CREATIVE

SYNERGY

Housing for Creatives
Towards a synergy fostering environment

Architecture Graduation Studio
Dutch Housing: Advanced Dwelling

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INTRODUCTION

This booklet is a portfolio documenting the graduation studio on the topic of Dutch dwelling. The project site is located in the Merwevierhaven in Rotterdam.

Chronologically, the studio consists of two phases. In the first phase, studio members split up into groups and researched existing neighborhoods to gain insight into dwelling design on both the urban scale and the typological scale. Parallel to this, the groups also conducted research on collectiveness and its relation to architectural design through a series of field-studies. With the knowledge from the research phase, each student entered an individual design process, where research and design occured hand in hand.

One of the main topics of this studio is the creation of an inclusive city, a city where each individual can be accommodated. However in Rotterdam, the creatives have been struggling to claim a space of their own, as there is a huge shortage of artist workspaces and housing. In addition to that, many creatives earn well below the modal income level and therefore struggle to afford adequate living space in combination with the workspace they need. This project strives to alleviate these issues with a design that for one, reliefs the shortages of not only housing but also workspaces and secondly, tackles the issue of affordability.

The final design focuses on the creation of a synergy fostering environment for creatives, which promotes inter-discplinary synergy and consequently, creative success.

RESEARCH
THE CREATIVE CLASS

ABSTRACT

The presence of creatives or the 'creative class' is observed to act as a stimulant for regional and local urban transformation and gentrification. Global statistics state that the creative industry serves as a major economic driving force of the twenty-first century. For Rotterdam, a global metropolis, the need for creativity grows hand in hand with its need to attract and hold talent. The necessity exists to perpetuate the creative city image and to remain competitive on the world stage. However, the lack of creative workspace and housing has become a stringent issue for Rotterdam and its creative community. By looking at the issue through a historical lens, the research establishes the insufficiency of present policies and proposes a solution in the form of physical architecture, with the goal of relieving spatial shortages and bettering the livelihoods of creatives through facilitation of interdisciplinary synergy.

Be creative - and die

'Be creative – or die' is how writer Christopher Dreher sums up the changes in urban development caused by the so-called 'creative class'. A term coined by Richard Florida[1] in his book 'The Rise of the Creative Class', in which he illustrates the global shift from the Organizational Age – an era of bureaucracy in which workers are bound under organisations and nine-to-five workdays were considered to be the norm – to the Creative Age. The creative class appears to be powering this shift, or rather, the growing recognition of human creativity as the powerhouse behind the ongoing developments in the domains of technology, innovation, culture and economy. The growing importance of human creativity on the global stage is also apparent in national statistics. In the UK for example, the number of jobs in the creative economy has grown by 416 thousand from 2012 to 2016 (Rocks, 2017). In the Netherlands, which is seen as a creative powerhouse, has seen a 3.4% growth in the creative industry per year between 2015 and 2018, equalling twice the growth of the entire Dutch economy (Rutten, Koops, & Visser, 2019).

The ascent of the creative class has brought forth economic growth and spurred on urban development across the globe, but it is not all sunshine and rainbows. Paired with the growth of the creative economy is the gentrification pioneered by the creative class, resulting in a myriad of social-economic and social-geographical issues: income-based segregation, centralisation of poverty (Florida, 2012, pp. 332-333) and displacement of in many cases the creatives which caused the neighbourhood to flourish in the first place (Cameron & Coaffee, 2005). The same is happening in Rotterdam, where the urban economic growth generated by the creative economy has presented the municipality the profitable option to sell real estate – which used to be workspace for creatives – to commercial developers. The scarcity of space causes its price to grow, eventually leading to the disappearance of entire creative and culturally centred neighbourhoods.

The issue of shortage of work-and presentation space for musicians, performers, (street)artists and crafters has not been entirely neglected by the municipality of Rotterdam. In a government issued report, the Rotterdamse Raad voor Kunst en Cultuur[2] (RRKC, 2018) states that Rotterdam as a 'cultural hotspot' should recognize

the value that creatives generate for the urban environment and the city, and that the lack of work-and presentation space greatly affects the flow of talent and inhibits the development of young talent. Furthermore, the RRKC urges the development of places for artists and makers to cross-over, where functions such as work and experimenting, producing and organising can take place simultaneously. In the past two decades, Rotterdam has developed several creative hubs and breeding grounds such as 25KV, Schiecentrale and Van Nelle Ontwerpfabriek. However, these developments were often financially motivated rather than designed for their creative/cultural benefits (SKAR, et al., 2017).

In spite of the municipality's efforts, artists and creatives are still struggling to find suitable workspaces. The number of artists waiting for work studios has grown from around 300 (four years ago) to 782. According to Olof van de Wal, director of SKAR[3] , the demand is double the current offer, he adds that if Rotterdam wants to remain the 'fun' city it is, the municipality needs to get into action now, before the artists are left with no choice but to move away from the city.

While for the city of Rotterdam, the statement 'be creative – or die' may be accurate, for the creatives of Rotterdam the opposite may be closer to the truth: 'be creative – and die'.

Be Creative - ~~or~~ Die **AND**

[1] University Professor and Director of Cities at the Martin Prosperity Institute at the University of Toronto's Rotman School of Management (Florida, The New Urban Crisis, 2017, p. 217)
[2] Rotterdam Counsel of Art and Culture
[3] Stichting Kunst Accommodatie Rotterdam (Foundation Art Accommodation Rotterdam)

Positioning and methodology

Regarding the creative environment of Rotterdam, two core issues can be identified:

• The current state of affairs for creatives in Rotterdam does not adhere to the municipalities vision of Rotterdam as a 'cultural hotspot'. Nor does it aid the city in the global contest for international talent.

• There is an extreme lack of dedicated studio dwelling and workspaces for creatives within Rotterdam, furthermore, the current studio spaces may not always provide options for creatives to promote their work, leaving them stranded in their own 'bubble'. As a result, artists remain trapped in their current financial circumstance.

This research explores these issues in more detail from two positions, on one hand the position of a consultant designer for the municipality, aiming to provide an informed architectural design as a response to the creative housing and workspace issue. This is with the realisation that for any housing initiative to be successful, support of the municipality is a must. This role is therefore required to illustrate not only the city's need for a creative live-work environment, but also the necessity. On the other hand, is the role of the advocate designer, which substantiates possible solutions from the position of an advocate for the creatives, with insight into their preferences on aspects including functionality and live-work mode.

The consultant designer perspective necessitates a deep understanding of the historical development around creative housing, workplace and initiatives. Furthermore, the benefits of a creative live-work environment for the city must be made apparent for both the municipality and the designer. Which brings us to the first research question:

How does Rotterdam benefit from the development of live-work environments for creatives?

The advocate designer perspective focuses on the second core issue mentioned previously, which is perhaps a financial issue just as it is a spatial one, requiring so-

cial-economic and/or political solutions to fully remedy. However, the scope of this research will be limited to finding spatial solutions given the limited time span and the ultimate goal of providing a groundwork for architectural design. Thus, leading to the following research questions:

How can the architectural design of a live-work environment contribute to the career prospects/professional growth of creatives?

Which mode of live-work housing do creatives prefer?

The report attempts to answer these questions by means of the following research.
•   A literature study on the definition of creatives and the historical development of creative housing and workspace in the Netherlands. This provides the theoretical foundation needed to frame the issue surrounding the topic of creatives more precisely. Further literature studies include the topics of the workings of the creative industry and the modes of live-work housing.
•   A qualitative questionnaire targeted at creatives in order to gain insight into their preferences regarding live-work environments. Following are example questions from the questionnaire:

-Do you experience conflict between work and your private life? If so, please elaborate.
-To what extent is your working environment separated from your living environment?
-When it comes to live-work environments, which of the following live-work configurations would be most suitable for your current circumstances:
(1) Work and live within the same room. (2) Work and live in separate rooms/floors. (3) Work and live completely separated, but in close proximity.

The subjects are individuals who conform with the definition of creatives resulting from the conducted literature study. Questionnaire results are interpreted in combination with statistical findings of the same target group.

- A plan-analysis on live-work dwellings designed for creatives, including:

Treehouse – Bo-DAA
KLEO Art Residences – JGMA
Cheval Noir – L'Escaut + Atelier Gigogne
Atelierwoningen Zomerdijkstraat – Piet Zanstra, Jan Giesen and Karel Sijmons

Analysis of the case-studies focus on the aspects of **circulation type**, **live-work mode** and **routing**, with the goal of identifying architectural interventions that influence the creation of synergy.

The definition of creatives

The term 'creatives' is an ambiguous one, as creativity is arguably present in all of us. So, what does it really mean to be a 'creative'?

Relation to the creative industry

If we follow Richard Florida's definition, a creative, or a core member of the Creative Class, is someone active in the field of science, engineering, architecture, design, education, arts, music and entertainment whose main function is to innovate, to come up with new ideas, create new concepts. He even goes as far as to include people in the fields of business, finance, law and healthcare, which he refers to as 'creative professionals'. He believes the common attribute of creatives to be the mentality which puts creativity, individuality and merit above all else. Another point of identification is the type of work creatives deliver, which is mental labour, as opposed to routine, physical work done by the Working Class and the Service Class (Florida, 2012, pp. 8-9). Being a creative is thus closely related to the work they do and the industry they belong to, the creative industry.

