are caused by the strong link between carbon energy and economic growth (Barry, 2020). Cheap, secure, reliable sources of carbon energy are essential for the pursuit of growth, nevertheless, these non-renewable resources are detrimental to the environment (Barry, 2020). Another undesirable effect of growth is urban sprawl (Johnson, 2001). Johnson (2001) characterizes various effects of urban development, namely decreased aesthetic appeal of the landscape; loss of farmland; reduced diversity of species; runoff stormwater; increased flood risk; removal of native vegetation, and ecosystem fragmentation. Moreover, Ewing et al. (2008) add that urban growth results in more car use, and thus CO_2 emissions. Urban growth and corresponding increased economic activity will increase per capita income, Kahn (2009) argues that richer consumers spend more on goods and energy, which results in more CO_2 emissions.

The solution within the growth paradigm to the aforementioned ecological impacts of growth is eco-efficiency. Another term similar to eco-efficiency is green growth. Eco-efficiency aims to reduce the environmental impact per unit of GDP, which is seen as a solution for sustainable growth. This solution seeks to decouple growth from ecological impacts, allowing for growth to continue whilst harm to the planet decreases simultaneously (Kurz, 2019; Scheidewind & Zahrnt, 2014; De Castro Mazarro, 2023). Authors that promote eco-efficiency argue that improvements present themselves through the advancement of scientific knowledge, accelerated technological innovation, improved monitoring and management, and internationalization of the market (Blühdorn, 2011). Nevertheless, current efficiency improvements are not sufficient to meet the climate goals (Kurz, 2019; Hayden, 2019). The gains made by efficiency improvements are outpaced by the rate of increased consumption and energy demand.

Consequently, there is not yet evidence that eco-efficiency is effective over the long term, and technology only provides a temporary fix for systemic issues (Kurz, 2019).

Similarly, Kaika et al. (2023) also criticize the eco-efficiency planning paradigm, they argue that rather than using market-led practices to shape urbanization with environmental protection, alternative planning instruments and tools should be developed for housing, energy, schooling, health, and caring that can address socio-ecological (in)equality and well-being. One of these alternative perspectives with corresponding instruments is post-growth planning, which will be elaborated upon in the following paragraph.

2.1.2 Post-growth
There is not yet a consensus on what a post-growth society might entail and what exactly would define it (Cosme et al., 2017). Simultaneously, there is also no uniformity in how the field should be named. Terms that are used to critically reflect on unfettered economic growth include degrowth, post-growth, and so on. Therefore, the concept of post-growth is oftentimes used interchangeably with degrowth (Durrant et al., 2023; Savini et al., 2022). Post-growth and degrowth share similar arguments. Nevertheless, post-growth aims to change planning practices with the current tools and instruments available, whereas degrowth aims to structurally reform the planning profession and the structure it lies within (Durrant et al., 2023; Krähmer, 2021). Savini et al. (2022) argue that the common motivation of post-growth is that alternative ways of organizing socioeconomic relations should be explored, beyond the principles of growth-oriented economic thinking. Barry (2020) further adds that the state needs to take a proactive role in transitioning into a post-growth society, mitigating negative externalities and failures not addressed by the market. Moreover, post-growth planning should prioritize social and ecological justice (Savini et al., 2022; Kaika et al., 2023), which could be translated into terms of sufficiency and limits.

Limits

Consumption needs to be limited to a level that does not undermine the possibilities for others today and in the future (Hayden, 2019). Economic activity and resource use should be decoupled (Barry, 2020). Energy use and material throughput should be reduced to a sustainable scale, decreasing the environmental impact on humans (Demaria et al., 2013.; Daly, 1992; Kallis, 2011). Daly (1992) further argues that resources should be allocated efficiently. Moreover, Barry (2020) argues that sustainability policies should include principles and objectives to contribute to addressing possible injustices and negative impacts such socio-energy transitions can generate. In the same vein, Kallis (2011) argues that measures to reduce the throughput of energy and consumption should be equitable and social.

Sufficiency

Besides the ecological considerations within post-growth, social interests are also recognized. Sufficiency is the advancement of social goals whilst respecting the boundaries and limitations of ecosystems (Kurz, 2019; Hayden, 2019). A goal of post-growth planning is to ensure that growth is no longer a means to an end to achieve public goals, such as health care, infrastructure, housing, and retirement (Barry, 2020). Furthermore, the alternative planning model is characterized by equitable distribution of wealth and democracy (Demaria et al., 2013). Therefore, in the transition to a post-growth society, social factors and equity are continually recognized.

In sum, post-growth authors argue that alternative pathways of socio-economic relations should be explored, prioritizing social and ecological justice, whilst recognizing limits and planetary boundaries (Savini et al., 2022). Consequently, the principles underlying post-growth consist of sufficiency, just transitions, a low carbon economy, and a proactive role for the state (Durrant et al., 2023; Barry, 2020; Krähmer, 2021).

2.2 Sustainable urban transformation in policy
Urban planning can play a pivotal role in the transformation to a more sustainable society (Schmid, 2022). Two core tasks of urban planning are housing and mobility (Durrant et al., 2023). Premises that underlie post-growth orientation in housing and mobility planning will be examined. Nevertheless, it should be noted that the proponents of degrowth and post-growth are yet to engage with clearly outlining how, where, and for whom the principles of post-growth can be applied in the urban context (Keblowsi, 2023; De Castro Mazarro, 2023). However, there are various practices for sustainable urban mobility and housing identified in the literature that conform to the premises of post-growth planning

when implemented with the recognition of limits and social goals. These sustainable practices in housing and mobility reinforce the aforementioned principles underlying post-growth.

2.2.1 Housing policy

There are various tenures and mechanisms for providing housing outside the logic of growth and current urban development. Schneider et al. (2013) argue that in post-growth housing policy, the growth of the housing sector is not an objective. Ermgassen et al. (2022) further add that housing within a post-growth perspective should fit within planetary boundaries. Simultaneously, housing is a fundamental human right, and expansion in the coming years to address human needs is essential (Ermgassen et al., 2022; Schneider et al., 2013). Housing is a key part of urban infrastructure and an essential resource for individual and collective health and wellbeing (Tunstall, 2023). Therefore, Tunstall (2023) further argues that within the post-growth planning paradigm, the worst-off and social renters should not loose out in absolute and relative terms.

However, post-growth planning does not necessarily encourage market-led housebuilding (Durrant et al., 2023). Post-growth advocates for housing as a public service, which can be provided by private owners, cooperatives, or municipalities (Schneider et al., 2013; Mete & Xue, 2021). Similarly, Mete & Xue (2021) add that housing should be unburdened from financial implications. The prime purpose of housing from the post-growth standpoint is the ability to offer shelter (Schneider et al., 2013). Moreover, housing is not a financial investment or status symbol from the post-growth perspective (Nelson & Schneider, 2018). Schneider et al. (2013) argue that post-growth housing innovations can be characterized as:

- Better allocation and utilization of existing stock of houses
- Housing that integrates natural ecosystems and challenges urban sprawl

In the following paragraph, sustainable housing measures are explored that add to the premises of post-growth.

Efficient use of existing housing stock

The existing consumption of housing services and living space is unequal (Ermgassen et al., 2022). In a growth-oriented market, there are foreign-owned homes, second homes, and empty homes. Nelson & Schneider (2018) argue that by using the square meters of the current built space more efficiently, the demand for housing can be reduced. Mete et al. (2020) further add that reduction in housing consumption per capita is important to respect environmental limits. Nevertheless, voluntary reduction of the consumption of living space will be hard to accomplish (Mete et al., 2020). Therefore, Mete & Xue (2021) argue that it is the role of the government to redistribute the shares of the housing stock. To further concretize the efficient use of existing housing stock Ermgassen et al. (2022) propose various measures: property taxes that disincentivize second home ownership, enhancing legal powers to take control of empty and abandoned homes, taxation regime that discourages large homes and cultural transformative solutions to housing provisions, such as co-housing and sharing space.

In the same vein, Schneider et al. (2013) argue that another pathway is to utilize the existing housing stock more efficiently. Currently built space (abandoned homes, second homes) can be refurbished and used differently. Moreover, refurbishment of the existing housing stock is resource efficient, increases the habitability and technical facilities of buildings and has a positive social, energy, and environmental impact (Cuchi & Sweatman, 2011).

Limiting urban expansion

Limiting urban expansion would keep agricultural and natural areas at the edges of cities open (Scheider et al., 2013; Scheidewind & Zahrnt, 2014). Furthermore, sustainable cities need open and green common spaces. Scheider et al. (2013) further argue that urban expansion can be limited by stopping city branding and competition between cities. In addition, limiting the capacity of banks to create money and increase the debt burden on households (Schneider et al., 2013). Nelson & Schneider (2018) further add that regulating city branding and competition and advertisements for luxurious housing and mortgage schemes would help decrease housing demand.

Additionally, Xue (2022) argues that the high-density, compact urban housing development is oftentimes proposed as a solution for reducing energy consumption from housing and housing-related transport. In the same vein, Scheidewind & Zahrnt (2014) argue that the construction of land-intensive one-family

homes and individualistic apartments should be opposed and that cities should be reshaped so that people can live at a higher level of residential density.

Limiting housing as a financial asset

Ermgassen et al. (2022) propose that to reduce the demand for housing as a financial asset, the government has to discourage investors to hold land strategically and unproductively. Ryan-Collins (2021) argue that this can be done by taxing the added value that is created by the positive externalities of others' doing. It is further argued by Ermgassen et al. (2022) that reforms can help redirect lending away from the property towards more productive investments. Lastly, financialization can be ignited by land ownership reforms. Private investors cannot benefit from the rising land values of publicly owned land. To make being a landlord more unattractive Nelson & Schneider (2018) argue that through the tax system rents can be regulated and leaving buildings vacant should be penalized. By discouraging housing as a financial investment it is easier to maintain a minimum acceptable housing quantity and quality for all, which is a priority within post-growth housing (Tunstall, 2023).

Resource efficiency and circularity

For new builds and refurbishments to fit within the sustainable standards of the post-growth perspective, the newly added housing stock should be net zero operational emissions (Ermgassen et al., 2022). In the same vein, the environmental impact of the existing buildings should be reduced (Cuchi & Sweatman, 2011). Tunstall (2023) further adds that housing under a post-growth perspective should result in a reduction of the total resources going into housing production and use.

Moreover, Hickel et al. (2021) argue that within the post-growth perspective, the maintenance and retrofit of buildings should be promoted over new construction. Refurbishment of the existing housing stock is resource efficient, increases the habitability and technical facilities of buildings, and has a positive social, energy, and environmental impact (Cuchi & Sweatman, 2011). Durrant et al. (2023) further argue that new developments and refurbishments should ensure the highest levels of resource efficiency and circularity during construction and long-term use.

Culturally transformative solutions

Another method of making housing affordable and sustainable is by introducing culturally transformative solutions to housing provisions. Schneider et al. (2013) propose measures such as social rent and house sharing. Moreover, Savini & Bossuyt (2022) argue that housing commons is a manner in which housing can be provided in a post-growth framework. Culturally transformative solutions to housing provisions, such as housing as commons fit within the post-growth framework as it stimulates efficient use of housing stock and limits urban expansion.

According to Savini & Bossuyt (2022), the principles of housing commons encompass collective ownership, democratic control, conviviality, and solidarity. In line with Lietaert's (2010) perspective on post-growth, co-housing emerges as an ideal embodiment of housing commons. Cohousing communities are neighborhood developments with a mix of private and common areas that allow for the community, while also providing its residents with privacy. Nevertheless, Ferreri (2022) argues that currently cohousing and other culturally transformative solutions to housing provision are only accessible to those who have a specific set of resources, whether economic, cultural, political, or social. Thus, there are very high entry costs for new alternative housing which fits within the post-growth perspective. Currently, co-housing inhabitants are predominantly well-educated, middle-income households (Cucca & Friesenecker, 2021).

Ultimately, post-growth housing is not a financial investment or status symbol, but rather a public service that is accessible and affordable for all citizens, whilst taking into consideration planetary boundaries and environmental impact (Ermgassen et al., 2022; Nelson & Schneider, 2018). Housing innovations that could fit within the premises of post-growth when they recognize limits mostly exist of better allocation and utilization of existing stock and integrating housing with natural ecosystems, challenging urban sprawl (Schneider et al., 2013). Identified post-growth pathways for housing are an efficient use of existing housing stock; limiting urban expansion; housing not as a financial asset; resource efficiency and circularity and culturally transformative solutions.

2.2.2 Mobility policy

In the following paragraphs, post-growth mobility is explored within the urban context. Cattaneo et al. (2022) found that within the post-growth mobility framework, environmental sustainability, economic viability, and social aspects such as conviviality and justice are of importance. Therefore, society's resources, infrastructures and spaces should be transformed (Cattaneo et al., 2022). Cattaneo et al. (2022) based their premises of post-growth mobility on account of Demaria et al.'s (2013) framework of degrowth principles:

- More sharing
- Improve global environment
- Limit infrastructure
- Improve local environment
- More justice
- More localization
- More autonomy

Moreover, Moller Jess (2022) argues that degrowth and post-growth authors favor slower and shared travel technology forms, whilst critiquing the current hypermobile lifestyle's obsession with speed, acceleration, and its corresponding use of energy and materials. In the same vein, Chertkovskaya & Paulsson (2021) argue that post-growth mobility is associated with smaller material throughput, slowing down, and a transition to low-carbon modes of transport (walking, cycling, and electrified public transport. Ferreira et al. (2017) characterize slow mobility utilizing promoting localism, slowness, and stillness. Slow mobility rejects transport studies that focus on mobility and making transport systems resistant to threats and disruptions, as it is argued that this leads to unsustainability and excessive costs (Ferreira et al., 2017). Moreover, Cattaneo et al. (2022) argue that a transition toward post-growth mobility can be accomplished with the adoption of mobility options. In the following paragraphs, alternative pathways will be explored for mobility that possibly fit within the post-growth perspective when they acknowledge limits and social goals.

Virtual mobility

Arnfalk (2002) argues that virtual mobility is when information technology facilitates access to activity without mobility. Virtual mobility facilitates a variety of activities such as teleworking, online shopping, and social media, which substitute physical mobility (Konrad & Wittowsky, 2018). Konrad & Wittowsky (2018) further argue that the information provided through virtual applications about public transportation and new forms of mobility (multimodality and sharing) make these options more feasible and attractive. Consequently, it is argued that virtual mobility leads to less travel time and the use of more sustainable travel modes (Konrad & Wittowsky, 2018). Furthermore, virtual mobility can lead to increased accessibility to social networks, goods, services, and opportunities for vulnerable groups, leading to a reduction in social exclusion (Kenyon et al., 2002). In the same vein, Moreno et al. (2021) argue that virtual mobility can enhance and improve urban service delivery and promote increasing sustainable practices. Nevertheless, Konrad & Wittowsky (2018) critique that an increase in travel information provided online and connections made on social media lead to more travel time and mobility.

Accessibility by proximity

Investment in local social capital, such as jobs and relationships, diminishes the importance of highly complex mobility systems, as citizens are less likely to travel further distances (Ferreira et al., 2017). In the same vein, accessibility by proximity is the change in land use patterns and societal arrangements so that individuals can find their needs (jobs, goods, education, etc.) in the proximity of their homes (Ferreira & von Schönfield,2022). Integrating service facilities, such as grocery stores and schools in neighborhoods promotes localized activities and reduces travel demand (Xue, 2022). In the same vein, Moriarty & Honnery (2013) argue that a focus on accessibility and urban density can cut transport demand and with it fuels and emissions. Moreover, proximity encourages the use of public transport and non-motorized transport and thus reduces car dependency (Xue, 2022).

A translation of accessibility by proximity is the '15 minutes city', which proposes that the city should be reorganized so that services and amenities should be within 15-minute walking distance (Mezoued et al., 2022). Living, working, commerce, healthcare, education and entertainment are six essential urban social functions that are included in the '15 minutes city' concept by Moreno et al. (2021). Moreno et al. (2021)

further add that people should not be disadvantaged in respect of their socioeconomic status or age to participate in urban life. Moreover, the '15-minute city' concept is further enhanced by virtual mobility, as information technology can facilitate the prompt delivery of services (Moreno et al., 2021). Consequently, the four premises of the '15-minute city' concept are proximity, density, diversity, and digitalization.

Nevertheless, Koster & Rouwendal (2012) argue that the increase of desirable amenities in vicinities of housing will increase the residential property values, which leads to social exclusion and housing precarity. A further critique is that for large travel reductions, unacceptably large density increases should be implemented, which would take decades (Moriarty & Honnery, 2013).

