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Master's Thesis

*“Using Workplace to Create Social Housing Space:
The Applicability of Office Conversion for Achieving Urban Sustainability in the Netherlands”*

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Abstract

The Netherlands is facing critical social, economic, and environmental challenges in its ongoing urban development. While there is a surplus of vacant office buildings, the social housing supply is deficient, putting low-income groups at increasing risk in safeguarding shelter. Next to acknowledging the pressing real estate market mismatches, the government has also established new guidelines for the environmental sustainability of the entire Dutch building stock. Subsequently, stricter environmental standards are employed for the production of new (social) housing and the upgrading of energy-inefficient buildings. Altogether, the Netherlands is being tested in its ability to make the necessary adjustments in the management and use of urban areas in order to meet its long-term political goals.

This thesis studies the applicability of converting office buildings into social housing as a consolidative and enduring solution for improving the social, economic, and environmental quality of urban areas. Specifically, the aim is to understand the institutional processes that are involved in realizing office conversion and the extent to which the Netherlands' societal challenges drive this urban development approach. In addition, this thesis attempts to shed light on the social, economic, and environmental effects of this type of building conversion on both new building residents and existing neighborhood residents, which is unprecedented in building conversion literature. This analysis is framed in the context of urban sustainability, which presents intergenerational goals for the social, economic, and environmental dimensions of urban areas.

The results of this research reveal that the practical application of urban sustainability through building conversion shows great potential for consolidating the three presented urban challenges while contributing to the ongoing goals of Dutch urban development. Through interventions like office conversion, urban society reaps the benefits of removing the socioeconomic threats presented by building vacancies, increasing the provision of affordable urban housing, and mitigating environmental stressors, such as urban energy consumption and greenfield construction. Specifically, the new social-renting residents of converted offices express their chief satisfaction towards having safeguarded affordable housing, albeit at the cost of some lesser technical qualities, such as dwelling size and noise insulation. Additionally, these residents benefit from an up-to-date and energy-efficient residence and established facilities and services nearby their buildings. While neighbors of converted buildings experience limited disruption – environmentally, economically, or socially – from office conversion in their daily lives, they appreciate the multi-dimensional benefits for greater society and encourage such consolidative solutions.

However, Dutch institutions struggle to address the environmental, economic, and social demands of cities in a balanced and adequate manner. The overarching political sentiment is still to foster short-term economic and social goals before long-term environmental needs, which can disfavor office conversion in the current real estate market. Nonetheless, investigating building conversion through the lens of urban sustainability shows that such small-scale urban developments have the potential to concomitantly address the environmental, economic, and social needs of all urban society, starting at the community-level.

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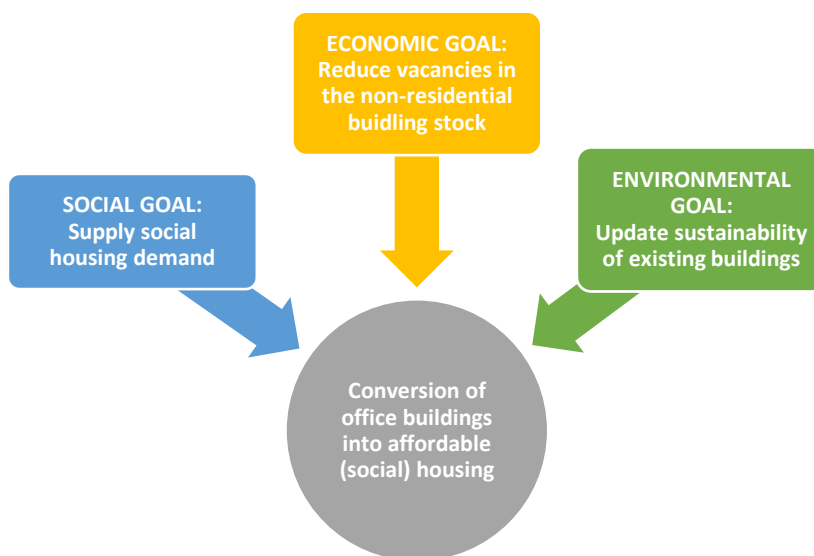
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1. Introduction: Three Urban Challenges

The Netherlands is facing critical social, economic, and environmental challenges in its ongoing urban development. On one hand, there is a national mismatch in the distribution of the building stock in the form of a simultaneous (social) housing shortage and an office building surplus. On the other hand, the national government has set ambitious goals to reduce the environmental impact of the Dutch building stock in order to mitigate climate change. Overall, building stock adjustments are high on the agenda of Dutch policymakers (Ministerie of BZK 2018a), necessitating integrative solutions to sustain the urban environments of the Netherlands according to the present and future social, economic, and environmental needs of urban citizens.

While national policies offer consolidative strategies for these tasks, these approaches have not yet proven to be realistic or successful in practice. Conversely, building conversion appears to be an undervalued strategy in this respect, thereby motivating this thesis. This thesis is in assignment of De Vries Ontwikkeling B.V., a small real estate (re)development company based in Soesterberg which specializes in conversions of non-residential (office) spaces into residential units. In collaboration with housing organizations, these projects made new affordable (social and mid-rent) housing available across the Netherlands. Overall, as summarized in figure 1.1, the company is motivated by the three societal goals: (1) removing vacant or otherwise outdated buildings from the existing building stock, (2) supplying more affordable housing given the national housing shortage, and (3) contributing to the sustainable quality of the existing building stock.

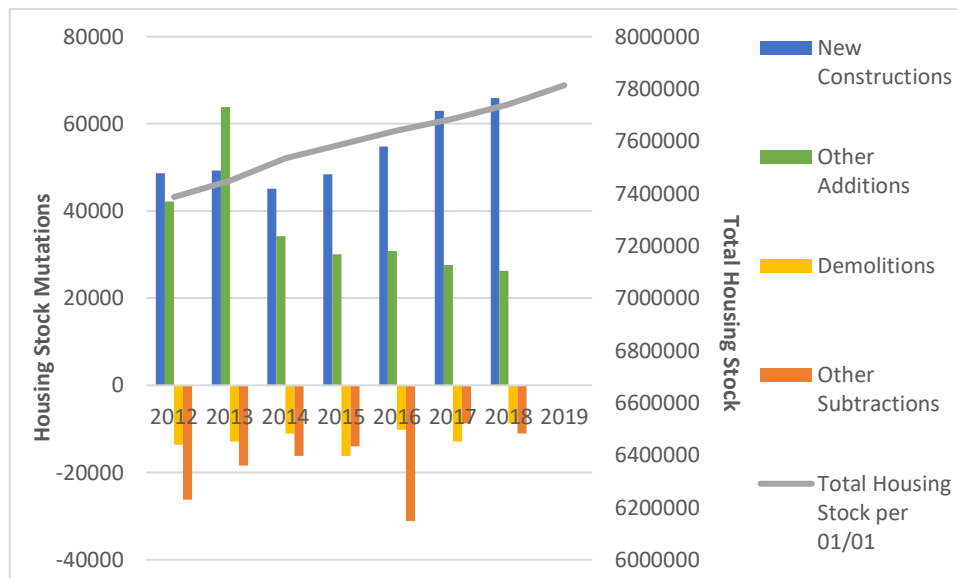
Fig. 1.1: Consolidating Three Societal Goals Through the Conversion of Office Buildings into Social Housing



Overall, the business model of De Vries Ontwikkeling assumes building conversion to be an effective strategy to simultaneously address these pressing urban challenges. Building conversion – “fitting a new use to an existing building” (Remøy & Wilkinson 2012, pp. 218) – is a well-documented real estate phenomenon, encouraged by academics and public institutions alike (Remøy & van der Voordt 2007; Remøy & Wilkinson 2012; Rijksoverheid 2019b). Furthermore, restrictive urban development policies and the tight housing market of the Netherlands create potential for converting vacant office buildings in the inner-city into housing (Remøy & van der Voordt 2007, pp. 89).

However, figure 1.2 shows that the rate of building conversion (“other additions”) in the Dutch housing market has been dwindling since 2013, whereas new construction is steadily growing again. This is surprising given the ongoing national housing shortage: building conversion typically requires less capital and construction time to yield new housing stock additions (Remøy & van der Voordt 2007, pp. 91). Furthermore, little is known about the extent to which building conversion actually affects the social, economic, and environmental quality of residents, neighborhoods, and – by extension – their greater urban areas.

Fig. 1.2: Development of the Total Housing Stock in the Netherlands (2012-2019)



Data: WoonOnderzoek Nederland (2019)

Therefore, this thesis studies the extent to which the conversion of vacant non-residential buildings into social housing is a consolidative strategy for addressing these inefficiencies in the office and housing markets, while improving the environmental quality of the urban building stock. Specifically, the aim is to understand the private and public processes that are involved in realizing building conversion in the Netherlands, zooming in on the redevelopment of office buildings into social housing. In addition, this thesis attempts to shed light on the effects of this type of building conversion on both the buildings' new residents and existing neighborhood residents, which is unprecedented in building conversion literature.

The central concept framing this analysis is urban sustainability, which embodies the intergenerational goals for the social, economic, and environmental dimensions of urban areas. While multiple interpretations of urban sustainability exist (see Huang et al. 2015), the European Environment Agency advocates for an applied definition of “minimizing the consumption of space and natural resources; rationalizing and efficiently managing urban flows; protecting the health of the urban population; ensuring equal access to resources and services; and maintaining cultural and social diversity” (Stanners & Bourdeau 1995). Such practical definitions of urban sustainability outline the desired outcomes for addressing urban challenges and provide a baseline for assessing the success of urban interventions. Therefore, building conversion is interpreted as an auditable and sustainable intervention for collectively addressing the three urban challenges presented, ensuing the following research questions:

- 1. Why is building conversion – from offices to social housing – facilitated in practice, and to what extent is urban sustainability a consideration for this type of conversion?**
- 2. What effect does building conversion – from offices to social housing – have on the urban sustainability of the converted building and its surroundings?**

This section concludes with an in-depth exploration of the contemporary tasks at hand: addressing the office building surplus, social housing shortage, and environmental sustainability goals of the Netherlands. Thereafter, a literature review presents previous findings in regards to office conversion into housing and a theoretical overview of urban sustainability presents the urban sustainability framework in which to understand the multi-dimensional effects of realizing this type of building adaption. With this contextual and academic background in place, the research findings are given both contextual and practical meaning, ultimately guiding the research and addressing the research questions.

1.1 Office Building Vacancy

In the Netherlands, 15.9% of the floor area of all offices was vacant in 2017 (PBL 2017b), accounting for about 2,950,000 m² of lettable office space (Dynamis 2018). Primarily, office vacancy is considered a private problem: the owner loses income from maintenance and utility costs and therefore has to look for new tenants or otherwise an alternative use for the building (PBL 2017a).

According to the Dutch environmental and urban planning agency (*Planbureau voor de Leefomgeving*), office vacancy also affects real estate investors and banks, which reverberate the national financial system. Nevertheless, Dutch institutional investors invest relatively minimally in commercial real estate in the Netherlands. Furthermore, the total amount of investor capital fixed in Dutch real estate is gradually dwindling. As such, office vacancies pose a limited risk to overall Dutch investment activity. Banks, however, remain threatened by “problem loans” allocated to now-vacant office buildings. While Dutch banks are gradually reducing the number of loans bound in real estate, several banks still have stakes in vacant offices (PBL 2017a).

Whether or not office vacancy has a direct social effect on its urban environment, however, is unclear. While it is commonly suggested that vacancy can have various negative externalities – i.e. contributing to lower livability levels, urban deterioration, criminality, negative stereotypes, and association to local economic decline, which are consequently linked to local house price devaluation (Rijksoverheid 2019b; Remøy & van der Voordt 2007, pp. 89) – national and international literature has not found definitive evidence in this respect (Donovan et al. 2017; PBL 2017a).

Altogether, office vacancy poses limited known social and economic impacts beyond the immediate property owner. Nevertheless, economic capital remains inefficiently tied in such unprofitable investments, which not only requires ongoing financing but also the continued and wasteful use of energy resources. Furthermore, these building-use ineptitudes stand in stark contrast with the Dutch social housing shortage. As such, office vacancy nods to greater social, economic, and environmental problems in the consumption of real estate in the Netherlands. Correspondingly, the Dutch government has also formally declared the ongoing office surplus to be a societal problem (Rijksoverheid 2019b).

Since there are regional differences in the extent of office vacancy rates (PBL 2017b), some local provinces have also adopted their own policies to address their respective regional vacancies. Notably, Provincie Utrecht, the governing body of the Utrecht province, adopted the *Aanpak Kantoren Transformatie Provincie Utrecht* in 2015 after intensive cooperation with its respective administrators, municipalities, market parties, and other third-party organizations. Since its implementation, the *Aanpak Kantoren Transformatie* has cut the land-use capacity for new office construction across the province and continuously promotes the efficient re-use of vacant office buildings by facilitating cooperation between the different stakeholders of Utrecht’s urban development (Provincie Utrecht 2015). In sum, both regional and national plans comprehend the enforcement of regional coordination in new office construction and the conversion offices into housing in order to better match supply and demand.

1.2 Social Housing Shortage

In the Netherlands, rent-regulated social housing is intended for those who cannot find an appropriate and/or affordable dwelling in the current housing market using their own means. In general, this criterion applies to households whose annual income limits their participation in the private housing market. As stipulated by the Dutch national government, the maximum household income level to qualify for social housing is €38.035 in 2019. The government also sets an upper limit for the net monthly rent price of social housing. Between 2015 and 2018, the *huurliberalisatiegrens* (“rent liberalization boundary”) between the social housing and private rental markets was €710.68 per month, which has now been raised to €720.42 (Rijksoverheid 2019c).

Eligible households may register for allocation to social housing via online platforms such as *WoningNet*, the largest national housing service provider, or directly with the social housing provider. Most Dutch social housing is owned and managed by independent non-profit housing organizations, and local municipalities otherwise (Elsinga & Wassenberg 2014, pp. 25).

While the Netherlands has one of the largest social housing stocks in Europe with almost 2.3 million dwellings (Elsinga & Wassenberg 2014, pp. 25), there is currently a deficiency of at least 92,000 social housing units according to real estate investment specialist Capital Value, who conducts annual studies of the Dutch housing market together with ABF Research (Capital Value 2019). Furthermore, Dutch news agency *RTL Nieuws* found that *WoningNet* registrants were waitlisted for an average of nine years in 2018 before being placed into social housing, with some outliers of up to thirty years (Van Dijke & Kempes 2018). In fact, social housing waitlist durations in the Netherlands have been rising in tandem with the deficiency of the social housing supply; in an identical study, *RTL Nieuws* found that the average *WoningNet* waitlist duration was eight years in 2015 (RTL Nieuws 2015).

Overall, the long-term growing demand for social housing can be attributed to (1) demographic changes of households, (2) shortages throughout the housing market, and (3) the insufficient production of housing in the Netherlands.

Demographic Changes of Households

Due to the growing immigration of labor, student, and asylum migrants and birth rates continuously exceeding death rates, the total number of Dutch inhabitants is expected to grow by an average of 69,000 per year between 2018 and 2022. Concurrently, the number of households will also grow as average household sizes are showing a downward trend, from 2.22 people per private household in 2010 to 2.16 in 2017. Between 2018 and 2022, the number of partner-households without children is also expected to increase significantly (by 60,000+), as are the number of single-person households (by 290,500). Altogether, the total number of households is expected to rise by 290,500, intensifying the demand-side pressure on the capacity of the existing housing stock (Capital Value 2018).

Moreover, the main target group for social housing allocation – low-income households – has grown by almost 12% between 2009 and 2015, compared to a 4% growth of all households in the same period (Ministerie van BZK 2017, pp. 25-26). Primary explanations for this phenomenon also include the aging population and shrinking household sizes as well as a relative growth of low-income households since the 2008 global financial crisis (Ministerie van BZK 2017, pp. 25; Capital Value 2018).

Widespread Housing Market Shortages

Formally declared in 2017, the Netherlands has been facing *woningnood* (“housing shortage”) across all housing sectors (Capital Value 2018). Whereas earlier reports estimated the total housing shortage to peak at 200,000 dwellings in 2018 (Ministerie van BZK 2018c, pp. 21), the shortage is now expected to grow up to 235,000 units by 2020 (Capital Value 2018). This is primarily due to the high household growth rate on the demand-side and insufficient production rates on the supply-side. Altogether, there has been an increasing gap between absolute registered households and dwelling count, with the most recent divergence originating from the construction delays caused by the 2008 global financial crisis (Lennartz 2018).

Subsequently, the supply shortage is raising housing prices. Rent per inhabitable square meter in the private-rented market has risen from €12.93 to €15.01 (16%) between 2015 and 2017, according to data from the Netherlands’ largest independent private-rental housing platform *Pararius* (2018). Alternatively, entering homeownership is also increasingly expensive with a 13% increase in average house prices during the same period, despite an overall decline of interest rates (CBS StatLine 2019).

The developments in the private and social housing markets are related. On one hand, the social housing shortage is forcing low-income renters to turn to the private-rented market to find housing at a larger share of their expendable incomes (so-called *dure scheefwoners*) (SCP 2018). On the other hand, mid- to high-income social renters who originally entered social housing on the basis of low-income eligibility unaffordability (*goedkope scheefwoners*) are not naturally relocating to housing in the private rental market due to its growing (Capital Value 2018).

Insufficient Production of Housing

Together with the ongoing housing shortage and absolute growth of households, the Netherlands has seen insufficient housing production rates to close the growing gap between the housing demand and supply (Capital Value 2018; Ministerie van BZK 2018c, pp. 47). The production rate of new dwellings has been dwindling in the Netherlands for decades, with the most recent dip in 2014 igniting and exacerbating the current housing shortage (Lennartz 2018). Overall, new dwelling production rates have fallen behind both Dutch household and population growth rates (Capital Value 2018).

As planned in the *Nationale Woonagenda 2018-2021*, the housing agenda of the Ministry of Internal Affairs (*Ministerie van Binnenlandse Zaken en Koninkrijksrelaties*) and various private housing corporations and housing organization partnerships,¹ 75,000 dwellings are to be added to the total housing stock per year – for a total of 700,000 dwellings by 2025 – in order to stabilize and eventually reduce the housing shortage (Ministerie van BZK 2018b). However, less than 55,000 dwellings were added to the total stock in 2017; if the current trend continues, no more than 500,000 dwellings will have been added by 2025 (Lennartz 2018).

In the social housing sector, production rates are not meeting the national objectives either. From an earlier prognosis of the Ministry of Internal Affairs, housing organizations should have been building at least 23,000 new social housing dwellings per year since 2014 to ease the ever-growing demand (Ministerie van BZK 2018c pp. 47). In practice, however, housing organizations have only averaged about 15,000 new dwellings per year (van Dijke & Kempes 2018) and hit a historic low of 13,500 in 2016 (Capital Value 2018). Overall, *Aedes*, the national partnership of housing organizations, reports a 47% decline in the new construction of housing between 2010 and 2016 (Aedes 2019). Together with demolitions, sales, and mutations to the non-regulated sector, the total social housing stock is expected to decline through 2023 (Capital Value 2018).

Now, the Ministry of Internal Affairs has set a target for the housing organizations to construct 30,000 new social housing units by the end of 2019 (Ministerie van BZK 2018c, pp. 47). In addition, *Aedes* intends to grow the social housing stock by 34,000 new units per year by 2021 (Aedes 2019). However, the current national context is not facilitative enough for this short-term construction need. Despite the governmental prioritization to address the housing shortage, the federal budget does not reflect their intentions and lengthy spatial planning procedures continue to hold up housing development. Furthermore, contractors are facing a large shortage of materials and personnel, also making it practically impossible to increase production rates (Capital Value 2018). Subsequently, *Aedes* warns that rising construction costs and growing corporate taxation rates – such as the disputed landlord levy (*verhuurdersheffing*) which subjects all large-scale (private and social) rental parties to an additional tax over their property values – will stagnate investment into the development and growth of social housing in the Netherlands into the foreseeable future (van Dijke & Kempes 2018).

Solving the Social Housing Shortage

The *Nationale Woonagenda 2018-2021* outlines various objectives to increase construction rates across all housing sectors and comprehensively tackle the housing shortage. To speed up the production of housing in the short-term, a greater regional corporation between housing organizations, developers, real estate agencies, municipalities, and construction companies is expected. This measure aims to remove unnecessary administrative delays and restrictions while maximizing and matching the construction capacity to the regional demand. Simultaneously, facilitating the construction capacity in the long-term is also necessary to avoid continued housing shortages in the future. The tasks at hand include optimizing the use of existing construction sites in built areas while facilitating urban economic growth, transit-oriented development, and the urban transition to sustainability, the development of inclusive cities, and maintaining the landscape quality of unbuilt areas (Ministerie van BZK 2018b).

Furthermore, it is critical for housing organizations to determine the specific residential demand and desires of households to develop the quantitative and qualitative housing stock accordingly, while also

¹ *Aedes, Bouwend Nederland, IVBN, NEPROM, NVB-Bouw, NVM, Vastgoed Belang, Vereniging Eigen Huis, and De Woonbond.*

anticipating future housing demand changes. Finally, the present housing shortage is to be addressed in conjunction with other local, regional, and national tasks for the housing stock by developing according to the local, regional, and national environmental guidelines, partaking in the national sustainability transition (i.e. removing residential natural gas dependency and improving energy label rankings), and accounting for other environmental interests such as livability, green spaces, proximity to facilities, and climate- and water-durability of the housing stock (Ministerie van BZK 2018b, pp. 3).

However, as was illustrated before, the plans to speed up construction rates may be ambitious due to the track history for housing production in the past years. Furthermore, the political and economic climate does not facilitate the desired levels of production. Although expanding the housing stock with newly constructed dwellings is critical to meet the aggregate need for housing from Dutch households, this strategy cannot stand alone. Nevertheless, it highlights the importance of a strong quantitative as well as a qualitative approach to the housing stock in order to prepare the future state of the Dutch housing stock and its demand. Furthermore, Dutch housing organizations could feasibly drive the large-scale conversion of non-residential buildings into (social) housing. For these property market actors, both economic and social feasibility are important. These organizations also do not require immediate returns on their investments. Theoretically, this makes housing organizations more likely to participate in such residential development projects (Remøy & van der Voordt 2007, pp. 94).

1.3 National Environmental Ambition

With the Paris Accord of 2015, the Netherlands and 194 other signatories agreed that global warming will be limited to less than 2 degrees Celsius, compared to the pre-industrial climate. The optimal goal of this global coalition against climate change is a maximum increase of 1.5 degrees Celsius. Supplementing the Paris Accord, the Dutch Ministry of Economic Affairs and Climate published the national Environmental Accord of 2018, which has the central goal of reducing Dutch greenhouse gas emissions by 49% between 1990 and 2030 (Klimaatakkoord 2018, pp. 7).

Correspondingly, the Ministerie of BZK published the *Nationale Omgevingsvisie (NOVI)* in 2018 as a policy-making instrument for realizing the terms set by the Environmental Accord (Ministerie van BZK 2018a). The *NOVI*, which has overarching jurisdiction over the use of physical space in the Netherlands, provides a long-term vision for addressing Dutch land-use and population growth in the context of climate change. In particular, *NOVI* aims to facilitate sustainable decision-making across all Dutch regions while maintaining their economic standing and taking advantage of innovative opportunities by consolidating different land-use and environmental concerns. Overall, the long-term aim is to sustain the quality and livability of the Dutch living environment, now and in the future (Ministerie van BZK 2018a).

NOVI is not a static document, but a continuously-evolving tool in which the Netherlands will frame its present-day and future development. When it was published in 2018, *NOVI* outlined three urgent topics to be addressed by governmental policy-makers, in collaboration with local authorities, citizens, and social parties: (1) realizing the energy transition, (2) sustainable urbanization, and (3) circular agriculture. Within the first topic, the government is pushing to make the Dutch energy supply more sustainable by investing in renewable energy, such as wind and solar energy. For the sustainable urbanization of the Netherlands, new homes are to be built in high-demand places that are easily accessible by road and public transport, as well as on foot and bicycle in inner cities. Finally, agriculture and horticulture are to become part of a circular food system, wherein soil preservation is essential, agriculture and nature reinforce each other, and the cultural-historical values of the landscape are preserved (Ministerie van BZK 2018a).

While such developments will have a major impact on the Dutch living environment, they can also be at odds with each other. For example, while *NOVI* recognizes the need for more housing, land-use policy will also need to address the growth of transportation infrastructure needs and energy consumption that corresponds urbanization. Next to these urban developments, the government wants to create more renewable energy plants, all the while realizing more green spaces. As such, *NOVI* requires the application of different sustainability interests to be consolidated in practice (Ministerie van BZK 2018a). For example, it is expected that the national building code will require new homes in the Netherlands to be constructed as zero-energy structures around 2020 (Capital Value 2018). Moving in this direction, the current government has already

decided that newly constructed buildings will no longer be connected to natural gas by default by the end of the current Cabinet's term (Rijksoverheid 2019a). Finally, *NOVI* provides scope for regional customization in its application, as based on local strengths, weaknesses, and cultural identity (Ministerie van BZK 2018a).

2. Literature Review & Theoretical Framework: Office Conversion as a Win-Win-Win Intervention?

Previous literature has already investigated reasons for office vacancy and the potential of their sustainable transformation in the Netherlands (see Remøy & van der Voordt 2007; Remøy & Wilkinson 2011). Since this thesis focuses on building conversion as a means for addressing the three urban challenges and realizing higher levels of urban sustainability in doing so, reviewing the preceding phenomenon of building vacancy and subsequent interventions provides relevant background information. This literature review is also performed to inform the existing assumptions about the advantages, disadvantages, and instruments used in successfully realizing the redevelopment of non-residential buildings into housing units.

2.1 Causes & Consequences of Building Vacancy

Vacancies in the building stock can be attributed to three factors: (1) unfavorable market conditions, (2) building inaptitude, and (3) locational undesirability. Since the turn of the century, office spaces have become particularly susceptible to the adverse effects of fluctuations in the real estate market and changing demand-side preferences. Subsequently, real estate literature argues that such vacancy results in adverse effects on the environment, economy, and society.

Unfavorable Market Conditions

Since the turn of the century, office vacancy is increasingly apparent worldwide. Following the strong economic growth and high-risk real estate investments in the late 20th century, the 2001 Dotcom Bubble burst was accompanied marked economic decline and shocks in real estate markets (Remøy & van der Voordt 2007, pp. 89). The Netherlands was not exempt to this global phenomenon: its competitive position worsened (Buck Consultants International 2003) and a vast amount of ongoing construction projects were halted, only to be picked up when market conditions improved again and interim demand-side office preferences had changed (Remøy & van der Voordt 2007, pp. 89-90). Following the 2008 global financial crisis, worldwide office vacancy rates increased once again, where after the Dutch government began to acknowledge the problem of long-term building vacancies in the Netherlands for its real estate market and urban society (Remøy & Wilkinson 2011, pp. 220).

