

A Multigenerational, Co-living Community for the Elderly

– ‘Designing for Care’: Research Plan –



Research Plan for ‘Designing for Care towards and inclusive environment’

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Introduction and Problem statement

Ageing is a phenomenon we saw coming years and years ago. The so called 'babyboom' right after World War II caused a massive increase of people reaching the age of 65 by 2011 and this won't stagnate for a while. Currently there are 1.3 million people with an age above 75 years living in the Netherlands; in 2030 this number is expected to be around 2.1 million. Many of them are physically well, but a decent amount needs some kind of care (Ministerie van Volksgezondheid, Welzijn en Sport, 2018). As the composition of the Dutch population is clearly changing, the housing and further built environment needs to undergo a transformation as well, providing the right facilities and living conditions for the elderly in care.

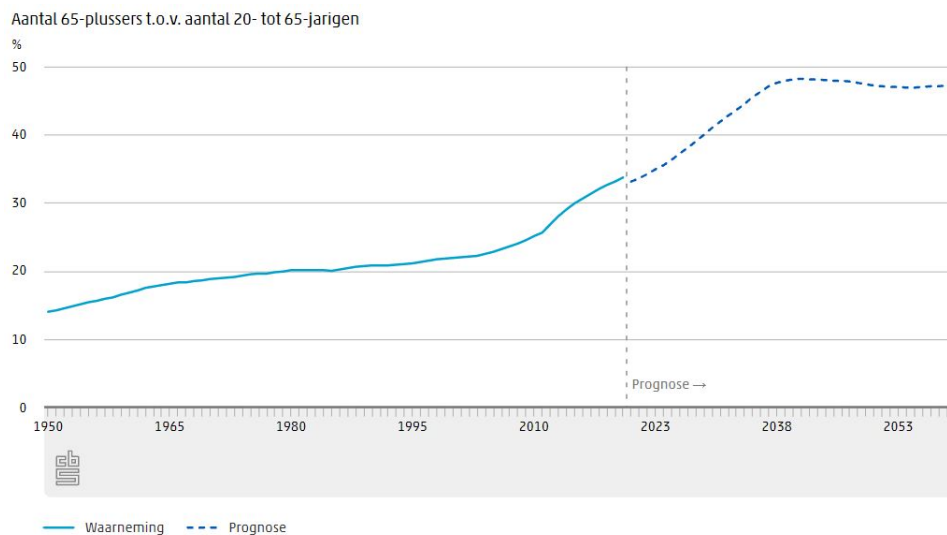


Fig. 1: Diagram showing the amount of over-65s in comparison to the 20-65 year-olds (CBS, 2021)

The research journey about this specific group of society started on the 20th of September 2021, when me and three other students went to a nursing home for a midweek to do fieldwork with the aim of getting to know the daily lives, activities, personal stories and opinions of the elderly people and other residents there. Simultaneously we tried to see how the architecture supported these needs. Our stay and fieldwork took place in the neighborhood Assendorp near the city center of Zwolle: in 'Huis Assendorp'. *'The former, old-fashioned nursing home, called 'De Molenhof', is transformed and renovated to reflect the character of Assendorp itself, with a mix of young and old residents and the possibility for local residents and visitors to meet, which creates a fresh dynamic and a familiar environment within the building. Well-arranged and affordable homes, a diverse arrangement of collective spaces and several commercial facilities make Huis Assendorp fully equipped for the residents' needs. The building is set up and furnished together with the inhabitants, making it an open and lively residential community all about freedom, independence, self-esteem and reciprocity.'* This description of this particular "nursing" home is given by Huis Assendorp of the building itself, together with 'Habion', the housing association in charge of the renovation and implementation of this new housing and living concept. Through fieldwork, observational research and analysis, we as architecture students gave ourselves the task to find out if this "utopian living environment" and concept really worked as well as stated here.