Active travel modes

Walkability and cycling are encouraged in line with slow mobility and a more socially and ecologically just mobility practice, as CO2 emissions reduce and active travel modes are affordable for many. Similarly, Cattaneo et al. (2022) argue for the transition to sustainable transport, attention should be given to active and hybrid travel modes. Cattaneo et al.'s (2022) operationalization of active and hybrid travel modes includes walking, scootering, cycling, or sharing these modes of transport. Moreover, Xue (2022) argues that land use strategies that can promote active mobility are urban development near public transport nodes, reducing parking lots, providing infrastructures for biking and walking, and reducing road capacity. In the same vein, Alexander (2012) argues that investment in such infrastructure can decrease dependency on the car.

Shared modes of transport

Drut (2016) identifies two systems of shared vehicles: vehicle-sharing systems and self-service systems. Whilst vehicle-sharing refers to a single vehicle being used by several users, self-service systems refer to a fleet of vehicles being used by different users. Shared use helps reduce the total number of vehicles in society and thus reduces congestion and rivalry for parking spaces (Drut, 2016). Vehicle-sharing primarily reduces congestion, whilst self-service systems lead to less space consumption within the city.

Furthermore, Nikolavea et al. (2018) propose the concept of mobility commoning. Contrary to the shared vehicle systems proposed by Drut (2016), commons are resources that are regulated by self-governing institutions, whereas shared vehicle systems are oftentimes initiated by market-oriented enterprises. Mobility as a commons can be concretized by social or community-owned enterprises providing transportation services (Nikolavea et al., 2018). Commoning is also a way of sharing modes of transport. Similarly, Illich (1973) proposed the concept of 'convivial' tools for post-growth mobility, which are technologies that are easy to understand, communally owned, and democratically developed based on the active involvement of their users.

Public transport

Public transport is oftentimes promoted in the context of post-growth development strategies (Moller Jess, 2022), as an alternative to privately owned vehicles. Hickel (2020) argues that the most efficient mode of transportation in terms of materials and energy required to move people around is to invest in affordable (or free) public transportation. Encouraging public transport and discouraging car use can be stimulated by urban development near public transport nodes, reducing parking lots, providing infrastructures for biking and walking, and reducing road capacity, similar to active travel modes (Xue, 2022; Alexander, 2012).

A way to invest in affordable public transportation is to encourage cost-free unlimited mobility, in the form of Fare-Free Public Transport. Fare Free Public Transport has been argued to be a strategy for contributing to social and spatial justice, addressing climate change, and challenging the pro-growth logic of urban development (Keblowski, 2023). Firstly, Fare Free Public Transport challenges the mobility-related exclusion of poorer and disenfranchised urban inhabitants (Keblowski, 2023). Secondly, Fare-Free Public Transport can alter travel behavior and limit car use in cities (Keblowski, 2023).

Nonetheless, Cattaneo et al. (2022) argue that public transport requires large and expensive infrastructure and cannot contribute sufficiently to the rapid change of mobility patterns that climate change emergencies require. In the same vein, Sheller (2018) argues that public transport often results in environmentally and socially destructive infrastructural projects aimed at enabling greater speeds and interconnectivity.

In sum, Cattaneo et al. (2022) identified seven overarching premises for post-growth mobility planning: more sharing; improving the global environment; limiting infrastructure; improving the local environment; more justice; more localization, and more autonomy. Moreover, post-growth favors slower, low-carbon modes of transport, which limit material throughput (Moller Jess, 2022; Chertkovskaya & Paulsson, 2021). Consequently, post-growth authors critique the current car dependency which leads to parking problems, congestion, and pollution. Alternative pathways explored that fit within the post-growth perspective are virtual mobility; slow mobility and accessibility by proximity; active travel modes; shared modes of transport and public transport.

2.3 Obstacles to Transformation

Current policies regarding housing and mobility are critiqued for various reasons. Criticism regarding housing policy concerns unmet housing needs, indebtedness, problems of financing social housing, accessibility and affordability, displacement, and socio-spatial polarization (Kleinman, 2007; Kadi & Muster, 2014; Vogelpohl & Buckholz, 2017). Critiques towards mobility policy regard congestion, social exclusion, collective and individual vulnerabilities, air pollution, and energy use (Ferreira & von Schönfeld, 2022; Loorbach et al., 2021). An overarching critique of housing and mobility policy is the environmental degradation, and lack of ecological vitality and diversity which is caused by the growth orientation within the current urban planning profession (Savini et al, 2022; Lamker & Schulze Dieckhoff, 2022). Thus, there is a need for a different discourse or perspective within planning. Post-growth planning can function as an alternative to growth-oriented planning, by injecting a sense of limits into societies and places (Savini et al., 2022). A transition towards a sustainable future involves new markets, practices, regulations, infrastructures, and cultural meanings that challenge the dominance of economic growth (Geels, 2012; Ferreira & von Schönfeld, 2022). However, the transition to a post-growth society would involve fundamental social, economic, political, and technological changes, some of which are difficult to achieve through political means (Büchs & Koch, 2019). In the same vein, Wächter (2013) argues that planning institutions play a decisive role in facilitating post-growth through promoting transitions.

2.3.1 Political and institutional

Durrant et al. (2023) argue that planners should not seek to be an overtly political actors trying to direct planning debates based on values, as they are subject to the elected officials in their local government. Nevertheless, planners should identify environmental and social harms that arise from growth-led proposals, voice uncomfortable truths, and articulate realistic spatial visions (Durrant et al., 2023). Thus, planners are subject to the political reality, formal rules and regulations, and informal norms of conduct, the institutional framework that shapes decisions (Birkenholtz, 2012). Currently, the planner acts in an institutional framework that is oriented toward economic growth and market actors (Mete, 2022; Savini & Bossuyt, 2022). Moreover, Ruiz-Alejos (2021) argues that there are few regulatory tools available to planners to reach social and environmental goals and challenge the current planning paradigm.

Ramírez Rincón et al. (2021) identified institutional barriers to sustainable urban planning from a municipal perspective in the Netherlands, which included lacking standardized directives for project sustainability inclusion; hindrances in collaboration between departments; sustainability practices evaluated based on monetary analysis and not including social concerns and benefits. Cease et al. (2019) further adds that costs and uncertainty about return on investment; limited budgets; prioritizing economic returns rather than environmental and social equity concerns are institutional barriers to sustainable urban development. In the same vein, Webb et al. (2018) argue that economic development and powerful private interest often override sustainable and social planning principles. Other barriers identified by Webb et al. (2018) are problems mobilizing financial capital for sustainability and social good, political cycles and influence, risk-averse planning systems, citizens' behaviors diverging from stated values, and lack of consistent and coherent policy and governance across levels and sectors.

Filion et al. (2015) classify these aforementioned barriers to sustainable urban development through political and institutional context; prevailing urban structure and dynamics (path dependence) and preference of the public. The main barriers that exist within these categories are inadequate funding and insufficient coordination between agencies, lagging government support for urban transitions (Filion et al., 2015).

2.3.2 Personal

Besides the institutional structure wherein the planner acts, the personal attitude and characteristics of the planner also determine whether the planner is susceptible to post-growth planning. Lamker &

Schulze Dieckhoff (2022) characterized nine positions about adopting post-growth planning: out of fashion, unnecessary, exclusivity, inappropriate, responsibility, uncertainty, speculative, inspirational, and revolutionary. Lamker & Schulze Dieckhoff (2022) further identifies four perspectives (desires, emotions, values, and sensemaking) that help understand the inner struggles and barriers that planners experience.

Most planners maintain a strong desire to do good and serve the public interest with knowledge and skills (Lamker & Schulze Dieckhoff, 2022). Therefore, if planners are convinced that post-growth planning is more aligned with the public interest, more active promotion of post-growth planning would be more likely. For example, Ruiz-Alejos and Prats (2021) found that planners recognize that if urban planning is to respond to current social and environmental challenges, the way planning works should change, integrating more clear and tangible environmental and social goals. Nevertheless, Planners fear negative emotions from politics and society if they propose post-growth alternatives to planning problems (Lamker & Schulze Dieckhoff, 2022). Moreover, planners feel disrespected by criticism of underlying current planning values. Challenging the growth imperative equals challenging the current worldview of planners, which still has political legitimacy (Mete, 2022). This is further strengthened by the circumstance that planners are oftentimes the neutral moderators or the objective technical-rational advisors within political and legal processes. Therefore, planners do not openly talk about values and argue that it is not part of their profession (Lamker & Schulze Dieckhoff, 2022).

Lamker & Schulze Dieckhoff (2022) also found that the foundation or underlying principles of planning are not perceived as a relevant discussion within planning. Moreover, planners are busy making sense of day-to-day tasks relating to digital transformation, sustainability, and climate change, leaving little room for the sensemaking of radical fundamental changes. Büch & Koch (2019) argue that growth is currently at the core of socio-economic institutions and deeply anchored in people's minds, bodies, and identities. Consequently, planning actors do not yet have an understanding of the necessity to question infinite economic growth (Ruiz-Alejos, 2021; Mete, 2022).

2.4 Conceptual model
Figure 1 shows the conceptual model which is comprised of the concepts discussed in chapter 2. For a transformation to a sustainable urban future in housing and mobility with post-growth premises, various practices are identified in the literature. Concerning housing policy: efficient use of existing housing stock; limiting urban expansion; limiting housing as a financial asset; resource efficiency and circularity and culturally transformative solutions. Concerning mobility policy: virtual mobility; accessibility by proximity; active travel modes; shared modes of transport and public transport are identified. These solutions are proposed in growth and post-growth-oriented literature. Nevertheless, when acknowledged in post-growth-oriented literature, the practices should have clear limits and measures of sufficiency. This distinguishes post-growth practices from growth-oriented practices. However, there are various obstacles to transformation to post-growth-oriented planning practice. Ultimately, practices and obstacles to a post-growth urban future are discussed.
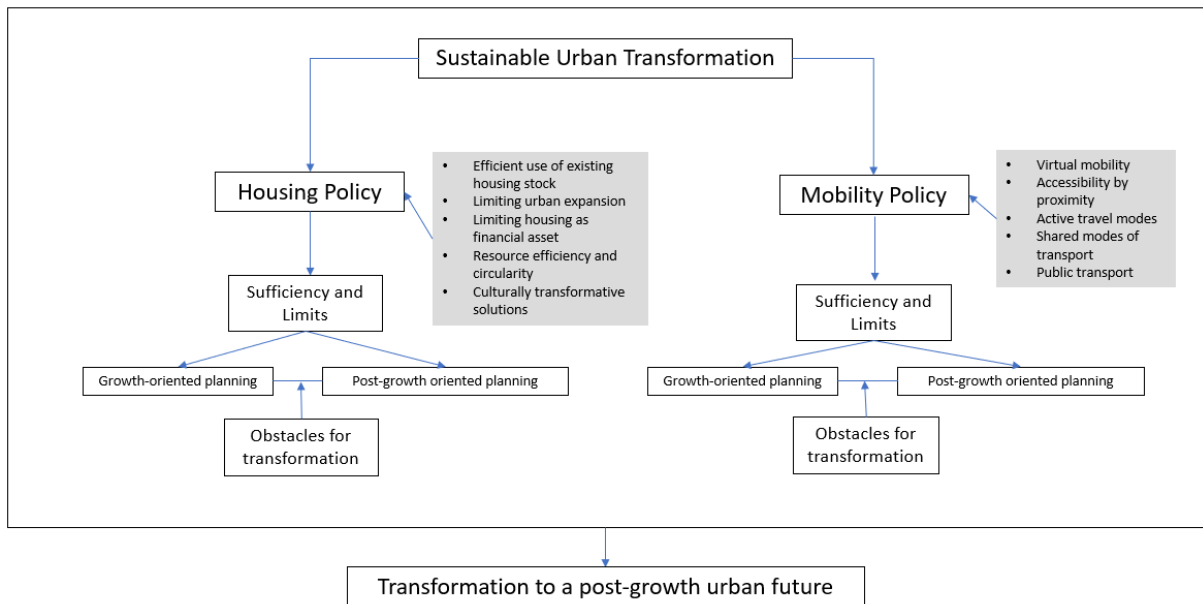
Figure 1- Conceptual model (Author, 2023)

The model is a guide to analyzing the housing and mobility policies of the municipality of Almelo and Hengelo.

Chapter 3: Methodology
In this chapter, the research design, the case selection and description, data collection, data analysis, limitations, and ethical considerations will be discussed and described.

3.1 Research design
This research aimed to explore housing and mobility policy documents of mid-sized cities in the Netherlands through the growth and post-growth perspective to see to which extent these documents are conducive to growth or post-growth orientation in planning. Moreover, obstacles to implement ideas with post-growth premises amongst policymakers were identified. To study this phenomenon in-depth, a multiple-case study design was used for this research.

A case study is an empirical investigation of a contemporary phenomenon within its context (Ebneyamini et al., 2018). Moreover, a case study allows the researcher to closely examine the data within a specific context (Ebneyamini et al., 2018). Yin (1993) identifies three types of case studies: exploratory, explanatory, and descriptive. This thesis is an exploratory case study, which is used to obtain an empirically based introduction to the structure, dynamics, and context of the subject of interest (Chopard & Przybylski, 2021). Moreover, multiple cases are analyzed as multiple case studies allow for wider discovery and theoretical evolution of research questions (Eisenhardt, 1991). A further advantage of a multiple case study design is that it allows the researcher to identify differences and similarities between the cases (Stake, 1995).

A qualitative research design was established to gain a further understanding of housing and mobility policy in mid-sized cities in the Netherlands and how much these are growth-oriented. To answer the sub-questions, a literature review was performed alongside qualitative empirical research consisting of thematic analysis of semi-structured interviews and policy documents (table 1).

Table 1- Sub-questions and research methods

Nr.	Sub-question	Method
1	What are the obstacles for policymakers in Almelo and Hengelo to implement post-growth planning ideas?	Literature review and semi-structured interviews
2	In the literature, what are identified obstacles for policymakers to implement post-growth planning?	Literature review
3	What are current (post-)growth planning practices identified by scholars in the field of housing and mobility, as highlighted in the literature?	Literature review
4	What are the growth-oriented practices identified in the fields of housing and mobility in Almelo and Hengelo?	Thematic analysis and semi-structured interviews
5	What are the signs of post-growth-oriented planning practices of housing and mobility in Almelo and Hengelo?	Thematic analysis and semi-structured interviews

3.2 Case selection and description
Flyvbjerg (2011) argues that when doing a case study it is important to first choose a relevant case. Housing and mobility are two main fields and core tasks of urban planning (Durrant et al., 2023). Therefore, housing and mobility play a significant role in the transformation to a more just and sustainable society. Secondly, the case study should be complete, in-depth, and of relevant timespan (Flyvbjerg, 2011). The case study only takes into account policy documents in place and published after 2008 and onwards, as post-growth thinking is only taken up by academics in the past few years (Lamker & Schultze Dieckhoff, 2022). After the financial crisis in 2008, academic authors started questioning the idea that our societies should be based on growth, proposing alternatives such as post-growth societies. (Savini et al., 2022; Latouche, 2009). Furthermore, recent developments in the last few years such as the publication of the IPCC reports on climate change, the housing crisis and energy affordability have increasingly popularised post-growth thinking. Therefore, post-growth planning could have impacted policies developed from 2008 onwards, in line with the emergence of the topic in urban planning. Lastly, the case needs to be studied concerning an appropriate environment (Flyvbjerg, 2011). Almelo and Hengelo are two typical cases of mid-sized cities in the Netherlands. According to two Platform31 (2023), mid-sized cities in the Dutch context have 40.000-100.000 inhabitants. Almelo has 73.155 inhabitants (CBS, 2022). Hengelo has 81.476 inhabitants (CBS, 2022). Moreover, in policy documents Almelo and Hengelo are characterized as typical mid-sized cities (Woonagenda 2021 Hengelo; Woonvisie Almelo

2020-2030). In the table below it is further illustrated how the criteria of case studies characterized by Flyvbjerg (2011) are implemented within this thesis.

Table 2- Flyvbjerg (2011) Characteristics of cases studies

Case	Housing and mobility policy
Period	2008-onwards
Environment	Almelo and Hengelo

3.3 Data collection

Ebneyamini et al. (2018) argue that there is various method of gathering data concerning case studies: observations, interview, document review, archival records, participant observation, using multiple sources of data, artifacts, and maintaining a chain of evidence. This thesis draws upon semi-structured interviews, thematic analysis, and a literature review.

3.3.1 Policy document analysis

Policy documents were consulted for analysis to explore to what extent growth orientation or post-growth orientation underlies housing and mobility planning in Almelo and Hengelo at municipal level. The retrieved policy documents had to adhere to various criteria. First off, the documents needed to be published by the municipality, as these organizations provide the framework for housing and mobility planning in Almelo and Hengelo. Secondly, the documents that are in place since 2008, as post-growth thinking is taken up by academics only in the past few years (Lamker & Schulze Dieckhoff, 2022).

Policy documents were found on the websites of the municipalities of Almelo and Hengelo, and an inventory of all the policy documents concerning housing and mobility was made. Thereafter, the documents were categorized based on the aforementioned criteria. Policy documents were downloaded via the municipal websites. The policy documents that were consulted during this research are depicted in the table below.