Remøy and van der Voordt (2007) argue that the Netherlands will continue to be prone to ongoing decline in the structural demand of office space “due to the decrease in the labor force through aging and the worsening competitive position of the Netherlands, which leads to outsourcing of work to lower income countries” (pp. 90). Together with changing demand for the sustainable performance of buildings, existing office buildings are increasingly becoming outdated and undesirable in the current office market. For example, changing office user preferences result in different performance needs from buildings, such as needs for particular facilities (i.e. for disabled persons), office layout requirements, demand-driven changes in taste and fashion, and other changing business practices that effect the use of space. Such contextual changes do not exclusively effect office buildings: these factors put all types of buildings at risk of obsolescence in their respective markets (Grover and Grover 2015, pp. 304). Aside from macro-scale market and economic changes, however, the building’s user quality and its location also play important roles in predicting its susceptibility to vacancy (Remøy & van der Voordt 2007, pp. 90; Grover & Grover 2015, pp. 304).

Building Inaptitude

Due to concurrent demand changes for office performance, a growing amount of existing office buildings are also becoming outdated and undesirable in the current office market. For example, changing office user preferences result in different performance needs from buildings, such as new requirements for particular facilities (i.e. for disabled persons), flexible office layouts, lower maintenance costs and improved energy-efficiency, sociocultural updates regarding taste and fashion, and other changing business practices that influence the use of space. Such contextual changes do not exclusively affect office buildings: these

factors put all types of buildings at risk of obsolescence in their respective markets (Grover & Grover 2015, pp. 304).

As such, existing offices can become structurally vacant when its occupants choose to move to newer buildings that better fit their present performance requirements (Remøy & van der Voordt 2007, pp. 90). Next to abovementioned consumer standards, this can also include buildings deemed to have a negative public image due to bad spatial-visual quality, outdated architectural aesthetic, physical decay, structural shabbiness, and/or evidence of vandalism, or buildings suffering from poor technical quality due to malfunctioning, inefficient, or out-of-date installations (Healey & Baker 1987; Grover & Grover 2015). When a building is no longer able to meet the demand-side requirements for office space, its functional lifespan for tenancy ends (Remøy & van der Voordt 2007, pp. 90).

Locational Undesirability

Similarly, the quality of an office building's relative location can trigger tenants to relocate elsewhere. For example, poor accessibility by public transport or car and poor parking provision can make a location undesirable for business activity. A negative image and a poor spatial-visual quality associated to the building's urban area can also drive out office tenants (Remøy & van der Voordt 2007, pp. 90).

Conversely, good access to regional, national, and/or international consumers, suppliers, and/or competitors is typically of importance for businesses. Hence, locational agglomeration patterns of particular markets can also impact the popularity of an office location: when neighboring firms move out, remaining office tenants tend to follow (Remøy & van der Voordt 2007, pp. 90). A concentration of aged premises is can also drive away market clusters. This scenario is common across urban landscapes, including the Netherlands, where buildings are usually grouped in terms of age and location (Brown & Teenstra 2008). As such, building clusters are likely to become obsolete together: when one goes, the rest follows (Grover & Grover 2015, pp. 303).

Finally, the land-use zoning of a location can also predict its building stock's susceptibility to vacancy. On one hand, mono-functional urban areas risk large-scale structural vacancy in the case of an economic downturn in its respective industry. On the other hand, municipalities' plans to change the land-use of an urban area can also trigger vacancy when the future development plans threaten business functioning or performance (Remøy & van der Voordt 2007, pp. 90).

2.2 Case for Conversion

Overall, academic literature assumes that "vacancy is a problem on different levels" (Remøy & van der Voordt 2007, pp. 89): it directly impacts the building's owner, while presenting the threat of economic insecurity, social uncertainty, and criminal activity (i.e. vandalism, graffiti, break-ins, illegal occupancy, fires) for its neighboring structures (Remøy & van der Voordt 2007, pp. 89; Remøy & Wilkinson 2011, pp. 220). Remøy & van der Voordt (2007) argue that one building vacancy can ultimately result in the deterioration of the local building stock when these negative externalities spur economic and social devaluation throughout the neighborhood (pp. 89). These authors' reasoning adheres to the "broken windows" theory of urban decline, an influential idea from urban sociology and criminology literature. The theory states that minor signs of public disorder – such as the presence of graffiti, garbage, and abandoned goods – eventually lead a downward spiral of serious crime and urban decay, because criminal offenders interpret these visual cues to be a reflection of residents' indifference about what happens in their neighborhood (Sampson & Raudenbush 2004, pp. 319).

Retaining vacant buildings is also undesirable from an environmental point of view, although the impact is more indirect: obsolete buildings occupy scarce land, while new construction increases the urban footprint (Ball 2002, pp. 95; Chandler 1991; Remøy 2010). Without intervention of the vacant building stock, urban construction has the potential to sprawl indefinitely.

For the real estate market, high rates of national vacancy mean that offices are let at low rates, resulting in a general decrease in rents and property value across the office market. In addition, large and

semi-permanent “for rent” signs can be considered bad advertising for the real estate business. Alternatively, taking non-conforming buildings off the market will bring rents to competitive levels again, while working towards market equilibrium in better matching the office supply with its demand (Remøy & van der Voordt 2007, pp. 90). This usually means either demolishing, retrofitting, or functionally converting the building. Otherwise, the building owner can also choose to “wait it out” in the hopes of finding a suitable tenant in the future (Remøy & Wilkinson 2011, pp. 220).

On the other side of these social, economic, and environmental consequences embodied by vacant buildings, the appropriate conversion of obsolete offices into other users can contribute to social, economic, and environmental goals of urban governance (Remøy & Wilkinson 2012, pp. 219). In the social and environmental domains, conversion can contribute to inner-city revitalization and other urban planning and land-use goals (Heath 2001; Beauregard 2005), such as promoting urban intensification, public transportation use, and embodied energy retainment. Converting vacant buildings can also reduce market inefficiencies while enhancing the sustainability of the built environment by updating the building’s environmental quality (Remøy & Wilkinson 2012, pp. 219-220). Additionally, functional and technical redevelopment can generate added economic value for the property in question, especially if it is located in a central urban area where land is scarce for new construction developments (Remøy & van der Voordt 2007, pp. 94). Finally, adaption takes less time than new construction projects and is cheaper than demolishing and building anew, thereby saving both resources and capital (Wilkinson, et al. 2009, pp. 49).

For example, the refurbishment of high-density residential buildings in Hong Kong resulted in a 9.8% increase in value – far exceeding the refurbishment costs – compared to identical un-refurbished properties (Chau, et al. 2003, pp. 18). In Australia, the intervention on obsolete buildings was a vital part of sustainable urban development, combatting social blight while preserving the historical character and identity of the existing structures (Remøy & Wilkinson 2012, pp. 219). The conversion of obsolescent offices into residences has also been reported to have a positive impact on the provision of housing and the vitality of urban centers in both Toronto and London (Heath 2001, pp. 173). This type of conversion has also emerged in New York City, Boston, Chicago, and Vancouver (Cook & Hall 1997; Houston 1998; Tinworth 1999). In the Netherlands, various small-scale conversion projects have also generated housing in Amsterdam and Rotterdam (Remøy & Wilkinson 2011, pp. 220).

2.3 Considerations for Conversion

While building conversion appears to be an attractive one-size-fits-all solution, Remøy and van der Voordt (2007) outline several criteria for determining the suitability of converting offices into housing. First, the building is vacant long enough for the current owner to be willing to sell the building to a developer or financially motivated to initiate a functional transformation him- or herself (pp. 91).

Second, the building is located in an interesting location for housing development, such as the inner city or immediate urban peripheries. Locations “with retail already in place and ready to serve potential tenants” are most attractive to residential developers, as they make the future residential building more attractive for renters or buyers (Beauregard 2005, pp. 2435). On the other hand, buildings located in office or industrial parks or along highways are usually unsuitable for residential housing: they can be poorly accessible by public transport and raise air and sound pollution concerns. Once the location’s residential suitability is approved, then the target group for the particular housing development can be determined. Whereas the choice of residential target group and dwelling count can make building conversion more financially feasible, its location is inevitably fixed (Remøy & van der Voordt 2007, pp. 91).

Finally, the building must have adequate potential for conversion. The conversion of a building with recognized architectural quality or monumental status generally succeeds, albeit with an economic loss. In this case, no great changes are made to the façade or any other notable architectural characteristics and the value of the building is reinforced. On the other hand, it is more difficult to create a positive business case for the conversion of an unremarkable outdated building due to its poor architectural, technical, or functional quality. Nevertheless, such buildings can be – and have been – converted into housing if the structure meets – or has the potential to meet – contemporary building and zoning requirements. For example, floors must reach a

minimum floor height of 2.60 meters according to Dutch building law and the building's zoning must be adaptable to permit its newly intended use (Remøy & van der Voordt 2007, pp. 91).

Even after meeting the preceding criteria for conversion, the redevelopment process itself can be more complex than that of new construction projects in the following aspects. Primarily, the conversion of offices into residences requires specialized competence of the actors in the real estate market. Developers, investors, and owners of office buildings usually have little knowledge of other real estate market branches, such as that of housing. Furthermore, despite the low rental potential of vacant offices, their owners still ask high selling prices. Surmounting the other costs of conversion, this can impede the possibility of building's redevelopment, especially if the income from its new function is not expected to return sufficient gains. Although housing has had a higher rent per square meter than offices in the Netherlands since 1996, unfavorable property transaction values can still withhold investors and owners from selling their vacant offices, leaving them waiting for market conditions to improve (Remøy & van der Voordt 2007, pp. 92-94).

Once a developer initiates conversion, the project can still face unique risks. Based on several case studies of office conversions in the Netherlands, Remøy and van der Voordt (2007) conclude that the building itself, the market, and the municipality can threaten its successful redevelopment into housing. First, older buildings usually have limited (mis)information about its technical drawings and structural material and risk having asbestos, thereby raising hidden costs during construction. Furthermore, since housing has different building codes than offices in the Netherlands – particularly regarding fire escapes, daylight provision, and surrounding noise levels – necessary adjustments to the building may accumulate high costs or even impede successful conversion altogether. Second, unexpected fluctuations in the housing market can the new housing units difficult to sell. Third, the municipal procedures involved in reprogramming land-use from an office to housing function can result in juridical stoppage of up to eighteen months, which makes the redevelopment timeline uncertain and can easily replace the time that is gained from pursuing conversion (Remøy & van der Voordt 2007, pp. 94-95). Overall, the miscalculation of these potential conversion costs results in expensive consequences for developers and even fruitless building-use adaptations (Wilkinson, et al. 2009 pp. 55).

While such risks can be eliminated through better planning strategies, problems like weak floor constructions, old installations, and asbestos continue to pose serious threats for developers. Maximizing the added value of the conversion, in turn, gives the feasibility of the project a better chance. For example, the choice of dwelling type and size can work favorably towards the return of investment from the housing units (Remøy & van der Voordt 2007, pp. 95), especially when corresponded with the optimal target group for the building's, location's, and market's characteristics (pp. 92). Furthermore, making agreements with municipalities beforehand can result in better cooperation and even subsidiary facilitation for developers during the conversion process itself (pp. 95). From an urban governance perspective, Wilkinson et al. (2009) also call for governmental bodies to provide clearer decision-making frameworks to facilitate and expand conversion initiatives (pp. 58).

Altogether, building conversion has been argued to bring various environmental, economic, and social benefits and mitigate respective negative impacts for urban society when applied appropriately. However, its practical and perceivable advantages for urban dwellers have not yet been researched. By using urban sustainability as a theoretical framework, the effects of office conversion can be studied at the scale of the local neighborhood. In turn, this theoretical framework allows the conclusions of this research to be scaled to the greater urban environment, now and into the future. The following sections both elucidate the multi-dimensional concept of urban sustainability and elaborate the relationship building conversion has with the environmental, economic, and social dimensions of sustainable urban living.

2.4 Theoretical Linkages to Urban Sustainability

The broad concept of sustainability is recognized as an important conceptual framework in which to research urban development and a core mechanism with which to make urban planning and policy decisions (Rydin 1998, pp. 749; Bruff & Wood 2000, pp. 519; Owens & Cowell 2002; Chan & Lee 2008, pp. 244; Dempsey et al. 2009, pp. 289). In fact, Owens (1994) emphasizes: “planning and sustainability share two fundamental perspectives – the temporal and spatial. Both are concerned with future impacts on and of particular localities” (pp. 440). As such, urban development policies – like the *Aanpak Kantoren*

Transformatie, Nationale Woonagenda, and *NOVI* – are expected to be either implicitly or explicitly linked to urban sustainability. Conversely, sustainability is also considered an elusive concept that is theoretically difficult to understand and challenging to operationalize and implement in practice (Gough 2015, pp. 146).

While the term was first applied as the solution for cross-generational environmental preservation, it has also gained recognition for its relevance to social and economic issues in the 1980s, which marked a decade of global concerns about poverty, scarcity of resources, and urban and environmental decay (Chan & Lee 2008, pp. 244; Dempsey et al. 2009, pp. 289). After decades without consensus about the overarching meaning of sustainability, the Brundtland Commission's definition has emerged as the most widely used (Gough 2015, pp. 146): "development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (WCED 1987, pp. 8). However, this definition has been criticized for being anthropocentric and ambiguous regarding the assumptions about the "needs" of present and future generations. Instead, recent sustainability literature proposed more operational formulations that concern specific urban outcomes, such as ecological impacts of human activity (Wackernagel & Rees 1997), economic impacts of urban growth (Daly 1990), and their implications on social equity (Bullard 1990).

Fig. 2.1: Widely-Accepted Dimensions of Sustainable Urban Development

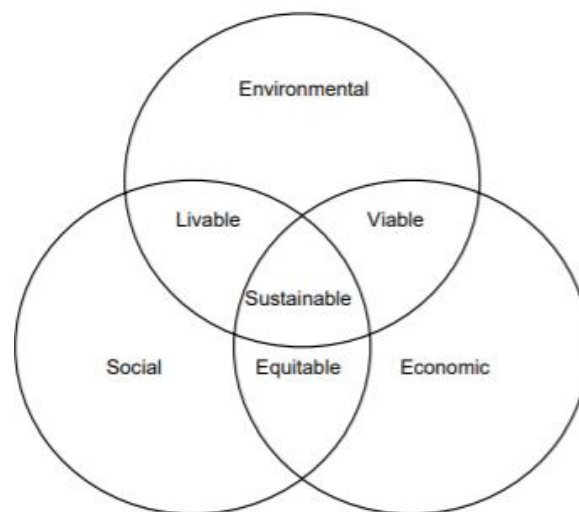


Figure: Tanguay et al. (2009)

In search of an operational definition of urban sustainability, both urban development literature and policy also emphasize the interrelated relationship between these environmental, economic, and social dimensions of sustainability (figure 2.1), while also recognizing the intergenerational demands put forth by the Brundtland Commission's definition (see i.a. Dempsey et al. 2009; Gough 2015; European Commission 2018). For example, Tomalty and Mallach (2015) define a sustainably city as one "that minimizes the use of natural resources and production of wastes while providing a livable, socially inclusive milieu for its inhabitants with sufficient economic opportunities to meet their needs and aspirations for the future" (pp. 51). More broadly, Tanguay et al. (2009) argue that sustainable urban development must be equitable (corresponding social needs with economic development), livable (corresponding social needs with environmental capacity and resources), and viable (corresponding environmental capacity and resources with economic development) (pp. 408).

Importantly, environmental, economic, and social sustainability are not apart from one another, but connected in shaping the overall urban quality of life in the present and beyond (Bramley & Power 2009, pp. 31; Dempsey et al. 2009, pp. 290). Rather than further disassembling each of these interconnected dimensions

in relation to one another (see Tanguay et al. 2009), their individual applications to urban sustainability – and office conversion – are discussed below.

Overall, these dimensions allow for the formation of urban sustainability indicators that allow city planners, policy-makers, and urban researchers to measure the environmental, economic, and social impacts of i.a. urban policy, urban design, transportation infrastructure, air and/or sound pollution, access to services by urban dwellers, and, in this case, office conversion. They also allow for the identification of urban problems and pressures – such as resource dependency, climate change, and building stock inefficiencies – that can be addressed by good governance and science-based solutions. Moreover, indicators allow cities to monitor the sustainable impact of urban interventions (European Commission 2018, pp. 5).

Environmental Dimension

In distinguishing the concept from the economic and social dimensions of sustainability, Goodland (1995) defines environmental sustainability as “the maintenance of natural capital” (pp. 10). Environmental sustainability seeks to improve human welfare by protecting the raw materials needed for human activity while ensuring that human waste does not exceed environmental capacity, in order to prevent harm to humans (Goodland 1995, pp. 3). As follows, environmentally sustainable urban development considers and limits negative impacts on natural capital, including air, water, flora, and fauna.

Conversely, the quantity of greenhouse gasses that a city emits is a widely accepted environmental indicator of urban sustainability (Tomalty & Mallach 2015, pp. 59). Half of all global greenhouse gas emissions are attributed to the built environment: aside from the high resource demands of urban transportation, buildings also expend vast amounts of energy for indoor climate control (Remøy & Wilkinson 2011, pp. 218; Tomalty & Mallach 2015, pp. 60). Therefore, the energy efficiency of the building stock plays a significant role in the environmental sustainability of a city, reflecting *NOVI*'s guidelines for sustainable urban forms in the Netherlands.

The sustainable adaption of real estate is a prudent way to reduce urban – and thus global – greenhouse gas emissions. Conversion, in particular, is considered a form of sustainable development for vacant or otherwise obsolete buildings, “as reused parts of the building retain embodied energy, and sustainable measures in the adaptation improve performance” (Remøy & Wilkinson 2011, pp. 218). With this premise, building conversion was actively pursued in Melbourne and showed potential in helping the Australian city meet its greater carbon neutrality targets (Wilkinson, et al. 2009).

In the Netherlands, tracking “energy labels” is an effective way to measure the energy performance of individual buildings over time. Energy labels, ranked from A (very efficient) to G (very inefficient), are allocated by *Milieu Centraal*, an independent public information organization dedicated to enabling sustainable consumer choices. The government-funded organization ranks buildings on the basis of their energy-efficiency, considering factors such as insulation, window glazing, heating systems, and solar panels. Since 2015, all Dutch homeowners received a provisional energy label based on data from the Land Registry; building owners are also required to provide a definitive energy label when selling or newly leasing the property (EnergieLabel 2019). As such, a dominant share the Dutch building stock offers a representative and comparable environmental sustainability ranking over time.

Alternatively, preserving green areas (i.e. “natural capital”) by regulating urban development patterns also works towards ameliorating urban greenhouse gas emissions and preserving the long-term environmental quality of cities. As summarized by Jim (2014), “a city with high-quality and generous green spaces epitomized good planning and management, a healthy environment for humans, vegetation, and wildlife populations, and bestows pride on its citizenry and government” (pp. 311). Additionally, these qualities reach all levels of society: Kuo et al. (1998) find that different social strata show similar sense of security, appreciations, and preferences, for urban nature in Chicago (pp. 52-55).

As urban sustainability increasingly requires the abatement of pollution and the provision of new green features to foster healthy urban environments (Finco & Nijkamp 2003, pp. 293), cities increasingly involve the provision, expansion, and preservation of greenery in both new urban development and

redevelopment projects (Gordon 1990; Beatley 2000). In turn, the destruction of existing green spaces degrades the environmental quality, quality of life, and overall level of human health within cities (Jackson 2003, pp. 198), raising valid environmental concerns for the justification of construction of new housing on greenfield sites. Conversely, changing the function of a vacant building to match current societal needs does not remove (nor add) the provision of urban green and mitigates the need to build elsewhere.

Nevertheless, upgrading the sustainability of the building stock and urban greening are necessary but not sufficient conditions towards urban sustainability, which also needs to balance the economic and social dimensions of sustainability. However, Jim (2004) argues that it is necessary to accept that “environmental benefits have to incur socioeconomic consequences”, in place of the reciprocal reasoning typically employed in urban development policy (pp. 317). While this reversal is more costly and less politically favored, it is critical for maintaining urban sustainability as an intergenerational goal (Jim 2004, pp. 317). Similarly, Goodland (1995) states that the environment has become a major constraint on human progress, with environmental sustainability – the overall maintenance of ecological life-support systems – being a necessary prerequisite for the other dimensions of urban sustainability to be approached (pp. 2-3).

Economic Dimension

Focusing in on economic sustainability, Foy (1990) explains that sustainability from an economic perspective requires that current economic activity does not disproportionately burden future generations (pp. 771). Within this definition, the urban economy is expected to provide, maintain, and continuously develop economic opportunities for its current and future inhabitants.

Nevertheless, cities are increasingly experiencing disruption from the effects of climate change, globalization, mass rural-urban migration, population aging, and natural resource depletion, which has both direct and indirect impact on urban economies (Tomalty & Mallach 2015, pp. 68). As such, the concept of urban resilience has gained traction within urban sustainability discourse to refer to “the ability of a city to adapt to change while sustaining its essential [economic] functions as a center of human habitation, production, and cultural development. Cities can be assessed on their vulnerability to disruptive forces and their capacity to adapt to them” (Tomalty & Mallach 2015, pp. 68). Vulnerability arises from the city’s exposure to environmental, economic, and social risks, such as environmental stress, global economic recessions, and social disparities. Capacity to adapt reflect the city’s ability to plan for and manage such environmental, economic, and social changes (Tomalty & Mallach 2015, pp. 68).

In particular, urban economies must show strong resilience to socioeconomic trends in the short-term to stay internationally competitive and innovative to preserve their economic sustainability. For example, there has been a major shift in the appreciation for the link between the quality of place and regional economic success since the turn of the century (Tomalty & Mallach 2015, pp. 18). Cities are increasingly investing in high-quality environmental, economic, and social amenities in new urban developments, which, according to Florida (2002), works to attract and retain workers in the contemporary knowledge-intensive and creative fields. In turn, the presence of this mobile “creative class” attracts firms scouting high-quality talent, which then boosts the urban rate of cultural and technical innovation and thereby also economic productivity. Nowadays, this cycle represents a new means of achieving urban competitiveness through sustainable urban development, replacing the traditional approach for cities to attract firms by offering cheap labor, good infrastructure, and a compliant local government (Tomalty & Mallach 2015, pp. 18).

Conversely, long-term mismatches in the housing market indicate cities’ economic vulnerability and incapacity to adapt to such socioeconomic and cultural shifts. Building surpluses threaten the competitiveness of real estate prices and result in economic inefficiencies (i.e. costs associated with vacancy). On the other hand, building shortages push prices up, thereby limiting opportunities for living and participating in the urban economy. In the long term, limiting access to the urban housing market tends to further increase housing prices and reduces the availability of low and mid-priced housing (Lillydahl & Singell 1987; Schwartz et al. 1984). Overall, housing – an economic good – cannot be sustainable without being affordable: sustainable housing means that everyone, today and tomorrow, has a decent place to live (Li & Shen 2002). For the greater urban economy, unsustainable housing also means constraining the availability of low-wage workers to fill jobs over an indefinite period of time (Green 2001, pp. 73).

Social Dimension

The social dimension of sustainability refers to the city’s continuing ability to function as a viable setting for human interaction, communication, and cultural development among socially and culturally diverse groups (Yiftachel & Hedgcock 1993, pp. 140; Bramley & Power 2009, pp. 31; Dempsey et al. 2009, pp. 290). Broadly, McKenzie (2014) defines social sustainability to be “a positive condition within communities, and a process within communities that can achieve that condition” (pp. 23). Supplementing this definition, promoting equitable access to housing, employment, and services at the city-level and meeting psychological needs at the neighborhood-level are critical components for social sustainability (Dempsey et al. 2009, pp. 292). The latter includes social interaction, collective participation, residential stability, trust in regard to safety and security, and community identification and pride (Dempsey et al. 2009, pp. 294; Bramley and Power 2009, pp. 33).

As economic growth tends to widen the gap between the rich and the poor (Ha 2007, pp. 116), socially sustainable urban development is important for sustainable growth and self-reliance at the community-level in particular (Roseland 2005). The economic, social, and cultural capital of low-income households is often threatened by large-scale urban development projects, when they risk relative marginalization and isolation from the urban benefits produced (Ha 2007, pp. 116). In turn, social mixing – which can be achieved through small-scale building conversion – is considered a desirable urban development mechanism for social sustainability to strengthen and preserve community capital for all residents (Colantonio 2010, pp. 79).

Furthermore, buildings are said to embody social and cultural capital; conversion thus has the potential to retain this capital in its urban environment if it is seen as beneficial to the community (Bromley, et al. 2005; Bullen 2007). Conversely, new residents of converted buildings may benefit from the capital hitherto encapsulated in their new residential building. Building conversion thus has the potential to maintain and even promote the social sustainability of an urban neighborhood as a small-scale, adaptable urban development.

2.5 Operationalization of Urban Sustainability

Macro-Level Institutional Inputs

The first half of the research performed for this thesis will focus on identifying stakeholders’ inputs in realizing office conversion into social housing. As based on the preceding contextual and theoretical overviews, these are categorized into the triad of dimensions of urban sustainability: environmental, economic, and social inputs. They are outlined in table 2.1, below, and serve to guide the research performed to the first research question. Overall, these inputs are considered macro-level guidelines in which decision-making processes for office conversions may take place.

Table 2.1: Institutional Inputs for Urban Sustainability

Environmental Inputs	Economic Inputs	Social Inputs
<ul style="list-style-type: none"> • Sustainable decision-making & urban development • Intensifying urban land-use • Urban zoning • Advancing environmental quality (i.e. provision of green, desirable noise levels, advancement of energy labels) • Etc. 	<ul style="list-style-type: none"> • Economic conditions & market players • Urban economic revitalization • Solving market inefficiencies • Financial capacity • Etc. 	<ul style="list-style-type: none"> • Increasing the aggregate (social) housing stock • Providing affordable housing for low-income households • Meeting social needs (i.e. accessibility & psychological needs) • Social mixing • Etc.

Micro-Level Societal Outcomes

Conversely, the second half of the research should see the institutionally-desired environmental, economic, and social outcomes at the micro-level of the neighborhood. In particular, this thesis investigates resident experiences of these theorized outcomes to offer a nuanced understanding of how office conversion directly affects the perceived urban sustainability levels of select households. The research focuses on the previously discussed operational dimensions of urban sustainability and are summarized in table 2.2.

Table 2.2: Societal Outcomes of for Urban Sustainability

Environmental Outcomes	Economic Outcomes	Social Outcomes
<ul style="list-style-type: none"> • Provision of green • Energy efficiency of building stock • Noise levels 	<ul style="list-style-type: none"> • Matching supply with demand • Affordability of housing • Price-quality valorization of housing 	<ul style="list-style-type: none"> • Access to housing • Access to employment • Access to services • Social interaction • Collective participation • Residential stability • Trust in regard to safety & security • Community identification & pride

3. Research Methodology

3.1 Approach & Research Methods

This research adopts a mixed-method approach with an emphasis on qualitative research to investigate the conversion of two former office buildings into social housing. Using urban sustainability as a theoretical lens, this approach serves to understand the effect of the broader national context on the facilitation of office conversion at the institutional level and, as follows, verify the presupposed outcomes of office conversion at the scale of the local neighborhood. The focus on qualitative data collection allows for deeper insight into residents' personal experiences of office conversion in comparison with the institutionally-desired outcomes.

