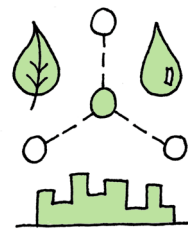


CREATING A GREEN-BLUEPRINT FOR ADULTS WITH AN MID

A research on enhancing social engagement in the living environment of adults with a Mild Intellectual Disability within urban green-blue grids



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01 PROBLEM STATEMENT

The Sociaal Cultureel Planbureau [Social Cultural Planning Office] estimates 6,4% of the Dutch population has a Mild Intellectual Disability (MID) (figure 1). This amounts to 1,1 million people in the Netherlands in 2018 dealing with an MID, with a range between 0,8 and 1,4 million people. This is an educated guess because there is no official registration of IQ or social self-reliance in the Netherlands (Woittiez et al., 2019, p. 7). Since there is no official record of people with an MID, people might not know they have an MID, which can lead to them not getting the help they need. A recent study (Eggink et al., 2020) shows that people with an MID are less satisfied with life, more often lonely and participate less in society compared to people without a disability (figure 2). However, people with an MID have the right to participate in society as equally and fully as possible. This is laid down under the UN Convention on the rights of persons with disabilities (Kennis- en exploitatiecentrum Officiële Overheidspublicaties, 2016).



Figure 1: 6,4% of the Dutch population has a Mild Intellectual Disability (Woittiez et al., 2019, p. 7).



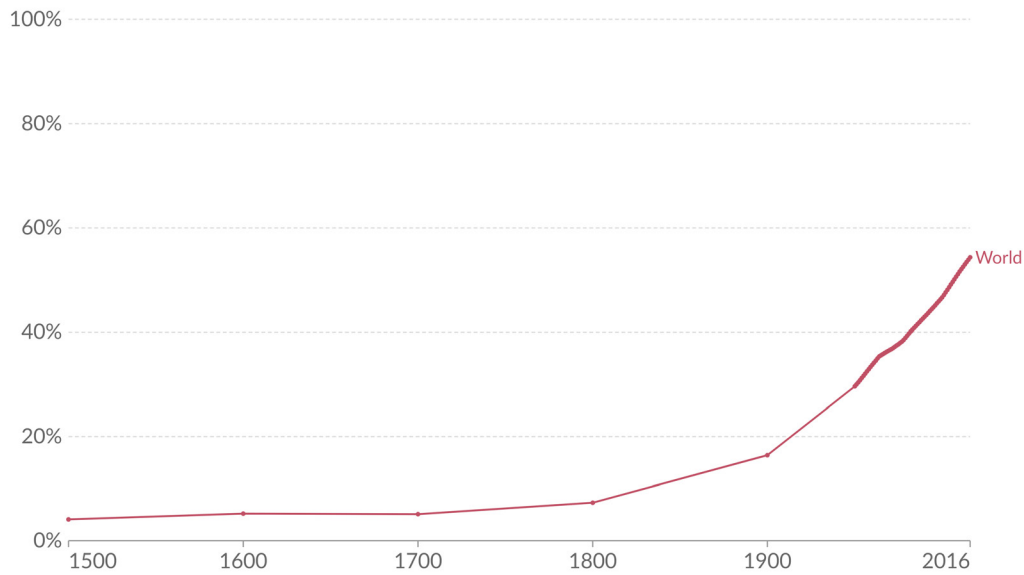
Figure 2: Adults with an MID are more often lonely & participate less in society (Eggink et al., 2020).

In view of the socially and politically broadly supported goal of making society more inclusive, the Bureau Strategische Analyse [Office of Strategic Analysis] (2019, p. 6) calls on a wide range of stakeholders to focus on simple government policy, prevention, integrated support, better equipment of professionals, appropriate communication and knowledge development for people with an MID. As an architecture graduate student I want to make a contribution to reach this goal by researching the specific needs for the (built) environment of people with an MID.