Thinking back to this week, the thing that immediately comes to mind is the huge variety of residents, their personalities, opinions, thoughts and role within this multigenerational community in Huis Assendorp. Everyone there feels free to express their thoughts, positive or negative, and they do this regularly during the several tea/coffee moments every day while coming together in the multiple collective spaces on ground level, like the 'great hall' or the so called 'Theetuin' (Tea garden). Specific groups could be distinguished, with every one of these groups taking a specific spot within the common spaces. This shows that their community is diverse enough for every individual to find company and to don't be alone. However, almost every day we saw the same people join the collective coffee hours, which means that a large part of the community was still at home, but this isn't a bad thing per se: some

people (maybe even more the elderly) really value their privacy and the community concept gives freedom to the residents to act accordingly.

The implementation of this concept into the former nursing home that was Huis Assendorp by Habion is an example of tackling certain problems that the elderly (and other age groups) have to deal with on a national level:

- Loneliness: multiple age groups stated they feel alone, but especially the elderly suffer from loneliness. On the 20th of March 2018 the Dutch Ministry of Health, Wellbeing and Sports launched their action program 'One against loneliness', spreading lots of information concerning this subject. It states that 43% of all adults experiences loneliness and among the elderly this percentage is even higher: 54% (of which 11% has a strong feeling of loneliness). In 2018 this were 700.000 lonely elderly, but in 2030 this number could rise to 1.1 million. This high percentage has many causes: the loss of a partner, losing a network of friends, family and acquaintances and the emergence of health problems like ones mobility, hearing or sight, stopping someone to easily go somewhere to meet or participate in activities. (Ministerie van Volksgezondheid, Welzijn en Sport, 2018) Huis Assendorp and its multigenerational concept is an example of a good attempt at tackling loneliness, but the architectural design hinders it.
- Less and less healthcare staff: Unfortunately, while the number of elderly people is growing, the shortage of healthcare staff is increasing as well. In the worst case there will be a shortage of 74.000 healthcare personnel in 2022, but this prognosis was done before the COVID-19 crisis, so the real number will be even higher than this. This shortage will also negatively impact the elderly/home care. It is getting more problematic when knowing that an estimated 2 million persons working in the care are needed in 2040 in comparison to the 1.4 million in 2020 (Dutch Health Hub, 2021).
- The Dutch housing market situation: also the housing shows a considerable shortage. In 2021 this number is around 300.000. That is the number of households that is forced to have no home of their own. Branch organization Aedes says the following: *'Flow is an important point as well. The elderly often stay in a social rental home, because of a shortage in proper homes for the elderly.'* (NOS, 2021) In the Netherlands the elderly definitely need proper homes, as 92% of the over-75s lives independently. Even two-thirds of the over-90s still lives on their own. *'Many elderly people feel the need to live together/near other elderly or households, with facilities nearby'*. (Rijksoverheid, 2019).

Simultaneously playing out with the general problems in the Netherlands regarding the elderly, were some more specific problems we noticed during our stay at Huis Assendorp, most of which could be explained by the flaws of the architectural lay-out and questionable distribution of spaces, functions, dwellings and inhabitants throughout the building. The first impressions we got from the architectural plans of Huis Assendorp showed already something interesting: the building consists of two residential wings, contrasting in apartment size, interconnected by a perpendicular wing, containing all the collective spaces and commercial facilities. During the fieldwork trip however, we discovered that the size of the apartments was not the only factor causing the two wings to contrast with each other: the age of the residents, height of the rent, available outdoor space and facilities within the apartments themselves. The commercial functions right in between the two wings actually added to this disconnection by for example claiming the former collective spaces as their waiting room. While there are enough rooms still functioning as collective spaces, some of them are barely used due to their illogical position in the building or their poor usability for the elderly.

Next to the physical division of the two wings within the building, these differences in dwelling and architectural flaws also cause a social division, accompanied by complaining, personal frictions and sometimes even jealousy. The multigenerational concept works reasonably well in Huis Assendorp, but the architecture itself is a bump in the road on the way to its full potential.