In order to answer the first research question, interviews were held with the various stakeholders that were involved in office conversions to understand the role their institutions played its facilitation. These stakeholders also provide expert knowledge on the social, economic, and environmental goals of the institutions they represent.

For the second research question, surveys were distributed among both residents of the two case study conversions and their surrounding neighbors to quantitatively measure their experiences around the conversion within the framework of urban sustainability. Furthermore, several in-depth interviews were performed to gain utmost insight into these experiences and to provide a more illustrative understanding of the survey data. The interviews also serve to compare the findings from the first research component to the actual outcomes for the neighborhoods investigated.

Optimally, a longitudinal approach would have been used for the second half of this research in order to measure the long-term effects of office conversion on both its new residents and its neighbors. However, due to the limited timeframe and lack of relevant case studies for such a study, this was not possible. Hence, before-after effects are measured by measuring participants' self-reported changes in their residential environments in the past half-decade. Furthermore, the use of mixed research methods – expert interviews, theory-based surveys, and follow-up interviews – still allow the research questions to be answered successfully.

3.2 Case Studies

The following two case studies have been selected on the basis of three criteria: the buildings (1) were former (semi-)vacant office buildings in the Utrecht province, (2) were converted into social housing within 12 months of one another in the last half-decade, and (3) are located inside or directly adjacent to a residential neighborhood. In such, it can be assumed the conversions occurred in temporally similar socio-political, economic, and urban contexts. Furthermore, their residential settings allowed for the investigation of the effects of the new residential buildings on their immediate urban surroundings, before and after their conversions from office buildings.

Ultimately, two buildings could be selected on the basis of these criteria: the Stadsring in Amersfoort (figure 3.1) and the Bakenmonde in Nieuwegein (figure 3.2). The cities of Amersfoort and Nieuwegein have been affected by widespread office vacancies during the last few decades, yet have different approaches and levels of experience regarding the conversion of office buildings into alternative uses, making the Stadsring and Bakenmonde interesting cases to investigate inside the Utrecht province. While the Stadsring and Bakenmonde also compare in terms of original construction year, and general structural features, they are also distinguishable in terms of their respective gross total surface areas and target residential groups. The buildings' features are summarized in table 3.1.

Figure 3.1a: The Stadsring before Conversion, 2015



Image: Provincie Utrecht Transformeert Kantoren (n.d.)

Figure 3.2a: The Bakenmonde before Conversion, 2014



Image: A3 Architecten (2019)

Figure 3.1b: The Stadsring after Conversion, 2016



Image: Zegers Bouw (n.d.)

Figure 3.2b: The Bakenmonde after Conversion, 2015



Image: A3 Architecten (2019)

Figure 3.1c: New Residential Dwelling in the Stadsring



Image: De Vries Ontwikkeling (2019)

Figure 3.2c: New Residential Dwelling in the Bakenmonde



Image: TransformatieTeam (2019)

Table 3.1: General Overview of the Stadsring and the Bakenmonde

	The Stadsring Stadsring 185, Amersfoort	The Bakenmonde Bakenmonde 1-2, Nieuwegein
<i>Previous Owner</i>	PingProperties	ING Real Estate Investment Management
<i>Developer</i>	R.I. De Vries Ontwikkeling	Jutphaas Wonen & Pensioenfonds Syntrus Achmea in variable collaboration with Bohan Projectontwikkeling & VORM Ontwikkeling
<i>Client</i>	De Alliantie	Jutphaas Wonen
<i>Municipality</i>	Gemeente Amersfoort	Gemeente Nieuwegein
<i>Province</i>	Provincie Utrecht	Provincie Utrecht
<i>Original year of construction</i>	1989	1986
<i>Date of purchase by developer</i>	June 2015	December 2007
<i>Date of official rezoning from office to residential land-use</i>	November 2015	November 2014
<i>Starting date of construction</i>	December 2015	December 2014
<i>Date of completion & transfer to client</i>	September 2016	December 2015
<i>Gross floor area of building</i>	Ca. 3,500 m ²	Ca. 7,800 m ²
<i>Total residences created</i>	53 converted apartments with 1-2 bedrooms	102 apartments and 4 maisonnettes ² with 1-2 bedrooms
<i>Average size per apartment</i>	Ca. 40-65 m ² per apartment	Ca. 60-75 m ² per apartment
<i>Target group for residence</i>	Young adults (18-30 years old)	N/A
<i>Change in energy label ranking</i>	From G to B	From C to A
<i>Other building characteristics</i>	<ul style="list-style-type: none"> • 4 floors with 1 sublevel floor • 1 newly adjoined or recessed balcony per dwelling • Access to most dwellings via central hallway • Parking lot directly in front of building (19 spaces) • Parking garage in basement (33 spaces) • Private storage units in basement 	<ul style="list-style-type: none"> • 5 floors³ with 1 sublevel floor • 1 terrace per ground-floor dwelling and 1 newly adjoined balcony per dwelling between the 2nd and 5th floors • Access to most dwellings via outside galleries • Parking lot directly in front of building (62 spaces) • Parking garage in basement (66 spaces) • Common storage area for bicycles on ground floor

3.3 Data Collection

Expert Interviews

In total, six experts were consulted regarding their institution's involvement in the conversion of the Stadsring and/or the Bakenmonde (see table 3.2; appendix A). Each expert participated in an one-on-one recorded interview, where questions were asked regarding the facilitating role of the developer, client, municipality, or province in realizing the conversions in question. In-depth questions addressed each

² Of the 106 total dwellings, 85 are converted residences and 21 are newly constructed residences built on top of the Bakenmonde's original roof.

³ The Bakenmonde was originally constructed with four above-ground floors. An additional fifth floor was constructed on top of the existing building during its conversion.

institution's environmental, economic, and social goals, challenges, and successes in the conversion of office buildings into (social) housing. Their inputs are categorized by theme in the following section of this thesis.

Table 3.2: Expert Interviewees

Contact Person	The Stadsring	The Bakenmonde
<i>Developer</i>	Rob de Vries Director R.I. De Vries Ontwikkeling	Marco van Dijk Head of Housing & Real Estate Jutphaas Wonen
<i>Client</i>	Noortje van der Have Senior Regional Developer, Amersfoort De Alliantie	
<i>Municipality</i>	Bart de Brouwer Project Manager Gemeente Amersfoort	Willie van Dam Economic Affairs Account Manager Gemeente Nieuwegein
<i>Province</i>	Menno Smit Program Manager Provincie Utrecht	

Resident & Neighborhood Surveys

Using the theoretical indicators of urban sustainability outcomes, survey questions were developed for Stadsring and Bakenmonde residents (appendix B) and neighborhood residents (appendix C), henceforth referred to as “neighbors”. Multiple-choice questions were formulated to rate their satisfaction with various environmental, economic, and social qualities in and around their homes. Basic demographic information was also collected to understand the social contexts of the respondents. Neighbors living within a 100-meter radius of the converted buildings were considered eligible for the survey. Furthermore, they must have lived in the neighborhood since before the conversions took place, as the neighbors' survey focused on their residential experiences before, during, and after the building's functional redevelopment. Residents and neighbors above 18 years of age were approached at their homes with the option to participate in the written survey. In cases where residents were not immediately available for participation, a letter with a weblink for the digital version of the survey was distributed. No personally-identifiable information was recorded.

Table 3.3: Survey Count

	The Stadsring	The Bakenmonde	Total
<i>Residents</i>	14	32	46
<i>Neighbors</i>	18	7	25
Total	32	39	71

After six half-days of field surveying and distributing letters, a total of 71 paper and digital surveys were submitted directly to the researcher (table 3.3). Unsurprisingly, more than twice as many surveys were collected from the Bakenmonde residents than the Stadsring residents, given that the latter building contains half the number of dwellings. Nevertheless, the response rates of the two buildings are comparable with 30.2% of Bakenmonde households and 26.4% of Stadsring households participating in the survey.

Surveying the Bakenmonde neighbors proved to be more difficult, however. This is attributed to the apartment-style residential buildings that are common in the neighborhood: every four to six dwellings shares a secured outside front door. Bakenmonde neighbors are therefore likely to be more critical about whom they let through this front door via intercom and were quite unresponsive to the written invitation to participate in the digital survey otherwise. As such, a meager 7.4% response rate of the neighborhood was obtained. On the

other hand, the Stadsring neighborhood is predominantly characterized by single-family homes with personal front doors. Furthermore, there is more outdoor activity by neighbors in the Stadsring neighborhood. A combination of these factors likely resulted in a higher willingness to participate in a survey, resulting in an overall response rate of 37.5%.

Fig. 3.3: Move-In Year of Respondents

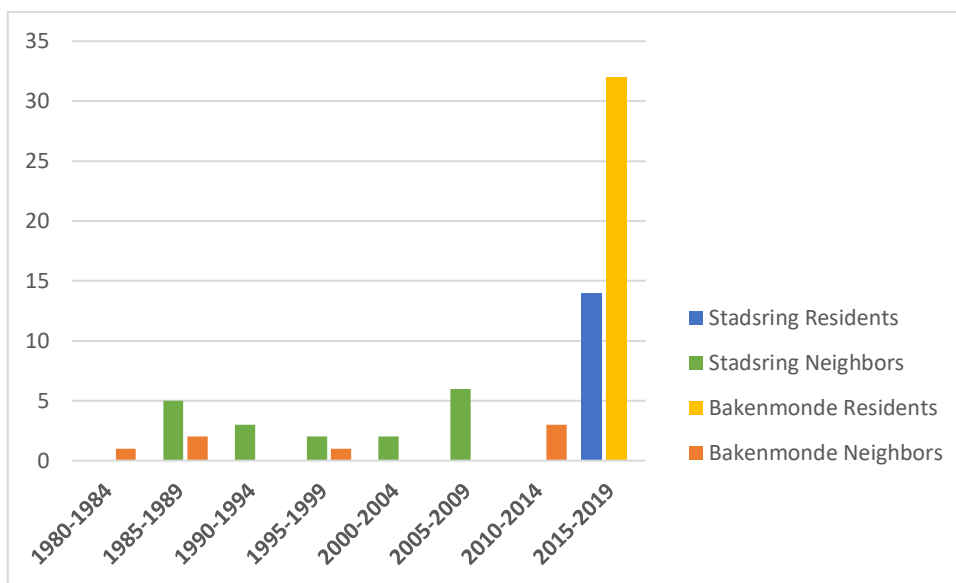


Fig. 3.4: Sex of Respondents

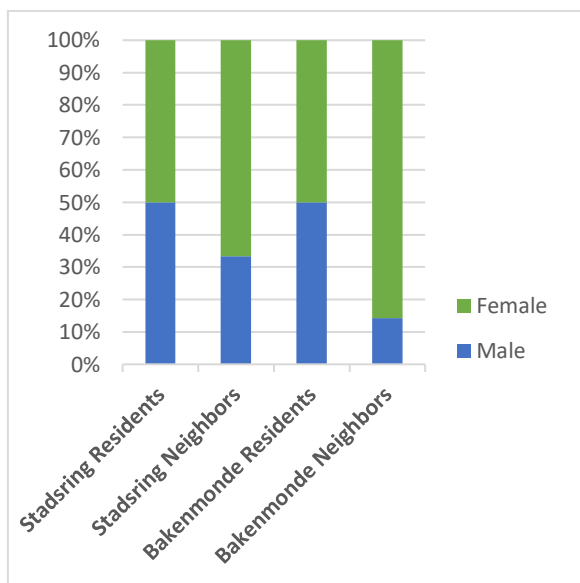
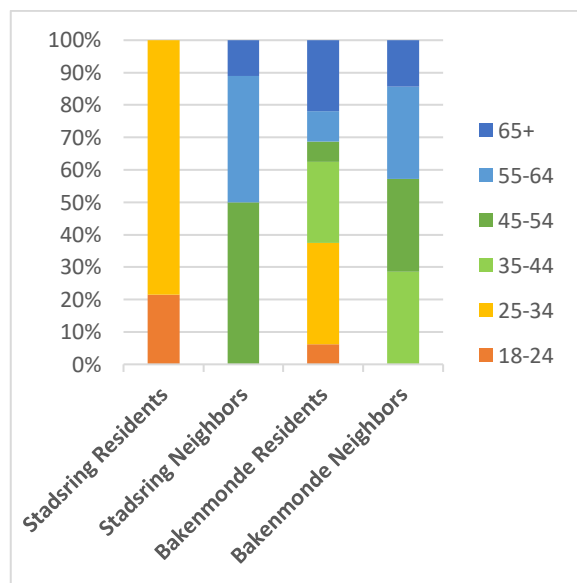


Fig. 3.5: Age of Respondents



While the response rates were too low to perform statistical tests, the demographic characteristics collected nevertheless provided baseline information in regards to the social compositions of the groups sampled. As shown in figure 3.3, all Stadsring and Bakenmonde residents indubitably moved into their respective neighborhoods after the buildings’ conversions whereas some of their neighbors have already resided in the neighborhood since the 1980s. Furthermore, most neighborhood respondents were female, while equal shares of males and females were surveyed in both the Stadsring and Bakenmonde buildings (figure 3.4). In terms of age distributions (figure 3.5), the Stadsring residents are naturally the youngest surveyed group, given that their dwellings are designated for young adults between 18 and 30 years of age. Conversely,

Bakenmonde residents are variable in terms of their age categories, ranging anywhere between 18 and 65+. In regards to their respective neighborhoods, the greatest share of neighbors are between 45 and 64 years of age.

Fig. 3.6: Household Composition of Respondents

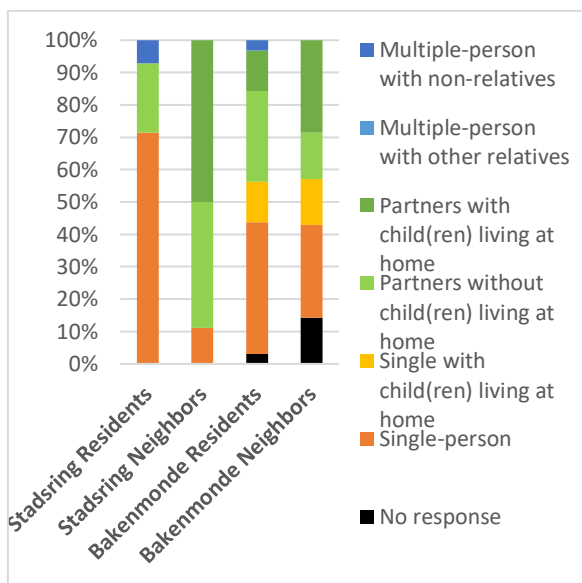


Fig. 3.7: Highest Completed Level of Education of Respondents

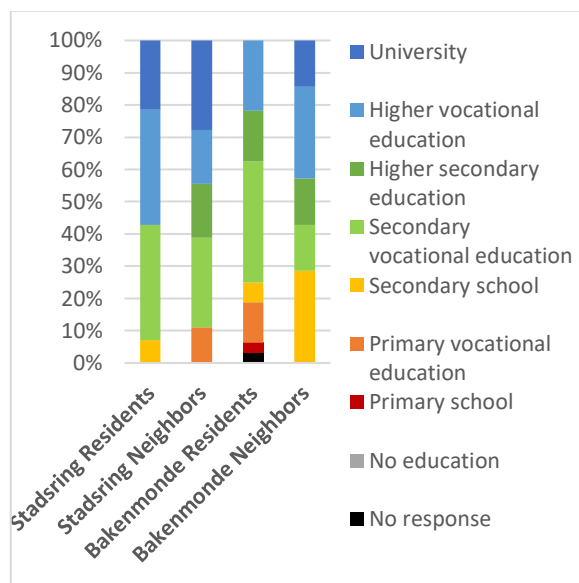


Fig. 3.8: Work Situation of Respondents

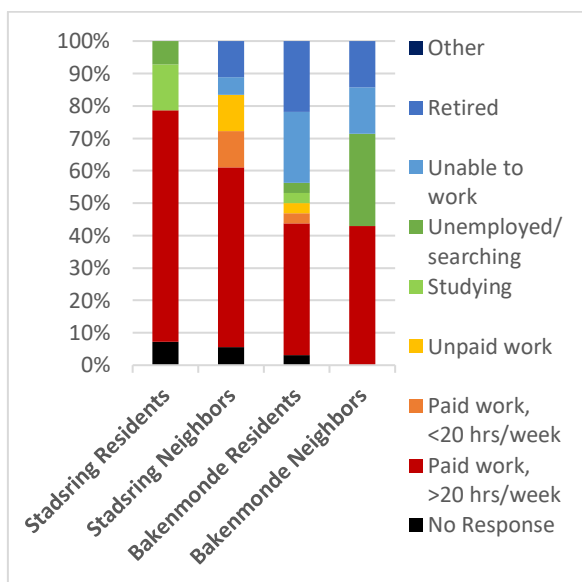
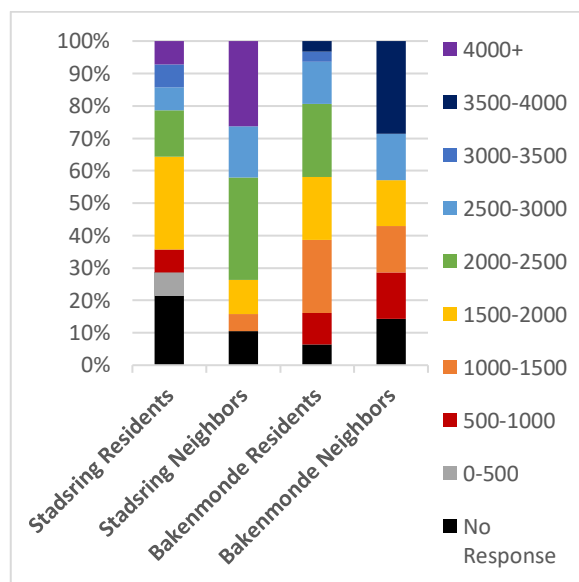


Fig. 3.9: Net Monthly Income of Respondents



Except for the Stadsring building, most surveyed residents and neighbors live in multi-person households (figure 3.6). Furthermore, greater shares of partners living with their child(ren) reside in the social housing buildings' adjacent neighborhoods. On average, Stadsring residents have completed higher levels of education than Bakenmonde residents (figure 3.7). A greater share of Stadsring residents also performs paid work for over 20 hours per week, whereas the Bakenmonde has the highest share of retired residents out of all groups surveyed (figure 3.8). Finally, more than half of Stadsring and Bakenmonde residents earn less than 2,000 net euros per month, placing them well within the income boundary for social housing eligibility (figure 3.9).

Resident & Neighborhood Interviews

For the second phase of investigating residential and neighborly experiences surrounding the office conversion, interviews were chosen as research method. The interviews were developed on the basis of a reflective analysis of the preceding expert interviews (appendices D & E). These follow-up questions aimed to gain more insight into the linkages between the institutional inputs into the conversion and how residents and neighbors explain their residential outcomes, as recorded in the survey. Since some residents and neighbors had limited availability, a digital version of the interview was also offered to maximize data collection. In total, 16 residents and neighbors responded to the open-ended questions, as shown in table 3.4. Their quotes are qualitatively categorized by theme together with the respective illustrative survey data.

Table 3.4: Interview Count

	The Stadsring	The Bakenmonde	Total
<i>Residents</i>	3 (1 in-person)	6 (2 in-person)	9 (3 in-person)
<i>Neighbors</i>	5 (2 in-person)	2 (0 in-person)	7 (2 in-person)
Total	8 (3 in-person)	8 (2 in-person)	16 (5 in-person)

4. Research Findings Part 1: Institutional Inputs of Office Conversion

As a result of the expert interviews, the facilitators and impediments of office conversion in the province of Utrecht could be identified. While social, economic, and environmental considerations emerge in the discussions around conversion, its pursuit is not strictly motivated by the desire to further these urban sustainability dimensions. Conversely, the desirability of pursuing office conversion for creating more housing can also be limited by various social, economic, and environmental impediments and consequences. Nevertheless, the societal challenges posed by the widespread office vacancy, social housing shortage, and environmental sustainability goals remain imbedded in motivating the conversion of the Stadsring and Bakenmonde buildings, thereby implicitly contributing to the greater urban sustainability of the Utrecht province.

4.1 Environmental, Economic, & Social Considerations of Office Conversion

As the overarching governing body of Utrecht's municipalities, Provincie Utrecht guides the long-term changes that occur in both the urban and peri-urban areas across the province. In regards to Provincie Utrecht's current goals for ongoing urban development, program manager Menno Smit explains:

Our goal is to drive inner-city development, such that the peri-urban area – the area that lies outside the defined urban contours – stays green, so that we can maintain them. And the urban area: that we intensify its land-use and add more quality. That can be through the addition of dwellings – that is important – and removing vacancies, such as office vacancy. But here we also have to include goals such as energy transition, climate adaptation, and social integration.

These urban development goals – and the pursuit of office conversion – are intertwined with desirable environmental, economic, and social outcomes for society. Even more, the overarching vision of the Provincie Utrecht for the Utrecht province explicitly captures the tri-dimensional aspects of urban sustainability.

To further develop a livable society, that is our greater interest. To keep that what is green, as green as possible. That what is urban, taking advantage of its opportunities to create an optimal, healthy, climate-proof, and robust environment, where it is pleasant to live, work, shop, and meet. That is our core.

However, Provincie Utrecht does not have direct jurisdiction to control the direction of the developments that take place within these urban contours: that responsibility lies with the locally-governing municipality. Nevertheless, Menno Smit explains that Provincie Utrecht plays an active role in cooperating with municipalities – often involving developers, housing organizations, and/or market parties as well – in which it assumes an authoritative role to jointly realize the goals of different parties.

Furthermore, Provincie Utrecht can regulate the developments that take place in peri-urban areas in order to prevent unnecessary urban sprawl, maintain regional transportation efficiency, and protect natural environments. In light of the longstanding office surplus across the province, Provincie Utrecht has therefore actively restricted the construction of offices in peri-urban areas by re-zoning empty parcels that were originally planned for new office developments, as stipulated in the *Aanpak Kantoren Transformatie*. As a result, this policy has also spurred municipalities to follow suit within their jurisdictional urban contours.

In the cases of Amersfoort and Nieuwegein, however, the municipalities have pursued more independent approaches in addressing their respective office surpluses. In fact, Gemeente Nieuwegein has already halted the construction of offices in Nieuwegein since 2010. This comes unsurprisingly as Nieuwegein has faced high levels of office vacancy throughout its short history as an urban node for working and living. Account manager Willie van Dam explains the municipality's rationale for adopting and upholding their office vacancy policy for almost a decade:

With this much office vacancy it still doesn't make sense to build new offices in Nieuwegein, not even for developers. What happens with the older, vacant buildings then? That's not good for the city's economy or livability.

In fact, Gemeente Nieuwegein's global goals are to support the real estate climate and social livability in the city, which overlap with the global aims of Provincie Utrecht. However, while Provincie Utrecht also expresses environmental motivations for intensifying land-use within cities, Wille van Dam says:

Addressing office vacancies is more economically-motivated. We want to keep Nieuwegein attractive for businesses. But high levels of vacancy can be seen as neglect, and then people don't want to settle here, and that is not good for our economy.

Conversely, Gemeente Amersfoort has chosen to restrict, rather than halt, new office construction. Nevertheless, Amersfoort has not seen new office construction in recent history, despite the ongoing opportunity for development. Project manager Bart de Brouwer explains:

Amersfoort still has a number of locations where offices can be built. A number of locations where offices can still come. But, I have been working here at Amersfoort's City Hall for seven years now and, I think, no new office has been built in those seven years.

While each governmental body recognizes the value of limiting office construction, different means are seen to have reached the same end. Contrasting the active approaches of Provincie Utrecht and Gemeente Nieuwegein in rezoning the capacity for new offices, the lack of office construction in Amersfoort is associated to economic stagnation in regional office markets. Furthermore, while Gemeente Nieuwegein does acknowledge the social next to the economic consequences of vacancy for Nieuwegein, only Provincie Utrecht additionally emphasizes the environmental considerations of building stock inefficiencies.

Still, Nieuwegein has expressed the goal to become an energy-neutral city by 2040, following the greater Dutch trend towards achieving sustainable and self-sufficient urban environments. However, efforts will be focused on improving existing living environments, energy efficiency, and green infrastructure, rather than specifically retrofitting or converting outdated (office) buildings. Overall, the municipality focuses its efforts on large-scale area development, rather than building-level development.

Nevertheless, intensifying housing development through office conversion across all inner-cities – including Nieuwegein and Amersfoort – inherently contributes to the Netherlands' greater environmental sustainability goals as urban infrastructure is already in place to serve residents. Menno Smit says:

Ideally – and that is the advantage of inner-city building, of course – is that there are already lots of public transportation connections. Those typical highway transformations are a bit more complicated. But converted buildings often exist in pre-existing mixed residential-working areas, where a few busses already stop daily.

On the contrary, conversions in the outskirts of cities would demand greater infrastructural development – i.e. public transportation expansion and potentially even new shopping nodes and local workplaces – to meet Dutch urban living standards and prevent the increased dependency on cars, which could otherwise be used to reach daily destinations. However, Bart de Brouwer questions the extent to which the building conversions themselves have a significant long-lasting impact on the housing stock in terms of environmental sustainability.

I find that environmental sustainability harder to achieve in existing buildings than newly constructed buildings. Because you are working with different building requirements. You're dealing with the requirements for existing buildings, not new buildings. So that is still a discussion we have with developers: if it should be without gas, or with. And you can't force some things. With new construction it is simply clearer: it just has to be without gas. So – in terms of sustainability – I think: yes, it is sustainable to re-use an old building. Of course that is very sustainable. However, in the long term I do wonder whether demolition-construction would not have been more sustainable.

In fact – while he expects conversions to expand building lifetimes by around thirty years – Bart de Brouwer suspects that converted buildings will be demolished in about fifty years anyways.

They will simply satisfy less sustainability ambitions. Sustainability – with most office conversions – is not the highest priority.

Hence, both Bart de Brouwer from Gemeente Amersfoort and Willie van Dam from Gemeente Nieuwegein see the conversion-driven improvements to the environmental quality of the existing building stock to be a bonus of the development, rather than a goal in itself. Both parties express more concern for tackling the (socio)economic issues of widespread office vacancies and housing shortages and therefore appreciate the societal impact of office conversion. Representing Gemeente Amersfoort, Bart de Brouwer states:

The knife cuts both ways. You remove vacant offices from the market, and you can realize dwellings there. There are still lots of vacant office meters here in Amersfoort. And there really is a housing need – as we call it – so you can combine them well.

In contrast, Menno Smit actually sees the enhancement of environmental sustainability as a very viable and sought-after approach in the ongoing urban development of the Netherlands. Following his argument, office conversion would also make a pragmatic intervention for enhancing environmental – and thereby also economic and social – outcomes for urban society.