People used to live primarily in small communities in rural areas for most of human history. In the past hundred years the share of people living in urban areas has increased to more than half of the total world population (figure 3). Even though it is debatable what is considered a rural or an urban area, it is clear that our living situation is rapidly shifting. Especially in the Netherlands, with the total population still growing, the percentage of people living in urban areas has increased from almost 60% in 1960 to more than 90% in 2021 (figure 4). This means society is getting more complex and increasing higher demands are placed on people's functioning, which is difficult for people with an MID (Putman & Woittiez, 2020). The limitations that an intellectual disorder entails are not always directly visible, especially when it is a 'Mild' Intellectual Disability, which means more can be asked of them than they can handle. Moreover, an MID is difficult to be clearly defined since the (potential) need for support of people with an intellectual disorder often concerns several areas of life at the same time and can differ per individual (Bureau Strategische Analyse, 2019, p. 6). It is therefore important for my research to empirically study individuals with an MID to understand the architectural needs of this vulnerable target group.

Urbanization over the past 500 years, 1500 to 2016

Share of the total population living in urban areas



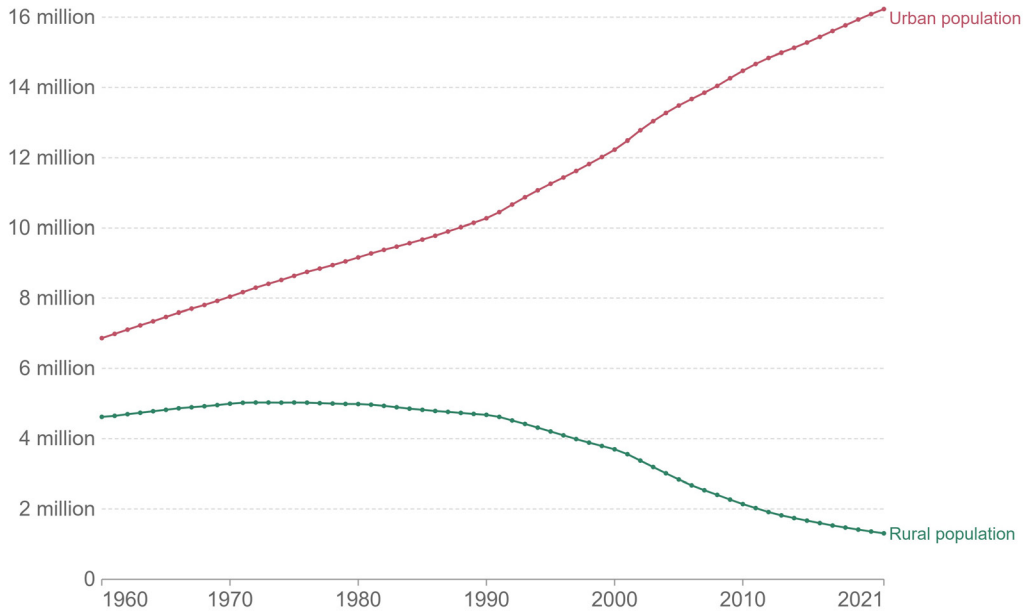
Data source: OWID based on UN World Urbanization Prospects 2018 and historical sources (see Sources)

Note: Urban areas are based on national definitions and may vary by country.

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Figure 3: Graph of the urbanisation of the world over the past 500 years (Ritchie & Roser, 2018).

Number of people living in urban and rural areas, Netherlands



Source: World Bank based on data from the UN Population Division

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Note: Urban populations are defined based on the definition of urban areas by national statistical offices.

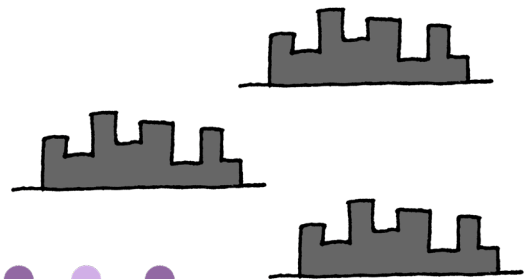
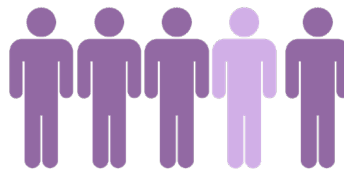
Figure 4: Graph of the number of people living in urban and rural areas in the Netherlands (Ritchie & Roser, 2018).