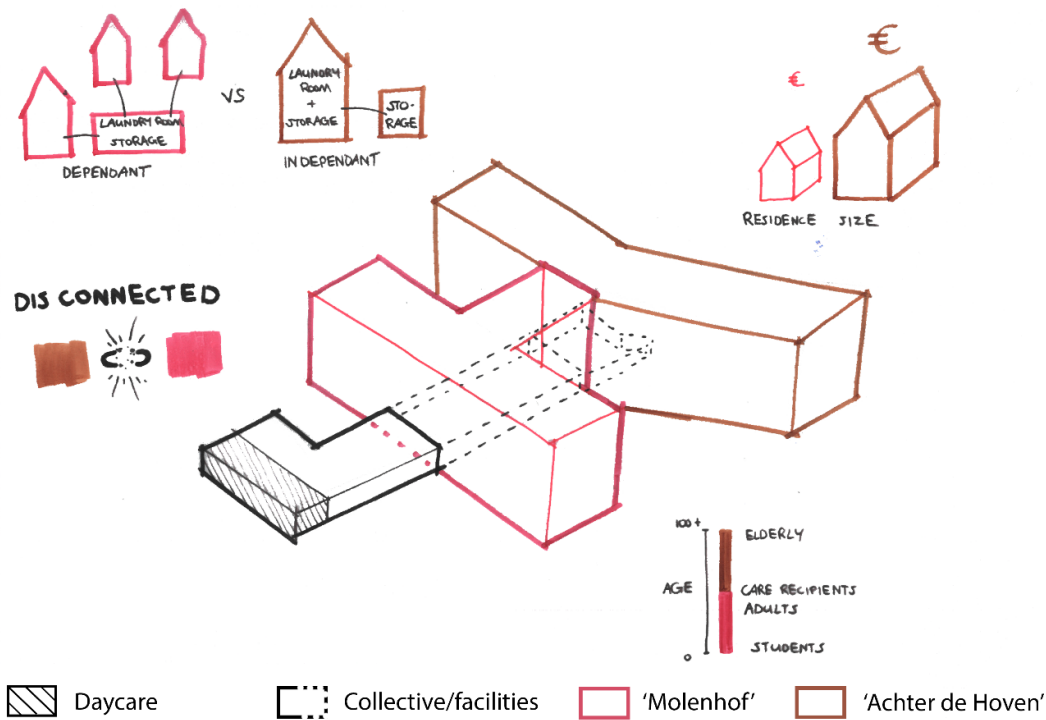


Fig. 2: Problematic findings from our fieldwork trip in Huis Assendorp; disconnection due to social contrasts and flaws in architectural design

The vast majority of the housing and care arrangements focusses on the target group of the elderly, instead of a mix of target groups. However, multiple studies show that the elderly are generally more interested in residential communities with young and old people mixed together, rather than those only with elderly people; to live, after their working life, in an environment that structurally provides more contact options in comparison to their previous place of residence. They want to stay connected with and contribute to society, which still seems to be a challenge. However, mutual services contribute to older people being able to live independently for longer. (Aedes-Actiz Kenniscentrum Wonen-Zorg, 2008). Next to that, there are reports of psychosocial benefits of interaction between different, generational groups, including a broader view of self, reduced depression, an increase in social connectedness, increased positive thinking toward the other, reduced stereotypic thinking and more hope for the future (Knight et al., 2014). Concepts concerning 'intergenerational co-living' could bring these different target groups together, combined with the benefits and opportunities these groups could bring to the table.

So, as described do problems occur on both the small and bigger scale within the care and housing for elderly. These problems will grow as the years go by due to the aging of the elderly and the shortage in proper homes and health care workers. This design research will be done to discover possibilities for architecture to form a solution for the stated problems, on the physical level of the building as well as the social level of the people; possibilities to put it in practice. Architectural design will play a huge roll in facilitating this new concept of intergenerational co-living, as the current architecture doesn't support it.

Main research question

To properly find architectural solutions for the found problems, a focused research needs to be done, supported by several research questions, starting with the main research question.