If we look at the definition of the creative industry as posed by Paul Rutten, we see similarities between the core values of Florida's Creative Class – creativity, individuality, merit – and Rutten's core elements of the creative industry – creativity, entrepreneurship, meaning (Rutten, Manshanden, Muskens, & Koops, 2004). Here, the terms 'merit' and 'meaning' can both be understood as the artists search for worthiness, a sense of accomplishment or virtue. While individuality indicates a need for differentiation of the individual from the masses, in a sense, a need for independence, which translates to entrepreneurship in the domain of business and industry. These terms may not cover the full meaning of being a creative, but can be taken as the defining factors of the nature of creatives.

Subsectors within the creative industry

The creative industry contains many disciplines, which can be categorised into three main subsectors: art and cultural heritage, media and entertainment, creative business services. The subsector art and cultural heritage includes disciplines

such as: visual arts, performance arts, writing and art preservation. The media and entertainment subsector includes: radio and television, publishing, film and music. The creative business services subsector includes: design and communication & information (Rutten, Koops, & Visser, 2019, pp. 140-141).

The creative production pipe-line

We have now identified the subsectors within the creative industry and distinguished the creative industry itself from other industries. However, in order to clearly define the boundaries of the creative sector, there is need to determine which economic activities belong to the core of the creative production pipe-line and which can be considered spin-off activities. With spin-off activities being activities that are merely a consequence of the core creative activities, which are non-exclusive to the creative industry (Rutten, Manshanden, Muskens, & Koops, 2004).

As a reference for the creative production pipe-line, we refer to the Generic Value Chain proposed by Porter (1998, pp. 37-40). The Generic Value Chain consists of five primary activities:

Inbound Logistics: The receiving, storing, propagating of source material.
Operations: The transformation of source material to product, the phase of 'making'.
Outbound Logistics: Distribution of products to consumers.
Marketing and Sales: Any act of making product purchase possible and encouraging consumers to do so.
Service: The post-sale maintenance and improvement of products.

Although the Generic Value Chain gives us a rather generic description of the processes involved in value creation, it is a universal system that can be applied to various industries. When applied to the creative industry, the financial value which the Generic Value Chain is designed to produce is for a great part, replaced by cultural value, and the activities within change accordingly, resulting in the following creative value chain:

Creation: The process of thought and creativity, which ultimately manifests into a creative product, such as a book, script, painting, architectural plans, and so on.
Production: The realisation of the idea or concept created in the creation phase.
Publishing & exploitation: The act of spreading or multiplying the reach and effects of the creative product, for example the showing of a film in several cinemas, or the mass production of copies of books and music CD's.
Distribution: The act of making products accessible to the consumers, in physical and/or digital form. Also includes the disclosure of location and date of performances and exhibitions.
Consumption: The moment in which the creative product is consumed, where economic and cultural value is realised (Rutten, Manshanden, Muskens, & Koops, 2004).

Creative value chain/subsectors	Art & Cultural heritage	Media & Entertainment	Creative Business Services
Creation			
Production		Creative industry	
Publishing & Exploitation			
Distribution			
Consumption			

[1] Demarcation of creative industry. Based on (Rutten, Manshanden, Muskens, & Koops, 2004)

Notably, separate activities within the creative value chain may overlap, as in the case of theatre and cinema, where publishing & distribution happen simultaneously. Another point of interest is that different activities may involve the same or separate actors. In the subsector visual arts for example, the creation and production activities often only involve a single actor, the artist. However, in the case of the media and entertainment sector, the one responsible for the creation (e.g. a script writer) often differs from the one responsible for the production (e.g. a director). (Rutten, Manshanden, Muskens, & Koops, 2004). This highlights the presence of situations in which individuals of separate disciplines within the creative sector must come together in order to complete the creative value chain, whereby close interaction and knowledge transfer are a necessity.

Core activities within the creative value chain

The activities creation, production and publishing & exploitation are seen as the core activities within the creative value chain [1]. Reason for this is that the core values of the creative ethos – creativity, individuality, merit – play a significant role within these activities, which are less if at all embedded in the activities of distribution and consumption. Distribution and consumption are therefore seen as spin-off activities which are attached to the core activities and are non-defining in regards to the identity of the creatives.

Following the findings in this chapter, the definition of creative is therefore:

People who value creativity, individuality and merit, whose primary activity involves creation and/or production and/or publishing & exploitation within the domains of art & cultural heritage, media & entertainment and creative business services.

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Historical development of creative accommodation in the Netherlands

Squatting movements

The development of creative housing in the Netherlands is closely tied to the squatting movements which took place during the second half of the twentieth century, which started as a reaction to the shortage of affordable housing and was later fueled by the high level of youth unemployment in the early 80s (Pruijt, 2013). Squatting is done by different societal groups – hippies, politically-driven students, activists, artists, and so on – as a way to achieve different goals. This chapter will focus on how the creatives in particular have utilized squatting for their own practical and political means.

Sociologist Hans Pruijt (2013) identifies five types of squatting. (1) Deprivation-based squatting, which is the most primal version of squatting. It is reserved for the under-privileged, often working-class citizens who are in urgent need of shelter. (2) Squatting as an alternative housing strategy, whereby the act of squatting is not seen as an act of desperation, but rather an act that comes from personal motivation. These motivations may be based on the rare possibility to live together in large groups, or the freedom of being able to modify your own home to your hearts content. (3) Entrepreneurial squatting, whereby abandoned real estate is transformed into amenities and public facilities such as bars, cultural centres, shops, restaurants, galleries, artist work spaces and more. (4) Conservational squatting aimed at the preservation of the urban fabric or pieces thereof, in hopes of halting (planned) transformation and in turn, advocate for alternative development. (5) Political squatting, used as a means to fight against 'the power' that stands as a symbol for the systematic, the non-autonomous. This form of squatting is used to change the system that oppresses certain groups, or used to bring attention to those whose needs are wrongfully ignored by the system. Important to mention is that all forms of squatting are political to a certain extent, only difference being that political squatting is primarily driven by a political agenda.

Over the last few decades, creatives have been part of all forms of squatting,

but perhaps less in conservational squatting in comparison to the other forms, as the preservation of the cityscape is not one of the main issues the creative community has been facing. However, entrepreneurial and political squatting were main forms of squatting done by the creatives, which has been crucial in pushing the (creative) housing shortage onto the Dutch political agenda. A few examples of entrepreneurial and political squatting by creatives are the Vondelbunker, the Overtoom 301 and the Slangenpand (snakehouse).

The Vondelbunker [2], a nuclear shelter in Amsterdam built at the start of the Cold War, was first occupied by squatters in the 1950s after its abandonment by the government. It started as a café where youngsters would gather for drinks and music. In the 60s and 70s, the Vondelbunker was in use by a local squatters' movement the 'Kraak Spreek Uur' ('Squat Speaking Hour'). After the pinnacle of the squatting movement in Amsterdam [3] – also referred to as the 'Squatter War' –, which took place in 1980, the Vondelbunker was transformed into a studio for musicians. Fast forward to June 2011, a collective of volunteers converted the bunker to a venue for workshops, give-away shop and cultural and political activities, with the belief that all space is political [4] (De Vondelbunker, 2011).

The Overtoom 301 [5] is located in the building of a former film academy which was squatted in 1999. In 2006, an association called EHBK (Eerste Hulp Bij Kunst: First Help for Art) bought the building which now houses dwellings, workspaces and public functions dedicated to art, politics and subculture (Overtoom 301, n.d.).

The Slangenpand [6] in Amsterdam was squatted on March 6th 1983 after it was left empty by a publishing bureau. The place was renovated by inhabitants and served as work and living space for 10 to 12 creatives. After the failure of several attempts of legitimisation, the building was bought by a housing foundation 'The Key' and transformed into luxe apartments (deSlang, n.d.).

[2] Entrance to the Vondelbunker

Welcome to the Vondelbunker

This is a non-commercial cultural centre run by volunteers out of the conviction that space is political

PAB

That means:
No VIPs, No Racism. No Sexism and no Assholes!

[3] Tanks as a reaction to the 'Squatters War'
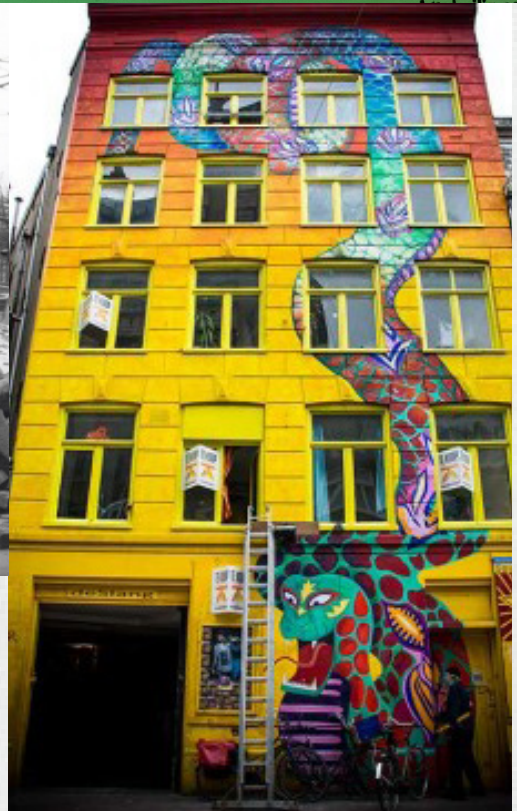
[6] The Slangenpand

The present...and beyond?