02 RESEARCH AIM

The aim of my research is to create architectural design guidelines for a small-scale housing facility including its immediate surroundings for adults with a Mild Intellectual Disability in an urban area. The potential to combine housing with additional neighbourhood facilities stimulating social interaction

will be taken into account. The guidelines will be focussed on improving the physical living environment of adults with an MID to reduce loneliness and segregation from society and support them in their everyday life to make them more satisfied in the growing urban landscape.

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03 SCOPE OF THE RESEARCH

Since 6,4% of the Dutch population has a Mild Intellectual Disability (Woittiez et al., 2019, p. 7) and the definition of a person with an MID contains a range of the IQ (see chapter 05 Definitions), it is very likely that there are large differences between individuals with an MID. For my research I will only get in contact with adults that know they have an MID, therefore the group of people I am empirically studying might not be representative for all adults with an MID. It is to be expected that my human-centred analysis is focussed on adults with a more sever MID, as they are all diagnosed.

The research will be focused on small-scale housing facilities of maximum 25 adults with an intellectual disability living in a group or on their own with care close by. Only facilities in the Netherlands will be analysed. I will be looking at different living concepts, including facilities for people with different levels of disability, but the focus will be solely on the adults with a Mild Intellectual Disability. The urban and architectural scale are most important for this research, interior design and furnishing will therefore not be taken into account.

04 THEORETICAL FRAMEWORK

The article of Reerink et al. (2017) introduces the 'waardigheidsparadigma' [dignity paradigm] that will be used as an theoretical framework to get a grip on what it means to design for people with a Mild Intellectual Disability nowadays. In the article they explain there has been a shift in the way of thinking about care for people with disabilities (figure 5). For a long time, an intellectual disability was seen as a medical problem. People with an ID were patients who needed to be cared for or treated in an institute. In the 1950s-1960s this mentality changed to normalisation and people with an ID were considered to be people with possibilities (instead of limitations) that could be trained

and developed. From the 1970s people with an ID were seen as people with rights and obligations that need support but should be integrated and included into society. The 'dignity paradigm' attempts to describe the current attitude towards people with an ID. My research will not delve further into defining this paradigm for people with an MID. The goal is to investigate what the architectural living environment of adults with an MID could look like according to this new perspective. It tries to find out how we can create a 'vital network' for adults with an MID whilst taking into account their desires and experiences to enhance the quality of life.

Paradigmata mensen met een beperking				
	<i>Defect-paradigma</i>	<i>Ontwikkelings-paradigma</i>	<i>Burgerschaps-paradigma</i>	<i>Waardigheids-paradigma</i>
Mensvisie	Mens met beperkingen	Mens met mogelijkheden	Mens met rechten en plichten	Mens met verlangens en ervaringen
Status persoon	Patiënt	Leerling	Burger	Medemens
Begeleiding	Verzorgen / behandelen	Trainen / ontwikkelen	Ondersteunen	Verplaatsen in / Prikkelen
Plaats van ondersteuning	Instituut	Speciale voorzieningen in de samenleving	Gewone voorzieningen in de samenleving	In vitaal netwerk
Maatschappelijke houding	Segregatie	Normalisatie	Integratie/inclusie	Verwachtingsvolle acceptatie

Figure 5: The development of paradigms through time (Reerink et al., 2017, p. 61).

The scheme *Overzicht* (influence of the) fysieke leefomgeving [Overview (influence of the) physical living environment] will be used to describe the living environment regarding adults with an MID (figure 6). Not all spatial aspects within the scheme are relevant for my research. Since the focus will be on housing and its immediate surroundings within an urban area, the following omgevingscomponenten [environment components] from the urban scale and building level will be investigated:

- 2. beschutting [embedding]
- 5. voorzieningen [facilities]
- 8. typologie & vorm [typology & form],
- 9. ruimtelijke organisatie [spatial organisation] and
- 12. buitenruimte [outdoor surroundings]

From the list of performance [performance] the aspects that seem most related to the characteristics of the 'dignity paradigm' will be analysed. Those aspects are the following:

- 3. controle/invloed op de omgeving [control/influence on the environment]
- 9. privacy [privacy] and
- 10. sociale interactie [social interaction]

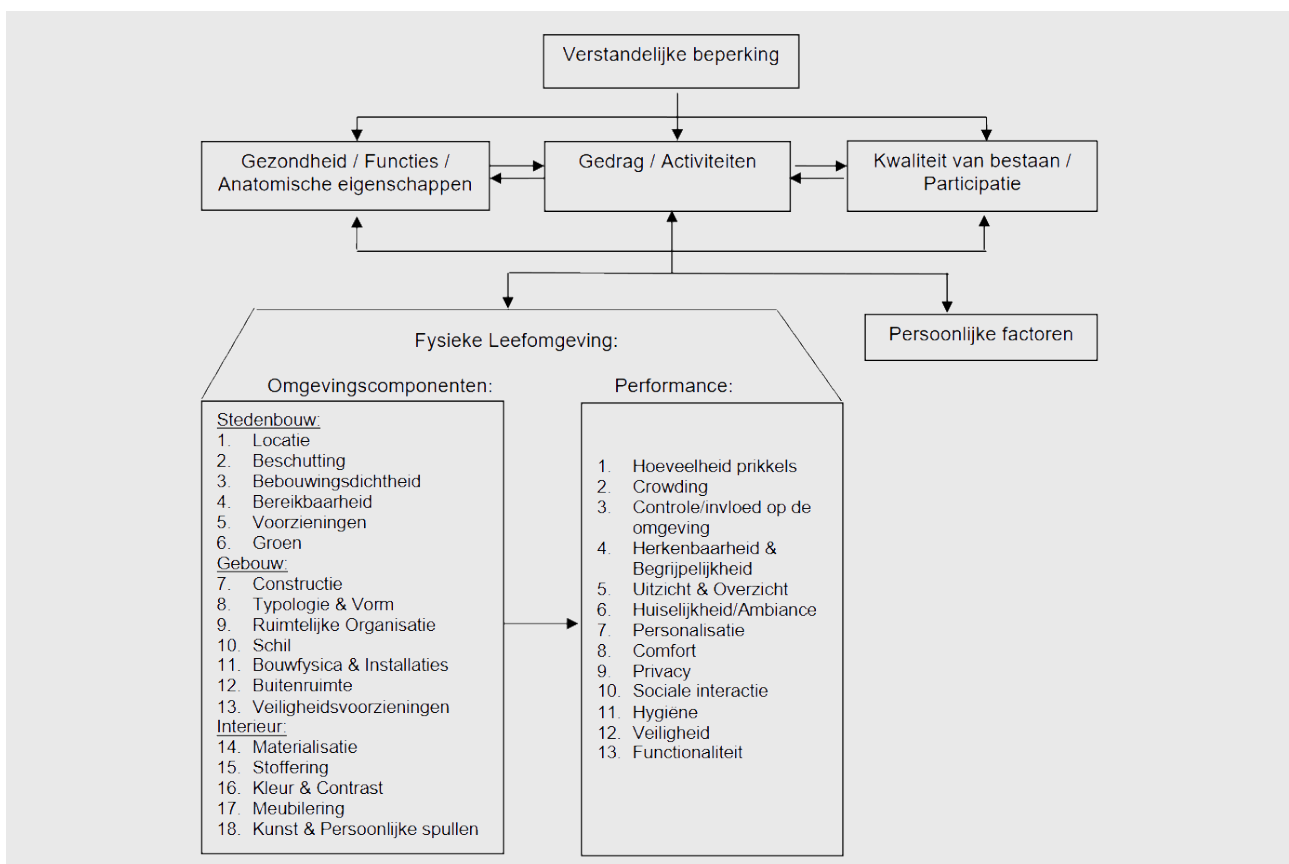


Figure 6: Overview (influence of the) physical living environment (Roos et al., 2022, p. 4).