- **How can architectural design establish multigenerational, co-living communities in which elderly can be easily cared for?**

A hypothesis for this research question is an architectural typology designed in such a way, it stimulates and facilitates social cohesion, interaction and care between the younger and older or stronger and weaker individuals within the community, but keeping the possibility for privacy as well. This can replace some of the professional care less and less healthcare staff is able to give. Furthermore, in this way the unprofessional care can be arranged within the whole community among themselves (adults to the elderly, elderly to the children, and so on). The elderly can still live independently with care nearby at any time, integrated with society due to all the other generations living besides them, and the other target groups, like starters and students, could get subsidized to live in this community for doing communal tasks, help and care, while simultaneously getting a home in these times of great housing shortages.

Theoretical definitions

Some terms from the main research question must be defined or made clear to be able to do a more focused research. The set definitions also form a frame of criteria as a base for setting up further sub questions and for example the search for useful case studies.

'Architectural design'

The 'Master of Architecture in Collective Housing, MCH, a collaboration of Universidad Politécnica of Madrid (UPM) and Swiss Federal Institute of Technology (ETH) states the following description of 'architectural design': **'a mix of *design*, understood as the creative process, and *architecture*, which is based on the creation and presentation of built solutions at a technical level, that focuses on covering and meeting the needs and demands; to create living spaces, using certain tools and especially, creativity'**.

'Multigenerational'

The definition of this term is the following: **'consisting of, relating to or involving multiple generations, as of a family or society'** (Merriam-Webster dictionary, 2021; Dictionary.com, 2021). Connecting this adjective term with 'community', it tends to lean more towards the use of 'multiple generations of society', but this does not exclude 'multiple generations of a family' living (closely) together within a community. It can also be interpreted as 'multiple generations of a family, but from different households in society', for example a student, an adult couple and an elderly woman living in separate houses but within the same unit of dwellings, sharing several facilities.

'Community'

Multiple online dictionaries give comparable definitions, coming down to the following description: *'the people living in one particular area or people who are considered as a unit because of their common interests, social group, or nationality, and who are perceived or perceiving themselves as distinct in some respect from the larger society within which they exist'* (Cambridge dictionary, 2021; Merriam-Webster dictionary, 2021; Dictionary.com, 2021). The term 'community' often goes hand in hand with the concept of **'co-living (communal living)'**: *'the practice of living with other people in a group of homes that include some shared facilities (areas, rooms, equipment or services for particular activities'* (Cambridge dictionary, 2021).

Mixing the two together, forming a “co-living community”, would create ‘a group of people living in one particular area as a unit, including some shared facilities, who are perceived or perceive themselves as distinct in some respect from the larger society within which they exist’.

‘The elderly’ vs ‘the elderly in need of care’

The Dutch National Institute for Health and Environment sets the criterium for being ‘an elderly person’ as ‘they were born at least 65 years ago’, so 65 years old and above. However, when looking at ‘the elderly in need of care’ this number needs to be adjusted, as from the age of 75 the risk of illness and limitations clearly increases and the perceived health and physical quality of life decrease (RIVM, 2011). As this research is done in the field of ‘Designing for Care’, the age of 75+ will be chosen to define ‘the elderly in need of care’ from now on.

Sub questions

A selection of research sub-questions is made to further elaborate/divide the needed background information to eventually find a suitable solution for the stated problems. These are the following:

- Which age/generational groups would fit in a co-living community together with elderly people and why?
- Which variety and mix of dwellings, facilities and spaces should be offered to make the co-living community meet the needs of the multigenerational target groups?
- What is a suitable size for a co-living community?
- Which architectural typologies could facilitate a multigenerational co-living community best?
- How can ‘care’ be categorized in ‘professional care’ and ‘unprofessional care’?