Table 3- Policy documents for thematic analysis

Name of publication	Translation	Topic	Organization	Publication
Mobiliteitsvisie Almelo op weg naar 2030	Mobility vision Almelo on the way to 2030	Mobility	Municipality of Almelo	2017
Gemeentelijk verkeers- en vervoersplan Almelo	Municipal traffic and transport plan Almelo	Mobility	Municipality of Almelo	2007
Concept Woonvisie Almelo 2020-2030	Draft Housing Vision Almelo 2020-2030	Housing	Municipality of Almelo	2020
Almelo Stad voor Mensen woonvisie 2020	Almelo City for People housing vision 2020	Housing	Municipality of Almelo	2012
Omgevingsvisie Almelo	Strategy on Spatial Planning and the Environment 2020-2030 Almelo	Housing and mobility	Municipality of Almelo	2020
Actieprogramma Wonen 2022 Almelo	Housing action program 2022 Almelo	Housing	Municipality of Almelo	2022
Woonagenda Hengelo 2021	Housing Agenda 2021 Hengelo	Housing	Municipality of Hengelo	2021
Woonvisie Hengelo 2016-2026	Housing Vision 2016-2026 Hengelo	Housing	Municipality of Hengelo	2016
Afwegingskader Woonvisie Hengelo	Assessment framework Housing Vision Hengelo	Housing	Municipality of Hengelo	2016
Kwalitatief afwegingskaderfactoren 2021	Qualitative assessment framework factors housing Hengelo 2021	Housing	Municipality of Hengelo	2021
Kwalitatief afwegingskaderfactoren 2023	Qualitative assessment framework factors housing Hengelo 2023	Housing	Municipality of Hengelo	2023
Omgevingsvisie buitengebied Hengelo	Strategy on Spatial Planning and the Environment Hengeloos outer part	Housing and mobility	Municipality of Hengelo	2022
Omgevingsvisie hart van Hengelo	Strategy on Spatial Planning and the Environment heart of Hengelo	Housing and mobility	Municipality of Hengelo	2022

Koersnota mobiliteit Hengelo	Strategy note mobility Hengelo	Mobility	Municipality of Hengelo	2021
Mobiliteitsplan mobiliteit 2040 Hengelo	Mobility plan 2040 Hengelo	Mobility	Municipality of Hengelo	2023

3.3.2 Semi-structured interviews

Semi-structured interviews were performed to identify obstacles to transformation to a post-growth society amongst policymakers in the fields of housing and mobility in Almelo and Hengelo and for further explanation of the policies. Policymakers in the fields of housing and mobility were approached as these are two core tasks of urban planning (Durrant et al., 2023. Consequently, these policy fields play a substantial role in the transformation to a post-growth urban future. Moreover, interviews are a powerful way of exploring the behavior of people and their interpretations and meanings of events and situations (Punch, 2014). Consequently, interviews can uncover behavior, obstacles and intentions, opinions, and interpretations of policymakers toward post-growth and growth-oriented planning which are not visible in policy documents.

An interview guide was developed based on the theoretical framework. Moreover, questions were derived from the policy documents that were analyzed (table 4). The interview guide can be found in Appendix A. In the table below the respondents and the date on which they were interviewed can be found. Interviews were recorded with the approval of the participants. Thereafter, interviews were transcribed by the author and uploaded into Atlas.TI. In Atlas.TI, the transcriptions were further analyzed. In the following paragraph, it will be further elaborated upon how the policy documents and interviews were analyzed.

Table 4- Respondents' interviews

Respondent number	Field	Date of interview	Municipality
I1	Mobility	21-04-2023	Almelo
I2, I3, I4 (group interview)	Housing and mobility	03-05-2023	Hengelo
I5	Housing	08-05-2023	Almelo
I6	Mobility	08-05-2023	Hengelo
I7	Mobility	15-05-2023	Almelo
I8	Housing	24-05-2023	Hengelo
I9	Housing	24-05-2023	Almelo
I10, I11 (group interview)	Mobility	30-05-2023	Hengelo
I12	Housing	31-05-2023	Almelo

3.4 Data analysis

For the policy document analysis and the interviews, thematic analysis was used. Thematic analysis is a method for identifying, organizing, and offering insights into themes across several forms of qualitative data (Alyavina et al., 2020). Moreover, it provides instruments for systematically coding and analyzing data, whereafter it can be linked to theoretical concepts (Alyavina et al., 2020). This thesis made use of the thematic analysis framework developed by Braun & Clarke (2006):

1. Familiarizing yourself with your data and transcribing verbal data
2. Generating initial codes (themes), developing predetermined codes (themes)
3. Searching for additional themes
4. Reviewing themes
5. Producing the report, providing a concise, coherent, and logical account of the story that the data tells

Themes were developed both inductively and deductively. Themes that were predetermined regard sustainable urban development themes and obstacles for transformation to a post-growth sustainable urban future found in the literature. All themes can be found in the codebook, see Appendix B. Moreover, codes were found inductively during the analysis of interviews and policy documents, which were added to the code book.

3.5 Ethical considerations

Interviewees signed a consent form, agreeing to participate in the interviews, which can be found in Appendix C. By signing this document they declared to be aware of their rights and allowing the researcher to record the interviews. The interviewees could withdraw from the study and exclude the

interview from the project at any moment in time. By signing the documents the interviewees agreed that they had enough time to ask questions about the research project and that involvement is voluntary.

The data gathered is confidential. The sound recording was only used by the researcher and is not published anywhere else. After transcribing the sound recordings were destroyed. Furthermore, the identity of the interviewees will not be disclosed for privacy reasons.

Chapter 4: Analysis

This chapter first outlines how growth and (post-)growth ambitions are prevalent in housing and mobility policies in Almelo and Hengelo separately. The ambitions regarding housing and mobility are discussed at the municipal level. Following the analysis of (post-)growth ambitions in housing and mobility planning, the obstacles for policymakers in housing and mobility policy in Almelo and Hengelo to implement post-growth planning ideas. Thereafter, the differences and similarities between Almelo and Hengelo are discussed. The subsequent paragraph will address the policy context of both Almelo and Hengelo in unison, as they employ comparable types of documents to establish the framework for their housing and mobility policies.

4.1 Policy context of Almelo and Hengelo (municipal level)

The guiding documents for the long-term policy goals and ambitions of the municipalities of Almelo and Hengelo concerning the physical environment are the Strategies of Spatial Planning and Environment (IPLO, 2023). In these visions mobility and housing are extensively discussed. Moreover, to further actualize ambitions within housing and mobility the municipalities establish additional visions and documents. The established visions in housing and mobility have a guiding effect regarding the physical living environment, the visions are not a legal instrument. Nevertheless, legal or regulatory instruments can be developed to achieve the goals prescribed by these documents.

In the housing visions aspects of housing in Almelo and Hengelo are discussed: quantity, quality, potential housing locations, distribution of homes, and the role of housing corporations and target groups (VNG, 2023). The housing vision forms the basis for the agreements between the municipality and other parties, such as housing corporations, tenant organizations, investors, and initiators of spatial plans. The agreements are further concretized in the housing action programs and agendas, in which agreements between these partners are recorded. To further steer housing initiatives in Hengelo, the municipality established a qualitative assessment framework, to which all housing initiatives are assessed.

Similarly, municipalities rely on mobility visions which are translated into municipal traffic plans, agendas, strategy notes, and plans to guide their mobility initiatives. Municipalities have significant opportunities to establish comprehensive frameworks that address mobility challenges (I6, 2023). Municipalities have the responsibility to improve the accessibility of locations within the municipalities, whilst improving the living environment, and road safety and accelerating the transition towards sustainable mobility (VNG, 2023). The housing and mobility policies on provincial, national and European level lie beyond the scope of this research.

4.2 Municipality of Almelo

4.2.1 Growth ambitions

Economy

It was found in the policy documents that Almelo aims to provide growth opportunities (Strategy on Spatial Planning and the Environment 2020-2030 Almelo, p. 12). Similarly, I7 argues that economic growth is one of the priorities of the municipal administration.

> ''To prevent shrinkage (as much as possible), we want to improve our accessibility and stimulate the economy in a general sense. This also includes city marketing, because, for people from the Randstad, we are an attractive alternative to their overwrought housing market. The connections with the Randstad already make us easily accessible, but we want to improve this even further.'' (p. 16, Draft Housing Vision Almelo 2020-2030, own translation)

Furthermore, according to I7, economic growth is crucial to generate prosperity which can be invested into sustainability.

> ''Before providing my interpretation, I believe it's important to emphasize that economic growth is crucial for a country. If you don't have jobs and there is massive unemployment, everyone will say, **** off with your environmental measures. We want jobs. You need to ensure a healthy economic climate, from which prosperity and resources can de derived to invest in other policy areas.'' (I7, own translation)

A concrete example of providing growth opportunities is the expansion of the XL Business Park in Almelo, to provide businesses with room to expand and grow within the proximity of Almelo (I5, I7).

A motivation for growing the economic structure is to ensure the quality of life and sufficient amenities within the city (I12). I7 stresses that the level of well-being and prosperity would decline when letting go of the concept of growth (I7). In the Strategy on Spatial Planning and the Environment 2020-2030 Almelo (p. 8, 2020) it is recognized that shrinkage of the population shouldn't lead to a decrease in amenities and facilities, which are needed to ensure a decent quality of life within the city. Mobility and housing measures function as a facilitator and stimuli for economic development.

Housing

It is a common view amongst interviewees that growth is further driven by the ambition of Spatial Planning Minister Hugo de Jonge to build 900.000 extra housing units by 2030 (I9, I12, I5). The ambition to expand the housing stock nationally translates into the addition of 4.100 extra housing units in Almelo (I9, I12). Almelo is going to develop more housing than local demand, developing for supra-regional demand, which means that the city is attempting to increase the population (I12). Almelo is undertaking construction efforts to address the housing shortage in the western region of the Netherlands and accommodate the growing number of refugees (I9). City marketing is used to put Almelo forward as an appealing alternative for people from the western parts of the country with overheated housing markets (Draft Housing Vision Almelo 2020-2030, p. 16). A further motivation to attract more households is to compensate for an increasingly aging population (Draft Housing Vision Almelo 2020-2030, p. 8). The goal is to attract households and young professionals with higher incomes and educations (Draft Housing Vision Almelo 2020-20302030, p. 8). An incentive for attracting young professionals is to fill in vacancies within the top technological sector which houses in Almelo (I12). Therefore, population growth is related to the earlier mentioned goal of Almelo to strengthen the economy. This growth is in contrast with the previous housing vision, which assumed long-term shrinkage, and preparations were already made for it. In that vision, Almelo aimed to moderate and pace housing construction. The existing stock would be renewed, but fewer new houses would be built (Draft Housing Vision Almelo 2020-2030, p. 16).

I9 further argues that to reach this ambition of adding 4.100 extra housing units, money, and numbers are paramount, aiming to be as cost-efficient as possible in the realization of these housing units.

"I always look for a balance between pragmatism, what is feasible and achievable, and which way, well, the sector is developing." (I7, own translation)

One interviewee argued that cost efficiency is directed by the incentive of market parties (area developers, contractors) to generate profits for themselves in the shortest amount of time possible (I12). The municipality of Almelo is mostly dependent on these market parties to realize extra housing units.

Mobility

The ambition to grow as a city corresponds with an increasing number of movements. Moreover, the significance of mobility is recognized as it functions as a stimulus for economic growth (p. 16, Draft Housing Vision Almelo 2020-2030), by being an attractive location for businesses by enhancing employee accessibility through improvements in public transportation, transport routes, and accommodating cars. This theme identified in the policies is further concretized by providing funding to maintain and expand international transport corridors which are present, such as the highway (A1) and Twente Canal (Mobility vision Almelo on the way to 2030, p. 9).

Nevertheless, it is the task of the municipality to think about mobility and housing with sustainability in the longer term (I12). All of the interviewees agreed that aforementioned increase in housing units and movements needs to be facilitated sustainably (I1, I5, I7, I9, I12). In the ensuing text, measures with post-growth premises to reach sustainable urban growth in housing and mobility in Almelo's policies are explored

4.2.2 Sustainable urban transformations
Housing
According to the Draft Housing vision Almelo 2020-2030 (p. 7), the housing market in Almelo comprised 33.000 houses in 2018, with 55% being privately owned and 45% designated for rental. Among the rental properties, 75% were under the ownership of social housing corporations.

<u>Sufficiency</u>
The earlier mentioned 4.100 to-be-developed houses are introduced to deal with the housing shortage in the Netherlands (I9). Almelo recognizes that everyone needs a home, a safe and pleasant environment is

a basic human need (Draft Housing vision Almelo 2020-2030, p. 1). Affordable housing for those with lower socio-economic backgrounds, who are locked out of the private market, is provided through social housing (Draft Housing vision Almelo 2020-2030, p. 21). The Draft Housing visons Almelo 2020-2030 (p. 55) further expresses that the pressure on the social housing market is increasing. On the contrary, the current plans of housing corporations cause a decrease in social housing by 2026 (p. 5, Housing action program 2022 Almelo). According to interviewees, Almelo possesses a considerable inventory of social housing and has the desire to reduce and distribute it evenly (I5, I12).

It was found during the interviews and in policy that the reason to decrease the social housing stock is to further increase the quality of the living environment and safety within neighborhoods for lower socioeconomic groups, Almelo aims to restructure the neighborhoods that consist primarily of cheap outdated social housing (I5; Draft Housing visons Almelo 2020-2030, p. 21). Some, but not all social housing will be rebuilt in the new developments (I5). Social housing will be added in neighborhoods with a small percentage of social housing (Housing action program 2022 Almelo, p. 8). This way, Almelo attempts to distribute social housing more evenly across the (surrounding) municipalities (Draft Housing vision Almelo 2020-2030, p. 14).

Limiting urban expansion
Almelo also has the objective to add 4.100 more homes by 2030. However, Almelo prefers infilled over the expansion of the city (Draft Housing vision 2020-2030, p. 18). Every spatial development first needs to be considered within urban boundaries before other locations are reviewed (Draft Housing vision 2020-2030, p. 18). Most of the to-be-developed units are going to be realized within the city's boundaries.

> ''When it comes to housing, we focus on densification. Particularly in inner cities, in which case we mainly designate the most worn-out areas around the railways. Outdated residential areas, or old business parks, that are eligible for transformation.'' (I5, own translation)

To attain extra houses within the boundaries of the cities, Almelo is going to encourage high-rise apartment complexes, with smaller apartments, transformation of existing buildings, and demolition of dated buildings (I12). This challenges the earlier strategy in the earlier housing vision of expanding beyond the boundaries of the city, to create suburban living environments for higher-income households (p. 10, Almelo City for People housing vision 2020). Moreover, to realize apartments with smaller square footage, Almelo is going to diverge from its original policy that apartments should be at least 75 m2 (I12). Policymakers see a trend that it is becoming more popular to live within smaller square footage and try to facilitate this (I5). Furthermore, inner-city development is favored to protect nature and agricultural land outside of the city (I5). Thus, over time limiting urban expansion has become increasingly significant within policies.

Nevertheless, I9 mentioned that according to the most recent vision to facilitate the growth of the city roughly 75% of the 4.100 units will be developed within the boundaries of the city, whilst 25% will be realized outside of the city's boundaries. This contrast earlier previous statements in policy and of interviewees wherein infilling was preferred. I12 echoed I9's statement and argues that ultimately politics will decide where the units will be built, expanding beyond city boundaries onto agricultural fields is inviting as inner-city densification is less cost-effective. Consequently, this illustrates that the municipality is willing to differ from the set housing policy to limit urban expansion beyond the city's boundaries, letting go of earlier set limits.

Limiting housing as a financial asset
Interviewee I12 expressed that to ensure that the newly developed urban areas are not bought by investors Almelo reinforces the self-occupancy obligation (*zelfbewoningsplicht*) within the to-be-developed zoning plans, in consultation with the developing parties. Another legal instrument in the Netherlands to avert housing from being used as a financial asset is buyback protection (*opkoopbescherming*). Houses cannot be purchased and rented out by investors when a neighborhood has buyback protection. Nevertheless, Almelo has yet to introduce the buyback protection as the reinstatement must be well founded, which is an expansive and time-intensive investment (I9). The legal instruments function as correctives to the private housing market, so it is less attractive to invest in housing. Consequently, these measures contribute to overcoming the earlier-mentioned shortage and affordability of housing.

<u>Resource efficiency and circularity</u>
One concern expressed in the Strategy of Spatial Planning and Environment is resource efficiency and circularity in spatial developments. The Strategy of Spatial Planning and Environment Almelo (p. 27) purposes to move towards the circular economy in 2050. This also regards the materials needed for housing. Nonetheless, one interviewee argued that the criteria surrounding circularity remain vague:

"Although no one knows exactly what circular means. Is it also true for the very last nail?" (I5, own translation)

Moreover, Almelo has the ambition to provide more regulatory room to adjust and expand existing homes and buildings (p. 12, Almelo City for People housing vision 2020). This allows for flexible use of real estate, to accommodate ever-changing needs (p. 18, Draft Housing Vision Almelo 2020-2030). Almelo exclaims that small business parks are found suitable for transformation and restructuring into residential areas.