The political sentiment is to enhance sustainability as much as possible, so our civil servants are actually instructed to 'do it!' More sustainable housing is also better for your urban neighbors. Corporations, but also private rental parties, can ask more per square meter because you have a better energy label. So there are enough incentives. People realize that it is good here, in the Netherlands, so the Dutch are definitely for enhancing sustainability.

In addition, both the Stadsring and Bakenmonde buildings' energy levels were significantly raised through conversion – from G to B and C to A respectively – which raises questions about the validity of Bart de Brouwer's skepticism about converted buildings' environmental sustainability. Furthermore, Marco van Dijk explains that upgrading the environmental quality of the Bakenmonde during conversion was actively pursued and eventually beneficial for the performance goals of Jutphaas Wonen, which include bringing their residential properties' energy labels up to the new A ranking standard.

While nothing can be definitively said about the relative energy performance of the Stadsring and Bakenmonde in the future, conversion did significantly improve the existing buildings' environmental quality and, at the very least, pushed back their final expiry (demolition) date by several decades. Altogether, such redevelopment projects have the potential to improve the environmental sustainability of the total urban building stock, just as the Bakenmonde did for the property portfolio of Jutphaas Wonen.

Altogether, the pursuit of office conversion alludes to desirable outcomes in terms of urban sustainability, whether or not its environmental, economic, and social dimensions are explicitly engrained in political priorities. Nevertheless, the actual process for successfully realizing office conversion is subject to both driving and impeding forces that stem the socioeconomic context and location in which it occurs and the availability of resources and expertise of municipalities, housing corporations, and developers.

4.2 Facilitators of Office Conversion

High Demand for Housing in Utrecht

As expected, the Utrecht province is affected by the national housing shortage. In this case, the shortage is exacerbated by the increasing in demand for housing across the Utrecht province and its larger urban nodes. Representing Provincie Utrecht, Menno Smit explains:

Utrecht is a relatively young province and is still growing fast. The city of Utrecht⁴ and the province continue to grow. You see a movement from the Netherlands to the Randstad⁵.

Housing organization De Alliantie is also witnessing a new phase in the national residential shift towards the centrally-located megapolis. The city of Amersfoort – which lies just east of the Randstad, at 20 kilometers from the city of Utrecht – has also become an increasingly popular residential destination for households wishing to live near Utrecht or Amsterdam, but unable to find affordable housing in the increasingly-popular Randstad. Consequently, the availability of affordable housing has also been diminishing and social housing waitlists have been growing in Amersfoort. To address this, De Alliantie representative Noortje van der Have explains:

De Alliantie wants to repulse these long waitlists by creating many new homes, quickly.

As such, De Alliantie is invested in several new-construction, conversion, and retrofitting projects to increase their aggregate supply of social housing dwellings in the Amersfoort area, inciting their involvement in the conversion of Stadsring when De Vries Ontwikkeling proposed the project. These new housing developments are hailed by Gemeente Amersfoort for addressing the local housing shortage: the Stadsring is particularly appreciated for making more affordable housing available for 18 to 30-year-olds. Bart de Brouwer says:

Amersfoort has a lot of need for housing for young adults. So that is really the added value for the city. There is just a terrible shortage of homes.

In fact, the conversion of the Stadsring was financially feasible on the condition that the new housing units would be reserved for this young demographic group. Recognizing the need for more affordable housing for 18 to 30-year-olds, Gemeente Amersfoort subsidized De Alliantie's purchase of the converted building from the developer, De Vries Ontwikkeling. In turn, this made the purchase possible for the housing organization and the conversion profitable for the developer. The director of De Vries Ontwikkeling, Rob de Vries, elaborates:

Above all, you have to have a positive business case to remove potential risks and create a positive result. The municipality contributed a subsidy to supplement the budget deficit. That made the conversion possible and contributed to it at a large extent. Otherwise De Alliantie would have had to pay more. But that did not fit in with De Alliantie's business case either – they also have an operating plan – and they also fell short. And we fell short. So, we put that together and approached the municipality about the subsidy scheme, which could close the gap. The subsidy was specifically for creating affordable housing for young people. It was granted at the end, when the conversion was realized. It was directly granted to De Alliantie.

However, this was a singular instance according to Bart de Brouwer; no other building conversion development has ever received municipal subsidization in Amersfoort. Furthermore, the subsidy was ultimately not granted on the basis that a vacant building would be removed from Amersfoort's office stock. Instead, Gemeente Amersfoort made the subsidy available on the basis of the city's housing demand demographic. While the subsidy's results were hailed by each of the involved parties, it also contradicts the desired social inputs for fostering urban sustainability, like social mixing. Menno Smit also warns that such one-sided housing developments may impede the social integration between a converted building and its neighborhood:

Its negative side can emerge when you start to develop everything too unilaterally – for example, it all becomes student housing or starter homes – so there will be very large residential turnover. As a result, community-building also gets worse on a social level, or it becomes a sort of 'party zone'. You don't want that either.

⁴ The capital and largest city of the Utrecht province is also named Utrecht.

⁵ The *Randstad* refers to the megapolis in the central-west of the Netherlands, consisting of Amsterdam, Rotterdam, The Hague, Utrecht, and their surrounding urban areas.

It is also unheard of for Gemeente Nieuwegein to subsidize building conversions into housing. Subsidies are namely not deemed necessary to spur the development of housing in the Nieuwegein; the widespread housing need creates sufficient demand for conversions to be profitable for developers, especially in nodal Randstad cities like Nieuwegein. Furthermore, informing and cooperating with market parties has proved to be sufficiently effective in reducing the city's office vacancy rate.

In terms of demographics, the demand for housing in Nieuwegein stems from young families that cannot find affordable housing to raise their children in the adjacent city of Utrecht and elderly people who want to move into single-story housing. These diverse demographic groups also reside in the Bakenmonde, contrasting the Stadsring's younger and smaller households. In fact, this was a conscious decision by Jutphaas Wonen, the housing organization that developed and manages the Bakenmonde. The Head of Housing and Real Estate, Marco van Dijk, explains:

We find that it is especially important to mix different demographic groups in our social housing. That is also our goal. Especially elderly residents. They often know each other – and other residents – which contributes to the levels of social cohesion inside the apartment building. But also when there is a certain problem in the building – maybe the intercom doesn't work, neighbors are causing nuisance, or there is garbage on the street – it is the elderly residents that tend to inform us first. Sometimes they speak up to their neighbors before we even have to get involved. They create a sort of social control. That also helps us manage the apartment.

As such, social mixing – on the basis of average household age in this case – acts as both a strategy and a means for providing adequate housing for the different households seeking to settle in Nieuwegein. Provincie Utrecht is also enthusiastic about social mixing for advancing residential inclusion in cities, but it cannot enforce this stance at the municipal level.

It is always nice to further social mixing, but we can't steer it. You can point it out to the municipalities, but it is up to them to do something about it, of course.

Despite reporting an overall sentiment of success around the Bakenmonde, the building's entire conversion process – from purchase to completion – was a lengthy one for Jutphaas Wonen, thereby forfeiting the opportunity to create more housing sooner. While Jutphaas Wonen, like De Alliantie, invested into the former office building with the primary goal to add more aggregate dwellings to their portfolio, the original intention was not to convert the vacant office building. When the housing organization originally purchased the Bakenmonde in 2007, together with a private developer and a pension fund, there were plans to demolish it and rebuild new housing on the site. After years of unsuccessful negotiations with various developers, conversion was ultimately deemed the best possibility for the Bakenmonde. Through the building's conversion and addition of a newly constructed fifth floor, Jutphaas Wonen was still able to meet their ambition for increasing their dwelling portfolio and answering Nieuwegein's housing demand.

Furthermore, the residential adaptation of vacant buildings also has the potential to offer benefits beyond suppling the housing demand. Since location is an important prerequisite for conversion, social housing could be realized in former office buildings with preexisting access to a myriad of social, economic, and environmental services, such as inner-cities. As a result, Menno Smit argues that this can create unique living situations for social renting residents who would not be able to afford housing in such locales otherwise.

I think there is a group that says: 'Well, it is very nice to live in something that has been converted.' Certainly regarding those low-hanging fruit locations, where you really live in quite unique places. It can be right in the middle of the city, at a relatively – well, it is still expensive – but a relatively attractive rental price.

More Experience in Conversion

While building literature reports that high levels of expertise are required for successfully realizing building conversion, this impediment has been lifted in the present day due to a growing track history of office

adaptions. In the case of Nieuwegein, it was only a matter of time before office conversion would take hold across the city. Since Nieuwegein – as it exists today – was erected in a few years' time as a growth center for both working and living in the 1960s and 70s, Willie van Dam from Gemeente Nieuwegein explains that:

Nieuwegein has had office vacancies since 'the start'.

As such, Nieuwegein was amongst the first Dutch cities with a converted building and an official policy for tackling structural vacancies by 2010. Over time, Gemeente Nieuwegein has established vast networks for promoting the conversion of vacant offices. Willie van Dam explains that bringing these different contacts and parties is the primary way in which the municipality actively facilitates conversion. Several years ago, the procedure for changing land-use on a building has also been shortened to 14-28 weeks, to further facilitate the process for developers.

Whereas Nieuwegein was a forerunner in the conversion of vacant offices into housing in the Netherlands, Amersfoort followed later, in 2015: the Stadsring was the first conversion of the city. Following the Stadsring's conversion, Gemeente Amersfoort quickly learned and adapted its procedures for the next building conversions it would oversee. Reflecting on his municipality's experience with the Stadsring, Bart de Brouwer explains:

I know that there was a lot of fuss about which re-zoning procedure to follow there. You have the long procedure that takes six months, or the short procedure that can take eight weeks. And I think the long procedure was chosen, although we know now that it can be done with a short procedure. So that has been a learning moment.

Furthermore, the procedures around the rezoning building land-use has gradually become smoother along with the growing experience surrounding building conversions in general. Importantly, this removes a significant impediment that would otherwise weaken the ability of a conversion to succeed. However, this also expands the opportunity for other real estate actors to engage in office conversion.

4.3 Impediments of Office Conversion

Competing Market Players

The popularity of converting vacant buildings inside cities has gained traction across all market segments in the Utrecht province, with private housing as well as non-residential developers increasingly pursuing conversion projects. While this is related to both provincial and municipal efforts in facilitating building conversion, the improved state of the economy has also increased opportunities for real estate investment by different parties.

As such, for housing organizations – which function as public-private partnerships – it is has become financially more difficult to take advantage of vacant real estate for housing development. While Jutphaas Wonen has developed three former offices into housing in Nieuwegein – the Brinkwal (2013), Bakenmonde (2015), and Villawal (2016) – the housing organization will no longer be pursuing conversion projects due to the increased competition in the office building market and the diminishing availability of vacant buildings suitable for residential adaption in Nieuwegein. In regards to Amersfoort, Bart de Brouwer also says:

The housing organizations are actually never on board. The prices are just too high. They cannot compete with market parties for office buildings that are vacant, or nearly vacant.

In fact, director Rob de Vries of De Vries Ontwikkeling attributes the financial feasibility of purchasing the Stadsring in 2015 to the low competition in Amersfoort's real estate market at the time.

Because of the 2008 crisis the purchase of the building was easier because the previous owner was happy there was an interested buyer.

Next to the present-day competition, however, opportunities to invest in suitably-located vacant office buildings is further diminishing for all market parties due to municipal regulation. Recognizing the increasing popularity of land-use conversion for real estate market investors, Gemeente Amersfoort has redefined its land-use desires to maintain its long-term interest for the city. Bart de Brouwer describes Gemeente Amersfoort's reaction to the increasing market-side demand for converting centrally-located office spaces.

What we've encountered was a tension between locations that are good for both working and living. You still have a lot of vacancies in Amersfoort, but that is mainly because they are not very interesting for working, nor for living. So building conversion increasingly focuses on a number of places. For places that are interesting for both working and living, well, with residences you can earn more as an owner. So many parties were going to sell their office properties for conversion. The city council then said that they wanted a framework to determine where we want to work on conversions, and where we don't. This was determined two weeks ago by the city council. It says: 'This is possible, and you can live and work there, but not there.' Around the city center you actually want to keep a number of places for work. Where the Stadsring is located, we said: 'Those buildings are located relatively far from everything and are no longer marketable. So you can work on conversion there.' At a number of other places, we want – especially around the train station area, between the city hall and the station – to keep that as an office area.

With limited vacant properties left available for residential conversion in desirable locations in both Amersfoort and Nieuwegein, the situation is ill-fated for parties interested in adapting offices; according to Bart de Brouwer, the low-hanging fruit is gone.

Quality over Quantity

A common thread in the development priorities of Provincie Utrecht and municipalities is the emphasis on the quality of office conversions into housing. As a starting point, Menno Smit stresses:

Provincie Utrecht isn't just concerned about quantity but also quality, that's very important. 'Quality' is applied in its broadest definition: it shouldn't just result in a building that is good enough for ten years, but for decades. It must be able to stand for at least fifty to seventy years.

This message also reached Gemeente Amersfoort by the time it got involved in conversions.

The Stadsring, that was the first conversion in Amersfoort. We were actually quite late with office conversions, because other cities had already converted many more buildings. But one of the lessons that I have heard about converting is that you actually have to go for quality, and not just want to participate in everything. So we said from the start that we really want – if something comes along – that it does meet our requirements. In terms of noise, for example, within the homes: we have strict requirements there. That you don't just place thin walls in between dwellings, so people experience noise nuisance. That is also not sustainable: then you get a lot of residential turnover. So it must really meet housing standards. They must be good quality homes. We still really want to stick with that. It must also add something – it must also have added value – the building. Like its appearance or in the outside space, things like that. So we don't just want to cooperate on just any conversion.

In fact, Gemeente Amersfoort does not make any building permit exceptions in order to allow a conversion – versus any other type of development – to proceed, simply because there is a quantitative surplus of vacant offices. Furthermore, emphasis is placed on the desired appearance of the final product in Gemeente Amersfoort. Bart de Brouwer explains:

We always have the game rule that it is not 'living in an office'. You live in a residential building. So it also has to have the appearance of a residential building, not an office.

Conversely, Gemeente Nieuwegein started with a quantitative approach to addressing the surplus of offices, having reached vacancy levels of 34% in 2010. In the same year, the municipality published its first

policy on addressing building-level vacancy, thereby halting the construction of new offices in the city and dedicating resources to finding varieties of new uses for existing offices. When Nieuwegein started to see results several years later, a second amended policy was published in 2014, which shifted the municipality's priorities for conversion from a quantitative to qualitative approach. As such, large-scale area development was introduced into the approach, aiming to upgrade livability levels and the economic attractiveness of the neighborhood together with the building. Altogether, Gemeente Nieuwegein has seen an office vacancy decline of over 14% since 2010, while increasingly emphasizing standards for quality of living in the city.

For example, in the conversations preceding the conversion of the Bakenmonde, noise standards were emphasized by Gemeente Nieuwegein as one of the most important considerations for granting its new residential zoning. Since the Bakenmonde is adjacent to the A2 highway, Willie van Dam says:

It was especially of important to guarantee good sound quality for the future residents of the Bakenmonde.

As such, Jutphaas Wonen had the noise levels in the Bakenmonde measured by an independent party. Subsequently, structural sound absorption techniques were applied inside the building and screens were placed on the balconies to dampen the noise stemming from the highway. Overall, in the case of Nieuwegein, Willie van Dam explains that enforcing such living standards on conversion projects has never annulled their ability to succeed.

Parking and especially noise standards are often the biggest obstacles for conversions. But this has never really stopped the conversion process. It just costs the developer more to make the necessary adjustments.

As such, developers and housing organizations have to be prepared to assume additional costs to ensure the adequacy of parking spaces, noise insulation, or otherwise when it comes to office conversion. Conversely, housing organizations try to maximize the quantity of dwellings that can reasonably fit into the existing building, in order to both mitigate unexpected conversion costs and meet their operational goals for expanding aggregate dwelling counts. As such, another story was built on top of the Bakenmonde to meet Jutphaas Wonen's objective. On the other hand, Noortje van der Have expresses this to have been a particular challenge during the planning phase of the Stadsring conversion.

It was especially important to get sufficient dwellings into the office, but that was difficult due to the rounded façade of the existing building. It was a puzzle to fit as many dwellings into it as possible, while still maintaining adequate living space per dwelling.

Altogether, there exists a tension between the greater desire to quantitatively diminish both office vacancies and housing shortages and the qualitative emphasis on other aspects of the environmental and social sustainability of residential conversions. While these goals exist at odds, the parties involved in conversion also understand the importance of quality for the long-term sustainability of the future residential building. Nevertheless, governmental bodies may be motivated to reassess their priorities for pursuing high-quality homes if the present-day quantitative housing shortage further inflates. Through the lens of urban sustainability, it is yet to be deliberated which environmental, economic, and social compromises are necessary to sufficiently address each of the Netherlands' three urban challenges.

Locational Inaptness

In line with concerns about the internal quality of residences of converted buildings, the governmental bodies also highlight the buildings' relative location as an important aspect of desirable urban living. Whereas these ample aggregate square meters of office vacancies exist inside the province's borders, many are therefore not considered for conversion into housing, especially those located in peri-urban areas and business parks. Menno Smit explains:

Then you have to ask yourself: 'Is the conversion into housing worth it?' Then you would live somewhere middle in a field, perhaps in a nice office building, without any services around the corner. Then I also think: 'Should we put a lot of effort into that, or should we find a better purpose for it?'

As follows, Bart de Brouwer emphasizes the greater challenge of finding an apt use for such buildings.

In the middle of a business park you also have vacant offices. But business parks have different sound zoning rules, so then we cannot cooperate in their conversion into housing. So then: 'What can we do with such an office?' Some of them stay vacant for ten years. Once in a while we get asked: 'Can't we make it a short-stay?' But you also don't want that, because temporary residents also have to have an acceptable housing and living climate. So we won't cooperate with that either. So, yes, it will remain vacant. It is a shame, but otherwise what? That remains difficult.

Within the urban contours, the conversion of vacant offices at certain locations can also be intentionally impeded by the municipality removing the possibility of conversion into housing, as was aforementioned. Bart de Brouwer also claims that the current state of office vacancies in Amersfoort is overblown by market parties, as there are more partially-vacant than fully-vacant office buildings in Amersfoort. Since the economy has picked up, the political sentiment around office vacancy has also changed.

We no longer perceive vacancy as a big problem. Housing and office developers may say: 'Look, so much is still vacant.' But if you zoom in, then it's mostly at the level of the building.

In the case that a location would be suitable for residential use, great importance is still placed on these preceding conversations. Although Gemeente Amersfoort's re-zoning permit procedure itself has been shortened from six months to eight weeks since the conversion of the Stadsring:

We really want to take our time before the permit procedure. So that the permit is not applied for when the municipality does not support it yet, because then you have to deny the permit. That also creates a fuss sometimes.

This is because Gemeente Amersfoort does not want to haphazardly make decisions about redeveloping vacant office buildings. They also need to embed a long-term sustainable quality for society, whereby the finished products have a new functional lifespan of at least several decades and are flexibly constructed to allow their future convertibility, as needed. This creates rigid guidelines for building developers to acknowledge when choosing to pursue conversion.

In sum, this reflects the invaluable prerequisite for developers to participate in discussions with local governing bodies and make adjustments to plans as needed in the Netherlands. While they help developers secure a green light for a proposed development, they can also foster municipal facilitation once the development is underway. In such, these efforts may save developers a significant amount of time and capital that could otherwise have been lost in an unsuccessful conversion attempt.

Financial Risks

As with any investment, investors still risk losing financial capital in the process of converting buildings. The type of financial risk varies per stakeholder. For Provincie Utrecht, Menno Smit explains:

Of course there are financial risks. In some cases we have offered to act as guarantor for conversions. Acting as guarantor means that we financially vouch for someone who has a development objective. This is well-vetted from our side. We usually have a bit more money than the average developer, but we need to be able to justify it. And if the development goes wrong, well, then it also costs us a lot of money.

The Stadsring was an example where Provincie Utrecht acted as a guarantor for its conversion. Thanks to its involvement, Rob de Vries explains:

The purchase of the building could happen without having had changed its land-use yet. The building didn't have a residential land-use permit yet. Provincie Utrecht covered that risk.

This was important for a bank loan to be granted to De Vries Ontwikkeling for the building's purchase. By acting as a guarantor, Provincie Utrecht can be held financially responsible when the developer cannot return the loan, i.e. due to an unsuccessful conversion. However, due to their extensive vetting procedure – involving contracts, various agreements, and third-party vetting – Provincie Utrecht has never lost financial capital from guaranteeing urban developments. On the other hand, private and semi-private parties – like as developers and housing organizations – are much more likely to experience financial setbacks in the process of converting an office into housing because they are directly involved. Rob de Vries describes such risks of building conversions:

You also have the risk of building. You bought an existing building, and you don't know what you will encounter: reconstruction needs, asbestos... Studies and reports will be done in regards to that. But sometimes it happens that – after a study has been conducted – that the study was not carried out properly. Well, where does the risk lie, then? With the developer, and that is us.

Nevertheless, experienced developers of office conversions, like De Vries Ontwikkeling, account for the construction risks inevitably tied in existing structures. With the help of Gemeente Amersfoort's subsidy, the Stadsring project was therefore a profitable investment for the real estate developer.

Civil Objections

Another source of both financial and judicial risk is the ability of urban dwellers to submit official complaints to their local governing body if they are in disagreement with a proposed development. Menno Smit explains the procedure for civil objections against construction plans in the Netherlands:

It happens at the municipal level. The Netherlands is arranged such that the jurisdiction for granting building permits and the like – and conversions – directly lie with the municipality. There you have all kinds of official and legal public consultation moments. And sometimes it is not very popular with residents: 'I've always lived here quietly on my own in a large office area, and I think it's wonderful, but now 200 people are suddenly going to live next door that I don't know.' So, how do you deal with that? These can be difficult conversations to have. These are always logical risks. But Provincie Utrecht has no direct interest in them because the juridical authority really lies with the municipality.

As such, municipalities can address civil objections in various ways, depending on the local sociopolitical sentiment. For example, Menno Smit points out that, on average, the City of Utrecht has a parking standard of less than one car per dwelling, depending on the neighborhood in which it is located. Conversely, smaller municipalities within the Utrecht province are more often accustomed to parking standards that grant up to two cars per dwelling. Subsequently, tensions may occur when residents see additional housing as a threat to the parking possibilities they have been used to, to which the municipality or developer may respond:

'But isn't it more important that more people can live there?' You try to talk around it, convince people, and even do a study from which we conclude that those parking spaces aren't really necessary anyway. You can say: 'Look, we are adding social housing. Social housing residents are often more limited in their spending. They don't have two or three Porsches in their driveway – then something is wrong – but they do have one car. So let that be a trade-off.' Usually that works convincingly, but it does cost a lot of energy. But that's an obstacle that as a developer, I think, you deal with more often than the municipality.

Overall, neighbors submitting objections to the local municipality is not an unexpected phenomenon when it comes to new urban developments, whether they involve conversion or not. Neighbors of the Stadsring, in particular, submitted several objections against the building's conversion. In how the Municipality of Amersfoort addresses such civil objections, Bart de Brouwer says:

You look objectively at what these residents bring to the table. Look, people are very quickly used to a vacant office. No nuisance, no noise, nobody looks into your garden. And if it gets converted into housing in one go, then people are often against it.

Especially when the office building was intentionally designed to limit outside disturbance to a residential neighborhood, as was the case with the Stadsring.

Look, the Stadsring – if you look at it – it is just a big wall. It was also developed as a sound barrier between the bypass – against which it lies – and the neighborhood behind it. And people thought, as long as it stands there, that is fine of course.

All in all, the civil objections about the Stadsring had to be taken into account and adjusted for by De Vries Ontwikkeling in order to guarantee its resale to De Alliantie. As such, these objections not only posed substantial financial risk for the developer, but also caused delays in construction.

I don't know how much money this cost us... But it did take five, six months to resolve.

Conversely, Gemeente Nieuwegein did not receive any civil complaints from the neighborhood about the Bakenmonde's conversion at all. Willie van Dam attributes this to the municipality and housing organization's active involvement at the development site. Marco van Dijk elaborates the experience of Jutphaas Wonen during the conversion process of the Bakenmonde.

There were three objections from the neighborhood. First, that there would be more social nuisance in the neighborhood, because social renters would live in it. But at Jutphaas Wonen we are active in the management of our properties to prevent that as much as possible. And if there are problems, the neighborhood can contact with us. The older residents also help with this, for social control of the building. In retrospect, nuisance didn't turn out not to be a problem for the neighborhood. There was also concern about parking. Whether there would still be enough parking places for the neighborhood. But look, the Bakenmonde already has its own parking lot. And we linked the parking spaces in the parking garage to the homes. They have the same number as the house, so residents will automatically park on their spot, and not in the neighborhood. And that there would be more garbage on the street. So we placed more bins outside the Bakenmonde.

As such, potential civil objections were addressed before formally being submitted to the municipality, which would have resulted in greater juridical delay the conversion process. Nevertheless, when there is neighborly disgruntlement, conversions are rarely unsuccessfully completed due to civil objections, at least in the case of Amersfoort. Bart de Brouwer states:

I would say almost always. That the conversion almost always works. The number of objections is just very small, so that's why it almost always works.

Still, the case of the Bakenmonde shows the value of engaging with urban society when initiating a development project. As such, rapport can be built between the developer and neighboring residents and any complaints can be addressed without passing through judicial procedures. Subsequently, this may save time for the developer and thus produce housing within a shorter timeline.

4.4 Sub-Conclusions

Through the facilitative efforts of various institutions, two vacant offices were made more energy-efficient and re-occupied with social housing residents. In both cases, the driving forces for office conversion surmounted the barriers, resulting in a successful, consolidative solution to the three urban challenges presented. Nevertheless, while each party involved in the Stadsring and Bakenmonde conversions express interest in furthering various environmental, economic, and/or social goals – depending on their institutional priorities – it is revealed that urban sustainability is an implicit consideration – rather than active motivation – for pursuing office conversion.

In fact, Gemeente Amersfoort and Gemeente Nieuwegein show a tendency to prioritize short-term economic and social goals before long-term environmental needs when it comes to addressing their cities' real estate inefficiencies. Similarly, the office and housing mismatches in the Dutch real estate market are the primary motivating factor for corporate investment into office conversion. Still, all parties recognize the ex post facto added value of conversion for urban society, given the broader environmental, economic, and social pressures being faced by Dutch cities today. Referring to the Stadsring conversion, Rob de Vries from De Vries Ontwikkeling concludes:

A great project has been realized with a good social impact. An office – a vacant office – has been removed and replaced by homes, which are in short supply. And the building has been made more sustainable.