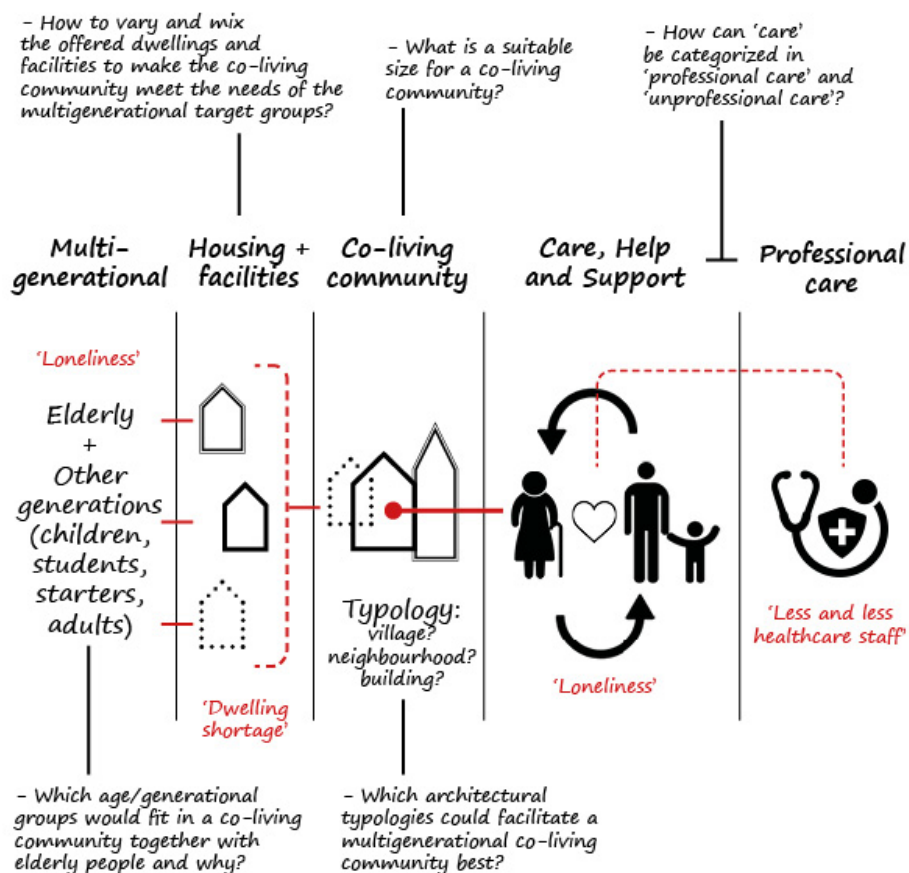


Fig. 3: Schematic visualization of research questions and hypothesis, including indications to the problem statement

Methodology

Now the research questions and definitions are formulated, the methods that will be used to find the answers to these questions will be discussed. Different sources next to the actual design process are essential to give the final result background, meaning and a purpose.

- Literature research: Multiple subjects have to be understood well or defined to implement them into the design and final product. A lot of information can be gathered regarding the community aspect in combination with co-living with multiple generations; on the architectural scale as well as the social scale. To determine the size of such a community is important as well, as it will function as a criterium for the collection of sources and case studies about the subject. Different age groups come with their needed facilities, spaces and other elements in the direct living environment, especially when looking at the older generations' physical disabilities and possible mobility issues. Speaking about the older and/or weaker target group, the available care needs space in the project too; the professional as well as the unprofessional care.
- Case studies: the literature I can find about communities and/together with care in the built environment can be supported by case studies regarding the same subject. Analysis of these examples could give me inspiration, techniques and ways to come up with design tools and typologies for the community. The most important part of the analysis would be the role of the user in the project, as with these mixed generations there is more difference in daily lives to deal with and provide architecture for. Here the function of different spaces plays a huge role as well, as does their level of publicness, collectiveness and privateness. The found case studies will also play a huge role in the determination of the architectural typology of the built community as a whole.
- Fieldwork: the midweek we stayed in nursing home Huis Assendorp was way too short and specific to get enough general knowledge about the elderly, their daily lives and the experience of their living environment. A different group of individuals in a different building with a different context will quite logically result in different opinions and stories. However, the information we got from Huis Assendorp is already very important, especially for my topic of research regarding the community with different age groups as the residents. The planned fieldwork trips are similar to case studies, as they can be compared to each other to discover similarities and differences; to see what is common and what is unique about the different nursing homes and their residents. The fieldwork would contain the same types of analysis: questionnaires/interviews, observations, taking photographs, sketching, mapping etc. To specify the questions asked, they would regard social contacts with other age groups/generations, their opinions on (possible) community housing and maybe even in what shape or form they see this concept work.