Even though not all squatted locations ended up as cultural or creative centres, the creative squatting movement as a whole has brought political interest to the topics of shortage in housing and environments for creatives. In 1999, the municipality of Amsterdam founded the Bureau Broedplaatsen (Bureau for Breeding Grounds, BBp), after urgent requests from the squatters' collectives in the year prior for 'a constructive location policy for the target group of young cultural-economic accretion' (Gemeente Amsterdam, n.d.). The BBp's main function is to assist creative initiatives with finding adequate, affordable establishments by providing consultation and financial support in the form of loans and dedicated funds.

Urban Resort is one of the creative initiatives in close coordination with the BBp. Currently, Urban Resort manages 20 creative breeding grounds across Amsterdam (Urban Resort, n.d.) which despite support from the BBp, were not easy to come by in a tightening real estate market. Furthermore, the policy for creative breeding grounds is only one of many, and is in constant competition with policies for education, refugee reception, care et cetera (Urban Resort, 2017).

There are many other artist-run initiatives across the Netherlands that create dedicated spaces and platforms for creatives. A few of the more prominent names are Foundation B.a.d., V2_Lab for The Unstable Media and Het Wilde Weten. Notably, while many of these initiatives strive to provide work space and exhibition platforms, very few provide housing options. And when they do, the number of accommodations only amount to a drop in the bucket. Foundation B.a.d. for example, offers three guest studios of 40 m2, and only for a period of three to six months. In most cases, applicants are required to proof their affinity as an artist and their willingness to contribute to the community, after which they are put on a (near endless) waiting list (Foundation B.a.d., n.d.; Overtoom 301, n.d.).

In Rotterdam, a similar policy for creatives is also in place, with three goals in mind. To create spaces for creative talent, achieve affordability for artist studio space and contribute to the urban development. When the policy was created in 2017, Rotterdam had 62 locations dedicated to the creative community in the form of artist work spaces [7][8][9][10], breeding grounds, artists' initiatives, creative collective business establishments, make spaces and creative production spaces (Gemeente

Rotterdam, 2017). Of all 62 locations, only a very limited amount, if any, provided the option for dwelling. It seems that current policies are only directed at relieving pressure on the availability of workspaces, and not so much on the issue of housing for creatives, which is arguably just as urgent, if not more.

According to a research conducted in 2013, the annual average gross income of a self-employed creative amounts to 21.908 euros, which is 10 thousand euros lower than the modal gross income of 32.500 euros (Van den Born, 2013). From the professions within the creative industry, self-employed visual artists have the lowest annual income of 13.990 euros on average (Raad voor Cultuur, Sociaal Economisch Raad, 2016), while being one of biggest creative sub-sectors in the Netherlands with 24.720 members as of 2018 (Centraal Bureau voor de Statistiek, 2020). It is creatives that belong to these groups that are especially vulnerable due to their financial burdens and job instability. In the end, the issues of displacement and vagrancy of creatives seem to boil down to a combination of their financial struggle and the shortage of suitable live-work accommodation.

In terms of solutions to these issues, Florida provides a few pointers in the book 'The New Urban Crisis' (2017). As part of the solution, he proposes an upgrade of low-wage jobs to middle-class income levels as a way to relief the financial pressures faced by the American service workers, which boosts the income of creatives working part-time in the service-industry. However, this strategy only stimulates the creative economy indirectly and requires the aid of political and economic forces at large to achieve. The same is true for other parts of the solution Florida provides, of which the conditions of success rely on forces on the regional or even the global level. The question becomes the feasibility of these strategies, and what the time-span will be before practical changes can be made and felt. On the opposite side of the spectrum are the Dutch policies and artist initiatives of which the effects are tangible, but insufficient to be truly impactful in relieving the issues of the creative community. Perhaps what is needed is something in between. A physical solution that is local, self-sufficient and yet impactful enough to be the glimmer of hope that keeps Rotterdam's creatives believing in the future, themselves, and their city.

Interdisciplinary synergy within the creative industry

This chapter explores the notion of interdisciplinary synergy and how it can help artists bolster their own position within the creative industry.

Synergy-driven production processes within the creative industry

Before diving into things, it is important to note a dichotomy within the whole of creative workers. Creatives can be split into two groups, the traditional creatives and the, for lack of a better term, non-traditional creatives. Traditional creatives – painters, sculptors, craftsmen, performance artists – communicate art through physical media, while non-traditional creatives – architects, designers, media entertainers – utilize digital media, or a combination of both physical and digital means to convey their ideas. Because of the difference in nature and form of their artwork or products, the way they integrate into the creative market also differs. Traditional artists are often limited to making direct sales of their products as a means of income. The market demand of physical artwork relies on interest from the general public and art collectors. The demand of the general public for artworks is largely saturated by mass-produced (digital) artwork, while art collectors are only interested in artworks of a certain prestige, thus effectively excluding themselves from the potential client pool of starting creatives. This in combination with a lack of promotional tools such as exhibition space leaves the average traditional artist in a very tough spot (RRKC, 2017). The non-traditional creatives on the other hand, are not limited to the selling of physical work and can much more readily promote their products through digital means. However, even within the world of digitalisation, there is still a need for art in its primitive, physical form.

Within the creative industry, synergy-driven production processes exist in which both traditional and non-traditional creatives play an important role, where both groups come together to create things better than the products of their individual efforts. The idea of these production processes is comparable to the aforementioned creative value chain in terms of the ordered fashion in which processes take

place and the requirement of multi-disciplinary involvement. However, while creative value chains belong to certain creative subsectors, synergy-driven production processes do not. Which is to say, creatives within creative value chains are tied to the creative subsector they are a part of, but those within a synergy-driven production process work through the production process in tandem with cross-sectoral peers [11].

Many of these production pipe-lines are present within the media entertainment sector. Take for example the creator of the 'Toy Story' film series, Pixar, of which the success is a result of synergy between creatives within a multi-disciplinary environment. As the production of each animated film requires storyboard artists, animators, writers, directors, and many more (Catmull, 2008).

Creative value chain/subsectors	Art & Cultural heritage	Media & Entertainment	Creative Business Services
Creation			
Production		Creative industry	
Publishing & Exploitation			
Distribution			
Consumption			

[11] Synergy-driven production process

Connecting art and technology

Art and technology have always been inseparable, the two evolve hand in hand. Just like how the invention of paper dramatically changed art expression in the past, the invention of computer technology has brought on a shift in the present art world. Technology offers creatives new grounds to explore and experiment in novel ways of conveying art. Moreover, an opportunity to break free from the traditional and become pioneers, which is arguably what being a creative stands for.

"Technology inspires art, and art challenges the technology."

– John Lasseter[4] (Catmull, 2008)

A few examples of creatives who have found their calling in the new media art[5] are:

- Stelarc, whose art is a fusion of the human body and robotics. [12]
- Yuri Suzuki, who creates art installations inspired by engineering. [13]
- Kim Keever, whose art is a result of creating chemical reaction in water. [14]

Without the contribution of the domains of engineering, robotics and chemistry, these forms of art would not be possible. It is perhaps beneficial to find ways of connecting the creative industry as a whole to those who specialise in these domains, in order to facilitate the fusion of art and technology.

Importance of community and peer culture

When it comes to group creativity, the outcome is dependent on the work environment's ability to invoke a context in which individuals are equal in power and status. In the case of a significant power distance, those higher in the power hierarchy are able to dismiss ideas that do not agree with their own (Harvey, 2014). Curating a supportive non-evaluative working atmosphere enables carefree sharing of ideas between individuals without the fear of being mocked or shunned for doing so. Such an environment is one of the key components to a successful group creative process (Amabile, Goldfarb, & Breackfleld, 1990). The importance of a peer culture within the creative environment is also apparent in the case of Pixar, where team members feel that the 'all for one, one for all' mentality helps bring out extraordinary forms of creativity (Catmull, 2008).

The following points are essential when it comes to facilitating inter-disciplinary synergy with the goal of bolstering the creatives' position within the creative industry.

- Introduce creatives to more channels of distribution and offering the opportunity to become part of larger production chains.
- Find ways of connecting the creative industry as a whole to those who specialise in domains outside of the creative sector, such as engineering, robotics and chemistry.
- Create supportive environments with flat hierarchies that allow free flow of creativity and knowledge sharing.
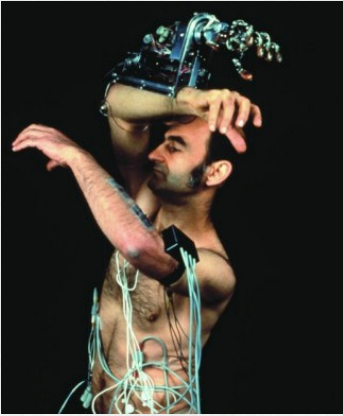
[12] 'The third hand' by Stelarc
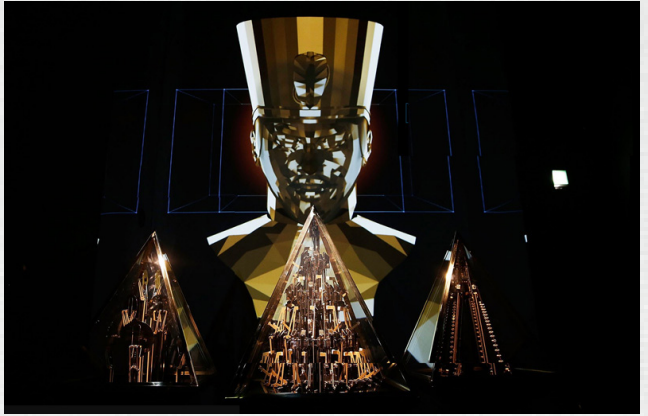
[13] 'Piramidi'by Yuri Suzuki

[14] 'Abstract 47628' by Kim Keever

[15] Kim Keever's studio space in 2001'

[4] Former Chief Creative Officer of Walt Disney Animation Studios
[5] New media art is an umbrella term for artwork produced using new media. It includes a diverse set of categories such digital art, computer graphics, computer animation, virtual art, Internet art, interactive art technologies, but may also pertain to such fields as computer robotics or art as biotechnology. New media art is characterized by spanning practices ranging from conceptual and virtual art to performances and installations. Very often, new media art acts like a platform for communication and interaction rather than a closed work (Wikiversity, 2019)

Live-work housing for creatives

This chapter focuses on the spatial needs of creatives. In addition, the live-work configurations proposed by Thomas Dolan are discussed in relation to findings and preliminary conclusions from the questionnaire.