However, only the Provincie Utrecht explicitly stimulates office conversion into social housing because of the balanced benefits it produces for each of the urban sustainability dimensions. Specifically, Menno Smit touches on the unique ability of this type of building conversion to consolidate environmental conservation, economic revitalization, and social wellbeing:

The added value of office conversion is really removing vacancies: then a goal has already been achieved. Vacancies also often have a negative effect on a location: it is perceived as socially more unsafe. This can sometimes become a downward spiral. Through conversion – whether it gets a residential or work destination – you get new life in the building, but also in the area itself. I absolutely find that an added value. And an additional added value: you redevelop using the original building stones, without having to sacrifice green area.

Consequently, office conversions may not be actively pursued as a consolidative intervention for addressing office vacancy, housing shortages, and environmental ambitions in practice. It also remains to be noted that the Stadsring and Bakenmonde conversions are considered successful developments by the parties involved, which may bias the evaluation of the extent to which their institutional inputs fostered urban sustainability. Conversely, little is known about the impact of unsuccessful, incomplete, or judicially-impeded conversion projects on the greater urban sustainability of cities. Nevertheless, using urban sustainability indicators to evaluate the outcomes of the Stadsring and Bakenmonde conversions for its new residents and existing neighbors allows for a deeper examination of the ability of office conversions to meet sustainable urban development goals.

5. Research Findings Part 2: Societal Outcomes of Office Conversion

Since both the residential experiences of the converted buildings' residents and surrounding neighbors were measured, this part of the research findings is split by these two population groups. Therein, findings are categorized according to the urban sustainability dimension measured. This creates an in-depth understanding of the different environmental, economic, and social effects the office conversions have had on these respective groups.

5.1 Resident Experiences of Office Conversion

Environmental Dimension

The indices used for measuring the environmental dimension of urban sustainability are residents' self-reported satisfaction with their own dwelling's noise levels, energy efficiency, and surrounding provision of green. In general, Stadsring and a Bakenmonde residents find that their overall expectations for their respective dwellings have been met: both describe their homes as "big" and "new". Upon closer inspection of their residences' technical attributes, however, residents note several shortcomings in the environmental quality of their homes. In particular, several complaints were made about the Stadsring's noise insulation, despite the efforts that have been invested into ensuring its living quality is up to standard.

The noise problems are huge. This is because of the layout of the apartments. The bedrooms are not next to the neighbors' bedrooms, so we hear everything that happens in the living room next door until late at night.

– Stadsring resident, male, 25-34

It is way too noisy. The walls are simply made of plasterboard, worthless. I also hear my upstairs neighbors flush their toilet, horrible. If I knew this beforehand, I would never have lived here.

– Stadsring resident, male, 25-34

Whereas the Bakenmonde has the utmost energy label ranking of A, some residents also notice some faults – albeit inconsistent – about the overall environmental quality of their dwellings. Next to experiencing difficulties with their indoor temperature control, nuisance from outside noise is also noted despite the measures Jutphaas Wonen also took to meet noise quality standards.

The noise insulation is good. The insulation against the cold is also good, but not as good for keeping out the heat.

– Bakenmonde resident, male, 65+

I am satisfied with this dwelling, but I often struggle with indoor temperature control. Noise nuisance from traffic is minimal, because everything is reasonable insulated. It doesn't bother me much, neither do noises from neighbors.

– Bakenmonde resident, female, 45-54

Outside noise = Easy to hear.

– Bakenmonde resident, male, 35-44

Comprehensively, these noise complaints are reflected by figure 5.1, which shows how residents of the converted buildings more frequently report the noise levels inside their homes to be (very) dissatisfactory in comparison to their neighbors. This information raises questions about the success of implementing sound-regulating measures onto existing non-residential as well as the extent to which the existing noise standards are sufficient enough to guarantee a acceptably noisy living environment. Nevertheless, the higher instance of

(very) dissatisfactory noise levels throughout the Bakenmonde’s neighborhood also can be attributed to its proximity to the A2 highway.

The sound-proofing measures that have been taken are great! It is the location of the building that explains my dissatisfaction, because of the noise from road traffic. There is always a lot of traffic at the intersection next to our apartment and the A2 highway is only a few hundred meters away.

– Bakenmonde resident, female, 25-34

Fig. 5.1: Satisfaction with Noise Levels Experienced inside Home

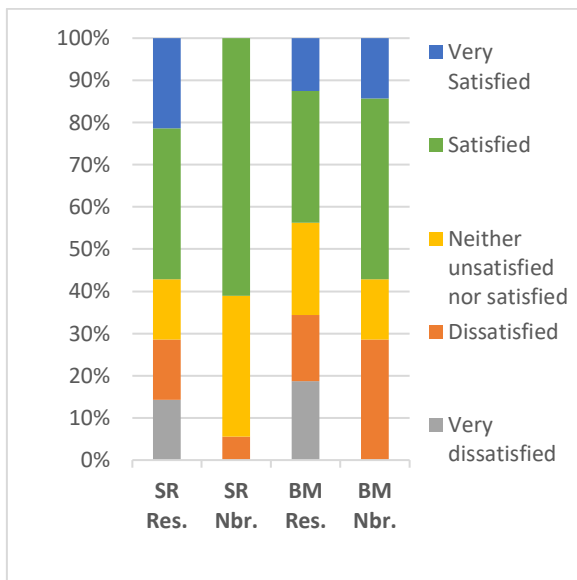


Fig. 5.2: Satisfaction with Energy Efficiency of Home

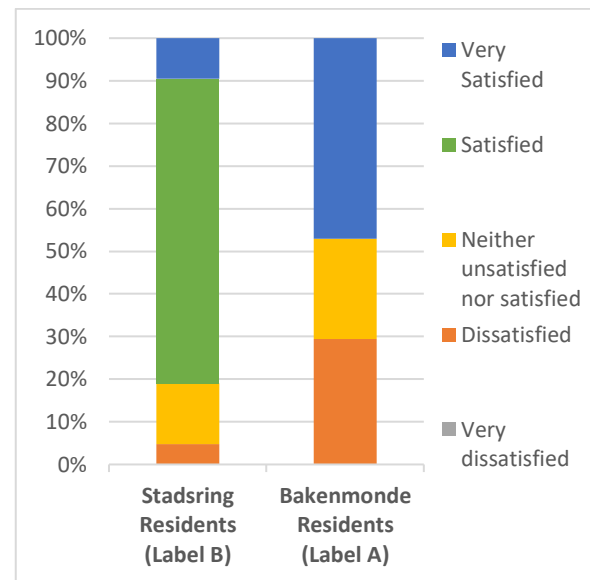
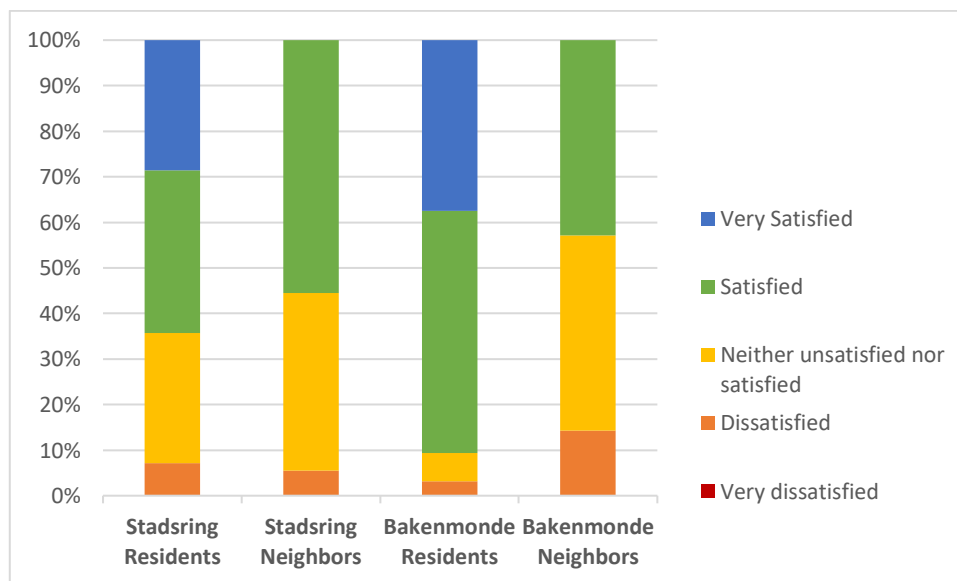


Fig. 5.3: Satisfaction with Green Provision in Neighborhood



Otherwise, over 80% of Stadsring residents are (very) satisfied with the energy efficiency of their homes, as illustrated in figure 5.2. Yet, less than half of Bakenmonde residents report to be (very) satisfied

with it – and almost a third is actually dissatisfied with it – despite the fact that the building has the highest allottable energy label in the Netherlands, an A. During interviews, however, Bakenmonde residents did not have a strong stance on the matter, regardless of reporting relatively low monthly expenditures on their energy consumption.

Energy bill? 71 euros. That works with me.

– Bakenmonde resident, male, 65+

In regards to the environmental quality of their neighborhood, both Stadsring and Bakenmonde residents share mixed reviews in terms of their satisfaction with the provision of greenery in their respective neighborhoods, as illustrated in figure 5.3. While not definitively conclusive from the data, this may be attributed to the household compositions of the residents. In particular, young families living in the Bakenmonde state:

There are very few playing areas and playgrounds in the neighborhood. There is only a fenced football field. Children play on the street and parking spots.

– Bakenmonde resident, female, 25-34

We don't have a playground for kids, and that isn't good.

– Bakenmonde resident, female, 25-34

On the other hand, the limited need for green areas around operational office buildings can also mean that there is less space available for outdoor recreation around converted buildings. As such, its new residents must share existing green spaces with the pre-established surrounding neighborhood, resulting in overall less outdoor area per capita. Nevertheless, across all environmental dimensions measured, other residents have reported to be very satisfied with the noise levels, energy efficiency, and green provision of or around their homes. While the divergence of opinions can be attributed to a range of factors, the price-quality of their social dwellings may play a role in explaining the relative self-reported satisfaction of some residents. This is further elaborated using the economic dimension of the urban sustainability framework, below.

Economic Dimension

In the social housing sector, monthly rent prices are evidently important to renters who cannot afford housing in the private rental market. In terms of urban sustainability, these lower rents must subsequently allow social renters to live in acceptable homes while retaining enough capital for personal investments elsewhere. As such, the quantitative affordability and qualitative valorization of the social dwellings in the converted buildings are investigated in this section.

Overall, rent prices differ somewhat between the Stadsring and the Bakenmonde (figure 5.4). Whereas apartments in the Stadsring reach the lower rental boundary of social housing, Bakenmonde apartments go up to the maximum rent liberalization boundary per month. Nonetheless, roughly the same proportion of residents receive an additional monthly housing allowance in both buildings (figure 5.5).

Altogether, figure 5.6 illustrates that over 70% of Stadsring residents are (very) satisfied with their monthly rent value. On the other hand, less than half of Bakenmonde residents feel the same, which may be associated to the relatively higher rent levels associated to living in their building. Nevertheless, in terms of the self-reported price-quality ratio of the apartments, both Stadsring and Bakenmonde residents share positive opinions about the costs associated to their living situation.

I get so much space for it.

– Stadsring resident, female, 18-24

It is big enough. Although I would've liked an extra room. Then I could put away those things that are lying on the table over there. But an extra room would also have been more expensive, of course. So that wasn't worth it.

– Bakenmonde resident, male, 65+

This place is very favorable in terms of living space and price and, by the way, it is permanent living space. The rent price is also fixed for now. So I accepted the offer to live here.

– Bakenmonde resident, female, 45-54

I am more than satisfied! The apartment is as good as new and affordable for many people.

– Bakenmonde resident, male, 35-44

Fig. 5.4: Social Renters' Monthly Rent

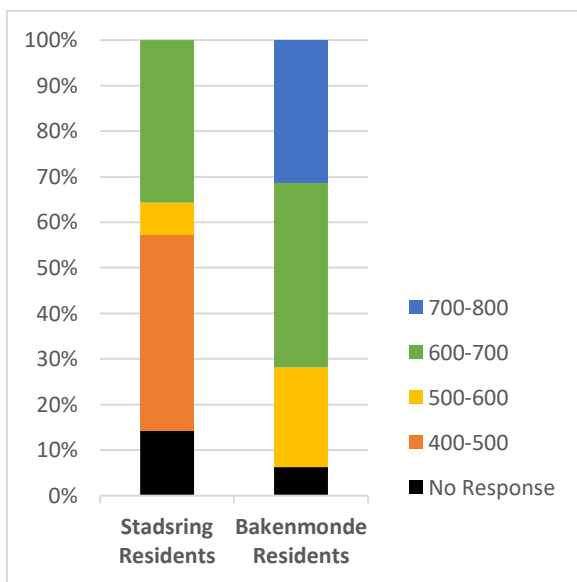


Fig. 5.5: Social Renters' Receipt of Housing Allowance

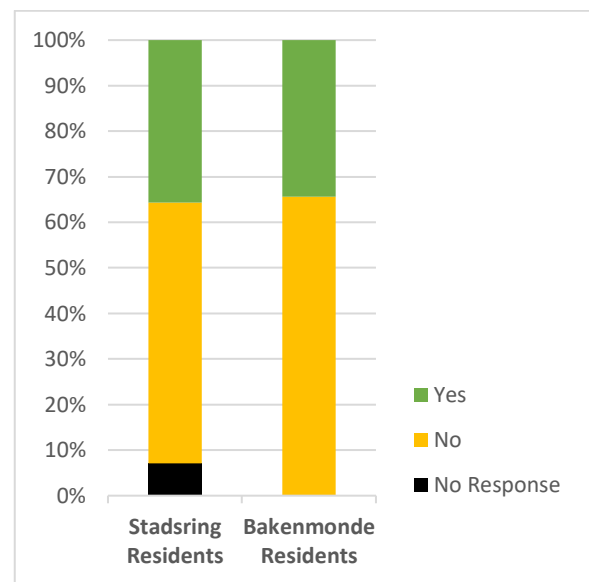
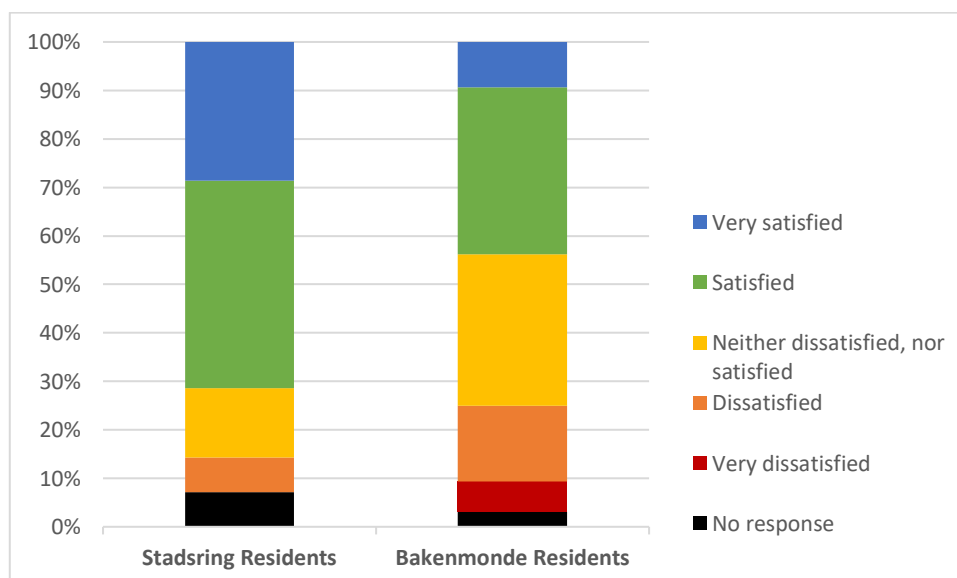


Fig. 5.6: Social Renters' Satisfaction with Rent Value



Both Stadsring and Bakenmonde residents also attribute their choice to live in the converted apartments to the combination of the desirable monthly rent, living space, and relative location.

It was the only place with a view on the water. I always lived in Vreeswijk, where boats passed by my front door. So I didn't want to miss out on that. I don't like being on the water, but I do like being by it. I don't want a boat, but I love to see them pass by. This way I also see acquaintances once in a while, because I know many shippers from Vreeswijk. They pass by here on the Lek river, of course. I think that's wonderful.

– Bakenmonde resident, male, 65+

However, next to these pull-factors, a Bakenmonde and a Stadsring resident also report having lacked other affordable housing options. In fact, the Stadsring resident explains that she doesn't intend to live in her current dwelling in the long-term, if financially possible.

I actually wanted to stay in IJsselstein, but I couldn't find a permanent residence there. I also wasn't registered for social housing long enough. So I got this residence by lottery.

– Bakenmonde resident, female, 45-54

There was no other housing available at the time. Now we would love to move again, but this isn't possible because of the current prices in the housing market. This apartment is starting to become too small for us.

– Stadsring resident, female, 18-24

Nevertheless, the below-market rental rate also works to justify building imperfections for other residents, such as this limited living space and the aforementioned noise problems.

But okay, it's cheap, so I can't really say much about it.

– Stadsring resident, male, 25-34

A Bakenmonde resident is also aware of the extra costs that would have been accumulated by their buildings' developer if all residents' wishes were met, which could also have resulted in higher costs for the residents themselves.

Then they would have to remove four or five apartments to make room for personal storage spaces. That costs money, of course.

– Bakenmonde resident, male, 65+

Another resident remains critical of the quality of their social housing dwelling, however, attributing this to the technical differences between office and apartment buildings and the financial constraints that prevented its apt conversion.

The longer you here, the more you come across things that show that the building was originally built for a different purpose. For various reasons – including financial reasons – the developers cut corners. For example, the new balconies are difficult to reach for the window cleaners. They were built onto the building, so washing the glass is difficult and isn't feasible from above, either. However, I am happy with the balcony.

– Bakenmonde resident, male, 55-64

Nonetheless, each social housing resident ultimately chose to be allotted to their respective dwelling. Furthermore, social renters typically remain registered on social housing allocation platforms in order to change their living situation as needed, if possible. Of course, the possibility thereof remains scarce given the high private rental prices and the limited availability of social rental dwellings. As such, Stadsring and Bakenmonde residents remain in their current residences, satisfied or not, without alternative choice.

Social Dimension

In terms of urban sustainability, accessibility to housing, employment, and services are among the important indicators of socially-healthy urban environments. At the level of the neighborhood, social interaction and collective participation, residential stability, trust in regard to safety and security, and community identification and pride also indicate the performance of cities regarding the social dimension of urban sustainability. These indices are explored for the Stadsring and the Bakenmonde in this order.

Fig. 5.7: Social Renters' Satisfaction with Distance between Home & Work Place

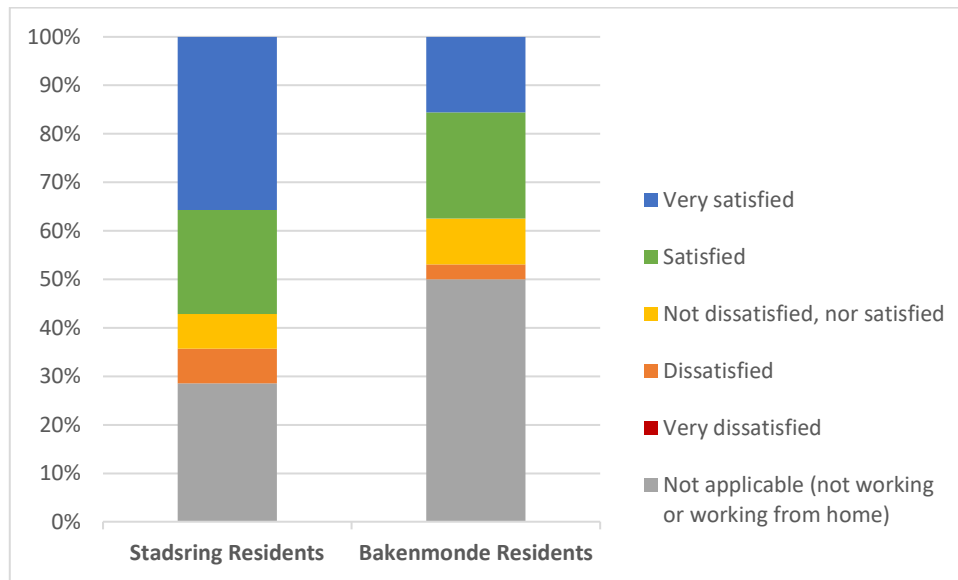


Fig. 5.8: Social Renters' Satisfaction with Distance between Home & Usual Grocery Store from Home

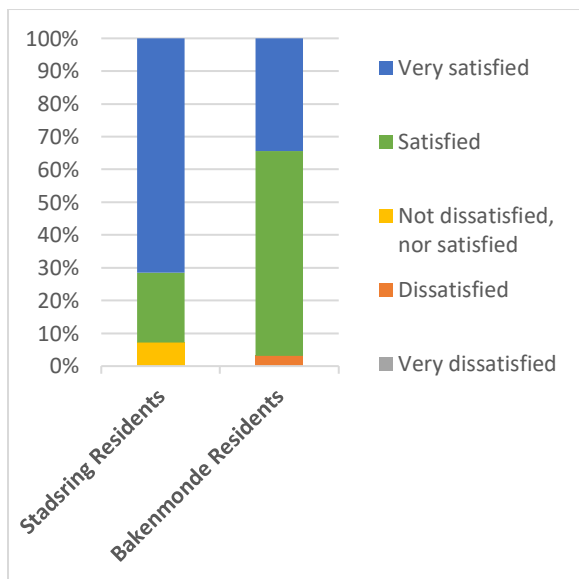
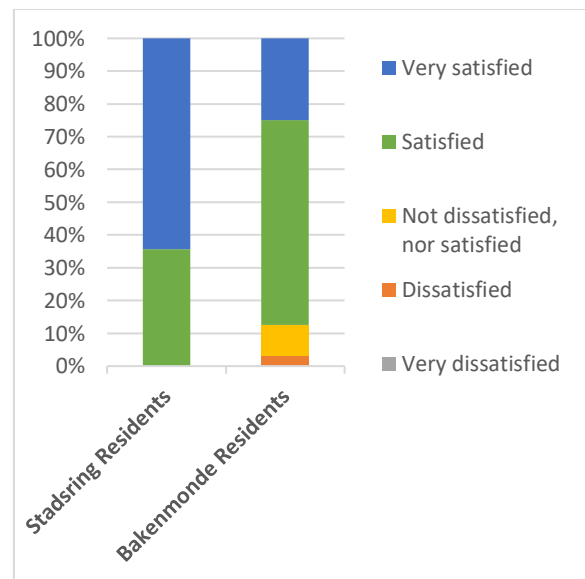


Fig. 5.9: Social Renters' Satisfaction with Distance between Home & General Services



A reported 60% of Stadsring residents live up to 10 kilometers from their non-domestic workplace and all residents live within 2 kilometers of their usual grocery store. In the Bakenmonde, 29.4% of non-domestic workers up to 10 kilometers from their workplace and 87.5% of all residents frequent a grocery store within 2 kilometers of their homes. As reflected in figures 5.7, 5.8, and 5.9, most Stadsring and Bakenmonde residents

are (very) satisfied with their respective proximities to their workplaces, grocery stores, and other general services, like hospitality services, health care providers, and public open spaces. A Bakenmonde resident says:

The services are great! Public transportation and the supermarket are nearby.

– Bakenmonde resident, male, 35-44

Another Bakenmonde resident elaborates his experience regarding his access to services in his neighborhood as a senior person.

The doctor is nearby, which is important to me. The supermarket is nearby. Also the tram station. Every day I also go to my son's shop, a bicycle shop. I go there regularly, so I think it's practical that it is nearby. It could all have been a little closer, but not too close either.

Because then you would also experience many things that you do not want outside your home. So everything is far enough but not too far.

– Bakenmonde resident, male, 65+

Conversely, a different Bakenmonde resident notes that she misses the infrastructure and services to foster social interaction with her neighbors in and around her apartment complex. The senior Bakenmonde neighbor also remarks that his elderly age affects the types and frequency of social contact he has with his apartment neighbors.

I have to say that – if you look at how many people live in our building – mutual contacts are minimal. At least in this side of the building. I don't know if also that applies to the other side, because many retired people live there, and quite a lot of people from that side of the building play bocce. Right next to the building, there is a bocce lane. They made the bocce lane, which also attracts many people from outside our building. So I have noticed that neighborly contact is made in that way. But I still miss more social contact around here. All sorts of social activities are organized through the community center, but they are more focused on the elderly, not so much on younger people. I miss a meeting place for people between 40 and 50-plus years of age.

– Bakenmonde resident, female, 45-54

I meet with my apartment neighbors once in a while. There are about four or five neighbors I meet with. I have visited them and they have also visited me. Not every week, not every month.

Just when it works out. But there are also many neighbors that you never come across, because they work during the day and aren't always home in the evenings either. And I'm a senior, so I also look for more contact with other seniors.

– Bakenmonde resident, male, 65+

Overall, the common trend between the Stadsring and Bakenmonde apartments is that their residents have more frequent contact with their buildings' fellow neighbors than with neighbors who live outside of it, as shown in figures 5.10 and 5.11. Furthermore, there is limited participation in activities organized by the neighborhood, which may further impede the opportunities to create social contacts within and outside of the converted buildings (figure 5.12). While some residents do report being involved with neighborhood activities once in a while, another Bakenmonde resident reports:

I believe very little is organized, or I'm missing this information.

– Bakenmonde resident, female, 25-34

Another Bakenmonde resident believes more opportunities for social interaction should be made available for her and her neighbors, whether or not they are organized. She argues that this could be important for the greater welfare of the residents and the neighborhood alike, applying a reasoning supported by the social goals for urban sustainability.

I think it would be good if housing organizations collaborated with the municipality and make agreements about providing more social infrastructure. This could also help keep the neighborhood safe and sociable, which is what they want, of course. They would find out: 'What's going on in the district, the neighborhood, and the like? Is there social control or not? Are people satisfied?' There also are quite a few foreign people who live in social housing here. They can become somewhat socially isolated, and then don't integrate well.