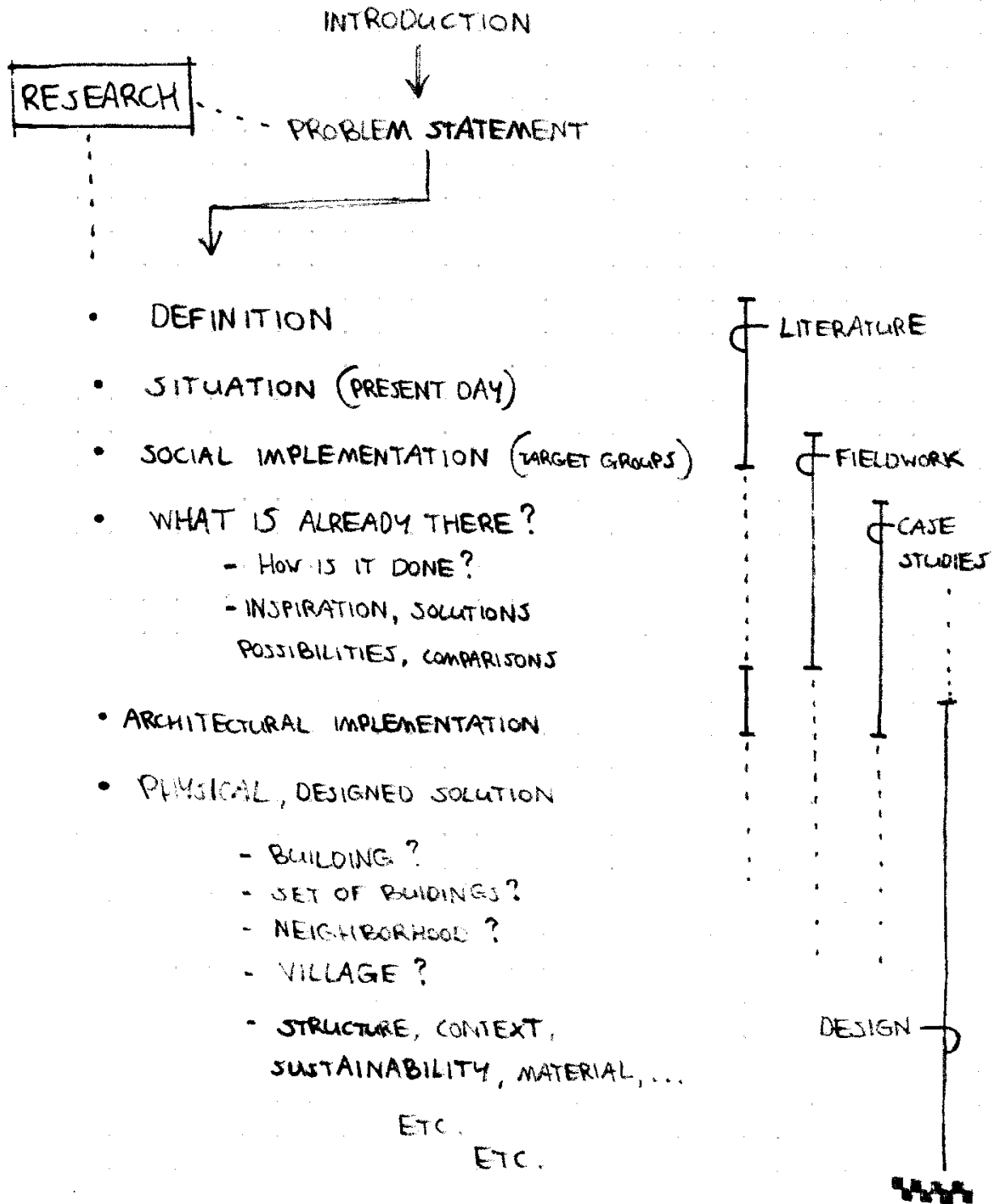


Fig. 4: Methods during the process of the total research and design

Sources for research

- Aedes-Actiz Kenniscentrum Wonen-Zorg (2008, March). *Wonen voor alle leeftijden. Een onderzoek naar woonprojecten met meer generaties en onderlinge dienstverlening.*
- Andersen, J., Bilfeldt, A., Mahler, M., & Sigbrand, L. (2021). *How Can Urban Design and Architecture Support Spatial Inclusion for Nursing Home Residents?* International Perspectives on Aging, 397–408. https://doi.org/10.1007/978-3-030-51406-8_31
- Arentshorst, M.E., Kloet R.R., Peine A. (2019). *Intergenerational Housing: The Case of Humanitas Netherlands*, Journal of Housing For the Elderly, 33:3, 244–256, DOI: 10.1080/02763893.2018.1561592
- Bodner, E., Cohen-Fridel, S., & Yaretsky, A. (2011). *Sheltered housing or community dwelling: Quality of life and ageism among elderly people*. International Psychogeriatrics, 23(8), 1197–1204. doi:10.1017/S1041610211001025
- Department of Social Development and the Department of Transportation and Infrastructure. (2015). *Design Standards for Nursing Homes*. New Nouveau Brunswick.
- Eijkelenboom, A., Verbeek, H., Felix, E., & Van Hoof, J. (2017). *Architectural factors influencing the sense of home in nursing homes: An operationalization for practice*. Frontiers of Architectural Research, 6(2), 111–122. <https://doi.org/10.1016/j.foar.2017.02.004>
- Gerards, S., R. De Ridder, and S. De Bleekere. 2015. “*Designing Multigenerational Dwelling: A Workshop with Four Flemish Architecture Firms.*” International Journal of Architectural Research: ArchNet-IJAR 9 (2): 20–30. doi:10.26687/archnet-ijar.v9i2.658.
- Hollie Sin (2020). *Retrofitting Suburbia: A Move Towards Multigenerational Living*. UWSpace. <http://hdl.handle.net/10012/16352>
- Knight, T., Skouteris, H., Townsend, M., & Hooley, M. (2014). The Act of Giving: A Systematic Review of Nonfamilial Intergenerational Interaction. Journal of Intergenerational Relationships, 12(3), 257–278. <https://doi.org/10.1080/15350770.2014.929913>