Spatial requirements of creative workspaces

The nature of the creatives' work often necessitates a specialised workspace which fulfils their spatial and functional needs. These needs are mostly reliant on the size of the artwork in production, the size and number of tools required, and the minimum spatial requirements of the activity itself. It is for this reason that the size and functionality of the workspace is most demanding in the case of traditional creatives, particularly sculptors, performance artists and artists who work with large installations.

In the case of sculpting studios, there are no definitive spatial guidelines as it would be dependant on the material in use – clay, stone, metal et cetera – and the size of the art pieces. In order to get an idea of the workspace area needed for sculpture studios, I referred to five precedents [16].

It appears that the range of studio area is quite large, with the smallest being 36 m2 and the largest being 510 m2. The smaller studios are often designed for individual usage, while the larger ones contain shared facilities. Aside from the floor area, another point of consideration is the transportation of materials and artworks. It is for this reason that most of the studios mentioned above are either one storey tall, or have the largest studio spaces located on the ground floor. A higher ceiling and wide portals can also be found across these projects.

In order to determine floor area requirements for studios dedicated to performance artists, which often incorporate elements of dance and theatre within their work, I referred to design guidelines regarding dance studios and theatre halls.

For dance studios, the floor area required depends on three variables. The average number of users, their age and the activities taking place. According to the National Dance Teacher Association of the UK, dance halls for education purposes must meet the floor area requirement of 3 m2 per person under the age 11 and 5 m2

per person over the age 11 (Stage & Studio, n.d.).

In the case of theatre halls, a lack of size guidelines is present just like in the case of sculpting studios. Therefore, I yet again referred to precedents for an indication of floor area and height. The numbers in the table [17] are dimensions of the stage area only, not including dimensions of for example dressing rooms or audience stands.

Data presented in this chapter may only serve as a preliminary indication for the spatial needs of creative workspaces. In order to determine design-specific dimensions, informed predictions or assumptions need to be made regarding the user population, nature of the activities taking place and the space requirements of facilitating functions – transportation routes, dressing rooms, space for machinery and audience stands.

PROJECT NAME	STUDIO AREA: SMALLEST – LARGEST (M²)
ANDREW BERMAN SCULPTURE STUDIO[6]	36 – 253
GLASGOW SCULPTURE STUDIOS[7]	50 – n/a
MODUS STUDIO + EL DORADO[8]	130 - 470
SCULPTURE SPACE[9]	40 – 510
STUDIO MATTE INDUSTRIAL ART SPACE[10]	160 – 360

[16] Sculpting studio floor area

PROJECT NAME	L|W|H (M)	FLOOR AREA (M²)
SYDNEY OPERA HOUSE[11] DRAMA THEATRE	13.7|11.3|4.7	155
THEATER IN HET KLAVIER[12]	10|6|n/a	60
FICHE KLEINE ZAAL[13]	7.5|9|3.75	67.5

[17] Theatre podia dimensions and floor area

Live-work configurations

In the book 'Live-Work Planning and Design', Thomas Dolan (2012) proposes three live-work configurations based on the proximity of living and working spaces: live-with, live-near and live-nearby.

In the case of a **live-with** configuration [18], also known as a loft, live and work happen within the same spatial boundaries. The additional ceiling height allows for more natural light exposure and the placement of large objects. The space is flexible as a result of the open floor plan, so that functional areas within the space can be easily modified (Dolan, 2012).

The **live-near** configuration [19] is where live and work are separated by walls or floors. This configuration is most suited for those who value the proximity of live-work, but feel the need of a layer of separation between work and personal life. The separation can help to minimise disturbances – noise, hazardous materials, smells – caused by work activity, or disturbances from children and other family members (Dolan, 2012).

In the **live-nearby** configuration [20], live and work are physically separated by a short walking distance, but remain part of the same property. This configuration nullifies any work-related disturbances from the residence and the other way around. As live and work are completely separated, it is also more suitable for client visits, employee meetings and walk-in trade (Dolan, 2012).

Questionnaire findings

The questionnaire (see appendix I) has had a limited number of respondents (12), the results are therefore by no means a statistical representation of the creatives community. However, the results are still indicative of a small selection of creatives' voices and are interpreted as such.
The following patterns are identified from the results:
• Traditional artists prefer dual-use space and do not mind the mixing of live and work.

•   Respondents who live with others prefer some level of separation of live and work.

•   Respondents who used to work outside of their homes before Covid-19 prefer complete separation of live and work.

Notably, the results did not indicate an overarching preference of live-work configuration which applies to all creatives, instead it highlights the divergent choices that exist within the creative community. It appears that the choices are determined by the amount of space needed for work activities; the household type; and working habits.

The findings indicate that a vast variety of wishes exist when it comes to live-work configurations. A complex that houses creatives should therefore also include a variety of apartment types in order to attract a bigger portion of the creative population.
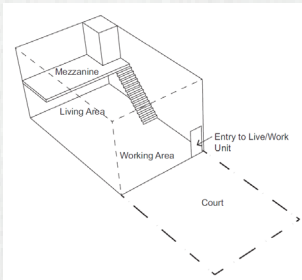
[18] Live-with
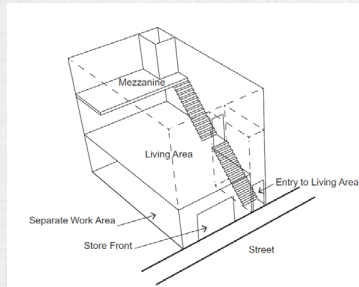
[19] Live-near
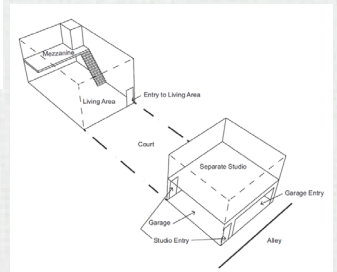
[20] Live-nearby

Live-work housing for creatives

In the following section, four existing projects have been analysed on the aspects of:

Circulation
Live & work configuration
Routing

CASE-STUDY NAME	CIRCULATION TYPOLOGY	LIVE-WORK CONFIGURATION	ROUTING: NUMBER OF INTERSECTING PATHS
TREEHOUSE	Corridor	Live-nearby	High
KLEO ART RESIDENCES	Corridor	Live-nearby	High
ATELIERWONINGEN ZOMERDIJKSTRAAT	Portico	Live-near	Low
CHEVAL NOIR	Portico/Gallery	Live-near/live-with	Medium

[21] Findings plan-analyses

The chosen case-studies are projects designed to house creatives, of which two follow the live-near configuration while the other two follow the live-nearby configuration [21].

Interestingly, projects that offer the live-nearby configuration (Treehouse and KLEO) have implemented the corridor typology, while those that offer the live-near configuration (Zomerdijkstraat and Cheval Noir) utilize primarily the portico typology or in combination with the gallery typology. The use of a corridor typology can be explained by the fact that it allows for a space-efficient layout of consecutive apartments, which can achieve a higher degree of space-usage. This in turn contributes to the affordability of the apartments. However, the corridor typology is less suited for live-with or live-near configurations where height differences are present within the same apartment (in the case of studio dwellings). In which case a portico or gallery typology is more suited.

The routing analysis points to a higher number of intersecting paths in the case of the corridor typology, which can be beneficial to the collectiveness according to a prior research done on collectiveness in dwellings (see appendix). The same research also suggests to keep the number of access points to the dwelling complex to a minimum, as to maximise intersecting paths and avoid social fragmentation.