"Revitalization, transformation or repurposing of small business parks (in residential areas) is also possible." (p. 45, Strategy on Spatial Planning and the Environment Almelo 2020-2030, own translation)

Examples mentioned by interviewees are that the former city hall is recently transformed into an apartment complex, other buildings that are frequently refurbished in the municipality of Almelo are former school buildings (I5). The purpose of refurbishment and flexible use of real estate is that materials are repurposed, enforcing circularity. Nonetheless, policymakers see that refurbishment is financially challenging, a lot needs to be invested, and demolished and new materials need to be added (I5). I12 expressed the concern that the financial burden is a reason to build new buildings, rather than refurbish. Moreover, the municipality has no instruments available to check and enforce whether a project is ultimately climate-neutral (I5). There is currently no procedure to verify the CO_2 emissions form the refurbishment or new build of a spatial development project reaches zero (I5).

Another example of a measure implemented by the municipality of Almelo to allocate its stock of buildings efficiently is the objective to make sure that the housing of the tenant corresponds with their living situation (Action program Housing 2022, p. 11).

"We want someone to start in a starter home at some point and then move on to a semi-detached and then perhaps to a detached house and then to a retirement home." (I9, own translation)

According to interviewee I9 this prevents large houses from being occupied by single-person households and more efficient utilization of the existing housing stock. These single-person households can progress into smaller apartments or alternative living arrangements. However, other than creating enough supply for people to move into suitable housing, there are not yet instruments available for the municipality to stimulate this behavior, as coercion does not work in the Netherlands (I9).

A small number of those interviewed suggested that the growth of housing is primarily bounded by the nitrogen crisis in the Netherlands (I5). Nitrogen and its effects on biodiversity are taken into account to be developed spatial plans. The project must not have too much nitrogen deposition during use and construction (I1). Nitrogen is an emission that hurts nature and biodiversity. Building plans are only executed when the amount of nitrogen deposited is not harmful to nearby designated natural areas. This forces stakeholders involved in spatial developments to opt for more environmentally friendly routes in building and usage, as this decreases nitrogen deposition (I5).

<u>Energy use</u>
The total housing stock of Almelo has to be natural gas free by 2050 (Draft Housing Vision Almelo 2020-2030, p. 11). New developments need to reach net zero emissions to comply with the national building regulations, namely the Dutch building decree (I9). I5 reported that to further decrease the energy use of the existing housing stock Almelo has energy coaches to offer advice and encourage them to invest in the resource efficiency of their home. Citizens can visit a 'sustainable energy counter' to receive advice on sustainable measures and the national schemes and subsidies that are in place (Draft Housing Vision Almelo 2020-2030, p. 31).

Pertaining to the social housing stock, Almelo made agreements with the social housing corporations in the Housing action program Almelo 2022 (p. 18) that the corporations will reduce the energy use of their

stock in the following years, through their own sustainability and portfolio strategy. Consequently, in 2022 housing corporations in Almelo renovated and made sustainable 570 houses (Housing action program Almelo 2022, p. 18).

Culturally transformative solutions

There is no mention of receptivity to alternative forms of living in the 'Almelo City for People housing vision 2020', but only in the 'Draft Housing Vision Almelo 2020-2030' (p. 19) and 'Strategy on Spatial Planning and the Environment 2020-2030 Almelo' (p. 41). Examples named alternatives are tiny houses or '*knarrenhofjes*' (alternative housing for the elderly) (Draft Housing Vision Almelo 2020-2030, p. 19). Thus, there is an increased openness for alternative more sustainable forms of living over time. Innovative living arrangements, such as tiny houses, are embraced in Almelo when initiated by private parties (Draft Housing Vision Almelo 2020-2030, p. 17). To further encourage the development of a tiny house park, rules, and regulations are recently developed (I9). Private actors are responsible for initiating the actions to develop culturally transformative living arrangements that are innovative. Another example is the cooperation of '*Hof van Heden*' in Almelo, a private initiative that wants to build cooperatively, a common vegetable garden and other facilities (I9). Common facilities within buildings are becoming increasingly popular in Almelo (I9). The recently developed former city hall contains a common laundry room, tools, cars, and guest rooms (I9). The initiatives revolve around the community and consist of a mix of public and private areas. These initiatives are further supported by the municipality of Almelo through being in dialogue with the initiators, assisting them with guidance through the regulatory framework for spatial developments (I9). Nevertheless, I5 is skeptical of the culturally transformative housing solutions, as the municipality cannot fulfill every individual wish within the boundaries of the city. For example, a tiny house park is a space-intensive practice in a city where space is scarce (I5).

Mobility

Car

Almelo states in the recent Strategy on Spatial Planning and the Environment 2020-2040 that the car is: 'a holy cow' in the city and its surroundings. I9 stresses the car is of importance for the residents of Almelo as work, hobbies, and education are often reached faster by car than by foot, bicycle, or public transport. Almelo has a good road network for cars (I12), therefore the car is a convenient mode of transportation and citizens are dependent on their cars (I1). Policymakers recognize that citizens will only consider alternative modes of transportation if they are competitive about travel time (I7). The electric car is an encouraged mode of sustainable transportation in Almelo, as it is argued that it is impossible to create a future without a car (I7). Measures to encourage electric vehicles are implemented from the European level, for example by obstructing the sales of diesel and gasoline cars by 2035 (I7), there are no further measures on the municipal level.

Nonetheless, I1 is critical of car usage in Almelo. I1 expresses that the car takes up a lot of space, which is scarce in Almelo, modes of transportation that are more sustainable and take up less space need to be considered increasingly in the new developments. The new developments are oriented in the proximity of the station and inner city, so that it is easier for citizens to make use of other modes of transportation than the car, such as public transport (I12).

Societal trends

Almelo recognizes two societal trends in policy that help reduce traffic flow and bring down the number of cars in the city: shared transport and virtual mobility. Virtual mobility, the new online dimension of shopping, education, and work is mentioned in the mobility vision (Mobility vision Almelo on the way to 2030, 2017). Nevertheless, during the interviews it was found that Almelo does not further engage with the trend and does not impose measures.

Concerning shared transport, a collectively owned, voluntarily maintained, and driven local bus and shared car systems are named as positive examples in the Strategy of Spatial Planning and Environment Almelo (p. 34). A way in which Almelo encourages car sharing is to make it a condition in the development of an area, fewer parking spaces need to be created, but there must be shared cars for the residents (I7). For example, an apartment complex is built with few parking spaces, but with the condition that the building has 3 collectively owned cars (I7). Moreover, in newly developed areas, where space is scarce, parking standards are lowered, so that people are expected to rely on other modes of transport such as shared transportation (I7, I1). The implementation of city-wide shared mobility in Almelo, as stated by I7, has not achieved success thus far. Interestingly, I7 argues that despite multiple attempts by market players to establish a shared mobility system, it has not been successful.

<u>Public transport</u>
When asked about public transport, I7 argues that Almelo prioritizes the accessibility of work destinations. To further advance the accessibility of these work destinations the city desires a high-quality public transport system:

"We want to maintain and improve the regional roads, a high-quality public transport system, and the high-quality Twente bicycle highway for the daily journeys to work locations" (p. 11, Mobility vision Almelo on the way to 2030, own translation)

Concrete measures proposed in policy to improve public transport are the integration of scheduled bus services and increasing the capacity and frequency of the rail network (Municipal traffic and transport plan Almelo, p. 24). An example of improving the rail network is lobbying for the Nedersaksenlijn, which is a new train connection from Almelo to Groningen (I7). Furthermore, in area developments surrounding the train station, parking norms are lowered, so that people are more likely to fall back on public transport as a mode of transportation (I7). I1 takes it a step further by suggesting that public transportation should be made free, and the funds allocated to roads should be redirected toward improving public transportation. Nevertheless, I1 acknowledges that this is more a personal preference than that it is executable on the municipal level on the short term.

<u>Resource efficiency in transport</u>
The scope granted in policy to public transport, shared transport, virtual mobility, and active travel modes is motivated by the goal to reduce CO_2 emissions in Almelo that are produced by mobility (Strategy on Spatial Planning and the Environment 2020-2030 Almelo, p. 37). CO_2, environmental impact, and climate adaptation are continually taken into account concerning mobility and infrastructural projects, in addition to feasibility and affordability (I7).

There is no further mention of the circularity or CO_2 emissions produced by the materials used in infrastructural projects in the mobility policies. However, Almelo is committed to achieving a circular economy, wherein CO_2-neutrality of materials is inherent (I1; Strategy of Spatial Planning and Environment Almelo, p. 27). Infrastructural projects in Almelo are established through inquiries from contractors and developers. It was found that contractors and developers are favored if they make use of circular materials (I1, I7). Ultimately, earlier mentioned feasibility and affordability take primacy within the inquiries, as the financial resources of municipalities are limited (I7). Moreover, how circularity is defined and implemented remains vague within the municipal organisation (I5).

<u>Active travel modes</u>
It is stated in policy that Almelo wants to make the (e-)bike a worthy alternative for commuting and shorter distances. There is attention to bicycle accessibility and continuous investment in biking infrastructure, such as the Twentse bicycle highway (F35):

"Priority for the bicycle, space for the car" (p. 33, Strategy on Spatial Planning and the Environment Almelo 2020-2030, own translation)

Almelo will also invest more in walking and cycling infrastructure surrounding business parks so that they are more easily accessible by bike and foot (I1). Furthermore, the inner city will only be accessible to bikers and pedestrians. Also specified is that pedestrians are entitled to move unhindered, safe, and comfortable, by providing pedestrian facilities and support when crossing busy streets and roads (Municipal traffic and transport plan Almelo, p. 14). This coincides with the earlier identified theme to efficiently use the scarce space within the city to build more housing, active travel modes take up less space than cars (I1).

<u>Sufficiency and accessibility by proximity</u>
The Mobility vision Almelo on the way to 2030 states that Almelo attached great value to self-reliance, also regarding transport (p. 8). There is a focus on alternatives for the car (public transport, e-bike, voluntary transport services) so that citizens without a car can travel throughout the municipality (Mobility vision Almelo on the way to 2030, p.14). Although there is a desire to incorporate social goals to increase self-reliance in the mobility vision, there is no mention of social aspects of mobility in the earlier published Municipal Traffic and transport plan Almelo.

Moreover, I1 argues that the core value for mobility in Almelo should be accessibility by all forms of transportation, walking, cycling, public transportation, and so on. The municipality should strive for

accessibility so that self-reliance and liveability increase (I1). Consequently, Almelo aims to make facilities and amenities, such as education and health care, easily accessible (Draft Housing vision 2020-2030, p. 27).

4.2.3 Obstacles to a transformation to a post-growth society
The following paragraphs will further elaborate on the obstacles to implementing ideas with post-growth premises, which incorporate limits. These obstacles are divided into three themes.

Mental shift
One issue expressed by I5 is that Almelo notices that its employees need to make a mental shift to incorporate factors into their work, that were less prominent in the past. Examples of those factors are limits, sustainability, and mobility. Moreover, the shift needs to be made mostly by older employees who have to adjust their routines (I1). A reason for this found by I1 is that the impending retirement of employees means that they feel like the task to transition towards a sustainable future is a challenge for the upcoming generation and is not their responsibility. Nevertheless, I7 expresses that there is an increase in cooperatively thinking about sustainability within the municipal organization. I1 acknowledges that this is characterized by an increase of the integral approach, wherein sustainability policymakers are continually involved.

Feasibility and affordability
A common view amongst interviewees is that feasibility and affordability mostly determine the shape of spatial developments (I1, I12, I9, I7). Various motivations were identified. Most money flows toward the management and maintenance of existing infrastructure (I1). New ideas such as shared mobility or alternative modes of transportation only come into play when new areas are being developed (I1). I12 further adds that policymakers set ambitions, however, the ambitions have to be paid for eventually. Therefore, ambitions need to be prioritized. Ultimately, to focus is one money and quantitative factors, such as several houses built (I9).

 "I always look for a balance between pragmatism, what is feasible and realizable" (I7, own translation)

I1 argues that area development ignites momentum for other ideas regarding housing and mobility. This view was echoed by I12, who found that policymakers can draw up an integrated vision for a new area, to further convince politicians to integrate new ideas regarding mobility and housing.

Politics
A policymaker has to invest in insight and support to ultimately persuade the council to make a certain decision (I5). A conservative council is less receptive to innovative and sustainable ideas (I12). Therefore, it is harder for policymakers to propose initiatives in line with the premises of post-growth housing and mobility. Thus, whilst the council is increasingly amenable to sustainable ideas (I7), it was found by interviewees that certain dogmas such as the car is a 'holy cow' do still exist (I12), a cargo bike instead of a car for daily use is an unusual idea in Almelo, whilst it is a way of decreasing car usage and thus CO2 emissions (I1). Consequently, policymakers exhibit a reduced inclination to put forth transformative sustainable ideas that challenge the established identity of the city, as they expect that this leads to negative emotions amongst the public and municipal council.

Furthermore, politicians ultimately determine the institutional and regulatory framework wherein the policymakers and citizens operate. Initiatives that are less common, such as co-housing projects and tiny house projects, are harder to process within the current regulatory and institutional framework (I9). Moreover, I1 argues that the institutional framework in Almelo is very policy poor, which means that decisions are made ad hoc and not tested to a vision or policy documents. Consequently, the definitions of sustainability and associated concepts, such as circularity, remain vague within the municipality of Almelo (I5). This makes making policy harder.

Additionally, the institutional framework in which the organization operates causes policymakers to work in a sectoral rather than integral manner concerning tackling policy and problems (I1).

"What do you think about this? And then it gets passed on to, for example, transportation, and transportation has an opinion. Then it gets passed on to greenery, and they think something about it. You can now see that we are slowly coming together, that we are g oing to look at the case together."
(I1, own translation)

Some felt that there is a trend towards a more integrated approach to policy-making (I1 and I7). The same can be said for sustainability, departments are increasingly collaborating on integrating sustainability into projects (I7).

<u>4.3 Municipality of Hengelo</u>
4.3.1 Growth ambitions
Economy
Hengelo has the ambition to be an attractive place to work, innovate, make, and be an entrepreneur (Strategy on Spatial Planning and the Environment heart of Hengelo, p. 66). Hengelo wants to be in the top three green technological regions in the Netherlands, and have a strong international competitive position in the manufacturing industry (Strategy on Spatial Planning and the Environment heart of Hengelo, p. 22).To be attractive for businesses and further advance the business climate, the young urban professional is attracted to:

> *'The tight labor market is together with the aging of the population of Twente a serious threat for our economy, the level of amenities and the ambition to be a top technological region in the Netherlands''*
> *(p. 24, Strategy on Spatial Planning and the Environment heart of Hengelo, own translation)*

Besides attracting and investing in the working population, Hengelo aims to have optimal connections with the region, Randstad, and international destinations to facilitate the economy (Strategy on Spatial Planning and the Environment heart of Hengelo, p. 29).

The majority of interviewees argued that the motivation for aspiring growth is the necessity to maintain attractiveness and retain amenities through an increase in scale (I2, I3, I4, I6, I8, I10, I11). I4 argues that to external organizations it oftentimes seems that economic growth has priority for the municipality, however internally, preserving existing amenities within Hengelo as a medium-sized city is prioritized, to ultimately preserve liveability within the city. An upsurge in the growth of the economy enhances the potential for amenities (Strategy on Spatial Planning and the Environment heart of Hengelo, p. 26).

Furthermore, I6 emphasizes that there is no separation between ecological advancement and economic growth, accentuating that sustainability is a prerequisite for growth.

> *''Unsustainability is no longer an option, I do see that we are moving forward hand in hand, promoting both the growth of the city and ecological considerations.'' (I6, own translation)*

Housing
According to the Housing agenda Hengelo 2021 (p. 11), Hengelo has the projection of declining population size until 2035 (Housing agenda Hengelo 2021, p. 11). The reasons for the increase in housing demand as argued in policy is the decreasing household sizes. Therefore, the previous Housing Vision 2016-2026 Hengelo (p. 7), stated that the time of great expansion has passed, therefore there was no need for significant expansion, improving and making the existing housing stock future-proof was the main priority within this policy.

Contrarily, a theme reported by interviewees was that Hengelo currently has 80.000 inhabitants, but has the ambition to grow beyond the 100.000 inhabitants, (I2, I3, I4, I8, I10, I11). In policy it is illustrated that Hengelo aims to reach this goal by portraying itself as an attractive living environment and accessibility through various modes of transport, in combination with being a top-technological region (p. 26, Strategy on Spatial Planning and the Environment Heart of Hengelo). Hengelo altered the strategy in light of the provincial government setting a strong ambition to make a substantial contribution to the National housing deficit, in line with Hugo de Jonge's aim to build 900.000 extra homes (p. 1, Housing agenda 2021 Hengelo). Hengelo wants to build at least 4500 extra homes by 2040, but the ambition is to surpass the 4500 extra housing units, also facilitating supra-regional demand (I2). Hengelo aims to attract earlier mentioned young highly educated young professionals searching for relatively cheap (small) houses or apartments (p. 5, Housing agenda 2021 Hengelo). Hengelo did not have a living environment that suited the aforementioned target group and will add 1.000 apartments for this in the coming years (I3).