As people with an ID find support in a 'vital network' according to the 'dignity paradigm' my research is focussed on finding living conditions that can foster such a network within an urban area. Therefore the measures and effects of urban green-blue grids will be studied. In the book 'Urban green-blue grids for sustainable and dynamic cities' (Pötz et al., 2012) the idea of urban green-blue grids is explained (figure 7). The book explores eight different themes: water, heat, biodiversity, urban agriculture, air quality, energy and economic and social value. Most measures that are discussed

contribute to multiple themes as they are part of a larger urban network. For my research the social value will be the most important theme to analyse as it focusses on health and well-being by reducing loneliness and social segregation. However, measures overlap so other themes will inevitable be touched upon as well. It is not my goal to include all different themes, but the additional effects of measures from the social value theme can be seen as advantages that can help to create extra support for implementing those measures.

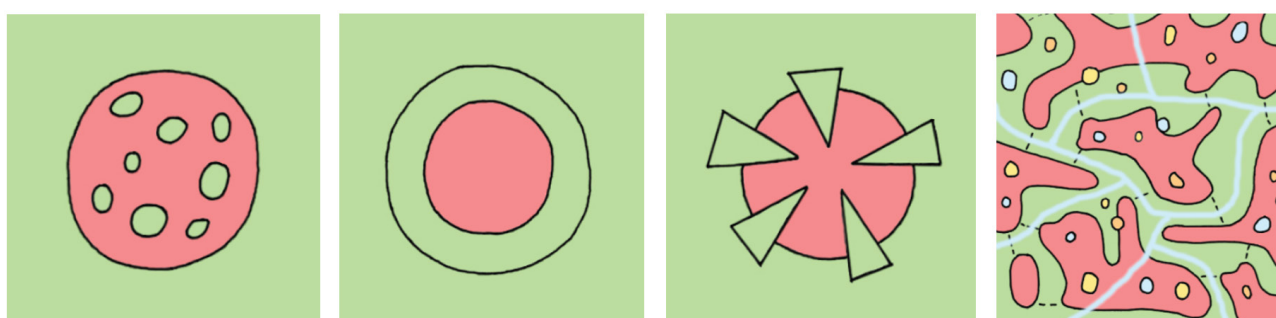
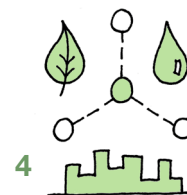


Figure 7: Development of green areas in cities. From left to right: 1. gardens in a walled city, 2. green ring 3. green slabs, 4. green-blue grids (Pötz et al., 2012, p. 26-27).

05 RESEARCH QUESTION

To tackle the challenges described in the problem statement and to be able to achieve the research objective, the following main research question will be answered:

“What living environment¹ for adults with a Mild Intellectual Disability² supports social engagement and meaningful experiences³ within urban green-blue grids⁴?”

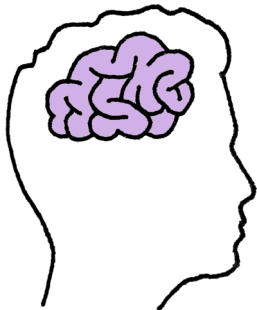


06 DEFINITIONS



1 Living environment

For this research the physical living environment is studied with an architectural focus on housing and its immediate surroundings. Spatial aspects like embedding, facilities, typology & form, spatial organisation and outdoor surroundings together with control/influence on the environment, privacy and social interaction will be used to describe the living environment



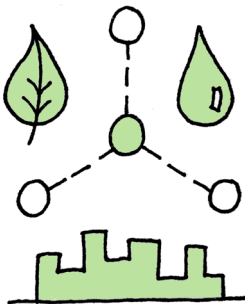
2 Mild Intellectual Disability

People with an IQ between 50 to 70, and people with an IQ between 70 to 85 who are not socially capable, are considered Mild Intellectual Disabled in the Netherlands (Woitfiez et al., 2019, p. 3). Social capability concerns communication, self-care, being able to live independently, social and relational skills, supporting community facilities, being able to take things independently, functional intellectual skills, work, relaxation, health and safety (American Psychiatric Association, 2013).



3 Social engagement and meaningful experiences

Social connections and personal experiences are crucial for a dignified life according to the 'dignity paradigm'. They foster 'an existence that, through optimal relationships, is as rich in experience and meaning as possible within the limits of what is practically 'feasible' (Reerink et al., 2017, p. 60).