TREEHOUSE

Designed by
Bo-da Architecture

Year built
2017-2018

Location
Kangnam-gu Dogok-dong. Seoul, South Korea

Gross Built Area
4 810 m^2
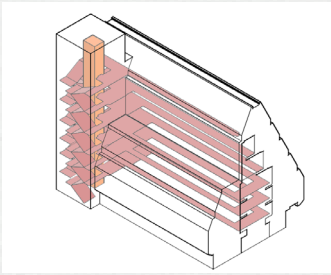
Circulation
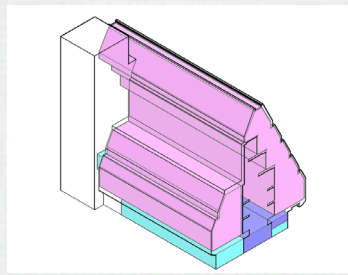
Live & Work

Circulation
Core

Live
Work
Amenities
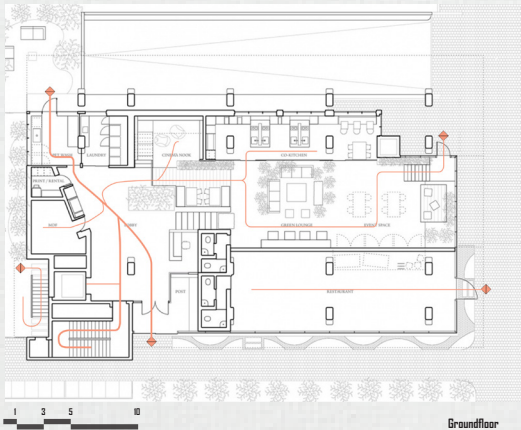
Entrances
Routing

Groundfloor
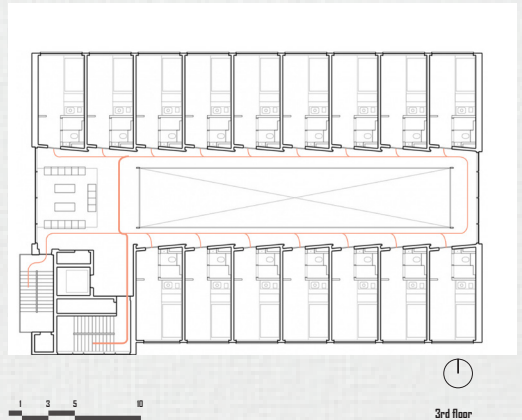
3rd floor

Routing

KLEO Art Residences

Designed by
JGMA

Year built
2019

Location
Michigan Ave., Chicago, USA

Gross floor area
26 000 m²
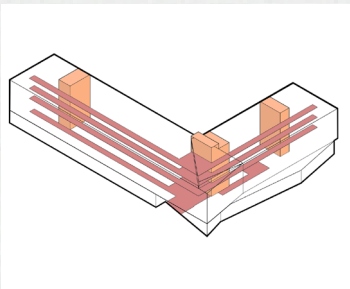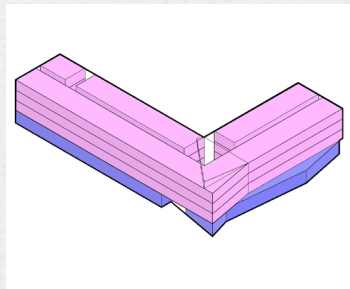
Legend:
- Circulation
- Core

- Live
- Work
- Amenities

◇ Entrances
— Routing

Circulation

Live & Work

5 10 20

Groundfloor

5 10 20

1st floor
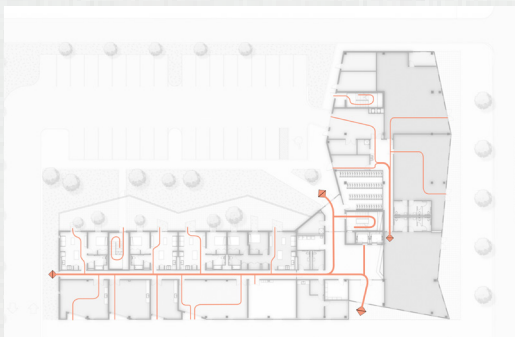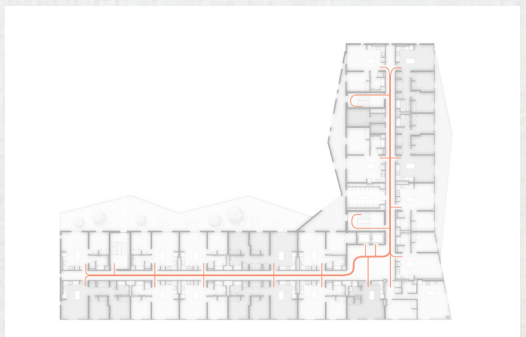
Routing

Atelierwoningen Zomerdijkstraat

Designed by
Zanstra, Giesen & Sijmons

Year built
1932-1934

Location
Zomerdijkstaat, Amsterdam, The Netherlands

Gross Built Area
2832 m^2
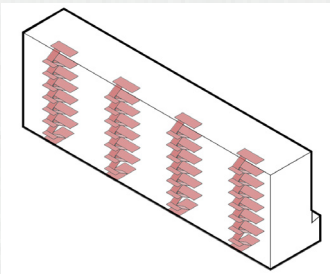
Circulation
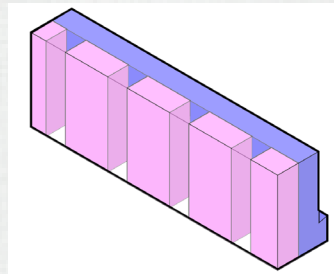
Live & Work

Circulation
Core

Live
Work
Amenities
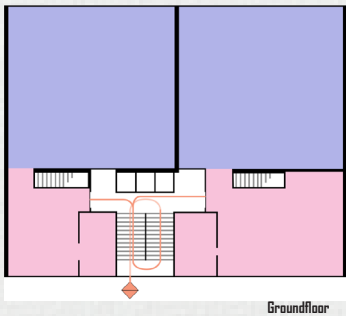
◇ Entrances
— Routing
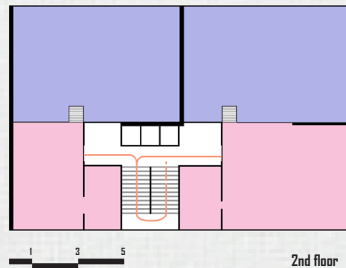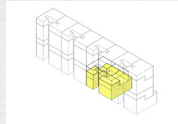
Groundfloor

2nd floor
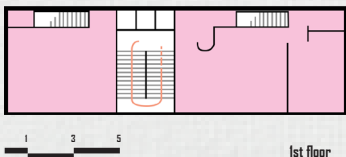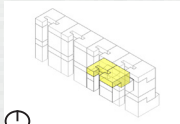
1st floor

Routing

Cheval Noir

Designed by
L'Escaut + Atelier Gigogne

Year built
2010

Location
St-Jans-Molenbeek, Belgium

Gross floor area
20 000 m²
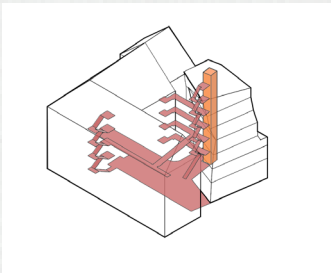
Circulation
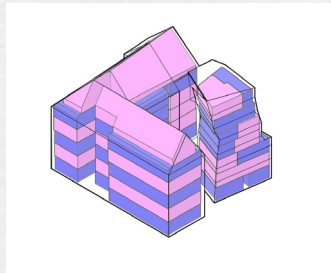
Live & Work

Circulation
Core

Live
Work
Amenities

Entrances
Routing

1 3 5   10   Groundfloor

1 3 5   10   2nd floor

1 3 5   10   3rd floor

Routing

34
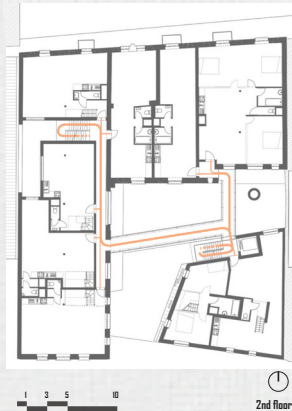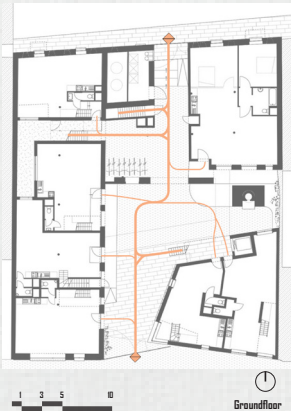
Conclusion: a design concept

The following goals and strategies are based on the research findings so far. Further research is required on the translation of goals to strategies. In particular the aspect of routing, places of interaction and their relation to the creation of synergy. Another point for further research is the criteria for creation or stimulation of interdisciplinary synergy. In which case the facilitation of interaction alone may or may not be sufficient.

Design goals

• Complex must match the envisioned creative spirit for Keilekwartier.

• Create a complex which can be utilised by both residents and the general public.

• Introduce creatives to more channels of distribution and offering the opportunity to become part of larger production chains.

• Find ways of connecting the creative industry as a whole to those who specialise in domains outside of the creative sector, such as engineering, robotics and chemistry.

• Create supportive environments with flat hierarchies that allow free flow of creativity and knowledge sharing.

• Provide all forms of live-work modes to cater to the entirety of creatives.

• Focus on affordability.

Design strategies

• Locate 8m high workshop on the roadside with open plinth as eye-catcher

• On the ground floor: a wide variety of workspaces (dancehall, woodworking, study room, meeting rooms, digital VR-lab, engineering tool room)

• Workspaces are divided into public and communal sections. Public sections can be rented by the general public, communal sections are reserved for residents only. Discounted fees apply for residents.

• Sense of community/Peer culture: Circulation corridor that connects all apartments on the same floor with public corners that function as public living-rooms.

• Affordable studio apartments of 23m2 take up 65% of the residential space. 35% Are dedicated to artist loft studios with north facing workspaces.

• Provide presentation and event space on ground floor.