– Bakenmonde resident, female, 45-54

Fig. 5.10: Frequency of Contact with Social Renters

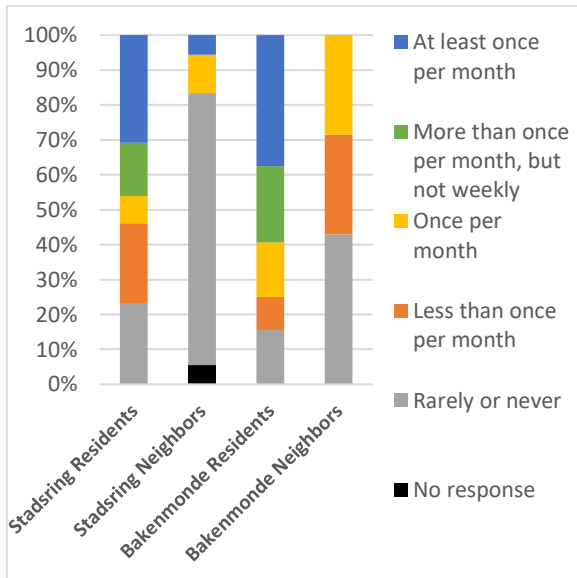


Fig. 5.11: Frequency of Contact with Other Neighbors

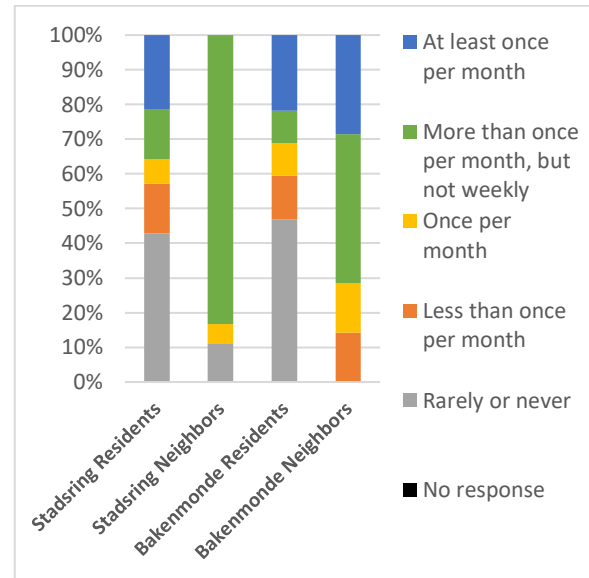
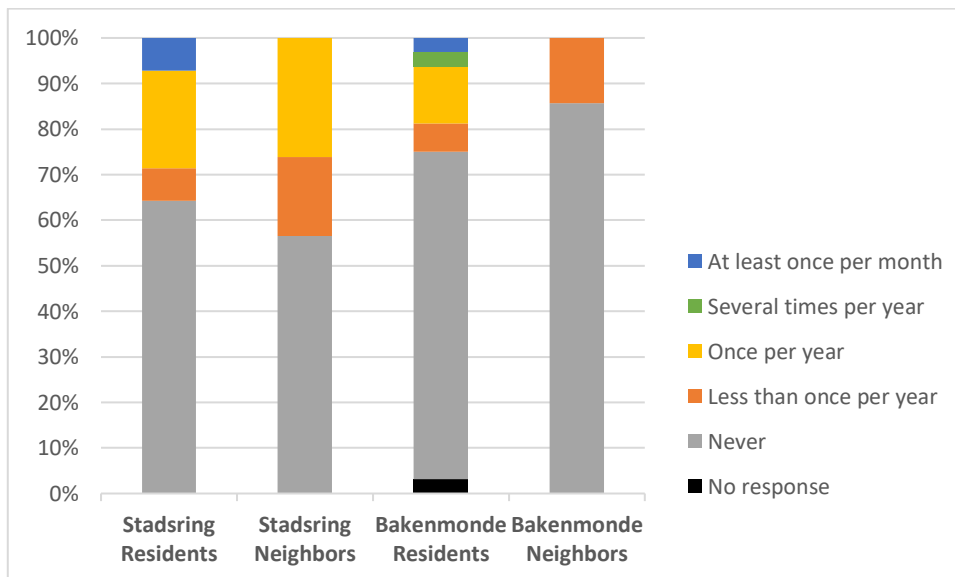


Fig. 5.12: Frequency of Participation in Neighborhood Activities



Nevertheless, no Stadsring or Bakenmonde residents report feeling unsafe in their respective neighborhoods (figure 5.13), despite the limited sociability among neighbors. In fact, a larger share of these residents feel very safe in their neighborhoods than those neighbors who do not live in the converted

buildings. For residents of the Bakenmonde, their sense of safety is primarily reported to stem from living in an apartment complex with a secured main entrance to the building.

I don't feel unsafe here. But in retrospect, I am very happy that my front door is not on the outside, like the other houses on the ground floor: they do have an outside door. I must say that I am happy with that, that I don't have that. I feel a bit more protected that way.

– Bakenmonde resident, female, 45-54

I feel pleasant and safe here. You can just close the door behind you. I always lived in a single-family house and I lived alone in the last few years. So when I heard something there, I thought: 'Huh, what's going on?' I don't have that here, I just think: 'It's probably fine.'

– Bakenmonde resident, male, 65+

Fig. 5.13: Feelings of Safety in the Neighborhood

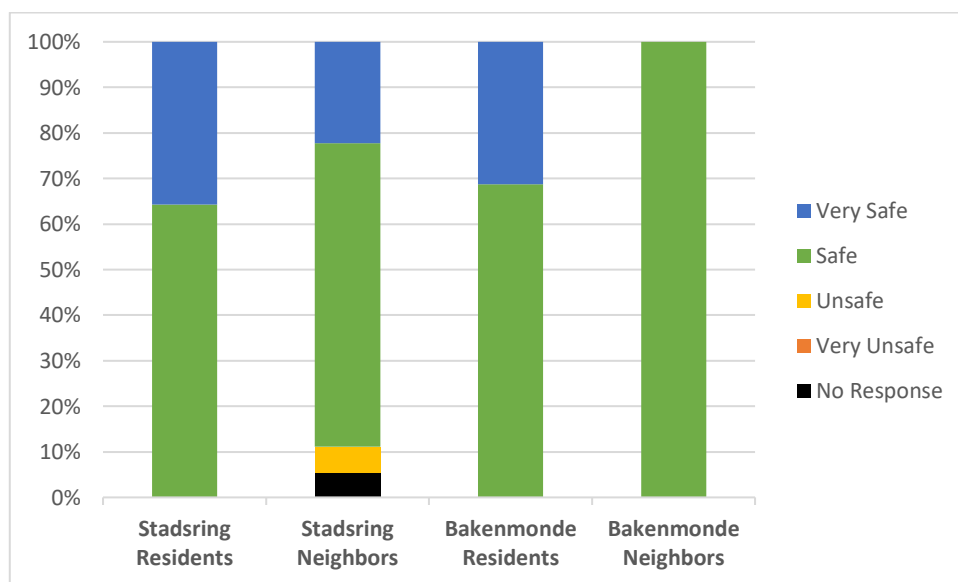


Fig. 5.14: Feelings of Attachment with Neighborhood

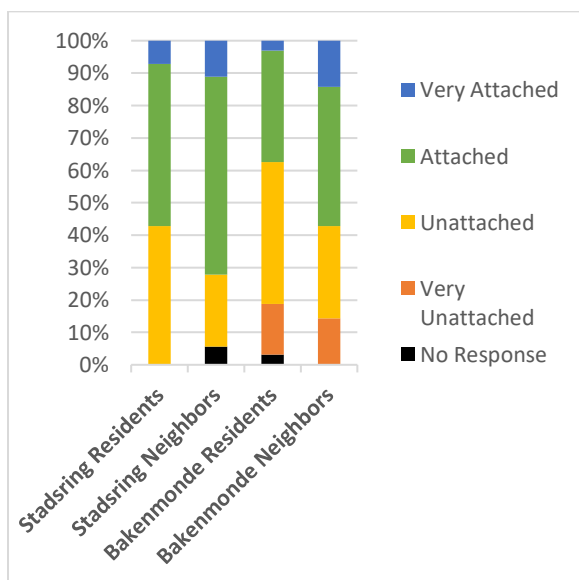
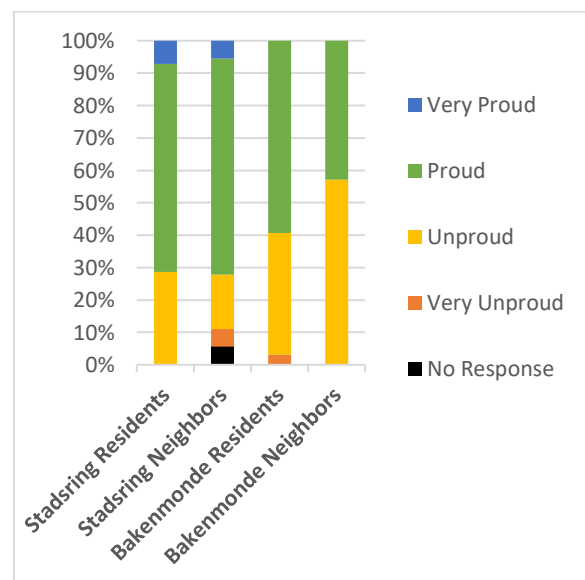


Fig. 5.15: Feelings of Pride in Neighborhood



While the secured central front door may also explain the sentiment regarding safety in the Stadsring, this was not confirmed by residents. However, a Stadsring resident does positively value the combination of her feelings of safety in and around her neighborhood and the ease of access to the nightlife services in the city center.

I can just walk home after going out at night.

– Stadsring resident, female, 18-24

Contrary to their self-reported feelings of safety, a greater share of both Stadsring and Bakenmonde neighbors report to be (very) attached to their neighborhoods, with 72.2% and 57.1%. On the other hand, 57.1% of Stadsring residents and 37.5% of Bakenmonde residents feel the same way (figure 5.14). This is unsurprising as long-term residents, such as the neighboring residents, are more likely to accumulate emotional feelings towards their neighborhoods than the newer inhabitants of the Stadsring and Bakenmonde. Yet, Stadsring residents are still almost equally (very) proud with their neighborhood as their neighbors (71.4% vs. 72.2%), whereas 59.4% of Bakenmonde residents report to have pride in their neighborhood in contrast with 42.9% neighbors of the Bakenmonde (figure 5.15).

All in all, the greatest differences between the Stadsring and the Bakenmonde in regards to the social dimension of urban sustainability is seen in their satisfaction with the accessibility to various urban destinations. The more positive evaluations by Stadsring residents comes unsurprising due to the dense urban environment in which the converted building is located: central Amersfoort. On the other hand, the Bakenmonde is located towards the fringes of the smaller city of Nieuwegein. Nevertheless, the extent to which the psychological needs are satisfactorily met are more comparable between the converted buildings than across their respective neighborhoods, suggesting that households in social housing may experience different social realities than their private renting or owning counterparts. Furthermore, the relatively short duration of residence in their current homes may come to effect across the residents' experiences with social interaction and participation, safety, pride, and attachment.

Overall Satisfaction

Despite some reported complaints about the environmental, economic, and social quality of their living situation, residents of both the Stadsring and the Bakenmonde are generally (very) satisfied with their respective homes and neighborhoods, as reflected in figures 5.16 and 5.17. Regarding the Stadsring, a resident comprehensively stated:

I get so much space in comparison to the rent price. And I can just walk home after going out at night. I am so happy I live here.

– Stadsring resident, female, 18-24

This statement is directly corroborated by De Alliantie's internal survey data. Noortje van der Have explains that, in general, the young inhabitants regard their dwellings' spaciousness and relative location to be desirable qualities of the Stadsring. Two residents of the Bakenmonde also share similar appreciation for their housing situations.

I feel happy here. I can do what I want to do. I want to stay here as long as I live.

– Bakenmonde resident, male, 65+

It is pleasant to live here. Everything is within hand's reach.

– Bakenmonde resident, male, 35-44

Similarly, Marco van Dijk globalizes these statements for the entire building: Jutphaas Wonen's residential satisfaction research reveals that the Bakenmonde is rated positively by its residents. Willie van Dam further expands this to the entire city of Nieuwegein, regarding residents of varying tenancies –

ownership, private rental, and social rental – living converted buildings. Overall, the municipality’s research finds that residents of converted buildings are equally satisfied with their housing situation as other residents.

Fig. 5.16: Social Renters’ Satisfaction with Home

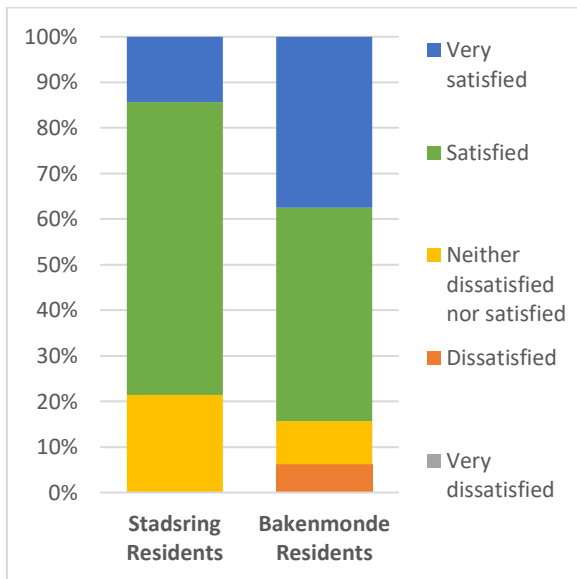
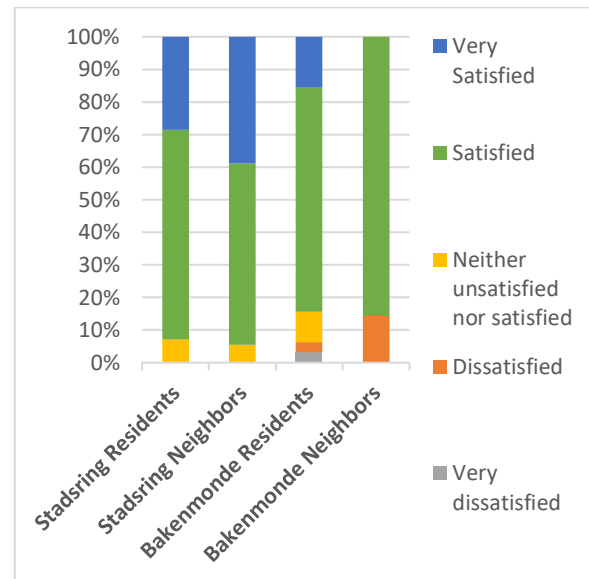


Fig. 5.17: Satisfaction with Neighborhood



Delving into the specific experience of living in a converted building, residents do explain that it creates a unique residential experience. Both buildings display features that are uncommon of typical residential buildings which simultaneously offer advantages and disadvantages for their residents.

It is a special experience to live in a former office building. You don't notice it much, but there are little things that are unique.
 – Stadsring resident, female, 18-24

You don't notice it at all, in a positive sense. Moreover, it offers advantages: luxurious common space, parking garage, and three-meter high ceilings.
 – Bakenmonde resident, male, 35-44

The advantage is that it is relatively new and needs little maintenance. The high ceilings give the apartment spatially rich feeling, but that also makes it difficult to warm up.
 – Bakenmonde resident, female, 45-54

I had to get used to the high ceilings at first. But now I don't notice it anymore. There are just some strange things. Like that lamp, it should actually hang a bit lower, over the table. But then I would have had to get its wiring replaced. But then I thought: 'It's actually nice like that.' It will always be different from a normal dwelling, of course.
 – Bakenmonde resident, male, 65+

Nevertheless, the residents’ overall conclusions about living in a converted office building remain positive. Only hints of the buildings’ pasts remain thanks to the appropriate adjustments made by the developers and the new life created by the residents. As such, converting offices into residential buildings appears to create a sustainable living environment from the perspective of residents.

The Bakenmonde is not really an office. You notice it, yes, like in the corridor. They have done everything to make everything possible. But the narrow corridor is really as minimal as possible, of course. For the rest, I don't have the feeling that I live in an old office building. They have all become apartments. It doesn't remind me of an office. They also built galleries onto the building. Then it immediately feels very different. The balconies were also added. They have done their best to turn it into homes. It no longer reminds me of an office building. I have worked in office buildings for decades, so I don't want to be in those anymore. So, in that sense, it worked out well. Except for the small details that I already reported.

– Bakenmonde resident, male, 65+

5.2 Neighborhood Experiences of Office Conversion

Environmental Dimension

For the neighbors of the converted buildings, the emphasis of research is on how their neighborhoods changed since the conversions. Overall, more positive than negative changes should have occurred in terms of urban sustainability. As such, regarding the environmental dimension, it is favorable that noise levels do not exceed bothersome levels and that the quality of urban green remains unaffected, if not enhanced. It is already a given that the average energy efficiency of the neighborhood's building stock improved due to the adjustments made to the Stadsring and the Bakenmonde during their respective conversions.

Foremost, neighbors immediately notice changes in noise levels in their neighborhood. During the construction phase of the conversions, some Stadsring and Bakenmonde neighbors already reported experiencing noise nuisance stemming from the office buildings. However, these experiences were not shared by all interviewed residents; others did not experience bothersome construction noise at all.

In terms of nuisance, during the renovation. That actually disappointed me a bit, especially during painting, strangely enough. I did expect to hear chopping and drilling and so forth, but that actually wasn't too bad. But the painting really made tremendous noise, also early in the morning. They had some kind of mechanical scaffold, a diesel monster. Every time there was a 'trrr' noise when it went up and down. That really had the most impact of the entire conversion. It was also during the summer. It went on all day, so you couldn't peacefully sit in the garden. And even if you closed everything inside, you just felt it throughout your house. It was really a heavy vibration. That really had the biggest impact because it lasted for a few weeks. I think it was also during the summer holidays. During the renovation process, you should really do something better than that in an existing neighborhood.

– Stadsring neighbor, male, 45-54

What a disturbance during the conversion! Noise of construction cranes, machines, shouting construction workers, roaring diesel engines of the construction traffic, construction workers' vans parked everywhere.

– Bakenmonde neighbor, male, 55-64

Since the conversion's completion, actual nuisance from their new neighbors in the Stadsring has been minimal. While neighbors have experienced noise problems in the past, little has persisted into today. It is also acknowledged that a building converted from an office to a residential function will inevitably make more noise, throughout the day and throughout the week.

Look, you will never be bothered by an office building. Then you have an ideal neighborhood. But now, when I think about it, I experience little trouble with noise. In general, the neighborhood is just very quiet. The noise nuisance only happened a few years ago, during the housewarming parties.

– Stadsring neighbor, male, 45-54

While ongoing nuisance from noise from the Stadsring or the Bakenmonde has been limited, some neighbors have noticed an overall increase in noise levels in their neighborhood since the conversion (figures

5.18 and 5.19). Nevertheless, it remains unknown if this change is strictly attributable to the new residents of the converted buildings. Furthermore, the former quietness of the office building outside working hours was not particularly desirable for the neighbors, either.

Of course there is nothing to experience in an office in the evening and during the weekend. I find that boring. I like a bit of liveliness.

– Stadsring neighbor, male, 55-64

Fig. 5.18: Change in Noise Levels Experienced inside Home, Before vs. After Conversion

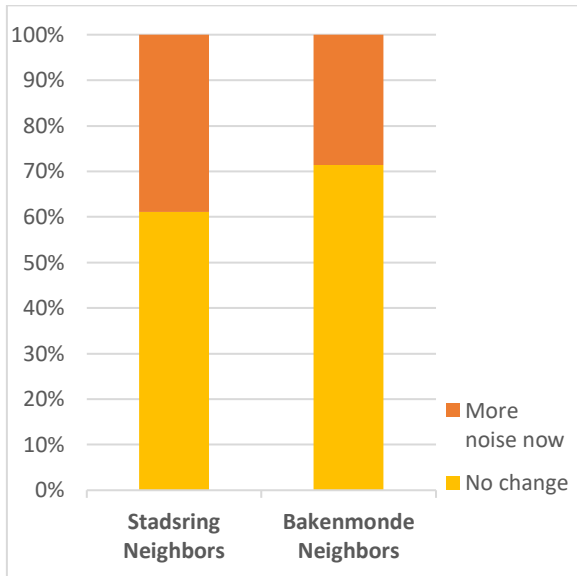


Fig. 5.19: Change in Noise Levels Experienced in Neighborhood, Before vs. After Conversion

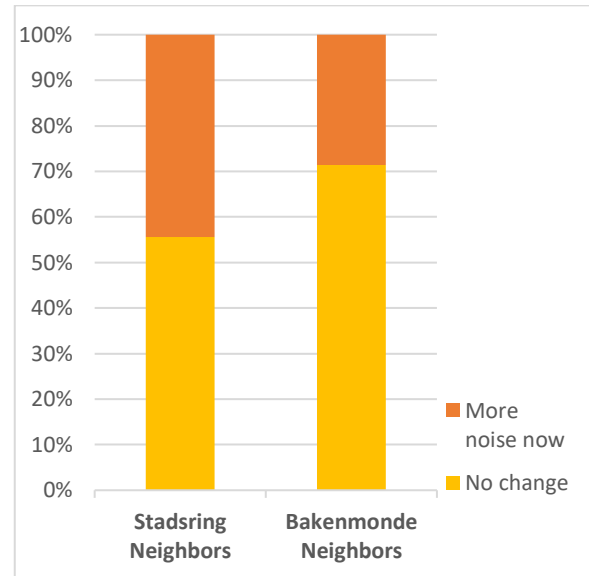
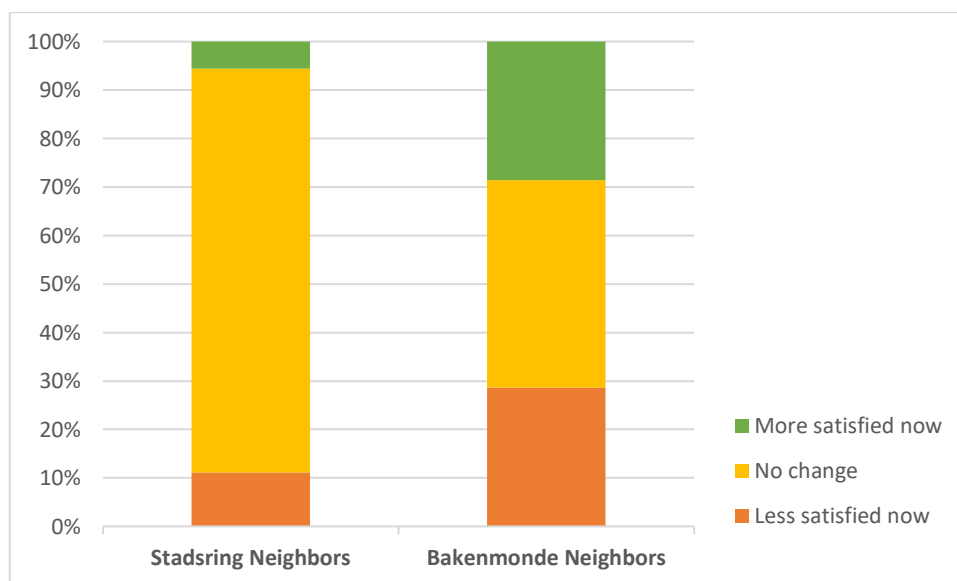


Fig. 5.20: Change in Satisfaction with Green Provision, Before vs. After Conversion



Even so, the overall effect of the Stadsring conversion on its neighborhood appears to be minimal. Several neighbors feel that the conversion had a very limited impact on the observable environmental quality of their neighborhood. Most neighbors of the Stadsring and Bakenmonde believe that there has been no

change in their satisfaction with the provision of greenery in their neighborhoods, as illustrated in figure 5.20. At most, the physical appearances of the converted buildings have improved.

The building looks better and fits better with the neighborhood.

– Bakenmonde neighbor, male, 55-64

It is clearly a residential building now. An office atmosphere is different, nothing happens there in the evening. And it looks very different now. It looks less ugly. It was certainly ugly, but of course, most office buildings are. Yes, it has become more beautiful. It has been given a fresh color, and that also looks better.

– Stadsring neighbor, male, 55-64

At a larger geographical scale, however, one neighbor of the Stadsring points out the greater positive impact of converting vacant buildings inside the urban contours for preserving the environmental quality outside of them. As such, it appears that the neighbors can also be aware of the potential of office conversion for the environmental – and, indirectly, economic and social – sustainability of their urban environment.

Amersfoort has a problem, of course. We really want to keep the outlying peri-urban area green. So you have to make sure that there is more housing in the city.

– Stadsring neighbor, male, 55-64

Economic Dimension

While the neighbors have no direct financial stake in addressing the surplus of offices and the shortage of housing in their respective cities, they do appear to be aware of these mismatches and welcome interventions that address such structural urban problems. Above all, linkages are made between office vacancies at the neighborhood-level with the national problem of the housing shortage. In addition, one Stadsring neighbor even comments on the importance of converting vacant offices into affordable housing for other dimensions of urban sustainability in his city, seeing how it promotes residential stability in Amersfoort in the long-term.

Overall, too many office buildings were built in Amersfoort. There is a huge surplus. At the time the idea was to make a profit, which is good for the project developers. It is logical that something must be done about this now. And if there are too few houses, I think it is very good to convert the available space into houses.

– Stadsring neighbor, male, 45-54

I just think it's important that more housing is developed in the city for young adults. That also keeps the city more lively. It keeps people inside Amersfoort. And when the housing is also somewhat affordable, that is the most desirable.

– Stadsring neighbor, male, 55-64

However, when asked if he believed the conversion of the Stadsring to have had an impact on the economic value of his home, the latter neighbor responded:

That would honestly surprise me. I haven't looked into that, but I don't think it would have a lot of impact on my home value. I think that other considerations are more important, if you want to buy a house in this neighborhood. I can imagine that people would really like to live here, but that's probably because there are relatively good housing, the neighborhood isn't very old, and it is close to the city center.

– Stadsring neighbor, male, 55-64

In fact, only renting neighbors of the Stadsring believe their rental value increased stronger than the market average of Amersfoort. However, this may be related to the popularity of centrally-located rental apartments, rather than having been influenced by the Stadsring conversion itself. Conversely, in the Bakenmonde neighborhood – where the majority of residents are home-owners (figure 5.21) – owners believed that their home value increased above the market average, while renters did not feel the same about their rental price, as shown in figure 5.22. However, no additional information was reported by home-owning neighbors of the Bakenmonde to confirm whether or not they believe that the conversion played a role in the valorization of their home.

Fig. 5.21: Neighbors’ Tenancy Type

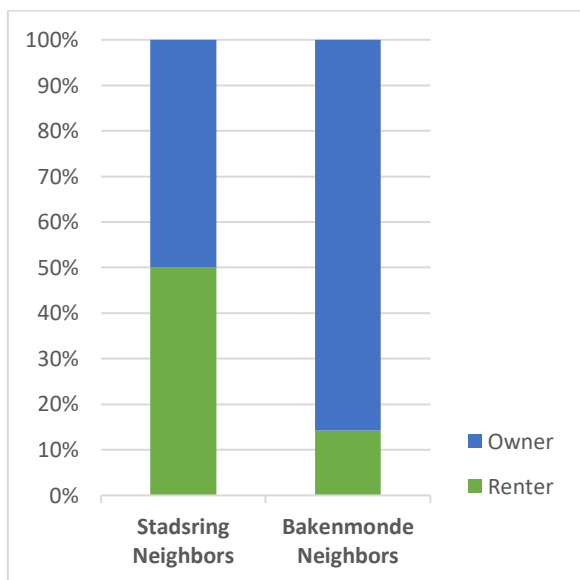
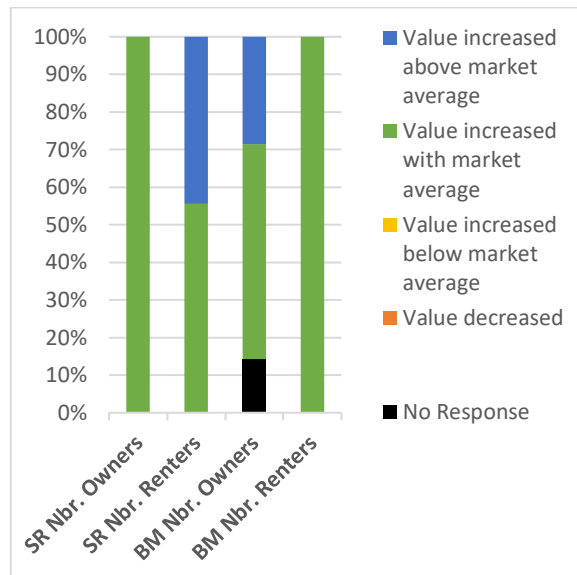


Fig. 5.22: Neighbors’ Perception of Home or Rent Value Change, Before vs. After Conversion



As such, the impact of the conversions on the economic quality of the neighborhood appears to be minimal. In terms of personal stakes, limited changes are reported in property (rent) values, thereby leaving most neighbors financially unaffected. Nevertheless, the neighbors can appreciate the economic value the buildings generate for their cities while realizing more affordable housing for all urban dwellers.