Mobility
As mentioned earlier, Hengelo wants to have good connections to various destinations to facilitate the economy. In the same vein, is stated in the Mobility strategy note Hengelo (p. 3) that mobility needs to contribute to a strong economy and liveability within Hengelo:

''The central issue is how mobility can contribute to Hengelo as a pleasant place to live, as a social city, as a city with a strong economy and living environment'' (own translation)

It was reported by I6 that Hengelo is lobbying for accessibility by rail and stressing the importance of the port. Another measure is that there is an extra focus to cater to the educated young professional, recognizing their demand for public transport so that they are more likely to go live or work in Hengelo (p. 8, Mobility strategy note Hengelo).

Consequently, housing and mobility policy are mainly there to stimulate the expected growth in Hengelo However, even as Hengelo strives to surpass 100,000 residents, the municipality must uphold quality as the foundation throughout the city (I8), this includes taking sustainability into account. The following paragraphs will delve into the sustainable urban transformation of housing and mobility with post-growth premises in Hengelo.

4.3.2 Sustainable urban transformations
Housing
In 2015, the housing market of Hengelo consists of 36.600 housing units, of which 44% are social housing and 55% is privately owned, the rest is privately rented (Housing Vision 2021–2026 Hengelo, p. 1).

Sufficiency
I3 voices that the current focus of Hengelo is ensuring housing for everyone. It is particularly challenging at this current moment, especially for those at the lower end of the income spectrum (I3), as the housing market in Hengelo is tight (Qualitative assessment framework factors housing Hengelo 2023, p. 1). Simultaneously, the supply of social housing is decreasing in Hengelo (Housing Vision 2021–2026 Hengelo, p. 7). The Housing Vision 2021–2026 (p. 8) further states that housing corporations are being restricted by changing national laws and regulations. The landlord levy (verhuurdersheffing) means that housing associations can invest significantly less than before, and tenants are facing higher housing costs due to rising rental prices. Nevertheless, Hengelo makes agreements with the housing corporations that the social housing stock will keep the same or increase in the coming years (Housing Vision 2021–2026 Hengelo, p. 10).

It was reported in both policy and during the interviews that whilst attracting young professionals is a necessity to improve the business climate, the typology of housing which is built for them (high rise and smaller appartements) is more affordable and contributes to the goal to ensure housing for everyone (Strategy on Spatial Planning and the environment heart of Hengelo, p. 27; I3).

Limiting urban expansion
To achieve population growth Hengelo will be constructing in higher densities within the existing city limits (Strategy on Spatial Planning and the environment heart of Hengelo, p. 27; I3), such as 1.000 apartments for young professionals. No new expansion locations are being designated to protect nature and agricultural land. Higher densities are also encouraged to preserve and safeguard the green spaces within the city, which are valuable public spaces (I8, I3). Moreover, Hengelo is experimenting with allowing the refurbishment of buildings into housing units in inner city areas where it was not allowed before, such as core hospitality or shopping areas (I8). This is further strengthened by the strategy mentioned in policy to accommodate population growth is to transform existing buildings:

''The municipality prefers housing utilizing transformation in which existing built-up areas are given new purpose, tailored to the needs''(p. 4, Qualitative assessment framework factors housing Hengelo 2023, own translation)

Spatial development is more likely to get permission in Hengelo when it concerns a transformation of an existing building (I3). In Hengelo, former retail and hospitality buildings have been transformed into housing in the inner city, and the most desirable buildings have been transformed (I8).

Limiting housing as a financial asset
Two interviewees brought up that Hengelo has implemented the self-occupancy requirement policy in two neighborhoods, where investors were a problem (I8, I3). If a property is purchased in those areas, a permit must be applied for if the investor wants to rent it out, however, the municipality will not grant such permits (I3). I3 further stresses that to put in place the self-occupancy requirement policy, the municipality had to demonstrate the presence of housing scarcity of affordable houses. I3 further argued that to prevent investors divert their attention to other neighborhoods, they are monitored so that

protective measures can be put in place timely (I3). Thus, the legal instruments function as correctives to the private market housing, decreasing housing shortage and making it more affordable.

<u>Efficient allocation and circularity</u>
In the Strategy on Spatial Planning and the Environment Heart of Hengelo (p. 3) it is stated that Hengelo strives for circular area development.

"We strive for circular area development and circular construction with the central goal of creating integrated functioning areas where loops are closed as much as possible" (Strategy on Spatial Planning and the Environment Heart of Hengelo, p. 3, own translation)

Circular area development aligns with the principles of the circular economy in the sense that material, energy, and water flows are closed (Strategy on Spatial Planning and the Environment Heart of Hengelo, p. 3). Furthermore, Hengelo is exploring the possibility of adding additional guidelines for climate-adaptive construction permits, adding extra requirements for materials (I8). For example, Hengelo is aiming to attract a developer that wants to build a timber frame construction of a multi-story building (I8, I2). There is an increasing focus on minimizing, reducing resources, reducing footprint, and making better use of what already exists (I3). This focus is accelerated by the nitrogen crisis, building plans do not get permits if they deposit a significant amount of nitrogen in the use or built phase (I3). Refurbishment and repurposing of the existing building stock minimize the need for new materials in the area's development. Therefore, efficient use of existing building stock and active policy to limit urban expansion in Hengelo enhances circularity and resource efficiency.

Nevertheless, Hengelo has limited power as a municipality to enforce measures regarding circularity and climate adaptivity (I3). The laws and regulations for building permits, which include measures on earlier mentioned factors, are determined nationally, in the Dutch building decree. I3 further argues that these national laws and regulations do not incentivize innovative thinking in terms of sustainability, whilst it is up to the market to come up with innovative sustainable housing solutions. Innovative sustainable housing solutions are financially less profitable, therefore the economic interests are often given priority (I8). This is further enforced by the lacking demand for radically sustainable housing initiatives, as people are less comfortable with innovative solutions than proven initiatives (I3).

<u>Energy use</u>
The policy states that the majority of homes are already there but need to be prepared for the future by taking sustainability measures (p. 4, Housing Vision 2016-2026 Hengelo). Hengelo makes agreements with housing cooperations, who own 44% of housing in Hengelo, to make their housing stock more sustainable (Housing Vision 2016-2026 Hengelo, p. 8).

Moreover, to encourage taking sustainability measures for private parties, Hengelo informs their citizens about sustainability initiatives, through residential coaches that are available to provide advice and answer questions about making your home more sustainable (Housing Vision 2016-2026 Hengelo, p. 22). Making the existing stock more sustainable and informing the population through residential coaches about sustainability, need to decrease the energy use of the housing stock.

<u>Culturally transformative solutions</u>
Hengelo aims to allocate urban areas for innovative living arrangements. In the qualitative assessment framework for housing projects (p. 5) it is argued that experimental and niche forms of living arrangements are preferred. Reasons given for favoring alternative living arrangements are the enhancement of sustainability, circularity, and affordability. Current innovative living arrangements in Hengelo are tiny houses, or a transformed office building with common facilities, such as a common laundry room (I8). However, from within the municipal organization, there is no special attention currently for culturally transformative housing solutions, as these projects are time and capacity-intensive (I8).

Mobility
<u>Sufficiency</u>
I6 finds that it is important to ensure the mitigation of transportation inequality and that mobility contributes to people's well-being. There were various measures summed up by I6 that mitigate transportation inequality such as free public transport below a certain level of income or above a certain age, and a free bicycle as part of the poverty reduction policy.

"We pay attention to the accessibility for individuals with reduced mobility and ensure the provision of additional mobility facilities for those who require them" (Mobility plan 2040, p. 29, own translation)

The measures taken for mitigation of transportation inequality come from the social department within the municipality, rather than the mobility policymakers (I6). The municipal organization is compartmentalized, especially the physical and social domain, whereas everything is interconnected and a holistic approach is found to be more beneficial for policy making (I6).

Car
Policymakers find that regarding mobility, citizens of Hengelo are reluctant to give up their cars (I3). Hengelo is not as aggressive in countering cars as leading cities, this is dependent on the identity and physical structure of the city (I3). Consequently, Hengelo keeps investing in extra asphalt to improve accessibility and traffic flows throughout the city by car (I6). A concrete example from within the policy is that the Wijkring will be improved so that an increasing number of cars can easily flow throughout the dense inner city area (Mobility plan Hengelo 2040, p. 14). Therefore, the physical fabric of the city keeps supporting car usage.

"I'm surprised how many people choose to take their cars and are perfectly fine with being stuck in traffic. They drive through the city and spend fifteen minutes on their commute, whilst if you ride a bike through the city, you can reach the other site in five minutes. They simply accept being stuck in traffic, they don't want to give up their comfort." (I11, own translation)

However, a theme brought up by the interviewees is that whilst Hengelo is reluctant to let go of car usage, the city attempts to make alternative forms of transport increasingly interesting, cycling, and shared transportation:

"Not so much discouraging, but rather making the alternative easier." (I6, own translation)

Interviewees I10 and I11 argue that when people realize that an alternative mode of transport, such as public transport or cycling is more efficient and easier, that people consider it to be an alternative for the car. Another example of this is that the parking norms in newly developed areas will be much lower than in the past (I6, I10, I11). Car dependency in these areas will become less interesting. These areas are designed with the STOMP principle.

STOMP-principle (Public transport, active travel modes, and shared transportation)
It was found in policy that Hengelo works with the STOMP principle. The STOMP principle is an area development strategy:

"With the STOMP principle, the car is no longer to the design of the space, but we start with the pedestrian (Stappen), cyclist (Trappen), Public transport (OV), and MaaS (Mobility as a service). Finally, the private car is taken into the institution." (p. 14, Mobility Plan 2040, own translation)

Consequently, the STOMP principle integrates the themes of public transport, active modes of transport, and shared transportation in public space and street design. The STOMP principle encourages considering the function and desired use of the road from all modes of transportation, rather than starting with designing the road for cars and then adjusting the remaining space accordingly (I10). Active travel modes, public transport, and shared transportation are prioritized.

"But I do believe that a shift is necessary. I think it's important to reduce reliance on cars and instead prioritize public transportation, cycling, and walking." (I11, own translation)

In ambition stated in policy is that Hengelo's primary transportation modes are public transport and active travel by 2040 (p. 14, Mobility plan 2040). A high-quality public transportation plan has been implemented to increase the number of residents using public transportation. One of the key objectives of this play is to provide the very citizen with access to public transport within a 300-meter radius (p. 8, Mobility Plan 2040). Furthermore, new housing developments in Hengelo are in the proximity of public transport, with lower parking norms, to stimulate public transport usage (I10, I11). Moreover, Hengelo works together with the provincial government during the concession, by adding extra lines or times, so that the bus and train services remain visible and continue to operate (I6). It is expected that the use of buses and trains will increase, as the new urban developments to attract young educated professionals are close to the train station, and car dependency in these areas will become less interesting (I2, I12).

Walking and cycling, active travel modes are prioritized in future area developments. Moreover, the living environment must stimulate exercise:

''Residential environments must invite exercise, walking and running routes must be indicated and there must be more attention for the bicycle.'' (p. 8, Strategy note mobility Hengelo junction of Twente, own translation)

Investments have been made to make cycling in Hengelo more attractive: adjusting traffic lights for a cyclist, and construction of a bicycle flat and separate cycle paths (Strategy note mobility Hengelo, p. 5). Furthermore, Hengelo invested (together with other cities in Twente, such as Almelo) in the bicycle highway (F35) (Strategy note mobility Hengelo, p. 5). Lastly, Hengelo aims to popularize cycling for car users through the use of marketing and communication (Strategy note mobility Hengelo, p. 3). Moreover, currently, the municipality is working on enriching the Mobility Plan 2040 with a walking and cycling policy (I6). Measures will include more walking paths or cycling routes to Haaksbergen and Oldenzaal (I12). Shared transportation will be further elaborated upon in the paragraph on societal trends.

Accessibility by proximity
It is articulated in the Strategy note Mobility Hengelo (p. 12) that one of the outlines of the province for municipal mobility is to reduce distances and avoid unnecessary movement. Hengelo translates this outline into ensuring accessibility of amenities (in the city center). This is further concretized by the measure that every housing plan should be realized in the proximity (walking distance) of public transport, shops, and welfare facilities:

''The urban residential environment is also attractive due to the short distance to the magnet in Hengelo, where all urban facilities are concentrated. The proximity and easy accessibility of good facilities contribute greatly to an attractive living environment in the urban living area'' (p. 52, Strategy on Spatial Planning and the Environment Heart of Hengelo, own translation)

I6 argues that Hengelo works following the neighborhood approach, which means that facilities and amenities that are daily necessities, such as education and healthcare, should be accessible in the neighborhood. Furthermore, Hengelo is a midsized city, therefore a lot of amenities are already within 15-minute reach by foot or bicycle (I6, I10, I11). I11 further argues that Hengelo aims to grow to maintain amenities, which leads to an improvement of accessibility by proximity.

Resource efficiency in transport
Hengelo wants to reduce emissions of mobility by 49% in 2030 (Strategy note mobility Hengelo, p. 10). This is supported by 80% of the population according to a conducted survey (Strategy note mobility Hengelo, p. 15). Furthermore, Hengelo's mission is to further improve resource efficiency in transport by stimulating innovation such as zero-emissions trucks and transport via waterways rather than roads (Strategy note mobility Hengelo, p. 6). The shift towards zero-emission mobility is facilitated by the STOMP design principle.

Regarding circular development and the construction of infrastructure, Hengelo strives to be zero-emission and circular in 2050 (Strategy on Spatial Planning and the Environment Heart of Hengelo, p 8). I6 argues that the market already provides opportunities to move towards the use of more sustainable products within infrastructural projects, which are made concrete in the specifications of the infrastructural projects (I6, I10, I11). The municipality relies on the market for innovation of green technologies (I6, I10, I11). Moreover, due to the nitrogen crisis contractors are forced to construct infrastructural projects more sustainably, for example by using electric cranes (I3). Projects can only prevail if they do not cause a significant increase in nitrogen disposition (Mobility plan Hengelo 2040, p. 10). Nevertheless, as long as it is cheaper to use unsustainable products during a project, it is routine to choose the cheaper option (I6).

Societal trends
Hengelo recognizes shared transportation and virtual mobility as developments within society (I6, I10, I11). Shared transportation is characterized in Hengelo by sharing systems for bicycles, scooters, and cars. Hengelo finds that this form of transport is suitable for the first and last mile (I6). Furthermore, the Strategy note mobility Hengelo (p. 25) emphasizes that shared mobility is a good alternative to the car. However, shared transportation is introduced by market parties, when found an interesting business case (I10). Currently, policies and regulations are made on shared transportation within Hengelo. One of the

strict requirements is to obtain a permit as a market party to introduce shared transportation in Hengelo that has to be emission-free (I6).

It was established during the interviews that Hengelo does not actively steer towards virtual mobility, it's a result of market and societal developments (I10). Furthermore, policymakers recognize the negative effects of virtual mobility, such as feelings of isolation, which are not desirable to ignite as a municipality (I10).

4.3.3 Obstacles to a Transformation to a post-growth society

Personal Characteristics

A common theme found by policymakers in Hengelo is that personal characteristics influence the policy that is ultimately made (I8, I10, I11). Argumentation, communication, enthusiasm, motivation, and confidence affect the ability of the policy maker to put forward their beliefs and ideas (I8, I10, I11). In certain fields there are more enthusiastic narrow-minded specialists than others:

> *''Certain traffic engineers, for example, who are crazy about bike lanes, or people from the green department who are obsessed with trees, right?'' (I8, own translation).*

I10 argues that with age enthusiasm and motivation sometimes fade as initiatives have been obscured in the past. Furthermore, I6 argues that older policymakers are less likely to integrate sustainability into their work. However, I8 stresses that ultimately policymakers work from a set policy, therefore the ideological preferences of the policymakers cannot get too prevalent in the municipality's actions, the policymaker acts as neutral moderator.

Politics

Ultimately, the municipal council is the most powerful within the organization (I2). Policymakers need permission from the council, they try to put through their ideas, however:

> *''Bureaucratically, we can sometimes find ourselves in a bit of a bubble here. In that sense, it's good to have a council that keeps us in check. The resident is the focal point. We may need to do it differently.'' (I2, own translation)*

For example, Hengelo is known for its spacious detached or semi-detached houses, with enough space around the house for cars (I8). Similarly, as mentioned previously, there is a shift towards sustainable mobility, but the car also plays an important role (I10). In the end, the council still represents the desires of society and the identity of the city (I3). The municipal council is part of the institutional framework wherein the policymaker operates. Policymakers make efforts to avoid generating negative emotions among the public and municipal council members. Implementing measures such as car restrictions or constructing predominantly high-rise apartments would contradict the preferences of the pubic and likely evoke negative sentiments (I8, I10, I3). As a result, policymakers are less inclined to propose radical sustainable ideas that challenge the established identity of the city.