4 Urban green-blue grids

Urban areas that actively integrate nature within their borders and create a network that protects existing vegetation and bodies of water are considered urban green-blue grids. Moreover, urban green-blue grids focus on climate adaptation, less heat stress, more biodiversity, food production, better air quality, sustainable energy production and quality of life (Pötz et al., 2012).

07 SUB-QUESTIONS

1

What different **living environments** are currently available for adults with a Mild Intellectual Disability?



2

What are the needs of adults with a **Mild Intellectual Disability** in relation to the living environment?



3

How can **social engagement and meaningful experiences** be fostered by the living environment of adults with a Mild intellectual disability?



4

How can **urban green-blue grids** support adults with a Mild Intellectual Disability?



08 METHODS

A combination of literature research and case studies with observations and interviews will be used to answer the research questions. Literature research will help to identify different living environments for adults with a Mild intellectual Disability and provide general descriptions of the available housing options. By doing literature study, I also hope to find theoretic

cal explanations of the needs of adults with an MID in relation to the living environment. Moreover, I will use this method to learn how social engagement and meaningful experiences for adults with an MID can be fostered according to literature. I will also do literature research on the effects and potential benefits of urban green-blue grids in general.

Next to the literature research I will do case studies. I will be visiting three different housing facilities for adults with a Mild Intellectual Disability. Comparing the different locations gives me an understanding of how the living environments perform currently and how they could be improved. I have arranged visits at the following locations:

- 1 a living group where people with different levels of disabilities live together,*
- 2 independent apartments with a meeting point for care within the building block and*
- 3 independent tiny houses in the yard of a care farm.*

I will try to do similar observations at every facility. My goal is to spend at least an hour in the 'common room/shared living space' of every facility with the themes of control/influence on the environment, privacy, social interaction and spatial organisation in mind. I will make pictures of the space (if I am allowed) and draw a floor plan. I will collect qualitative data by observing how the residents use the space, writing down or drawing what they do on their own or with help from caregivers and how they interact. I will also map how the private spaces relate to the 'common room/shared living space' and track the routing of the residents and caregivers between common and private areas. My aim is to spend at least another hour in the direct surroundings of the housing facility and describe the embedding, photograph the typology & form and map the outdoor surroundings. I will also map routes to important facilities in the neighbourhood.

Based on these observations I will do a combination of unstructured and semi-structured interviews. The unstructured interviews will help to establish rapport and comfort with the participants to get in-depth information about certain behaviours or feelings related to the spaces I observed. For the semi-structured interviews I will separately sit down with at least four adults with an MID, three caregivers, a relative and an initiator of a living concept. I prepared questions on the eight different spatial aspects (embedding, facilities, typology & form, spatial organisation, outdoor surroundings, control/influence on the environment, privacy and social interaction) and I will discuss measures and effects from the urban green-blue grids.

I have also planned a visit to a daycare facility where around 60 adults with an MID work, to get more impressions of the needs and wishes for the living environment from a larger group of adults with an MID. I will ask multiple individuals some of the questions from the semi-structured interview to get a broader understanding of my target group and collect more voices.



Literature research



Observations



Interviews

09 LITERATURE

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Woittiez, I., Eggink, E., & Ras, M. (2019). *Het aantal mensen met een licht verstandelijke beperking: een schatting*. Sociaal Cultureel Planbureau. SCP-publicatie 2019-6.

10 FIELDWORK WEEK

9 November – interview with a caregiver at a location with independent apartments and a meeting point for care within the building block (*'wonen met een trefpunt' concept especially for adults with an MID*)

10 November – tour through the building and interview with a resident at the same location

14 November – spending a day at a daycare centre (*work related daycare facility especially for adults with an MID*)

15 November – spending a day at a 'Thomashuis' (*living group where people with different levels of disabilities live together*)

16 November – spending another day at the 'Thomashuis'

17 November – interviews with initiator, caregiver, resident and relative at a carefarm (*with Tiny Houses in the yard especially for adults with an MID*)