Social Dimension

While their relative accessibility to their work and retail places did not change because of the conversions, certain social qualities of the Stadsring and Bakenmonde neighborhoods was affected by the relatively large influx of new residents. In turn, this can influence the neighbors’ psychological satisfaction with their neighborhoods. Broadly comparing the current state of the converted building as to when it was (partially) vacant, both Stadsring and Bakenmonde neighbors appear to feel more at ease with its permanent occupancy because of the residential stability and social control it creates for their respective neighborhoods.

I prefer the residential building. Now there is no constant turnover of renters, no intermittent vacancy, no parking problems, no nightly break-ins.

– Bakenmonde neighbor, male, 55-64

In my neighborhood I prefer the residential building. Vacancy attracts homeless people and bad maintenance of the building, particularly the garden.

– Stadsring neighbor, female, 55-64

However, Bart de Brouwer of Gemeente Amersfoort argues that these concerns about vacancy attracting such social problems is redundant in Amersfoort.

Of the vacant locations, there are not that many, I have to say honestly. Usually there are half or quarter filled. That is already less attractive. But they aren't entirely vacant either.

Nevertheless, the Stadsring neighbors still feel threatened by the possibility of attracting various problems associated with building vacancy, especially given the Stadsring's central location. In turn, they strongly prefer exchanging this threat with creating more housing in their neighborhood.

It can happen, of course. Besides, obviously I know there is a housing shortage in Amersfoort. That people were in favor of its inhabitance. This building was empty. It is big building. Then you obviously turn it into housing!

– Stadsring neighbor, male, 55-64

You just don't want to have buildings near the inner city that are vacant, that have corners that are not surveyed. Because then you get drug-dealing. I have also heard that around the Stadsring building you have this corner there, a narrow corridor, and behind that there was drug-dealing activity. In this sense, I find its habitation and use only positive.

– Stadsring neighbor, male, 45-54

If you keep it vacant for a long time then you think: 'Well it probably isn't a pleasant location to rent.' That was happening for a long time. It didn't bother us yet, but I can imagine that if you don't do anything about it... In the future, something has to be done about it, otherwise it just gets worse.

– Stadsring neighbor, male, 45-54

Surprisingly, though, this sentiment is not reflected in the Stadsring neighbors' self-reported change in their feelings of safety within their neighborhood since the conversion (figure 5.23). As for the Bakenmonde neighborhood, neighbors do not show strong consensus in how their feelings of safety have changed since the conversion. Similarly, the neighbors share positive anecdotes about the improved social charm of their neighborhoods due to the conversions: the buildings have become more lively, with more people, plant pots, and cats. Nevertheless, the neighbors' general consensus are that the conversions have ultimately had a limited impact on the overall social quality of their neighborhood and their own social experiences within it.

In no way has the conversion changed the character or atmosphere of our neighborhood.

– Stadsring neighbor, male, 55-64

I don't experience nuisance from the Bakenmonde. My quality of life is independent from the conversion of a building, given that it doesn't create regular nuisance.

– Bakenmonde neighbor, male, 55-64

As such, the slight changes in the neighbors' feelings of attachment and pride in their neighborhoods, as illustrated in figures 5.24 and 5.25, may be unrelated to the conversion itself. However, a neighbor of the Stadsring notes that the effect of the conversion may have had varying effects on his neighborhood depending on the micro-geographical scale of measurement.

If they live closer to the building, I can imagine that the conversion had a greater impact them it had on me. Because when those people sit outside, then there is the chance that the Stadsring residents are looking into their gardens. We live twenty-five meters from the building: there are three houses between us.

– Stadsring neighbor, male, 55-64

Yet, another Stadsring neighbor – who lives directly across the street from the backside of the building – doesn’t see this to be an issue:

Maybe they can look into my garden from their balconies. But, you know, it's not terribly interesting to see me read a book in my garden. I do not expect people there to just stand on a balcony and look inside.

– Stadsring neighbor, male, 45-54

Fig. 5.23: Neighbors’ Change in Feelings of Safety in Neighborhood, Before vs. After Conversion

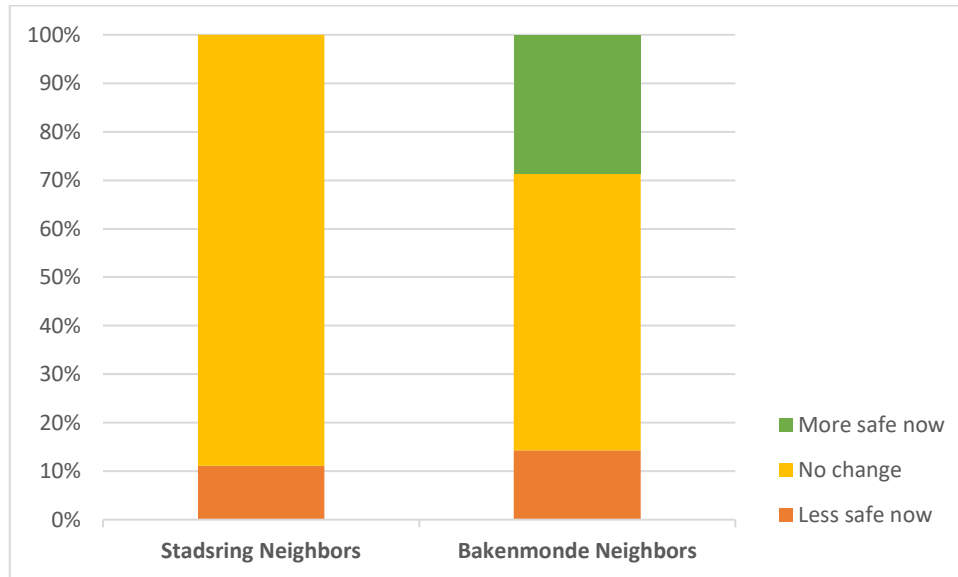


Fig. 5.24: Neighbors’ Change in Feelings of Attachment in Neighborhood, Before vs. After Conversion

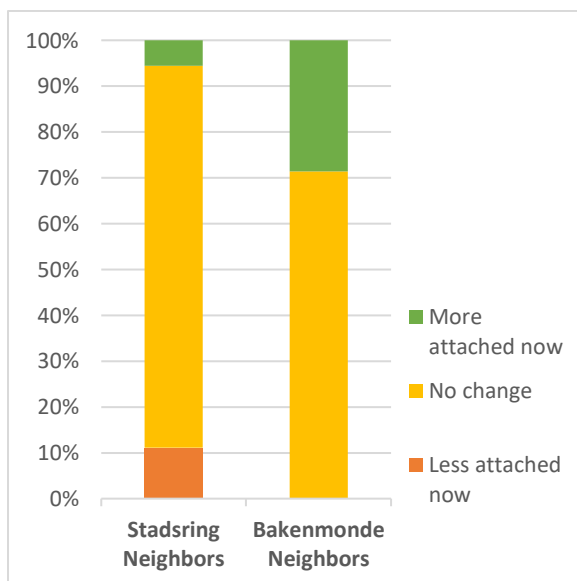
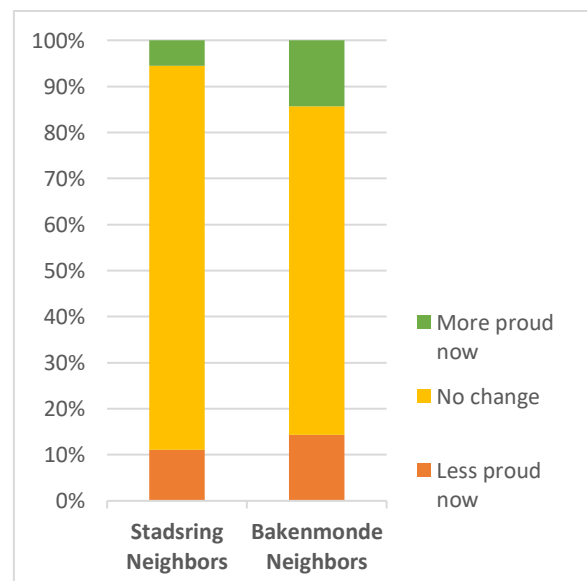


Fig. 5.25: Neighbors’ Change in Feelings of Pride in Neighborhood, Before vs. After Conversion



Furthermore, the direct effect of the Stadsring conversion on its adjacent neighborhood may have been dampened by the limited opportunities for social interactions due to the building’s design. The situation is also comparable to that of the Bakenmonde.

The existing situation is that the building is close to our homes, but the entrance is on the other side. That makes it difficult now. They are people who won't live there for very long and they feel less connected with such a neighborhood. In terms of the houses next to our home, they live there for quite a long time. There is little residential turnover. The neighborhood does not have a lot of cohesion – that is not so bad – but people know each other. People know each other by face and people know who lives inside each house. For the houses next to or behind your home, you can easily walk up to it if there is some kind of problem. But in the Stadsring, you have a new group of residents who live pretty close – there's only one street in between us, that's not that much – but to get in touch, you have to go around it completely, around two buildings. And then you have to find out which apartment number is causing the problem. So you are physically close, but the social contact is very far away.

– Stadsring neighbor, male, 55-64

The ambience and character of my neighborhood hasn't changed because of this barrier, which prevents social contact. The Stadsring residents also don't get invited to the neighborhood barbeque.

– Stadsring neighbor, male, 55-64

You can't just drop by someone's house. You have to ring the doorbell outside before even being able to enter the building.

– Bakenmonde neighbor, female, 25-34

The combination of low accessibility to the front door (Stadsring) and into the apartments (Stadsring and Bakenmonde) partially explains the clear difference between the levels of social contact between neighbors and the social renters and the neighbors amongst themselves, as was also shown earlier. At 77.8%, the vast majority of Stadsring neighbors report to rarely or never speak with the residents of converted building, whereas 83.3% have contact among each other at least once a month. While Bakenmonde neighbors generally report higher frequencies of social contact than the Stadsring neighbors, there is also a contrast between the 28.6% of Bakenmonde neighbors that have contact with the social renters at least once per month versus the 85.7% that report at least the same rate of social contact with the neighbors that do not live in the Bakenmonde.

Nonetheless, a Stadsring neighbor understands that fostering social contact is only one of the many considerations that have to be made when it comes to converting an existing office building into housing. However, he still would have appreciated the effort to facilitate social contact between the Stadsring and its neighbors to enable social interaction and collective participation across the neighborhood.

The choice of keeping the front door on the other side was logical, considering how the building was once designed. It was probably also the easiest in terms of its redevelopment and address. In terms of parking it was also the most logical since there was a lot of hassle about that in the neighborhood: whether or not the conversion would cost us parking spaces. But that means – also because there is no back entrance – that the contact is not there.

I'm not sure how you could realize that here, but in general, if you create new housing close to existing homes, I think it's good to think about how the residents could come into contact with each other. Of course, young people have a different rhythm. And they have different wishes. Someone who lives in an apartment on his own is not concerned with the neighborhood, of course. Rather when you are settled, you start to do that more. But still, I think just greeting each other and being able to address each other easily is often positive if you want to prevent problems.

– Stadsring neighbor, male, 45-54

Altogether, the conversions are perceived as a positive change for the urban environment, while not directly affecting the social quality of the pre-established neighborhood. Since social contact between the converted buildings and their respective neighborhoods is impeded by their accessibility to the public, the neighborhood is likely to continue evolving socially irrespective of any demographic shifts occurring within the Stadsring or the Bakenmonde.

5.2.4 Overall Satisfaction

Overall, there was limited resistance to the conversions of both the Stadsring and the Bakenmonde aside from the aforementioned concerns that were addressed by relevant the municipality, housing organization, and/or developer. In fact, it is likely that the concerns stemmed from a fraction of the neighborhoods’ residents, rather than being common sentiment.

I had no concerns, objections, etc. about the conversion plans.

– Stadsring neighbor, male, 65+

I actually had no concerns, objections, or other comments about the conversion plans. The building was vacant, of course. And you see that with that other vacant office building next door, that when it is vacant for a long time, it starts to decay. Once in a while it was used, but then it wasn't again. So I see the change into housing as positive.

– Stadsring neighbor, male, 45-54

Two Bakenmonde neighbors, however, address that the neighborhood’s anticipated garbage disposal issues has not been thoroughly solved by Jutphaas Wonen. Despite providing garbage dispensers inside Bakenmonde, as some residents still leave their trash elsewhere.

Several Bakenmonde residents do not utilize their own underground garbage dispensers, but dump their garbage somewhere else, creating nuisance for the rest of the neighborhood.

– Bakenmonde neighbor, male, 55-64

There are residents who do not put their garbage in their designated container, but elsewhere, like the containers on the Vloedmonde, which results in those containers filling up too quickly. I know from fellow neighbors that the residents of the Bakenmonde have been personally addressed on this matter. Personally, I doesn't cause me much disturbance.

– Bakenmonde neighbor, female, 45-54

Fig. 5.26: Neighbors’ Change in Satisfaction with their Neighborhood, 2014 vs. 2019

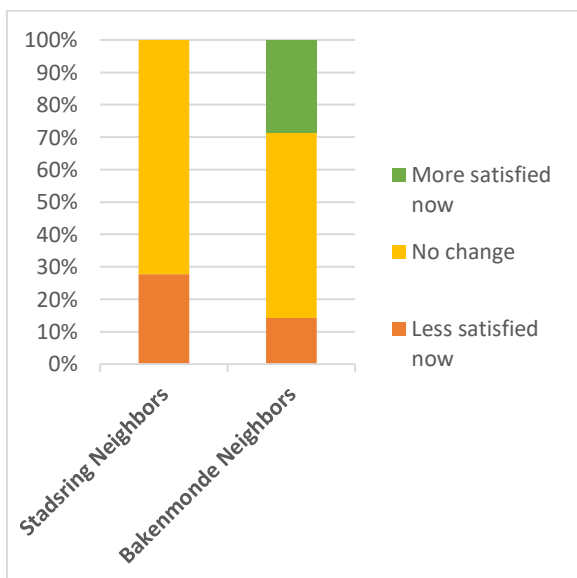
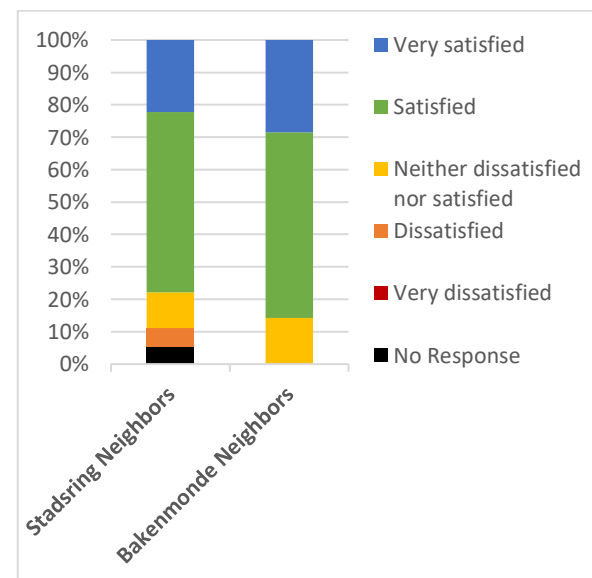


Fig. 5.27: Neighbors’ Satisfaction with the Conversion of the Office Building into Social Housing



As such, changing the land-use of the vacant office buildings did not overwhelmingly improve the neighbors’ satisfaction with their respective neighborhoods, as shown in figure 5.26. In fact, Stadsring

neighbors only report no change or negative change in their satisfaction in the past five years. Nevertheless, there is a general sense of positivity in regards to the choice of converting vacant offices into housing in both the Stadsring and Bakenmonde neighborhoods, as reflected in figure 5.27. Several neighbors elaborated their positive stance, globally expressing preference for inhabited residences over vacant offices.

I thought it was an outstanding idea. It's very good that vacant offices are now managed – to prevent their decay – and converted into living space. Keep going!

– Stadsring neighbor, male, 55-64

I definitely think the building has become visually more pleasant. Great! I also don't notice that more people are living in the neighborhood now. That is also great. It also feels nicer that people live there, instead of vacant office buildings.

– Stadsring neighbor, female, 45-54

Actually, I found – and still find – it a great development. The building frequently changed hands between different renters and was vacant in between tenancies. In that sense, the situation has improved greatly now that it is permanently inhabited.

– Bakenmonde neighbor, male, 55-64

Moreover, one neighbor of the Stadsring is enthused by the idea of converting the remaining vacant office buildings around his neighborhood, seeing as it is consolidative in addressing the widespread office vacancies, the housing shortage, and the desire for maintaining green space in Amersfoort.

They should also tackle the vacant building next door. A lot of offices are vacant in Amersfoort. All this vacancy leaves you cold. I think that it is silly if you know how many people want a house in Amersfoort. You must ensure you keep the young people in the municipality. And that they can live in a decent way. You have to ensure that the peri-urban areas – because we have beautiful natural area – are not built on. So I think it's great when this sort of thing happens. Just tell mister De Vries that! Tell mister De Vries that he should also convert those other vacant buildings.

– Stadsring neighbor, male, 55-64

5.3 Sub-Conclusions

Overall, the Stadsring and Bakenmonde conversions had an effect on the environmental, economic, and social aspects of residential life inside and around the buildings. For the new residents of the converted buildings, the outcomes are particularly evident in the short-term. These residents compromise the economic opportunity to live in affordable housing with some less-desirable environmental and social aspects of their dwellings, such as poor noise insulation, small dwelling sizes, and limited social infrastructure. Still, the residents also benefit a residence that is up-to-date and energy-efficient and located nearby established facilities and services. Altogether, the urban sustainability of the Stadsring and Bakenmonde buildings have been enhanced since their conversions resulted in housing with a sufficient environmental quality that meets the affordability, accessibility, and psychological needs of residents.

In regards to the urban surroundings of the Stadsring and Bakenmonde, the effect of their conversions on their neighborhoods' urban sustainability is less marked in the short-term. In general, the neighbors of the converted buildings experience limited adverse disruption – environmentally, economically, or socially – from office conversion in their daily lives. At the moment of research, however, the conversions did not notably contribute to any neighborhood indicators of urban sustainability, either. While this can be attributed to the limited social interaction across the buildings and their respective neighborhoods, another explanation for the minimal quantitative effects measured may be attributed to the limited the spatiotemporal scale of study. In fact, interviews with neighbors reveal a positive sentiment towards office conversions for its potential to protect peri-urban green space, prevent building decay and criminal activity, and stabilize residential turnover in the long-term, which also nod to the spatiotemporally-unbounded understanding of urban sustainability.

6. Interpretation & Discussion of Results

6.1 Facilitating Office Conversion

A common thread of the institutional actors involved in office conversion is their global aim to create more (socially-rented) dwellings. This is reinforced by the national housing need, long social housing waitlists, and the rentability of housing units. As such, developers and housing organizations have invested in the residential adaption of buildings with the civic support of municipalities and other governing bodies.

Private developers are primarily motivated to pursue building conversion if it creates a positive business case for the company, which is also implied in the criteria for convertibility set forth by Remøy and van der Voordt (2007). In fact, the choice of De Vries Ontwikkeling to invest in the conversion of the Stadsring support the authors' argument. First, the building's previous owner was happy to sell the Stadsring in a time of economic downturn. Second, the building is located against the inner city of Amersfoort, inside an existing neighborhood with nearby urban facilities and services. Correspondingly, the building's location was highly attractive for young adults searching for housing in Amersfoort: the target group which eventually made the conversion financially feasible. Third, the expertise of De Vries Ontwikkeling in office conversion informed the building's potential for successful residential adaption. As such, no exceptional measures had to be taken to successfully realize the conversion.

Jutphaas Wonen, which is both responsible for the development and management of the residential Bakenmonde building, had to balance the abovementioned criteria together with their own performance goals for realizing the conversion. As such, the environmental standards of the building were amongst the conversion's priorities. Otherwise, both Jutphaas Wonen and De Alliantie took measures to maximize the number of units that could be realized in their respective buildings: Jutphaas Wonen even chose to construct an additional story on top of the existing structure to make room for another twenty-one dwellings.

Finally, Gemeente Amersfoort, Gemeente Nieuwegein, and Provincie Utrecht express satisfaction for the office conversions' role in creating more (affordable) dwellings, given the widespread housing need. Additionally, Gemeente Nieuwegein applies conversion as a strategy for improving urban livability and economic competitiveness in the Nieuwegein, whereas Provincie Utrecht also sees conversion as an effective means to intensify the use of urban areas while preserving Utrecht's green peripheries.

However, the extent to which addressing office vacancy is a motivating factor for pursuing the adaptive reuse of office buildings is equivocal. While Gemeente Amersfoort provided the financial assistance needed to realize the Stadsring conversion, their specific condition was the realization of housing for young adults. On the other hand, Gemeente Nieuwegein offered their expertise for the Bakenmonde conversion, given the municipality's targets to address the city's widespread structural vacancy problem. Nevertheless, the municipality acted more as a facilitator than as an active driver of conversion.

Overall, Provincie Utrecht shows the most initiative in directly addressing office vacancy throughout the province. Next to acting as guarantors for the land-use adaption of buildings, Provincie Utrecht assumes an active role in re-zoning peri-urban land to impede the construction of new office buildings, advising municipalities against office vacancy, and consolidating various private and public actors involved in office conversion across the province. However, since the municipalities have direct jurisdiction of the use of their respective urban land, Provincie Utrecht primarily remains limited to the role of advisor inside urban contours.

Furthermore, the strict living standards for residential dwellings and declining availability of 'low-hanging' vacant office buildings means that it has become increasingly difficult to concurrently intervene on the three urban challenges through office conversion; housing organizations have limited financial resources to compete on the increasingly popular vacant property market and then update outdated building to the required environmental standards. Simultaneously, municipalities are increasingly strict in granting land-use changes; not all property locations are considered adept for residential use – such as those in business parks or along highways – and Gemeente Amersfoort is now reserving attractive city-center locations for continued office use, too.

While valid reasons are given for employing such restrictions on office conversion into housing, these urban governance strategies ultimately come at the cost of braking housing production rates and promoting the environmental quality of the aggregate building stock. Alternatively, demolition-construction or the greenfield

construction of new high-density housing equally contributes to these goals, but still impinge the environment by wasting both land and resources. Nevertheless, as argued by Goodland (1995) and Jim (2004), employing this approach directly nods at the common fallacy of urban development policies in prioritizing socioeconomic goals over intergenerational environmental needs, which are ultimately indispensable for sustaining the environmental, economic, and social functioning of cities into the future.

Of course the provision of new housing in unideal living environments could also contribute to a range of economic and social problems (Dempsey et al. 2009). Lack of infrastructural access to urban nodes can result in the exclusion of participation in the urban economy and a simultaneous lack of neighborly social control can result in the increasing prominence of criminal behavior, to name a few. Conversely, unaffordable housing, due to the insufficient housing supply, also limits the ability of low-income households to access jobs and markets in urban centers (Green 2001) and accumulate social and cultural capital (Ha 2007).

As such, Dutch locally-governing bodies may need to reconsider their strategies and priorities in tackling the three urban challenges if they are to result in the greater urban sustainability of cities in the Netherlands. While each party acknowledges different degrees of interrelatedness between their environmental, economic, and social goals, only Provincie Utrecht equally emphasizes all dimensions of urban sustainability. Subsequently, approaching urban sustainability in such a balanced way may create new interpretations for sustainable urban development, where short-term consequences in the economic and social domains of urban sustainability may be necessary to foster long-term benefits across all domains of urban life. As presented in this research, the comprehensive application of urban sustainability can hence strengthen the long-term success of office conversions – and any other type of urban development – for Dutch urban society and beyond.

6.2 Effects of Office Conversion

Whether or not office conversion practically succeeds in positively contributing to the environmental, economic, and social sustainability of urban society, in the short-term at least, was investigated in the second half of this research. Ultimately, the successful application of urban sustainability should create a condition in which local communities reinforce the environmental, economic, and social welfare of their urban environments (Bramley & Power 2009; Dempsey et al. 2009).

In terms of the new social renting residents of the converted buildings studied, the overwhelming sentiment is the satisfaction with having safeguarded affordable housing. This result directly reflects institutional goals to cater to this housing demand. Nevertheless, the provision of housing in the short-term occasionally comes in conflict with other ongoing dimensions of life. Stadsring and Bakenmonde residents report some difficulties with the technical qualities of their homes and the surrounding community-building infrastructure, such as playgrounds and other meeting places. As such, the converted apartments may not provide a sustainable setting for residential life in the long-term.

Nevertheless, the new residents simultaneously benefit from the existing transportation infrastructure and retail services around their housing, thus allowing them to access and participate in the urban economy. Residents also benefit from the relatively energy-efficient installations in their ‘new’ apartments, which can contribute to lower monthly energy bills. Furthermore, realizing social housing in private renting or owning neighborhoods results in a more socioeconomically mixed urban community, which is desirable from a social sustainability perspective (Colantonio 2010). Albeit this argument is dampened by the low instance of social contact between the social renters and their neighbors, time may be an important factor for advancing their ongoing integration into the existing community.

In regards to these neighbors, their most disruptive experience of the office conversions were concentrated at the start of the buildings’ new lives. Predominantly, noise nuisance was experienced during the construction period and the first few days of the buildings’ residency. Other anticipated problems, such as parking shortages, were ultimately unaccounted for. Remaining issues could be addressed by the presiding housing organization in cooperation with residents and/or neighbors.

However, both parties – the new residents and the existing neighbors alike – ask for more opportunities to foster social contact among each other. Next to promoting community attachment, pride, and

participation, this could allow the community to resolve problems among themselves, disregarding the need for a third party. While this is happening internally to a certain degree – among the residents of the converted buildings – outward connections towards the surrounding neighborhood would theoretically incur mutual and reinforcing benefits in terms of social sustainability. Nonetheless, in the current situation, the effect of the conversions on the social sustainability of their surrounding neighborhoods was limited. Other than removing the threat of social problems associated with building vacancies, limited changes in the psychological states of the neighbors were measured.