Another organizational obstacle regarding urban sustainable development is departmentalization (I6). It is up to the policymakers to work together and initiate an integral approach to policymaking (I11).

> *''It is also one big, very complex organization, so yeah. But then you have to work hard to achieve an integrated approach because people won't come to you automatically. You have to seek out the people yourself'' (I11, own translation)*

I4 argues that over time-solving spatial issues has become more integral rather than sectoral. Moreover, the administration of the municipality stimulates an integral rather than sectoral approach (I6):

> *''We emphasize the need for an integrated approach because everything is interconnected. However, in practice, when it comes to policymaking, things become incredibly complex. I encounter the challenge that social officials primarily focus on social matters, while my traffic officials discuss the placement of signs, and urban development solely focuses on building houses. The coordination between these different areas is not yet straightforward. However, it is gradually improving.'' (I6, own translation)*

Feasibility and affordability

To realize extra housing in the municipality Hengelo is dependent on private parties. These private parties experience extra rules and regulations on sustainability as a threat, as extra rules and regulations can hurt profitability (I8).

''There are plenty of regulations. And to implement more regulations you need a very broad consensus. When you come to economic interest, do you want to add regulations or do you still want to build? Do you want things to be built, or do you want to put developers in an even more difficult situation?'' (I8)

I8 proposes that investors will be more open to sustainable innovative solutions if projects are subsidized by the municipality. Furthermore, for mobility, the municipality is dependent on subsidies from the provincial and national governments, which are oftentimes not sufficient to translate the ambitions of the Mobility Plan 2040 Hengelo into reality.

''The bike parking facility under the market square currently has 250 spots, and we, as team mobility, once suggested turning it into a facility with a minimum of 500 spots. However, there was only 50k available. Well, it's then not possible to build an expensive large underground parking facility'' (I10, own translation)

Therefore, the aspirations outlined in the Mobility plan and other visions within the municipality may not necessarily be achieved. The attainment of these goals Is contingent upon the involvement of private entities and the availability of national and provincial subsidies (I10).

<u>4.4 Differences and Similarities</u>
4.4.1 Growth
Ultimately, both municipality's efforts to grow as a municipality for multiple reasons. Almelo and Hengelo have been assigned the responsibility of erecting extra houses, considering the aim of Hugo de Jonge to construct 900.000 homes to alleviate the housing deficit. Moreover, both cities attempt to stimulate their economies, for example by attempting to attract highly educated young professionals. Eventually, the aim of preventing shrinkage is to maintain the level of facilities and thus the quality of life.

4.4.2 Housing
Concerning the expansion of the housing stock, Almelo and Hengelo both prefer infilled within the city's boundaries, rather than expansion into agricultural fields and nature. Nevertheless, in contrast to Hengelo, Almelo carefully explores expansion beyond the city's boundaries, as these developments are more cost-effective to realize (I9, I12). In the same vein, Almelo does not have self-occupancy requirements in neighborhoods yet, whereas Hengelo has already assigned 2 neighborhoods. Almelo is currently in the process of exploring the possibility of assigning self-occupancy requirements, however, this is an expensive process. Hengelo already has a tiny house park (I3), whereas Almelo is currently in the process of creating a policy framework for a tiny house park (I9). Hengelo has opted to prioritize other work over investing significant effort in innovative housing solutions like tiny house parks, citing the significant time commitment required for policymakers (I8, I3).

The basis of housing policies in Almelo and Hengelo is the ability to offer shelter to every citizen. Simultaneously, the municipalities attempt to make the future and existing housing stock more energy efficient. Both municipalities have energy coaches and advisors to incentive homeowners to take sustainability measures, housing cooperations have to reduce the energy use of their stock and new builds have to be zero-emission due to the national Building Decree (*Bouwbesluit*). In addition, both municipalities are more likely to grant permission for a new development if it involves the transformation of an existing building, utilizing pre-existing materials.

4.4.3 Mobility
Hengelo is open to shared transportation, whereas it does not seem to be encouraged by policymakers in Almelo (I7). Therefore, Hengelo is currently in the process of creating a policy framework for shared mobility providers, whereas Almelo does not actively facilitate or stimulate shared transportation options. Furthermore, Hengelo has already incorporated the STOMP principle into its mobility policies through the recent completion of its latest mobility policy. On the other hand, Almelo is in the process of developing a new mobility vision (I1), in which the STOMP principle will also be integrated. Currently, Almelo is a policy-poor municipality regarding mobility (I1).

Almelo and Hengelo both want to decrease the emissions caused by mobility. The municipalities attempt to stimulate the shift from the car towards public transport, active travel modes, and shared transportation, by making it more accessible and attractive. It is not necessarily about discouraging the car, it is about stimulating and making alternatives more attractive. Furthermore, in new developments, the cities wield a lower parking norm, which makes car usage less attractive. Nevertheless, there is still focus and room for the car in the mobility policies of Almelo and Hengelo.

4.4.4 Obstacles to a Transformation to a post-growth society

Regarding obstacles to the implementation of ideas with the premises of the post-growth perspective, similar themes were identified in Almelo and Hengelo. Personal characteristics, such as motivation, communication, argumentation techniques, and enthusiasm, determine the extent to which a policymaker can forward their ideas. Furthermore, the political structure ultimately determines the agenda, visions, and goals with regard to mobility and housing. The political structure serves as a representation of the resident's voices, which may not always align with sustainable practices with post-growth premises. Lastly, projects and practices are mostly steered towards affordability and feasibility, as budgets are limited and the municipalities are dependent on profit-driven organizations to reach certain goals, such as the expansion of the housing stock

Chapter 5: Discussion, conclusion, and Recommendations

5.1 (Economic) Growth, housing, mobility, and Sustainability

Both Almelo and Hengelo did not have projections of significant population growth, only household growth due to households becoming smaller. The stagnation of population growth can be attributed to an aging population and outmigration of young individuals from the region. Nevertheless, Almelo and Hengelo both attempt to grow. Almelo is building for supra-regional demand and Hengelo is aiming to grow beyond the 100.000 inhabitants. The primary objective for growth in Almelo and Hengelo is to preserve the quality of services, amenities, and overall liveability within the cities. The primary objective is not simply growth, but rather expanding the customer base to financially support the development of services and amenities, ultimately enhancing the overall quality of life within the city. Stimulating growth to maintain a level of amenities and quality of life was not found a motivation for stimulating growth in the theoretical framework. Nevertheless, Ewing et al. (2008) and Kahn (2009) argue that urban growth leads to increasing in CO2-emissions through rising consumption and car-usage, amongst other things.

To facilitate this growth the municipalities make use of the housing and mobility paradigm that is currently dominant within north-western Europe, neoliberal or growth-oriented urban planning (Olesen, 2014). Swyngedouw & Moulaert (2000) identified city marketing as a growth-oriented planning tool, this is also used by Almelo to attract new inhabitants. Moreover, parallel to the literature, Almelo and Hengelo leave the distribution and supply of housing to the market and only provide correctives to it (Mete & Xue, 2021). The issues identified by Kleinman (2007) regarding market-oriented housing policies are present in Almelo and Hengelo, such as unmet housing needs, problems financing social housing, and concerns about the private renting sector. One of the causes of problems financing social housing is the landlord levy, which means that housing associations can invest significantly less than before in Almelo and Hengelo. Similar conclusions were drawn by Dieleman (1996), who observed a diminishing attractiveness in investing in de-commodified social housing in the Netherlands, primarily due to the declining presence of the welfare state. Furthermore, housing needs are unmet due to a tight housing market. Lastly, there are concerns about investors in the private renting sector in Almelo and Hengelo, for which the municipalities have introduced corrective legal measures such as the self-occupancy requirement and buyback protection.

In the coming years, extra houses will be built in Almelo and Hengelo to facilitate growth. Therefore, Almelo and Hengelo follow the expansionary, high environmental resource consumption pathway which characterizes a growth-oriented housing policy (Ermgassen et al., 2022). Regarding materials and energy consumption of the housing stock, Almelo and Hengelo do not go beyond the Dutch building decree. The Dutch building decree does not contain any requirements regarding the circularity of the products used during construction, circularity is initiated by market parties. All new developments do need to be zero-emission according to the Dutch building degree. Following Ruiz-Alejos (2021), the municipalities are reluctant to implement extra regulatory tools to reach social and environmental goals. The economic interest of private parties, such as developers are prioritized, as Almelo and Hengelo are dependent on these parties to realize spatial developments. In line with Sager's (2011) research, private parties are primarily focused on producing rent from urban locations, prioritizing short-term profitability over sustainability considerations. Extra measures would negatively impact profitability for market parties.

Population growth leads to an increase in movements. Moreover, mobility is used as a stimulus for economic growth. In the same vein, Nikolaeva (2022) argues that mobility is often characterized as supporting and stimulating growth. Almelo and Hengelo aim to be an attractive location for businesses by enhancing accessibility, accommodating cars, and strengthening public transport, and transport routes. Accessibility is improved to improve the business climate, which leads to attracting investment, increasing competitiveness, and cultivating entrepreneurship, conforming to elements of growth-dependent planning identified by Rydin (2013).

The car is still dominant in Almelo and Hengelo, both cities are reluctant to let go of the car. Similarly, Loorbach et al. (2021) argue that within growth-oriented urban planning use of the car is still central and the norm. Measures such as extra asphalt are still taken to improve accessibility by car in both cities. According to de Vos (2015), the local environment affects travel mode choice, therefore by altering the urban structure to improve car accessibility, Almelo and Hengelo alter the local environment so that the car is most convenient to use. Moreover, interviewees argued that to stimulate more sustainable forms of transport than the car, the focus is to make them more convenient. This is in line with the findings of

Ferreira & von Schönfeld (2022) who argue that current day mobility is characterized by efficiency, travel time and time savings. Furthermore, policymakers argued that most money about mobility flows into the maintenance of existing urban infrastructure, which is mainly geared towards cars. Furthermore, due to an increase in mobility, amenities have been concentrated and people need to travel further distances to reach said amenities in Almelo and Hengelo. This phenomenon is identified by Ferreira & von Schönfeld (2022) as one of the reasons why the pro-growth mobility narrative is no longer preservable.

According to studies by Ferreira & von Schönfeld (2022) and Ermgassen et al. (2022), the growth of mobility and housing units corresponds to proportional environmental impacts. However, Almelo and Hengelo are actively dedicated to achieving circularity and zero-emission status by 2050. In pursuit of this objective, they are taking measures to prevent any increase in CO_2 emissions resulting from the expansion of mobility and housing, guided by the principles of eco-efficiency. The concept of eco-efficiency, as highlighted by Kurz (2019), advocates that technological advancements can decouple economic growth from ecological impacts. Aligning with this perspective, Almelo and Hengelo, rely on market-driven innovation to establish a sustainable future in housing and mobility, in line with the findings of Loorbach et al. (2021). Moreover, Almelo and Hengelo conform to the existing national regulatory framework concerning sustainability in housing and mobility, with limited additional measures. However, they actively encourage and support sustainability initiatives, when introduced by private actors. As mentioned before, private parties oftentimes prioritize short-term profitability over sustainability in Almelo and Hengelo. The reliance on market actors creates a situation where municipalities are hesitant to introduce additional regulatory tools, as they fear the potential deterrence of these investors. However, Kurz (2019) and Hayden (2019) argue that eco-efficiency measures are not sufficient to meet climate goals. s

5.2 Sustainable urban solutions with post-growth premises

5.2.1 Housing
Consistent with the post-growth perspective Almelo and Hengelo find that housing is a fundamental right and shelter should be provided to all citizens (Schneider et al., 2013; Ermgassen et al., 2022; Tunstall, 2023). Therefore, social housing is provided within the municipalities for those who are locked out of the private housing market. Social rent is one of the post-growth housing possibilities proposed by Schneider et al. (2013). Nevertheless, housing corporations are being restricted and supply is not meeting demand in Almelo and Hengelo.

Most housing within the municipalities is provided by private actors. Nevertheless, the municipalities do discourage investors from buying property in some neighborhoods by making being a landlord more unattractive (Nelson & Schneider, 2018; Tunstall, 2023; Ermgassen et al., 2022). Almelo and Hengelo only provide correctives to the mechanisms the market provides for the distribution and supply of housing (Mete & Xue, 2021). In neighborhoods where investors increase rents so that the poor are locked out (Kadi & Muster, 2014), Hengelo has a self-occupancy obligation, and Almelo is aiming to introduce the self-occupancy obligation. The self-occupancy obligation is a municipal reaction to concerns about the private rented sector and unmet housing needs, which were identified by Kleinman (2007) as issues in market-oriented housing policies.

As mentioned earlier, Almelo and Hengelo are planning on expanding the housing stock. In line with Johnson (2001) and Scheidewind & Zahrnt (2014), Almelo and Hengelo attempt to redirect urban sprawl, by prioritizing infilled over the expansion of the city in the realization of extra housing stock, protecting nature and agricultural land. Moreover, Hengelo stresses that green open spaces within the city should remain, following Scheidewind & Zahrnt (2014) who argue that sustainable cities need to safeguard green common spaces. The added housing stock in Almelo and Hengelo will be more high-rise and close to public transport facilities. In the same vein, Xue (2022) argues that high-density urban housing development is a solution for reducing energy consumption from housing and housing-related transportation. Furthermore, Almelo and Hengelo encourage refurbishment of existing buildings, to keep within the limits of the city. Similarly, Hickel et al. (2021) argue that within the post-growth perspective of housing, retrofit, and maintenance should be promoted over new construction. Nevertheless, the expansion of the city still consists of individualistic housing units. Single-family housing is still popular amongst developers, as these are easiest to sell to the population of Almelo and Hengelo. This contrasts Scheidewind & Zahrnt's (2014) findings that the construction of land-intensive one-family homes and individualistic apartments should be opposed within the post-growth housing perspective. Moreover,

whilst Almelo is aiming to build 75% of the extra homes within the boundaries of the city, it is contemplating building 25% of the 4.100 extra housing units outside of the city's boundaries, as development onto agricultural land outside the city is argued to be more cost-effective.

Furthermore, to efficiently allocate and utilize housing, which is in line with the premises of post-growth (Schneider et al., 2013), Almelo and Hengelo try to make sure that the housing of the tenants corresponds with their living situations, preventing large houses from being occupied by single-person households. Nevertheless, in line with the findings of Mete et al. (2020), Almelo found that voluntary reduction of living space is hard to accomplish and that coercion does not work in the Netherlands.

Whilst single-family housing is still the norm in Almelo and Hengelo, culturally transformative housing solutions do exist. Projects in Almelo and Hengelo consist of tiny house parks and other living arrangements with common facilities, such as guest rooms, washing rooms, and so on. Innovative solutions allow for living on fewer square meters (Schneider et al., 2013). These collective and common facilities are identified by Savini & Bossuyt (2021) as part of housing commons that fits within the post-growth framework. However, it is expressed that the establishment of culturally transformative housing solutions, such as the tiny house park in Hengelo, takes up significant time and capacity usage from within the municipality, initiators, and external parties. This is in line with the findings of Cucca & Friesenecker (2021) who argued that culturally transformative housing solutions are only accessible to those who have resources, such as economic and social capital.

According to Ermgassen et al. (2022), post-growth housing should fit within planetary boundaries. To research resource efficiency and circularity in housing policy, Almelo and Hengelo do not put any more effort than the Building Decree of the Netherlands. The newly added stock is net zero operational emissions, as argued by Ermgassen et al. (2022) and Tunstall's (2023) objectives of post-growth housing. Moreover, refurbishment of existing buildings is prioritized over new development so that materials can be reused, which is in line with the post-growth perspective which argues that maintenance and retrofit of buildings should be promoted over new construction (Hickel et al., 2021; Cuchi & Sweatman, 2011). Cuchi & Sweatman (2011) recognize that the environmental impact of existing buildings should be reduced as well. Consequently, Almelo and Hengelo have energy coaches and advisors to encourage citizens to take sustainability measures and decrease the energy usage of the existing housing stock. Simultaneously, social housing cooperations implement sustainability measures to reduce energy use. Whilst efforts are made to reduce the total resources going into housing use, no regulatory framework is put into place to reduce the total amount of resources going into housing (Tunstall, 2023). As a result, not all buildings align with the limits set by planetary boundaries, contradicting the principles of a post-growth perspective.

The housing policy in Almelo and Hengelo contradicts the post-growth perspective by not placing restrictions on the expansion of the housing stock. Almelo and Hengelo are actively making efforts to attract new residents, particularly highly educated young professionals. This stands in contrast to the findings of Schneider et al. (2013), who suggested that competition and city branding among cities might restrict urban expansion, introducing a more sustainable urban environment.