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[8] 'Ackersdijkstraat' https://www.google.com/maps/place/Ackersdijkstraat+20,+3037+VH+Rot-
terdam/@51.9383418,4.471377,3a,74.9y,87.77h,103.5t/data=!3m6!1e1!3m4!1syeN4SuVO1YahO26KU-
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[9] 'Borgerstraat' https://www.google.com/maps/place/Borgerstraat+24,+3027+EB+Rotterda
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[10] 'Insulindestraat' https://www.google.com/maps/place/Insulindestraat+279,+3038+JV+Rot-
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319859!4d4.4694245

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view-2001.jpg

[18] [19] [20] 'Live-work proximity types' (Dolan, 2012)

MASTERPLAN
M4H

Preserved existing building

Europoint

Quadrant A
x
Strijp S

Quadrant B
x
Binckhorst

De Fruithaven

Ferro Dome

Quadrant D
x
Katendrecht

HAKA Gebouw

Katoenveem

Quadrant C
x
Kop Van Zuid
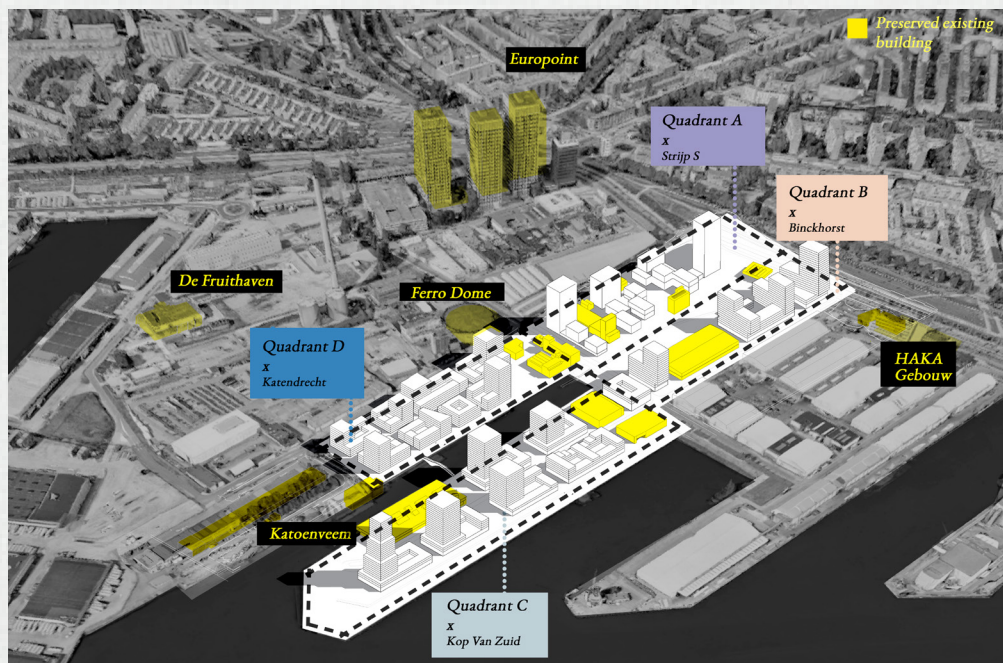
Masterplan: Quadrant A

The proposed project will be situated within the Keilekwartier in M4H Rotterdam, for which the students of the Advanced Dwelling Graduation Studio have formulated a masterplan. The students were divided into four groups, each responsible for one of the quadrants within Keilekwartier, which are presented in the overview on the previous page. Each group was then assigned a reference project which would serve as inspiration for the design of their own quadrant, with the focus on typologies and urban strategies.

Within our group, who is reponsible for quadrant A, the vision was primarily based on preserving and stimulating the creative spirit of the location. Places of creativity were already present in quadrant A such as, the AVL Mundo , Studio Van Lieshout and Soundpoort. But they seemed disconnected and lost within a jungle of unused and/or dilapidated office space and old warehouses. Our goal was to transform the entire area into a creative hub, which acts as a breeding ground for creativity, and also as a platform for creative knowledge sharing (cross-pollination) and exhibition. To reach this goal we proposed several urban strategies [22].

These strategies served as guidelines for the definition of the urban fabric, expressed in the following aspects [23]:

Collective vs outdoor space
Preservation
Building heights
Plinth Functionality

As the final step in the design process of quadrant A, we imagined the aesthetics of the street, the entrance and the courtyard through a series of impressions and captions [24].

Vision ➡️ Main focus on creatives and creative industries

WHAT INGREDIENTS WILL BE USED FOR THIS
URBAN ENVIRONMENT?

- Maintaining the design offices and studios to
  emphasize on creative industry and attract
  creatives
        (e.g. Keilewerf and AVL-Mundo)

- Accommodate flexible working spaces
  for people living in the quarter
        (e.g. work close to home / in
          residential building)

- Formal hard edge vs creative soft
  edge

- Public space as a catalyst for
  combining daily life with creativity, working
  people and spare time activities
        (e.g. accommodate temporary studios
          or exhibition in open park)

[22] Urban strategies - by Joel Swaab

Urban Diagrams
Collective vs public outdoor space
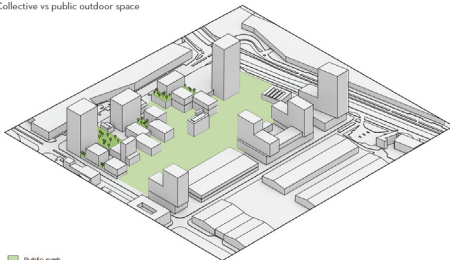
- Public park
- Collective greenery / courtyards

Urban Diagrams
Building heights
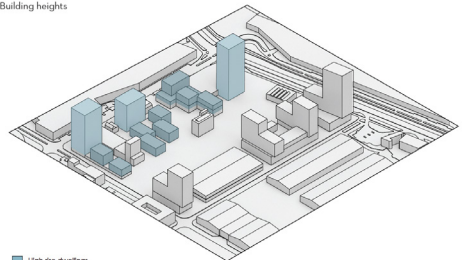
- High-rise dwellings
- Mid-rise dwellings

Urban Diagrams
Preserved buildings in new situation
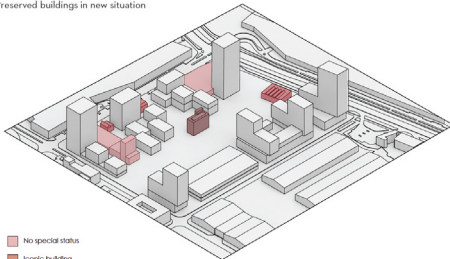
- No special status
- Iconic building
- Monumental building

Urban Diagrams
Plinth functionality with circulation
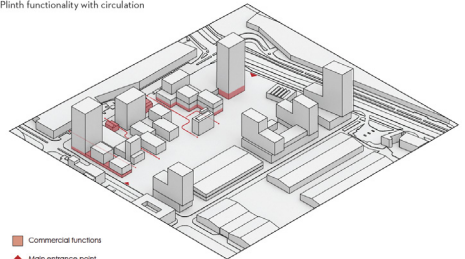
- Commercial functions
- Main entrance point
- Pedestrian routes

[23] Urban diagrams - by Daryna Chernyshova
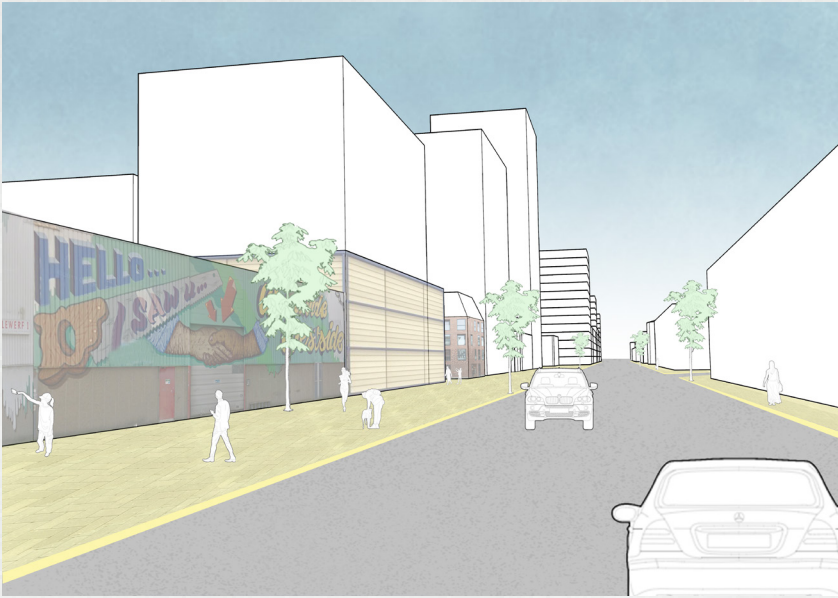
[24] Impressions and captions

"Finally, I would like to take you on a quick tour through quadrant A, starting at one of the main roads of our site, the Keileweg, where the Keilewerf is situated on the corner. Acting as a billboard for the creative hub found within this quadrant. This more public side of the quadrant is what we refer to as the formal side, based on its straight roads and flush facade lines, because of the public nature, the plinths will have commercial functions such as restaurants and shops. At first glance, the buildings may seem very closely packed, but the main entrance leading to the other side is in fact, hidden between two mid-rises."

"If we move closer, the entrance reveals itself, with a beautiful central view on Soundport, a building that speaks much about the identity of the site, as it is the only building of monumental status within quadrant A. Furthermore, it also functions as a dedicated space for creative media and music professionals."

Following paths on both sides of Soundport, the view opens up to an enormous green space, where the formal atmosphere changes to one that is more open and free, which is also reflected in the uneven facade lines. In this open space, everyone is free to express their creativity through artwork and be inspired by others, including studio Roosegaarde and AVL Mundo, for which the site provides exclusive outdoor exhibition space.