Likewise, the office conversions were not considered to be of any financial value for their surrounding properties. While literature argues that building vacancies degrade the economic desirability of urban environments, homeowners did not feel threatened by the formerly vacant offices in this respect.

Conversely, neighbors do appreciate the adaptive reuse of vacant buildings into housing to be beneficial for the long-term environmental quality in their urban region; strong linkages are made between the threat of housing construction on the ongoing provision of green. As such, office conversion is hailed by the neighbors for presenting a consolidative solution that not only benefits their local community by removing opportunities for criminal activity, but also benefits greater urban society by preserving unbuilt land. Taking this one step further, one neighbor also considers the provision of affordable housing – and the subsequent influx or retainment of residents – to be essential for maintaining the local urban economy. This thinking aligns with the greater goals of urban sustainability and was brought to the forefront of some neighbors' minds as a result of the tangible building conversion in their neighborhoods.

As such, the conversions of the Stadsring and the Bakenmonde have still contributed to a shift in the environmental, economic, and social aspects of residential life in their respective neighborhoods. While the short-term effects are more direct for the new residents, the neighborhood also appears to start benefitting from the urban development in the long-term. The consolidative potential of office conversion is thus brought to the public eye, representing a tangible and local solution to the greater urban challenges of the Netherlands. As such, urban sustainability – as characterized by the intertwined environmental, economic, and social dimensions – may be increasingly experienced, understood, and reinforced by the public as an achievable framework for urban development.

7. Conclusions

Overall, the results of this research reveal that the practical application of urban sustainability through building conversion shows great potential for consolidating the three presented urban challenges while contributing to the ongoing goals of Dutch urban development. Through interventions like office conversions, urban society reaps the benefits of removing the socioeconomic threats presented by building vacancies, increasing the provision of affordable urban housing, and mitigating environmental stressors, such as urban energy consumption and greenfield construction. The individual environmental, economic, and social contributions of office conversion for each of the relevant parties is summarized in table 7.1.

However, Dutch institutions still struggle to address the environmental, economic, and social demands of cities in a balanced and adequate manner. In fact, the overarching political sentiment is still to foster short-term economic and social goals before long-term environmental needs. Nonetheless, this investigation of office conversion through the lens of urban sustainability shows that such small-scale urban developments have the potential to concomitantly address the environmental, economic, and social needs of all urban society, starting at the community-level.

As such, it is recommended for institutions to continue pursuing small-scale building conversion from the perspective of urban sustainability. While demolition-construction or greenfield construction may be more desirable options for realizing more housing in the short-term, environmental considerations must not be pushed aside. Furthermore, entire neighborhoods may benefit from the intervention on vacant buildings, which also offer pre-established social and economic infrastructure for new residents of converted apartments. While the supply of vacant buildings in desirably located urban areas is increasingly dwindling, bottom-up approaches to the remaining building vacancies may yield desirable results for both urban governing bodies and society. In such, municipal collaboration with housing organizations is encouraged in order to meet each party's goals, while working towards the ongoing urban sustainability of the urban arena.

Table 7.1: Summary of Environmental, Economic, and Social Implications of Office to Social Housing Building Conversion

	Environmental	Economic	Social
Residents	(=) Preestablished access to green space	(+) Affordable housing (+) Desirable location, including access to urban services	(=) Preestablished access to services (-) Limited interaction with neighbors outside apartment & community participation
Neighbors	(+) No removal of green space (-) More trash in neighborhood (-) More noise in neighborhood	(=) No perceived impact on home values	(+) More liveliness and sociability in the neighborhood (+) Removal of (threat of) social problems associated with vacant buildings (+) Residential stability in neighborhood (-) Limited interaction with new residents of converted buildings
Developer & Housing organization	(+) Housing organizations have and apply performance goals for energy efficiency in new residential developments	(+) More affordable housing created (+) Housing organizations have and apply performance goals for expanding dwelling count (=) Resources spent convincing neighbors of conversion project (-) Increased competition in the office real estate market	(+) Positive ratings from residents living in converted buildings (+) Intentional social mixing for social cohesion and control ⁶
Municipality	(+) Increased cooperation and expertise across institutional actors to address environmental goals (+) Intensifying land-use in city (=) Upgrading the sustainability of the building stock is not an explicit goal for conversion (-) Concern about the long-term environmental quality of converted buildings	(+) More affordable housing created (+) Improved image of economic competitiveness (+) Removal of economically inefficient property	(+) Increased cooperation and expertise across institutional actors to address housing needs (+) Improved urban livability levels (=) Limited social mixing
Province	(+) Increased cooperation and expertise across institutional actors to address environmental goals (+) Intensified land-use in urban areas (+) No removal of green space (=) Upgrading the sustainability of the building stock is not an explicit goal for conversion	(+) More affordable housing created (+) Creation of more affordable housing	(+) Increased cooperation and expertise across institutional actors to address housing needs (=) Limited social mixing
Overall Urban Sustainability	(+) Increased cooperation and expertise across institutional actors (+) Removal of energy expenditure redundancy at the level of the building (+) Adaptions to the energy efficiency of the urban building stock to address environmental goals (+) Intensified land-use in urban areas (+) No removal of green space	(+) Removal of financial expenditure redundancy at the level of the building (+) Removal of vacant office buildings (+) Creation of more affordable housing (+) Intensified use of existing services	(+) Increased urban residential accessibility for low-income households (+) Removed of (threat of) social problems associated with vacant buildings (=) Access to services remains in place (-) Limited interaction & community participation among residents of converted buildings

⁶ Relevant to the Bakenmonde case only.

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9. Appendices

A. Expert Interview Topics

1. How is the institution/person involved in the transformation project?
2. What motivated the institution to pursue this transformation project?
 - i. What are the environmental, economic, and social motivations (if applicable)?
3. What are the institution's priorities for this transformation project?
 - i. What are the environmental, economic, and social priorities?
4. What opportunities are associated with this transformation project?
 - i. What are the environmental, economic, and social opportunities (if applicable)?
5. What are the risks associated with this transformation project?
 - i. What are the environmental, economic, and social risks (if applicable)?
6. Who is the target group (client/residents) for this transformation project?
7. What motivated the selection of this target group for this transformation project?
 - i. What are the environmental, economic, and social motivations (if applicable)?
8. What is the added value of transformation for this particular development?
 - i. What is the environmental, economic, and social added value?
9. What are the outcomes/benefits of this housing development for the institution?
 - i. What are the environmental, economic, and social outcomes/benefits?

B. Residents' Survey

Enquête: Bewoners Sociale Huurwoning

Hartelijk dank voor het meedoen aan deze enquête. De enquête heeft 28 vragen en duurt ongeveer 10 minuten om in te vullen. Ik verzoek u om het zo accuraat en eerlijk mogelijk te beantwoorden. Per vraag is er uitsluitend één antwoord mogelijk. De enquête kan door meerdere volwassenen (18+) uit uw huishouden beantwoord worden voor maximaal één keer per persoon. Uw antwoorden worden anoniem verwerkt en hebben geen gevolgen voor u of uw huishouden.

A. Algemene woonsituatie

1. Sinds welk jaar woont u in uw huidige woning? (vul hier het jaartal in)

2. In het algemeen, hoe tevreden bent u over uw huidige woning?

- Zeer tevreden
- Tevreden
- Niet tevreden, maar ook niet ontevreden
- Ontevreden
- Zeer ontevreden

3. In het algemeen, hoe tevreden bent u over uw huidige buurt?

- Zeer tevreden
- Tevreden
- Niet tevreden, maar ook niet ontevreden
- Ontevreden
- Zeer ontevreden

4. Hoe veilig voelt u zich in uw buurt?

- Zeer veilig
- Veilig
- Onveilig
- Zeer onveilig

5. Hoe gehecht bent u aan uw buurt?

- Zeer gehecht
- Gehecht
- Niet gehecht
- Helemaal niet gehecht

6. Hoe trots bent u op uw buurt?

- Zeer trots
- Trots
- Niet trots
- Helemaal niet trots

B. Maandelijkse kosten

7. Wat is het **netto**-inkomen van uw **huishouden** per maand?

Het inkomen dat overblijft nadat van het bruto-inkomen belasting en premies zijn afgetrokken, ofwel dat wat iemand "schoon in het handje" krijgt.

- | | | |
|--|--|--|
| <input type="checkbox"/> Minder dan € 500 | <input type="checkbox"/> € 1500 tot € 2000 | <input type="checkbox"/> € 3000 tot € 3500 |
| <input type="checkbox"/> € 500 tot € 1000 | <input type="checkbox"/> € 2000 tot € 2500 | <input type="checkbox"/> € 3500 tot € 4000 |
| <input type="checkbox"/> € 1000 tot € 1500 | <input type="checkbox"/> € 2500 tot € 3000 | <input type="checkbox"/> Meer dan € 4000 |

8. Ontvangt uw huishouden maandelijkse huurtoeslag?

- | | | |
|--|--|--|
| <input type="checkbox"/> Nee | <input type="checkbox"/> Ja, € 50 tot € 100 | <input type="checkbox"/> Ja, € 150 tot € 200 |
| <input type="checkbox"/> Ja, minder dan € 50 | <input type="checkbox"/> Ja, € 100 tot € 150 | <input type="checkbox"/> Ja, meer dan € 200 |

9. Wat is uw **kale** huur per maand?

Uw huur zonder kosten voor gas, water, licht en overige servicekosten en zonder het verrekenen van eventuele huurtoeslag.

- | | | |
|---|--|---|
| <input type="checkbox"/> Minder dan € 100 | <input type="checkbox"/> € 400 tot € 500 | <input type="checkbox"/> € 800 tot € 900 |
| <input type="checkbox"/> € 100 tot € 200 | <input type="checkbox"/> € 500 tot € 600 | <input type="checkbox"/> € 900 tot € 1000 |
| <input type="checkbox"/> € 200 tot € 300 | <input type="checkbox"/> € 600 tot € 700 | <input type="checkbox"/> Meer dan € 1000 |
| <input type="checkbox"/> € 300 tot € 400 | <input type="checkbox"/> € 700 tot € 800 | |

10. Hoe tevreden bent u met de **kale** huurprijs van uw woning, in verhouding met de kwaliteit van uw woning (en woonomgeving)?

- Zeer tevreden
- Tevreden
- Niet tevreden, maar ook niet ontevreden
- Ontevreden
- Zeer ontevreden

C. Economische voorzieningen

11. Welke werksituatie is het meest op u van toepassing?

- | | |
|---|--|
| <input type="checkbox"/> Betaald werk, meer dan 20 uur per week | <input type="checkbox"/> Werkloos of werkzoekend |
| <input type="checkbox"/> Betaald werk, minder dan 20 uur per week | <input type="checkbox"/> Arbeidsongeschikt |
| <input type="checkbox"/> Onbetaald werk | <input type="checkbox"/> Gepensioneerd |
| <input type="checkbox"/> Studerend of schoolgaand | <input type="checkbox"/> Andes, namelijk |

12. Hoe ver is de locatie van deze werksituatie vanaf uw woning (km)?

- | | | |
|---|--|--|
| <input type="checkbox"/> N.v.t., niet werkend
(vraag 13 overslaan) | <input type="checkbox"/> Minder dan 2 km | <input type="checkbox"/> 10 km tot 20 km |
| <input type="checkbox"/> N.v.t., thuiswerkend
(vraag 13 overslaan) | <input type="checkbox"/> 2 km tot 5 km | <input type="checkbox"/> Meer dan 20 km |
| | <input type="checkbox"/> 5 km tot 10 km | |

13. Hoe tevreden bent u met de bereikbaarheid van uw werkplek?

- Zeer tevreden
- Tevreden
- Niet tevreden, maar ook niet ontevreden
- Ontevreden
- Zeer ontevreden

14. Hoe ver is uw reguliere supermarkt vanaf uw woning (km)?

- Minder dan 1 km
- 1 km tot 2 km
- 2 km tot 3 km
- 3 km tot 4 km
- 4 km tot 5 km
- Meer dan 5 km

15. Hoe tevreden bent u met de bereikbaarheid van uw supermarkt?

- Zeer tevreden
- Tevreden
- Niet tevreden, maar ook niet ontevreden
- Ontevreden
- Zeer ontevreden

16. Hoe tevreden bent u met de bereikbaarheid van de algemene voorzieningen rondom uw buurt (winkels, horeca, medische voorzieningen, etc)?

- Zeer tevreden
- Tevreden
- Niet tevreden, maar ook niet ontevreden
- Ontevreden
- Zeer ontevreden

17. Hoe tevreden bent u met de betaalbaarheid van de algemene voorzieningen (inclusief supermarkt) rondom uw buurt?

- Zeer tevreden
- Tevreden
- Niet tevreden, maar ook niet ontevreden
- Ontevreden
- Zeer ontevreden

D. Milieukwaliteit woonsituatie

18. Hoe tevreden bent u met het energielabel (X) van uw woning?

- Zeer tevreden
- Tevreden
- Niet tevreden, maar ook niet ontevreden
- Ontevreden
- Zeer ontevreden

19. Hoe tevreden bent u met het niveau van buitengeluid die u ervaart in uw woning?

Het geluid dat niet vanuit uw woning stemt, bijv. van burens en/of wegverkeer.

- Zeer tevreden
- Tevreden
- Niet tevreden, maar ook niet ontevreden
- Ontevreden
- Zeer ontevreden

20. Hoe tevreden bent u met het niveau van geluid die u ervaart in uw buurt?

Het geluid dat u ervaart als u zich in uw buurt bevindt, buiten uw woning.

- Zeer tevreden
- Tevreden
- Niet tevreden, maar ook niet ontevreden
- Ontevreden
- Zeer ontevreden

21. Hoe tevreden bent u met de voorziening van groen in uw buurt?

- Zeer tevreden
- Tevreden
- Niet tevreden, maar ook niet ontevreden
- Ontevreden
- Zeer ontevreden

E. Sociale karakter woonsituatie

22. Hoe vaak heeft u contact met één of meer medebewoners van uw appartementencomplex?

Buiten de mensen die bij u thuis wonen. Dit kan ook contact via telefoon, whatsapp, sms of email zijn.

- Minstens 1 keer per week
- Vaker dan 1 keer per maand, maar niet wekelijks
- 1 keer per maand
- Minder dan 1 keer per maand
- Zelden of nooit

23. Hoe vaak heeft u contact met één of meer buurtbewoners?

Buiten de mensen die in uw appartementengebouw wonen. Dit kan ook contact via telefoon, whatsapp, sms of email zijn.

- Minstens 1 keer per week
- Vaker dan 1 keer per maand, maar niet wekelijks
- 1 keer per maand
- Minder dan 1 keer per maand
- Zelden of nooit

24. Hoe vaak doet u mee aan buurtactiviteiten?

Activiteiten die zijn georganiseerd door én toegankelijk voor buurtbewoners.

- Minstens 1 keer per maand
- Meerdere keren per jaar
- 1 keer per jaar
- Minder dan 1 keer per jaar
- Nooit

F. Algemene vragen

25. Wat is uw geslacht?

- Man
- Vrouw

26. Wat is uw leeftijd?

- 18 t/m 24 jaar
- 25 t/m 34 jaar
- 35 t/m 44 jaar
- 45 t/m 54 jaar
- 55 t/m 64 jaar
- Meer dan 65 jaar

27. Hoe is uw huishouden samengesteld?

Kinderen die niet op uw woonadres staan ingeschreven moet u niet tot het huishouden rekenen.

- Ik woon alleen
- Alleenstaand met thuiswonend(e) kind(eren)
- Echtbaar of partners zonder thuiswonend(e) kind(eren)
- Echtbaar of partners met thuiswonend(e) kind(eren)
- Samenwonend met andere familieleden
- Samenwonend met niet-familieleden
- Anders

28. Wat is uw hoogst voltooide opleiding?

Een opleiding afgerond met een diploma of een voldoende getuigschrift.

- Geen opleiding
- Lagere school, basisschool
- Lager Beroepsonderwijs (LBO, LTS)
- Middelbaar Voortgezet Onderwijs (MAVO)
- Middelbaar Beroepsonderwijs (MBO), MEAO
- Hoger Voortgezet Onderwijs (HAVO, HBS, VWO, HTS, HEAO)
- Hoger Beroepsonderwijs (HBO)
- Universiteit (WO)

Dit was de laatste vraag van de vragenlijst. Hartelijk dank voor het invullen!

**Enquête:
Buurtbewoners sinds 2015 of eerder**

Hartelijk dank voor het meedoen aan deze enquête. De enquête heeft 28 vragen en duurt ongeveer 10 minuten om in te vullen. Ik verzoek u om het zo accuraat en eerlijk mogelijk te beantwoorden. Per vraag is er uitsluitend één antwoord mogelijk. De enquête kan door meerdere volwassenen (18+) uit uw huishouden beantwoord worden voor maximaal één keer per persoon. Uw antwoorden worden anoniem verwerkt en hebben geen gevolgen voor u of uw huishouden.

A. Algemene woonsituatie

1. Sinds welk jaar woont u in uw huidige woning? (vul hier het jaartal in)

2. In het algemeen, hoe tevreden bent u over uw huidige buurt?

- Zeer tevreden
- Tevreden
- Niet tevreden, maar ook niet ontevreden
- Ontevreden
- Zeer ontevreden

3. Is uw algemene tevredenheid met uw buurt veranderd in de afgelopen vijf jaar?

- Ja, meer tevreden nu
- Ja, minder tevreden nu
- Nee, geen verandering

4. Hoe veilig voelt u zich in uw buurt?

- Zeer veilig
- Veilig
- Onveilig
- Zeer onveilig

5. Is uw gevoel van veiligheid in uw buurt veranderd in de afgelopen vijf jaar?

- Ja, meer veilig nu
- Ja, minder veilig nu
- Nee, geen verandering

6. Hoe gehecht bent u aan uw buurt?

- Zeer gehecht
- Gehecht
- Niet gehecht
- Helemaal niet gehecht

7. Is uw gevoel van hechting aan de buurt veranderd in de afgelopen vijf jaar?

- Ja, meer gehecht nu
- Ja, minder gehecht nu
- Nee, geen verandering

8. Hoe trots bent u op uw buurt?

- Zeer trots
- Trots
- Niet trots
- Helemaal niet trots

9. Is uw gevoel van trots op uw buurt veranderd in de afgelopen vijf jaar?

- Ja, meer trots nu
- Ja, minder trots nu
- Nee, geen verandering

10. Hoe tevreden bent u met het niveau van buitengeluid die u ervaart in uw woning?

Het geluid dat niet vanuit uw woning stemt, bijv. van burens en/of wegverkeer.

- Zeer tevreden
- Tevreden
- Niet tevreden, maar ook niet ontevreden
- Ontevreden
- Zeer ontevreden

11. Is het niveau van buitengeluid die u ervaart in uw woning veranderd in de afgelopen vijf jaar?

- Ja, meer buitengeluid nu
- Ja, minder buitengeluid nu
- Nee, geen verandering

12. Hoe tevreden bent u met het niveau van geluid die u ervaart in uw buurt?

Het geluid dat u ervaart als u zich in uw buurt bevindt, buiten uw woning.

- Zeer tevreden
- Tevreden
- Niet tevreden, maar ook niet ontevreden
- Ontevreden
- Zeer ontevreden

13. Is het niveau van geluid die u ervaart in uw buurt veranderd in de afgelopen vijf jaar?

- Ja, meer geluid nu
- Ja, minder geluid nu
- Nee, geen verandering

14. Hoe tevreden bent u met de voorziening van groen in uw buurt?

- Zeer tevreden
- Tevreden
- Niet tevreden, maar ook niet ontevreden
- Ontevreden
- Zeer ontevreden

15. Is uw tevredenheid met de voorziening van groen in uw buurt veranderd in de afgelopen vijf jaar?

- Ja, meer tevreden nu
- Ja, minder tevreden nu
- Nee, geen verandering

16. Hoe vaak heeft u contact met één of meer buurtbewoners?

Dit kan ook contact via telefoon, whatsapp, sms of email zijn.

- Minstens 1 keer per week
- Vaker dan 1 keer per maand, maar niet wekelijks
- 1 keer per maand
- Minder dan 1 keer per maand
- Zelden of nooit

17. Hoe vaak doet u mee aan buurtactiviteiten?

Activiteiten die zijn georganiseerd door én toegankelijk voor buurtbewoners.

- Minstens 1 keer per maand
- Meerdere keren per jaar
- 1 keer per jaar
- Minder dan 1 keer per jaar
- Nooit

D. Woningwaarde

18. Woont uw huishouden in een huurwoning of een koopwoning?

- Koopwoning (*vraag 19 maken en daarna vraag 20 overslaan*)
- Huurwoning (*vraag 19 overslaan*)

19. I.v.m. koopwoningen: De afgelopen jaren zijn de huizenprijzen in (Amersfoort/Nieuwegein) gestegen. Hoe schat u in dat de waarde van uw koopwoning in veranderd is in de afgelopen vijf jaar?

- De waarde van mijn woning is sterker gestegen dan het gemiddelde in Amersfoort
- De waarde van mijn woning is ongeveer even sterk gestegen als het gemiddelde in Amersfoort
- De waarde van mijn woning is minder sterk gestegen dan het gemiddelde in Amersfoort
- De waarde van mijn woning is gedaald

20. I.v.m. huurwoningen: De afgelopen jaren zijn de huurprijzen in (Amersfoort/Nieuwegein) gestegen. Hoe schat u in dat de kale huurprijs van uw huurwoning in veranderd is in de afgelopen vijf jaar?

- De kale huurprijs van mijn woning is sterker gestegen dan het gemiddelde in Amersfoort
- De kale huurprijs van mijn woning is ongeveer even sterk gestegen als het gemiddelde in Amersfoort
- De kale huurprijs van mijn woning is minder sterk gestegen dan het gemiddelde in Amersfoort
- De kale huurprijs van mijn woning is gedaald

D. Gebouwtransformatie

Vragen 21 en 22 gaan over het appartementencomplex aan de (Stadsring 185/Bakenmonde). Het voormalige kantoorgebouw werd in (2016/2015) omgebouwd tot (53/106) betaalbare huurwoningen.

21. In het algemeen, hoe tevreden bent u over de verandering van kantoorgebouw naar wooncomplex?

- Zeer tevreden
- Tevreden
- Niet tevreden, maar ook niet ontevreden
- Ontevreden
- Zeer ontevreden

22. Hoe vaak heeft u contact met één of meer bewoners van het getransformeerde wooncomplex?

Dit kan ook contact via telefoon, whatsapp, sms of email zijn.

- Minstens 1 keer per week
- Vaker dan 1 keer per maand, maar niet wekelijks
- 1 keer per maand
- Minder dan 1 keer per maand
- Zelden of nooit

23. Wat is uw geslacht?

- Man Vrouw

24. Wat is uw leeftijd?

- 18 t/m 24 jaar 35 t/m 44 jaar 55 t/m 64 jaar
 25 t/m 34 jaar 45 t/m 54 jaar Meer dan 65 jaar

25. Hoe is uw huishouden samengesteld?

Kinderen die niet op uw woonadres staan ingeschreven moet u niet tot het huishouden rekenen.

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 Alleenstaand met thuiswonend(e) kind(eren)
 Echtpaar of partners zonder thuiswonend(e) kind(eren)
 Echtpaar of partners met thuiswonend(e) kind(eren)
 Samenwonend met andere familieleden
 Samenwonend met niet-familieleden
 Anders

26. Wat is uw hoogst voltooide opleiding?

Een opleiding afgerond met een diploma of een voldoende getuigschrift.

- Geen opleiding
 Lagere school, basisschool
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 Middelbaar Beroepsonderwijs (MBO), MEAO
 Hoger Voortgezet Onderwijs (HAVO, HBS, VWO, HTS, HEAO)
 Hoger Beroepsonderwijs (HBO)
 Universiteit (WO)

27. Welke situatie is het meest op u van toepassing?

- Betaald werk, meer dan 20 uur per week Werkloos of werkzoekend
 Betaald werk, minder dan 20 uur per week Arbeidsongeschikt
 Onbetaald werk Gepensioneerd
 Studerend of schoolgaand Anders, namelijk.....

28. Wat is het netto-inkomen van uw huishouden per maand?

Het inkomen dat overblijft nadat van het bruto-inkomen belasting en premies zijn afgetrokken, ofwel dat wat iemand "schoon in het handje" krijgt.

- Minder dan € 500 € 1500 tot € 2000 € 3000 tot € 3500
 € 500 tot € 1000 € 2000 tot € 2500 € 3500 tot € 4000
 € 1000 tot € 1500 € 2500 tot € 3000 Meer dan € 4000

Dit was de laatste vraag van de vragenlijst. Hartelijk dank voor het invullen!

D. Resident Interview Topics

1. Bent u tevreden met uw huidige woning? Waarom (niet)?
2. Waarom had u voor uw huidige woning gekozen?
 - a. Maandelijkse huurprijs
 - b. Woonoppervlakte
 - c. Aantal slaapkamers
 - d. Locatie van woning
 - e. Buurtkarakter en -sfeer
 - f. Voorzieningen rondom woning (ov-aansluiting, supermarkt, park, etc.)
 - g. Energielabel van woning
 - h. Bouwstijl en/of ontwerp van gebouw
 - i. Unieke karakter van gebouw
 - j. Er was geen andere geschikte woning beschikbaar
 - k. Anders, namelijk:
3. Welke verwachtingen had u over uw woning voor dat u er in verhuisde?
4. Zijn deze verwachtingen voldaan? Waarom (niet)?
5. Mist u voorzieningen in en/of rondom uw woning (bijvoorbeeld woon-, werk-, ontmoetings-, en/of servicevoorzieningen)? Welke?
6. Heeft uw huidige woning invloed gehad op uw levenskwaliteit?
7. Hoe lang verwacht u nog in deze woning blijven wonen? Waarom?
8. Wat vindt u er van om in een voormalige kantoorpand te wonen?
9. Heeft u het gevoel dat u in een kantoorpand of een appartement woont? Leg uit.

E. Neighbor Interview Topics

1. Waarom had u voor uw huidige woning en woonbuurt gekozen?
2. Was u naar deze woning en woonbuurt verhuisd in het heden? Waarom (niet)?
3. Had u bedenkingen, bezwaar en/of andere opmerkingen toen het bij u bekend was dat het kantoor getransformeerd zou worden naar woningen? Hoe werden deze aangepakt door de gemeente, woningcorporatie, en/of ontwikkelaar?
4. Heeft u sinds de transformatie overlast gehad vanuit het getransformeerde pand? Hoe werden deze aangepakt door de woningcorporatie?
5. Heeft de transformatie invloed gehad op uw levenskwaliteit? Leg uit.
6. Heeft de transformatie kwaliteit toegevoegd aan uw buurt? Waarom (niet)?
7. Heeft de transformatie de karakter en sfeer van uw buurt veranderd? Hoe?
8. Achteraf gezien, heeft u voorkeur voor een leegstaand kantoor of een additioneel appartement in uw buurt? Waarom?
9. Heeft u het gevoel dat u naast een kantoorpand of een appartement woont? Leg uit.