5.2.2 Mobility
Both Almelo and Hengelo aim to grow within the following years, which results in more movement and mobility within the city. Almelo and Hengelo do not engage with limits concerning mobility, contrasting the post-growth perspective. In line with Chertkovskaya & Paulsson (2021), Almelo and Hengleo aim to stimulate the shift towards a zero-emission mobility future which is mostly characterized by stimulating sustainable alternatives such as public transport, shared transportation, and active travel modes. In Hengelo, this is characterized by the design principle STOMP in Hengelo, where all other modes of transportation are prioritized before the car in new developments. In new developments in Almelo and Hengelo, the car is given less space through a lower parking norm and construction of new developments near stations. Moreover, a lot of bicycles and walking infrastructure has been erected in Hengelo and Almelo over the years. Active travel modes are part of slower modes of transportation, which are favoured by post-growth authors (Moller Jess, 2022). Moreover, facilitating active travel modes decreases transportation inequalities, as walking and cycling is affordable. In the same vein, Alexander (2012) and Xue (2022) argue that investing in parking lots, housing amongst transportation nodes, and constructing walking and cycling infrastructure can decrease dependency on the car.

Another concept within the STOMP principle is shared transportation. Almelo and Hengelo leave shared transportation to the market. Whilst Almelo is reluctant, Hengelo recognizes shared transportation as a viable option for the first and last mile, or as a replacement for the second car. This is in line with the findings of Demaria et al. (2013), who argue that more sharing is part of the degrowth mobility framework of the future. Therefore, Hengelo invests in a policy framework to regulate private shared transportation initiatives. Furthermore, this aligns with the positive sustainable effects of shared transportation distinguished by Drut (2016) and Nikolavea et al. (2018).

In terms of public transport, Almelo and Hengelo lobby for accessibility through public transport. Nevertheless, whilst it is the wish of some policymakers, Almelo and Hengelo do not go as far as post-growth literature in providing public free transportation (Keblowski, 2023; Hickel, 2020). However, Hengelo does provide free transportation for those above the age of 65, and under a certain income boundary.

To alter transport inequality and poverty for all citizens, Almelo and Hengelo aim to make all forms of transport accessible. Similarly, Demaria et al. (2013) argue that justice is part of the post-growth mobility framework. To further advance accessibility, accessibility by proximity is used, policymakers argue that Almelo and Hengelo are relatively small cities in which you can reach a lot of the city in 15 minutes. Therefore, citizens can find most of the facilities needed, goods and education, in the proximity of their homes (Ferreira et al., 2017; Moriarty & Honnery, 2013). New developments will be constructed nearby the inner cities, so facilities are easily accessible. However, not all essential facilities, living, working, commerce, healthcare, education, and entertainment, as characterized by Moreno et al. (2021) are available within 15 min. of Hengelo and Almelo citizens. Due to the increase in scale and mobility of citizens, some amenities also disappeared in Almelo and Hengelo, amenities have an increased catchment area over time. Therefore, Almelo and Hengelo aim to increase in population, so that the level of amenities will be maintained or increased.

Ultimately, mindful of Demaria et al. (2013) framework of degrowth transportation principles, Almelo and Hengelo attempt to improve the global environment by stimulating forms of zero-emission transportation, such as active travel modes, or shared zero-emission scooters. Shared transportation is left to the market. By growing the population, the cities hope to maintain a certain level of amenities and therefore improve autonomy and localization. By making transportation accessible for vulnerable groups, such as lower socio-economic groups, Hengelo and Almelo attempt to make transportation more just. Notwithstanding, Almelo and Hengelo both do not put limits on mobility. Furthermore, virtual mobility is not stimulated or part of Almelo and Hengelo's framework for sustainability mobility.

5.2.3 Nitrogen crisis
Unfettered growth leads to damaging ecological impacts (Lamker & Schulze Dieckhoff, 2022). Even though Almelo and Hengelo both aim at growing their population and economy, to fore come shrinkage and lack of amenities, they are limited by the nitrogen crisis in the Netherlands. Nitrogen is an emission that hurts nature and biodiversity. Building plans and infrastructural projects are only executed when the amount of nitrogen deposited is not harmful to nearby designated natural areas. This forces stakeholders involved in spatial developers to opt for more environmentally friendly routes in building and usage, as this decreases nitrogen deposition. This is parallel to the post-growth perspective in which energy use and material throughput should be limited to a sustainable scale so that it does not impact the environment disproportionately (Kallis, 2011).

5.3 Obstacles
The obstacles to implementing post-growth premised planning can be divided into three themes, personal characteristics, politics and institutional framework, and feasibility and affordability.

Following Lamker & Schulze Dieckhoff (2022) policymakers in Almelo and Hengelo argue that policymakers should not be overtly political actors. Similarly, the policymakers in Almelo and Hengelo argued that they should act as neutral moderators, as policymakers work from a set policy. However, communication, argumentation, enthusiasm, and other personal characteristics do influence the work of policymakers and their ability to put their ideas through. Policymakers also found that age is a determinant of implementing ideas with the premises of post-growth planning. Older policymakers are holding on to their routines, which are based on previous ideologies, and are more restrained concerning proposing new initiatives.

Furthermore, policymakers in Almelo and Hengelo contend that economic growth is essential for generating prosperity to finance sustainability goals, emphasizing that there is no separation between ecological advancement and economic growth. This corresponds with Büch & Koch's (2019) findings that growth is currently at the core of socio-economic institutions and deeply anchored in people's minds, bodies and identities. Policymakers in Almelo and Hengelo do not challenge the fundations of growth, in accordance with Ruiz-Alejos (2021), Mete (2022) and Lamker & Schulze Dieckhoff (2022) who found that the underlying principles of planning are not perceived as a relevant discussion within planning.

Policymakers are subject to elected officials (Lamker & Schulze Dieckhoff, 2022). Policymakers in Almelo and Hengelo do not want to cause negative emotions among the municipal council and the public. Therefore, their proposals are oftentimes in line with public opinion. Citizens of Almelo and Hengelo are fond of their (semi)detached housing and cars, therefore policymakers are careful with proposing radically innovative and sustainable initiatives. Moreover, the policy is only made more integrally in the past few years, whereas the municipal organizations were structured in a sectoral manner. Similarly, Ramírez Rincón et al. (2021) identified hindrances between departments as an institutional barrier to sustainable urban planning.

Currently, the policymakers are working in an institutional framework that is mostly catered to economic growth and the market, parallel to the findings of Mete (2022) and Savini & Bossuyt (2022). Numbers, limited budgets, and cost-effectiveness consider primacy, thus economic concerns are prioritized over environmental and social equity (Cease et al., 2019; Webb et al., 2018). In tandem with the findings of Webb et al. (2018), the municipalities are dependent on market parties for housing and certain mobility services, policymakers feel that no more rules and obligations regarding sustainability practices should be reinforced to prevent scaring off powerful economic interests. Furthermore, money mainly flows towards maintaining and management of existing urban structures, instead of new initiatives.

5.5 Conclusion

In conclusion, the practices outlined in post-growth literature for sustainable urban development can be found in the housing and mobility policies of Almelo and Hengelo. These policies address various aspects such as the treatment of housing as a financial asset, managing urban expansion, promoting resource efficiency, and encouraging culturally transformative solutions. Additionally, the mobility policies emphasize, proximity-based accessibility, active modes of travel, shared transportation, and public transportation. However, both municipalities prioritize growth rather than setting limits to ensure that planetary boundaries are not exceeded. The main motivation for pro-growth policy is to avoid shrinkage of the city, which would lead to a declining level of amenities and amenities, and ultimately a declining quality of life. An implemented limit is the nitrogen crisis which leads to municipalities being critical of spatial development in regard to environmental consequences, provoking initiators of spatial developments to take more environmentally friendly routes in usage and building, to decrease environmental effects. Additionally, Almelo and Hengelo embrace sufficiency principles through measures such as the provision of social housing and addressing transportation inequalities.

Furthermore, whilst sustainability and social goals are incorporated into policies, practical implementation reveals that quantity, numerical targets, and cost-effectiveness take precedence as guiding principles for municipalities. Further obstacles to implementing sustainable practices with post-growth premises are personal characteristics and institutional structure. The implementation of ideas with such premises depends on the level of enthusiasm, effective communication, and persuasive argumentation of the policymaker towards the municipal council and administration. Furthermore, policymakers try to prevent negative emotions amongst the public and municipal council, as a result, they are less likely to propose culturally transformative and sustainable ideas that challenge the identity of the city.

5.6 Reflection and Recommendations for future research

Upon reflecting on the research process, one can identify strengths, weaknesses, and limitations. There was a great willingness to engage with questions regarding post-growth housing and mobility of the municipalities of Almelo and Hengelo, however, policymakers were not extensively acquainted with the concept of post-growth planning, expressing that it is a vague academic concept.

Concerning the policy analysis, the quality is dependent on the policy documents that are available to the researcher. Not all policy documents are updated frequently and might not reflect and communicate

the current understanding of housing and mobility goals in Almelo and Hengelo. For example, the mobility vision of Almelo was about to be revised. The research approach does not allow for evaluating how much of the policies are taken into practice Additionally, the researcher translates quotations from Dutch policy documents and interviews to English based on their available knowledge. Therefore, it may be that translations are misinterpreted.

There are various recommendations for future research. Future research could look into how the post-growth perspective could be implemented in the most peripheral parts of the Netherlands, as this research focuses on mid-sized urban areas. Another proposition for future research is to further look into how the identity of a city can be altered, so that the municipal council is more receptive to radical solutions, such as the post-growth concept. Lastly, a study can be performed to see how the dependence on markets and subsidies is influencing municipalities' goals to become circular and zero-emission in 2050.

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Appendix A: Interview guide

Interview guide post-groei huisvesting in Almelo

Zijn er vooraf nog vragen over het onderzoek en/of andere onduidelijkheden?

Obstakels voor post-groei

1. Welke waarden zouden volgens u huisvesting moeten sturen?
2. Hoe zouden beleidsadviseurs en wethouders post-groei planning kunnen promoten, ondanks politieke sturing op economische groei?
3. Wat zijn de huidige organisatorische blokkades om een duurzaam huisvestingsbeleid te voeren?
4. Op welke manieren vormen formele regels, normen en voorschriften het huidige huisvestingsbeleid?
5. Op welke manier vormen de persoonlijke eigenschappen van beleidsmakers en wethouders (verlangens, emoties, waarden en zingeving) het huidige huisvestingsbeleid?

Groei-georiënteerde praktijken in huisvesting

1. Wat zijn huisvesting maatregelen die de komende jaren in de gemeente Almelo moeten worden genomen die sterk samenhangen met economische groei?
2. Hoe kunnen beleidsadviseurs een balans vinden tussen de economische groei en sociale en ecologische overwegingen, gegeven het huidige institutionele kader dat gericht is op economische groei en marktspelers?
   a. Hoe worden in de huidige institutionele structuur de sociale en ecologische doelstelling bewerkstelligd?
   b. Worden de sociale en ecologische belangen soms achtergesteld bij de economische belangen die spelen rondom huisvesting?
3. Hoe staat de gemeente Almelo tegenover de eerder genoemde karakteristieken van groei-georiënteerde huisvesting:
   ☐ Deregulatie
   ☐ Marktgeoriënteerd en afhankelijk
   ☐ Privatisering van publieke huisvesting (overgang sociale huur naar particulier eigendom)
   ☐ Door de overheid in gang gezette gentrificatie
   ☐ Grote sub-urbane woonmilieus met koopwoningen die afhankelijkheid van de auto vergroten
   ☐ 'Groene' innovaties die afhankelijk zijn van extractie van hulpbronnen
   ☐ Uitbreiding van de stad in het groen
4. Wie zijn in de gemeente Almelo relevante belanghebbenden omtrent huisvesting?
   a. Tot in hoeverre spelen marktpartijen een rol?

Post-groei georiënteerde praktijken in huisvesting

1. Wat zijn huisvesting maatregelen die de komende jaren in de gemeente Almelo moeten worden genomen die sterk samenhangen met duurzaamheid en sociale belangen?
   a. Tot in hoeverre wordt in Almelo huisvesting ingezet om sociale ongelijkheid tegen te gaan?
      i. Is er een bepaalde ondergrens van huisvesting welke voor iedereen gegarandeerd wordt?
2. Hoe staat de gemeente Almelo tegenover de volgende huisvestingstrends:
   ☐ Integreren van natuurlijke ecosystemen
   ☐ Tegengaan van verdere uitbreiding van de stad in groene gedeeltes
   ☐ Efficiënt gebruik van de huidige voorraad gebouwen
      o Transformaties van kantoor naar woning, doorstromen, geen tweede huizen, vakantiewoningen, etc.
   ☐ Het tegengaan van het gebruik van woningen als belegging
   ☐ Efficient gebruik van hulpbronnen
   ☐ Circulariteit
   ☐ Andersoortige woonvormen welke beter zijn voor het klimaat: zoals tiny houses; co-housing

3. Is de gemeente Almelo bewust bezig met het verminderen van haar CO_2 uitstoot veroorzaakt door huisvesting?
4. Tot in hoeverre wordt er bij projecten rekening gehouden met CO_2 uitstoot, circulariteit van de materialen en efficiënt gebruik van de materialen?
   a. Is dit een vereiste dat wordt gesteld tijdens het aanbesteden van projecten?
   b. Hoe zou je kaders kunnen stellen hiervoor en is dit een wens?
5. Tot in hoeverre wordt er bij huisvestingsprojecten rekening gehouden met het vergroten van de groene en blauwe ruimtes (natuur en water) in de stad?
6. Worden er grenzen gesteld aan de groei van het aantal woningen? Groei van een stad betekend vaak toename van mobiliteit, gebouwde omgeving en CO_2 uitstoot.

Vragen over de geanalyseerde beleidsdocumenten *(mits tijd over)*

Concept woonvisie Almelo 2020-2030

1. Waarom wordt er nadrukkelijk gestuurd op het voorkomen van (economische) groei in algemene zin?
2. Is citymarketing om mensen aan te trekken van buiten effectief?
3. Tot in hoeverre maakt Almelo herontwikkeling en transformatie van oude gebouwen mogelijk?

Almelo stad voor mensen woonvisie 2020

1. '' Gecontroleerde groei naar circa 75.000 inwoners in 2020. Toevoegen 170 tot 225 woningen per jaar, waarvan 50 tot 60% binnenstedelijk.''. Wordt hier inmiddels anders over gedacht, dat alle stedelijke uitbreiding binnenstedelijk moet plaatsvinden?

Omgevingsvisie 2020-2040

1. Er wordt beaamt dat Almelo open staat voor alternatieve woonvormen (co-housing; knarrenhofjes; tiny houses), op welke wijze wordt dit vormgegeven en/of actief gestimuleerd?

Einde

Zijn er beleidsdocumenten die ik mis, maar wel relevant zijn voor huisvesting en Almelo, lokaal?

Bedankt voor je tijd en je participatie in mijn onderzoek. Zijn er nog andere mensen die ik kan spreken?

Interview guide post-groei mobiliteit in Almelo

Zijn er vooraf nog vragen over het onderzoek en/of andere onduidelijkheden?

Obstakels voor post-groei

6. Welke waarden zouden volgens jou transport en mobiliteitsplanning moeten sturen?
7. Hoe zouden beleidsadviseurs post-groei planning kunnen promoten, ondanks politieke sturing op economische groei?
   a. Ambtenaren staan in dienst van het politieke apparaat, maar hoeveel vrijheid hebben ambtenaren om te functioneren als klankbord en/of hun eigen mening te verkondigen?
8. Wat zijn de huidige organisatorische blokkades om een duurzaam mobiliteitsbeleid te voeren?
9. Op welke manieren vormen formele regels, normen en voorschriften het huidige mobiliteitsbeleid?
10. Op welke manier vormen de persoonlijke eigenschappen van beleidsmakers (verlangens, emoties, waarden en zingeving) het huidige mobiliteitsbeleid?

Groei-georiënteerde praktijken in mobiliteit

5. Wat zijn mobiliteit- en transport maatregelen die de komende jaren in de gemeente Almelo moeten worden genomen die sterk samenhangen met economische groei?
6. Hoe kunnen beleidsadviseurs een balans vinden tussen de economische groei en sociale en ecologische overwegingen, gegeven het huidige institutionele kader dat gericht is op economische groei en marktspelers?
   a. Hoe worden in de huidige institutionele structuur de sociale en ecologische doelstelling bewerkstelligd?

      b.   Worden de sociale en ecologische belangen soms achtergesteld bij de economische belangen die spelen rondom mobiliteit?

7. Wie zijn in de gemeente Almelo relevante belanghebbenden omtrent mobiliteit?
   a. Tot in hoeverre spelen marktpartijen een rol?