We believe that our vision for Quadrant A will be essential in promoting the creative and innovative spirit within the Maker's district, where the future is truly, in the making.
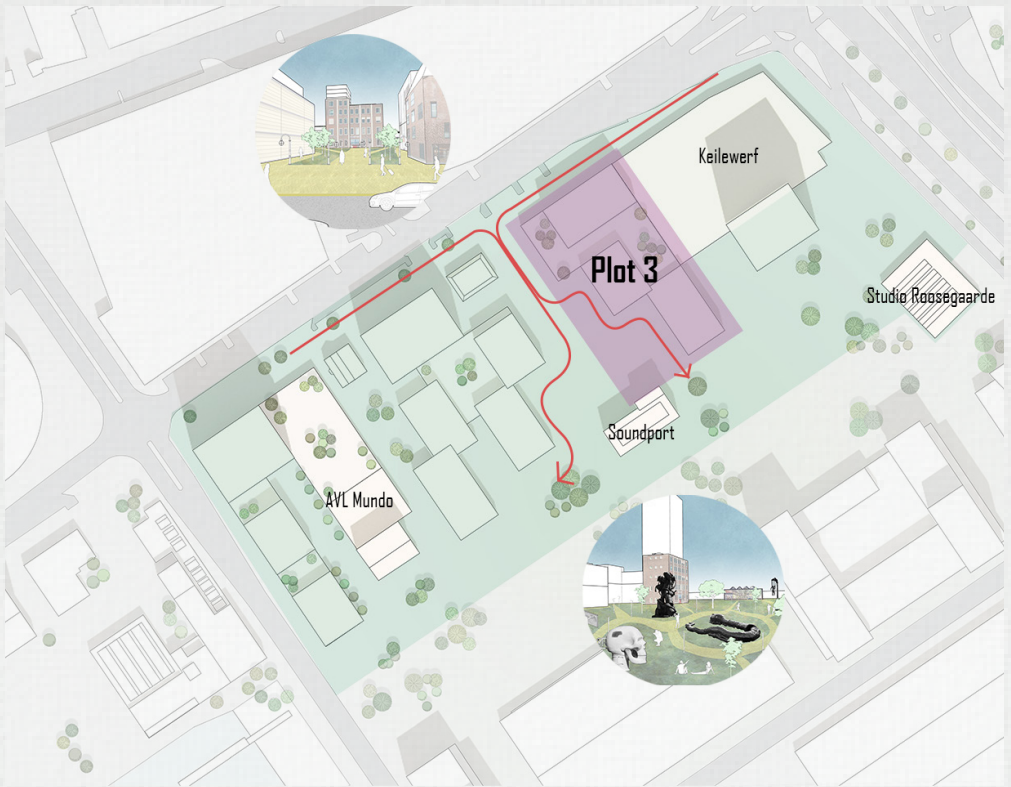
During our masterplan design phase, we characterised this quadrant as one with a creative spirit. A vision that is in line with the municipality's ambition to attract creativity and craftmanship to this location and also because creativity is already very much present in quadrant A as it houses a number of hotspots of creativity such as the Studio Roosegaarde, the Keilewerf, Soundport and AVL Mundo. The centre of the quadrant will be transformed into a sculpture garden which is connected to the main road via an opening on the north west side of the quadrant.

The plot itself is directly connected to the Keilewerf on its north-east side. And on the south-west side the plot is positioned alongside the main port of access towards the centre of the quadrant, which led to the cascading façade lines as seen from above.

THE
DESIGN

Morphology
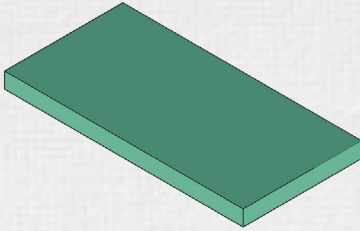
The height of the plinth is conform to the Rotterdamse plint, which is 5m.
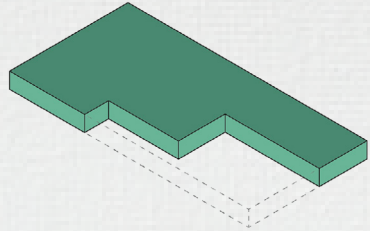
Parts are then cut out from the footprint to create the cascading façade line.
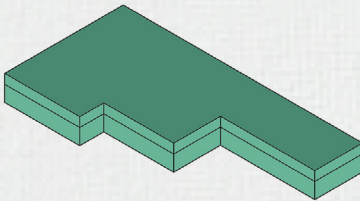
An additional layer is then added to the base to match with the height of the adjacent Keilewerf which goes up to a height of 8m.
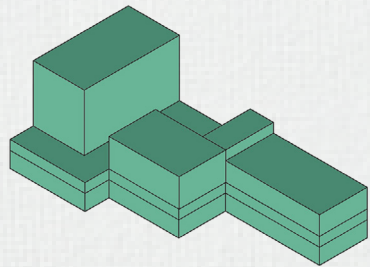
Dwelling blocks are then added on top with decreasing heights from northwest to the southeast to minimise shading.
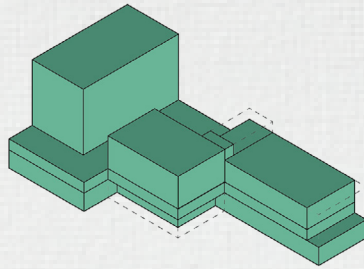
Finally, some adjustments were then made whereby a part of the plinth is pushed inward to accentuate the entrance area. The southeast façade is pushed in create a terrace and a block is removed from the roof to allow additional sunlight into the courtyard.

Public vs Private
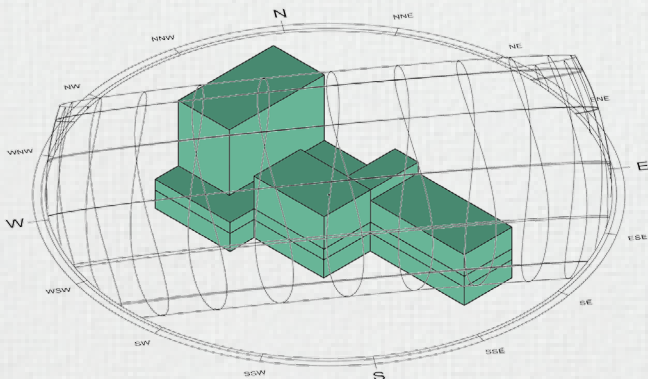
Private
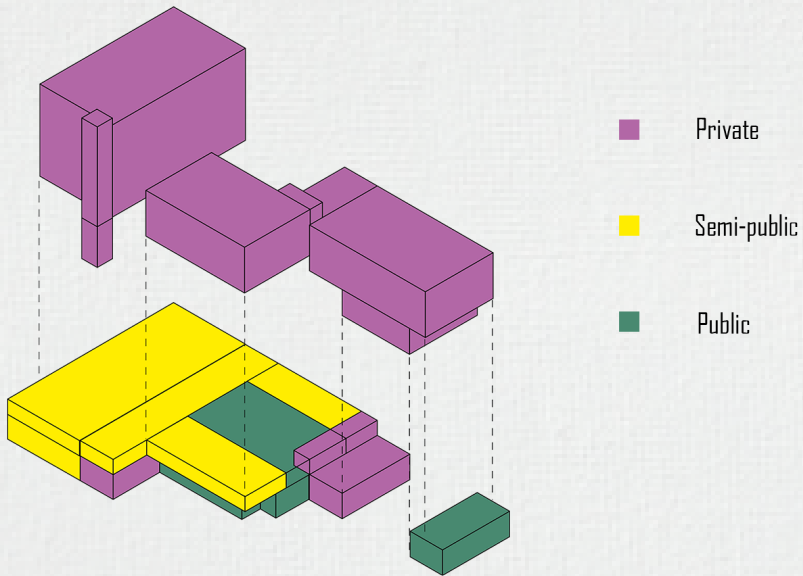
Semi-public

Public

The public and semi-public functions are situated on the ground floor and first floor. The private zones, including communal zones are situated in the floors above. The public zones are freely accessible to the public, while the semi-public ones are only freely accessible by residents. However the public can also gain access to them with a reservation. The private zones, which include communal zones are sectioned off using card readers.

Functions

Dwelling

Communal zone

Car sharing hub

Storage

Workspace

Bike parking

Commercial

Exhibition

Entrance
(residential)
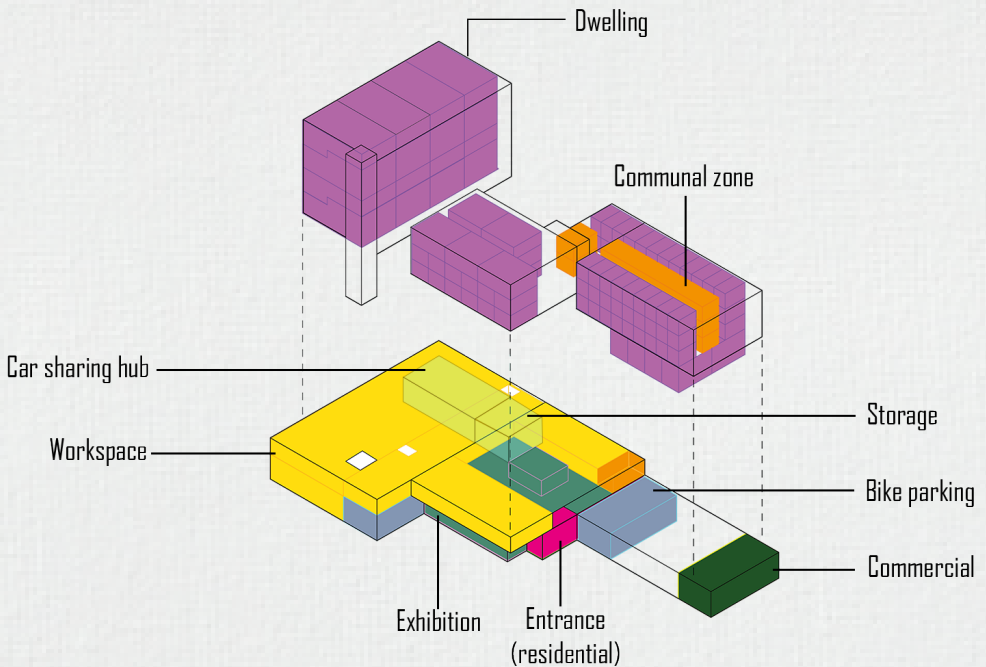
At the heart of the building is a public exhibition hall, which is surrounded by work-spaces, bike parking and a car sharing hub. A commercial zone is placed on the more public side of the building facing the sculpture garden. Most of the dwellings can be found on the higher floors, with communal zones placed in between the apartments in the co-living typologies.