- Leininger, M. M. (1988). *Care: The Essence of Nursing and Health (Human Care and Health Series)*. Wayne State University Press.
- Mann-Lewis, B. (2014). *A Multigenerational Home: Designing Architecture that Facilitates Multigenerational Care*. Carleton University Research Virtual Environment. <https://doi.org/10.22215/etd/2014-10296>
- Park, J., & Porteous, J. (2019). *Age-friendly Housing*. Van Haren Publishing.
- Parker, K.J. *Multigenerational living: Design for Ageing*. Ageing Int. 25, 90–100 (2000). <https://doi.org/10.1007/s12126-000-1014-x>
- RIVM (2011). *Gezond ouder worden in Nederland*. (270462001) <https://www.rivm.nl/bibliotheek/rapporten/270462001.pdf>

- Roger J. Brown & Ying Zhang (2006) *Senior Housing*, Journal of Housing For the Elderly, 20:1-2, 75-96, DOI: 10.1300/J081v20n01_05
- Ross Chapin Architects. (n.d.). *Pocket Neighborhoods • Creating Small Scale Community in a Large Scale World*. Pocket Neighborhoods. Used on October 25, 2021, from <http://pocket-neighborhoods.net/>
- Souza, E. (April 19, 2021). *What is Co-Living?* ArchDaily. Used October 25, 2021, from <https://www.archdaily.com/915335/what-is-co-living>
- Spevak, E. (2020). *Friends of all ages: Life in a multigenerational community*. AIA. Used on October 19, 2021, from <https://www.aia.org/articles/5636-friends-of-all-ages-life-in-a-multigeneration:61>
- Sung, S. J. (2015). *Reconnect Generations: Intergenerational Housing*. University of Washington. <http://hdl.handle.net/1773/35088>
- Winters, S. (2003). *Gedwongen om na te denken: Naar een betere aansluiting van wonen en zorg voor ouderen*. OCMW-VISIES, 1
- Woodward, A. *Housing the elderly*. Society 19, 52–57 (1982). <https://doi-org.tudelft.idm.oclc.org/10.1007/BF02712909>
- Yoon, K. Y. (2020). *Multigenerational housing projects and integrating elderly*. University of Stavanger. <https://uis.brage.unit.no/uis-xmlui/handle/11250/2681010>
- Yoshino, S. (2012, March). *Social Integration of Elderly and Architecture*. University of Cincinnati. https://etd.ohiolink.edu/apexprod/rws_etd/send_file/send?accession=ucin1337102120&disp osition=inline