Post-groei georiënteerde praktijken in mobiliteit

7. Wat zijn mobiliteit- en transport maatregelen die de komende jaren in de gemeente Almelo moeten worden genomen die sterk samenhangen met duurzaamheid en sociale belangen?
   a. Tot in hoeverre wordt in Almelo mobiliteit ingezet om sociale ongelijkheid tegen te gaan?
      i. Is er een bepaald niveau van bereikbaarheid vastgesteld dat voor elk persoon gegarandeerd moet zijn? (bijv. iedereen zou in de nabijheid van een busstation, supermarkt, etc. moeten wonen)
8. Hoe staat de gemeente Almelo tegenover de volgende mobiliteitstrends:
   ☐ Virtuele mobiliteit
   ☐ Bereikbaarheid in de buurt (15 min. city)
   ☐ Actieve manieren van reizen: fiets en wandelen
   ☐ Gedeelde manier van transport
   ☐ Bevorderen van het OV
9. Is de gemeente Almelo bewust bezig met het verminderen van haar CO_2 uitstoot veroorzaakt door mobiliteit?
10. Tot in hoeverre wordt er bij infrastructuur projecten rekening gehouden met CO_2 uitstoot, circulariteit van de materialen en efficiënt gebruik van de materialen?
    a. Is dit een vereiste dat wordt gesteld tijdens het aanbesteden van projecten?
11. Tot in hoeverre wordt er bij infrastructuur projecten rekening gehouden met het vergroten van de groene en blauwe ruimtes (natuur en water) in de stad?

Vragen over de geanalyseerde beleidsdocumenten

Mobiliteitsvisie

1. Hoe komt een document zoals een Mobiliteitsvisie tot stand?
   a. Wie stelt de prioriteiten?
2. In de mobiliteitsvisie worden maatschappelijke ontwikkelingen omschreven en de mobiliteitseffecten voor de gemeente Almelo, wordt er actief gestuurd op het bevorderen van enkele van deze ontwikkelingen?
3. Welke van de pijlers (Economie & Werk; Aantrekkelijke binnenstad; Zorg & Participatie) heeft het meeste prioriteit?
4. In het document wordt gerefereerd aan 'slim gebruik maken van subsidies, binnen en buiten de organisaties. Slimme manieren en nieuwe samenwerkingsallianties om de mobiliteitsopgaven te kunnen aanpakken'. ⮕ Hoe krijgen deze 'nieuwe samenwerkingsallianties' vorm, is dit ook met private marktpartijen?

Verkeers en vervoersplan Almelo

1. Tot in hoeverre is het Verkeers en vervoersplan Almelo 2007-2015 nog relevant?

Omgevingsvisie Almelo

1. Hoe speelt Almelo in op de mobiliteitstrends zoals omschreven in de Omgevingsvisie?
2. Waarom blijft de auto een grote rol spelen, is er nagedacht over alternatieven?
3. Hoe worden de ambities in de Omgevingsvisie omtrent mobiliteit bewerkstelligd/gefinancierd?

Einde

Zijn er beleidsdocumenten die ik mis, maar wel relevant zijn voor mobiliteit & Almelo, lokaal?

Bedankt voor je tijd en je participatie in mijn onderzoek. Zijn er nog andere mensen die ik kan spreken?

Interview guide post-groei huisvesting in Hengelo

Zijn er vooraf nog vragen over het onderzoek en/of andere onduidelijkheden?

Obstakels voor post-groei

11. Welke waarden zouden volgens u huisvesting moeten sturen?
12. Hoe zouden beleidsadviseurs en wethouders post-groei planning kunnen promoten, ondanks politieke sturing op economische groei?
13. Wat zijn de huidige organisatorische blokkades om een duurzaam huisvestingsbeleid te voeren?
14. Op welke manieren vormen formele regels, normen en voorschriften het huidige huisvestingsbeleid?
15. Op welke manier vormen de persoonlijke eigenschappen van beleidsmakers en wethouders (verlangens, emoties, waarden en zingeving) het huidige huisvestingsbeleid?

Groei-georiënteerde praktijken in huisvesting

8. Wat zijn huisvesting maatregelen die de komende jaren in de gemeente Hengelo moeten worden genomen die sterk samenhangen met economische groei?
9. Hoe kunnen beleidsadviseurs een balans vinden tussen de economische groei en sociale en ecologische overwegingen, gegeven het huidige institutionele kader dat gericht is op economische groei en marktspelers?
    a. Hoe worden in de huidige institutionele structuur de sociale en ecologische doelstelling bewerkstelligd?
    b. Worden de sociale en ecologische belangen soms achtergesteld bij de economische belangen die spelen rondom huisvesting?
10. Hoe staat de gemeente Hengelo tegenover de eerder genoemde karakteristieken van groei-georiënteerde huisvesting:
    ☐ Deregulatie
    ☐ Marktgeoriënteerd en afhankelijk
    ☐ Privatisering van publieke huisvesting (overgang sociale huur naar particulier eigendom)
    ☐ Door de overheid in gang gezette gentrificatie
    ☐ Grote sub-urbane woonmilieus met koopwoningen die afhankelijkheid van de auto vergroten
    ☐ 'Groene' innovaties die afhankelijk zijn van extractie van hulpbronnen
    ☐ Uitbreiding van de stad in het groen
11. Wie zijn in de gemeente Hengelo relevante belanghebbenden omtrent huisvesting?
    a. Tot in hoeverre spelen marktpartijen een rol?

Post-groei georiënteerde praktijken in huisvesting

12. Wat zijn huisvesting maatregelen die de komende jaren in de gemeente Hengelo moeten worden genomen die sterk samenhangen met duurzaamheid en sociale belangen?
    a. Tot in hoeverre wordt in Hengelo huisvesting ingezet om sociale ongelijkheid tegen te gaan?
        i. Is er een bepaalde ondergrens van huisvesting welke voor iedereen gegarandeerd wordt?
13. Hoe staat de gemeente Hengelo tegenover de volgende huisvestingstrends:
    ☐ Integreren van natuurlijke ecosystemen
    ☐ Tegengaan van verdere uitbreiding van de stad in groene gedeeltes
    ☐ Efficiënt gebruik van de huidige voorraad gebouwen
        o Transformaties van kantoor naar woning, doorstromen, geen tweede huizen, vakantiewoningen, etc.
    ☐ Het tegengaan van het gebruik van woningen als belegging
    ☐ Efficient gebruik van hulpbronnen
    ☐ Circulariteit
    ☐ Andersoortige woonvormen welke beter zijn voor het klimaat: zoals tiny houses; co-housing
14. Is de gemeente Hengelo bewust bezig met het verminderen van haar CO_2 uitstoot veroorzaakt door huisvesting?
15. Tot in hoeverre wordt er bij projecten rekening gehouden met CO_2 uitstoot, circulariteit van de materialen en efficiënt gebruik van de materialen?
    a. Is dit een vereiste dat wordt gesteld tijdens het aanbesteden van projecten?

b. Hoe zou je kaders kunnen stellen hiervoor en is dit een wens?

16. Tot in hoeverre wordt er bij huisvestingsprojecten rekening gehouden met het vergroten van de groene en blauwe ruimtes (natuur en water) in de stad?

17. Worden er grenzen gesteld aan de groei van het aantal woningen? Groei van een stad betekend vaak toename van mobiliteit, gebouwde omgeving en CO_2 uitstoot.

Vragen over de geanalyseerde beleidsdocumenten *(mits tijd over)*

Woonvisie Hengelo 2016-2026

1. De woonvisie 2016-2026 luidt dat er locaties benoemd waar ruimte is voor nieuwe en andere vormen van wonen, is hier veel vraag naar?
   a. Zijn deze locaties inmiddels benoemd en een succes?
   b. Is er ambitie om dit breder uit te rollen over de stad?
   c. Hoe staat het huidige institutionele kader deze ontwikkelingen in de weg?

Afwegingskader Woonvisie Hengelo/ Kwalitatief afwegingskaderfactoren 2021

1. In het afwegingskader wordt beaamt dat de gemeente voorkeur geeft aan transformatie in plaats van nieuwbouw. Transformatie is een manier van materiaal besparing en hergebruik. Waarom wordt er geen voorkeur gegeven aan circulair of CO_2-arme materialen? En is dit eventueel een optie in de toekomst?
   a. Wat is ongeveer de verdeling tussen nieuwbouw initiatieven en transformatie initiatieven?

Omgevingsvisie hart van Hengelo

1. Waarom wordt er gestuurd op groei? Hoe is de ambitie geformuleerd om een +100.000 stad te worden, zoals omschreven in een recent artikel van Tubantia?
   a. Hoe wordt hier actief aan gewerkt?
   b. Een vaak genoemde reden van stimuleren bevolkingsgroei is het behouden van een bepaald voorzieningsniveau. Hoe zou een basis niveau van voorzieningen kunnen worden gegarandeerd zonder bevolkingsgroei?

Einde

Zijn er beleidsdocumenten die ik mis, maar wel relevant zijn voor huisvesting en Hengelo, lokaal?

Bedankt voor je tijd en je participatie in mijn onderzoek. Zijn er nog andere mensen die ik kan spreken?

Interview guide post-groei mobiliteit in Hengelo

Zijn er vooraf nog vragen over het onderzoek en/of andere onduidelijkheden?

Obstakels voor post-groei

16. Welke waarden zouden volgens jou transport en mobiliteitsplanning moeten sturen?

17. Hoe zouden beleidsadviseurs post-groei planning kunnen promoten, ondanks politieke sturing op economische groei?
   a. Ambtenaren staan in dienst van het politieke apparaat, maar hoeveel vrijheid hebben ambtenaren om te functioneren als klankbord en/of hun eigen mening te verkondigen?

18. Wat zijn de huidige organisatorische blokkades om een duurzaam mobiliteitsbeleid te voeren?

19. Op welke manieren vormen formele regels, normen en voorschriften het huidige mobiliteitsbeleid?

20. Op welke manier vormen de persoonlijke eigenschappen van beleidsmakers (verlangens, emoties, waarden en zingeving) het huidige mobiliteitsbeleid?

Groei-georiënteerde praktijken in mobiliteit

12. Wat zijn mobiliteit- en transport maatregelen die de komende jaren in de gemeente Hengelo moeten worden genomen die sterk samenhangen met economische groei?

13. Hoe kunnen beleidsadviseurs een balans vinden tussen de economische groei en sociale en ecologische overwegingen, gegeven het huidige institutionele kader dat gericht is op economische groei en marktspelers?
    a. Hoe worden in de huidige institutionele structuur de sociale en ecologische doelstelling bewerkstelligd?
    b. Worden de sociale en ecologische belangen soms achtergesteld bij de economische belangen die spelen rondom mobiliteit?
14. Wie zijn in de gemeente Hengelo relevante belanghebbenden omtrent mobiliteit?
    a. Tot in hoeverre spelen marktpartijen een rol?

Post-groei georiënteerde praktijken in huisvesting

18. Wat zijn mobiliteit- en transport maatregelen die de komende jaren in de gemeente Hengelo moeten worden genomen die sterk samenhangen met duurzaamheid en sociale belangen?
    a. Tot in hoeverre wordt in Hengelo mobiliteit ingezet om sociale ongelijkheid tegen te gaan?
        i. Is er een bepaald niveau van bereikbaarheid vastgesteld dat voor elk persoon gegarandeerd moet zijn? (bijv. iedereen zou in de nabijheid van een busstation, supermarkt, etc. moeten wonen)
19. Hoe staat de gemeente Hengelo tegenover de volgende mobiliteitstrends:
    ☐ Virtuele mobiliteit
    ☐ Bereikbaarheid in de buurt (15 min. city)
    ☐ Actieve manieren van reizen: fiets en wandelen
    ☐ Gedeelde manier van transport
    ☐ Bevorderen van het OV
20. Is de gemeente Hengelo bewust bezig met het verminderen van haar CO_2 uitstoot veroorzaakt door mobiliteit?
21. Tot in hoeverre wordt er bij infrastructuur projecten rekening gehouden met CO_2 uitstoot, circulariteit van de materialen en efficiënt gebruik van de materialen?
    a. Is dit een vereiste dat wordt gesteld tijdens het aanbesteden van projecten?
22. Tot in hoeverre wordt er bij infrastructuur projecten rekening gehouden met het vergroten van de groene en blauwe ruimtes (natuur en water) in de stad?

Vragen over de geanalyseerde beleidsdocumenten

Mobiliteitsplan Hengelo 2040

Het OV in Hengelo lijkt aardig goed geregeld, met een OV-halte op 300 meter lopen voor iedereen. Lukt het om de mensen met het OV en fiets in plaats van auto te laten reizen?

    a. Hoe zou je dit extra kunnen stimuleren?
2. Hoe werkt het STOMP-principe in de praktijk? Hoe krijgt dit vorm in nieuwe gebiedsontwikkelingen?

Omgevingsvisie hart van Hengelo

1. In het provinciale plan voor mobiliteit is onder andere aangegeven dat plan van aanpak voor duurzame mobiliteit ook het vermijden van mobiliteit betekent. Hoe geeft Hengelo hier ruchtbaarheid aan, ondanks de ambitie om te groeien?
2. Hoe wordt er bij huidige infrastructurele projecten gekeken naar circulariteit en CO_2-emissie van brandstoffen en grondstoffen die gebruikt worden?

Einde

Zijn er beleidsdocumenten die ik mis, maar wel relevant zijn voor mobiliteit & Hengelo, lokaal?

Bedankt voor je tijd en je participatie in mijn onderzoek. Zijn er nog andere mensen die ik kan spreken?

Appendix B: Codebook

Code group	Code	Subcode	Code description
Sustainable urban development	Housing	Efficient use of existing housing stock	Reference to efficient use of existing housing stock
		Limiting urban expansion	Reference to limiting urban expansion
		Housing as financial asset	Reference to limiting housing as financial asset
		Resource efficiency and circularity	Reflecting on using building materials effiently and circularity
		Culturally transformative solutions	Reflecting on non-traditional housing
	Mobility	Virtual mobility	Technology facilitating access to activity without mobility
		Slow mobility	References to localism, slowness and stillness
		Accessibility by proximity	Facilities and social life in proximity of housing
		Active travel modes	Walkability and cycling
		Shared transportation	Vehicle sharing systems, mobility commoning
		Public transport	Reference to public transport
		STOMP-principle	Referene to the design principle used in Hengelo that prioritized other modes of transport over the car
		Car	Reference to the prominent role of the car
	Sufficiency		Reference to a consuming no more products and services than needed
	Limits		Reference to carrying capacity of ecosystem, respecting planetary boundaries
	Growth-ambition		Reference to the ambition to grow as a city, regarding economy or population
Obstacles to implement ideas with post-growth premises	Personal		Reference to personal characteristics that influence policy making
	Institutions		References to the institutional and regulatory framework wherein policymakers operate

Appendix C: Consent form
Toestemmingsformulier (Nederlands)

Toestemmingsformulier onderzoeksproject: ''Post-groei planning: voorbij (economische) groei als motor voor duurzame stedelijke ontwikkeling in Nederlandse middelgrote steden.'' voor de geïnterviewde.

Ik heb informatie over het onderzoeksproject gelezen. Ik heb de kans gehad om vragen te stellen en mijn vragen zijn op juiste wijze behandeld. Ik heb genoeg tijd gehad om te beslissen of ik mee wou werken aan het onderzoeksproject. Mijn betrokkenheid is volledig op vrijwillige basis. Ik kan mij op welk gewenst moment terugtrekken uit het onderzoeksproject, zonder hiervoor een reden te geven.

(De geluidsopname wordt alleen gebruikt door de onderzoeker, om het interview terug te kunnen luisteren. De geluidsopname wordt verder nergens gepubliceerd en na de verwerking van de inhoud vernietigd. Tevens zal de naam van de organisatie van de geïnterviewde niet in het verslag worden benoemd, maar worden gecodeerd)

- o Ik ga akkoord met deelname aan het onderzoeksproject
- o Ik ga er mee akkoord dat de interview gegevens voor educatieve doeleinden worden gebruikt
- o Ik ga er mee akkoord dat er een opname (geluidsopname) van het interview wordt gemaakt

Naam geïnterviewde:

Datum:

Consent form (English)

Consent form research project: ''Post-Growth Planning: moving beyond (economic) growth as a driver for sustainable urban development in Dutch mid-sized cities.'' for the interviewee.

I have read the information about the research project. I have had the opportunity to ask questions and my questions have been answered adequately. I had enough time to decide if I wanted to participate in the research project. My involvement is entirely voluntary. I can withdraw from the research project at any time, without giving any reason.

(The sound recording will only be used by the researcher, to be able to listen back to the interview. The sound recording will not be published anywhere else and will be destroyed after the content has been processed. Also the name of the interviewee or the organization of the interviewee will not be included in the report, but coded).

- o I agree to participate in the research project
- o I agree that the interview data is used for educative purposes
- o I agree that the interview will be recorded (voice-recorded)

Name interviewee:

Date:

Appendix D: Transcription interviews
The transcriptions of interviews are provided to supervisors in a separate document and will not be published for privacy of the interviewees.