Sources (introduction, problem statement, definitions):

- Cambridge Dictionary. (2021, 20 October). *Co-living definition*. Used on October 22, 2021, from <https://dictionary.cambridge.org/dictionary/english/co-living>
- Cambridge Dictionary. (2021, 20 October). *Community definition*. Used on October 21, 2021, from <https://dictionary.cambridge.org/dictionary/english/community>
- Dictionary.com. (2021). *Definition of community*. Used on October 21, 2021, from <https://www.dictionary.com/browse/community>
- Dictionary.com. (2021). *Definition of multigenerational*. Used on October 22, 2021, from <https://www.dictionary.com/browse/multigenerational>
- Habion. (2021). *Huis Assendorp - Zwolle*. www.habion.nl. Used on October 7, 2021, from <https://www.habion.nl/projecten/de-molenhof-zwolle/>
- Huis Assendorp. (n.d.). *Ons verhaal*. Huis Assendorp Zwolle. Used on October 7, 2021, from <https://www.huisassendorp.nl/ons-verhaal/>

- MCH, MAS in Collective Housing. (2020, 23 maart). *Architectural design: definition, types and examples*. MCHMaster. Used on November 1, 2021, from <https://www.mchmaster.com/news/architectural-design-definition-types-and-examples/>
- Merriam Webster Dictionary. (2021). *Community*. The Merriam-Webster.Com Dictionary. Used on October 21, 2021, from <https://www.merriam-webster.com/dictionary/community>
- Merriam Webster Dictionary. (2021). *Multigenerational*. The Merriam-Webster.Com Dictionary. Used on October 22, 2021, from <https://www.merriamwebster.com/dictionary/multigenerational>
- Ministerie van Volkshuisvesting, Ruimtelijke Ordening en Milieubeheer. (2019, 12 juli). *Ontwikkelingen woningmarkt senioren*. Seniorenwoningen | Rijksoverheid.nl. Used on October 8, 2021, from <https://www.rijksoverheid.nl/onderwerpen/seniorenwoningen/ontwikkelingen-woningmarkt-senioren>
- Ministerie van Volkshuisvesting, Ruimtelijke Ordening en Milieubeheer. (2021, March 5). *Aanpak eenzaamheid onder ouderen*. Eenzaamheid | Rijksoverheid.nl. Used on October 8, 2021, from <https://www.rijksoverheid.nl/onderwerpen/eenzaamheid/aanpak-eezaamheid>
- Ministerie van Volksgezondheid, Welzijn en Sport (2018, March). *Actieprogramma: Eén tegen eenzaamheid*. Eenzaamheid | Rijksoverheid.nl
- NOS. (2021, February 17). *Schreeuwend tekort aan woningen, wat moet eraan gedaan worden?* Used on October 8, 2021, from <https://nos.nl/artikel/2369109-schreeuwend-tekort-aan-woningen-wat-moet-eraan-gedaan-worden>
- Sterenborg, K. (2021, October 12). *Het personeelstekort in de zorg: oorzaken en oplossingen*. Dutch Health Hub. Used on October 8, 2021, from <https://www.dutchhealthhub.nl/artikel/het-personeelstekort-in-de-zorg-vijf-oorzaken/>

Sources (images):

- CBS. (2021). *Grijze druk* [Graph]. <https://www.cbs.nl/nl-nl/visualisaties/dashboard-bevolking/leeftijd/ouderen>