Circulation

Vertical circulation

Horizontal circulation
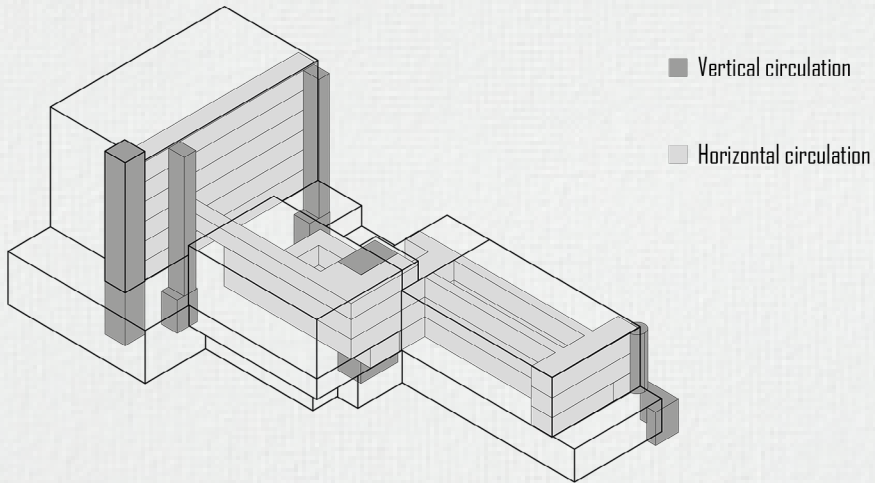
The horizontal circulation consists of both a corridor system and a gallery system with are connected by a skybridge between the higher block and the lower blocks. The corridor system is chosen for its space-efficiency and the gallery system is chosen to create a more open façade towards the inner deck. As for the vertical circulation, the main ones are placed within the perimeters of the building so that residents are more likely to pass through the public and semi-public zones where they could potentially observe or even interact with the people there.

Routing

WORKSPACE

GREEN ROOF

CAFE
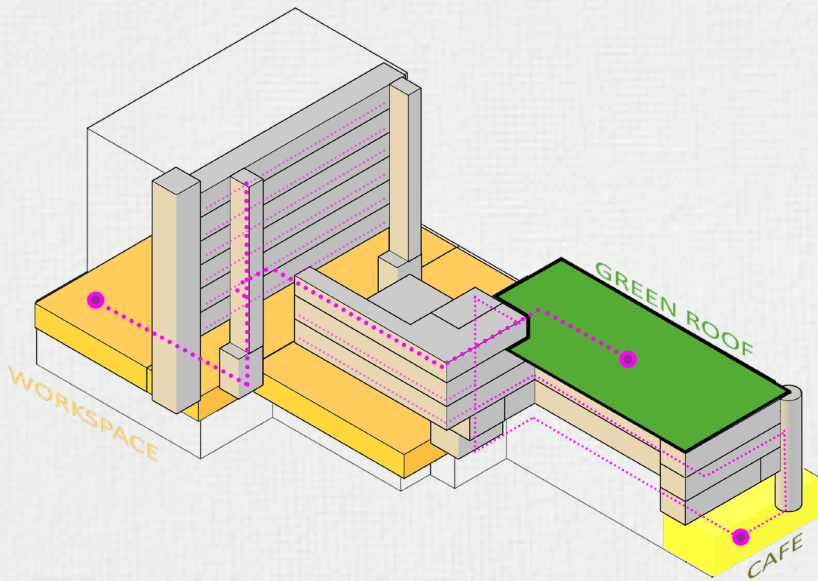
Hotspots encourage movement through the building

In contrast, hotspots are placed around the outer edges of the building with the same reason of encouraging movement and interaction.

Typologies

ATELIER
8x
90m2

ATELIER DUPLEX
8x
140m2

POD
64x
9m2

LOFT
8x
34m2

STUDIO
20x
22m2

STUDIO +
5x
45m2
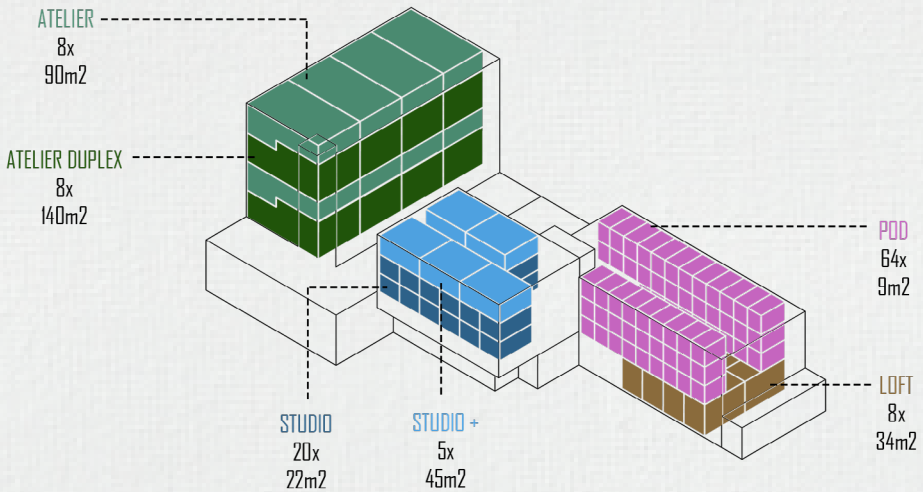
The building offers 6 different typologies which vary greatly in floor area and composition in order to accommodate creatives with different workspace needs and income levels. Floor areas range from 9 square meters for the POD typology up to 140 square meters for the Atelier Duplex. The bigger typologies: studio+, atelier and the atelier duplex include separate working spaces while the other smaller typologies do not.

Structure - building
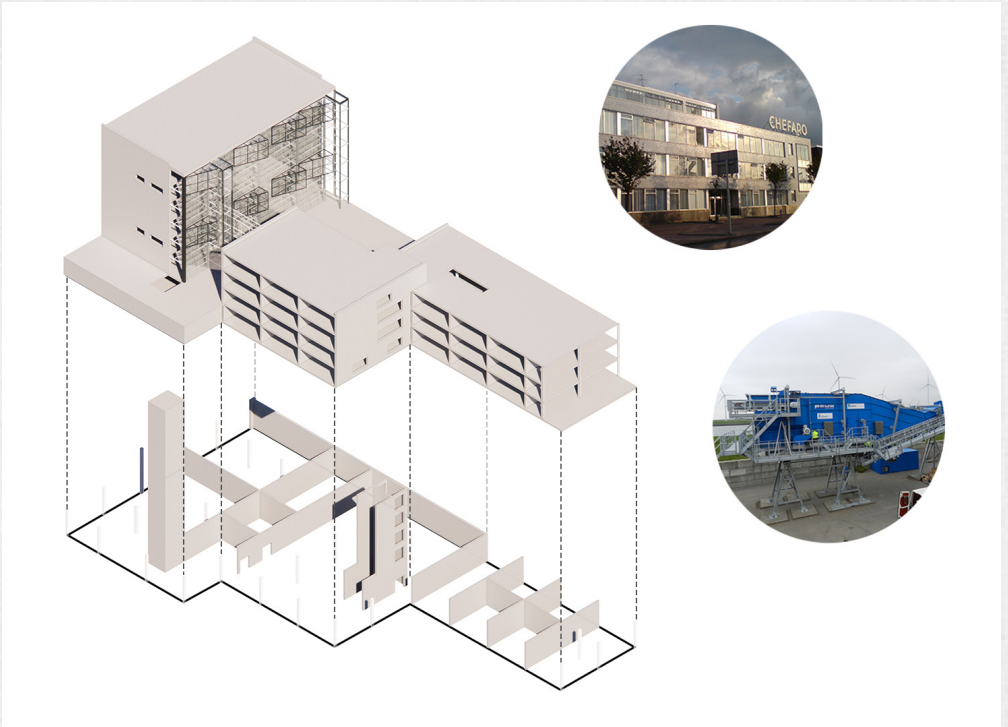
The structural elements of the building are made of recycled concrete from the Chefaro building which currently occupies the plot. This can be done using the on-site concrete recycling technology developed by TU Delft in collaboration with Strukton.

The recycled concrete is indistinguishable from newly made concrete in regards of appearance and strength. By re-using existing concrete greatly reduces the material costs, transport costs and the environmental impact of the overall design.

Structure - gallery

Floor structure

Secondary facade structure

Prefab balcony

Curtain wall mullions

Exterior glazing

Structural steel

Structural steel (dark)

Triple glazed Low-E Glazing
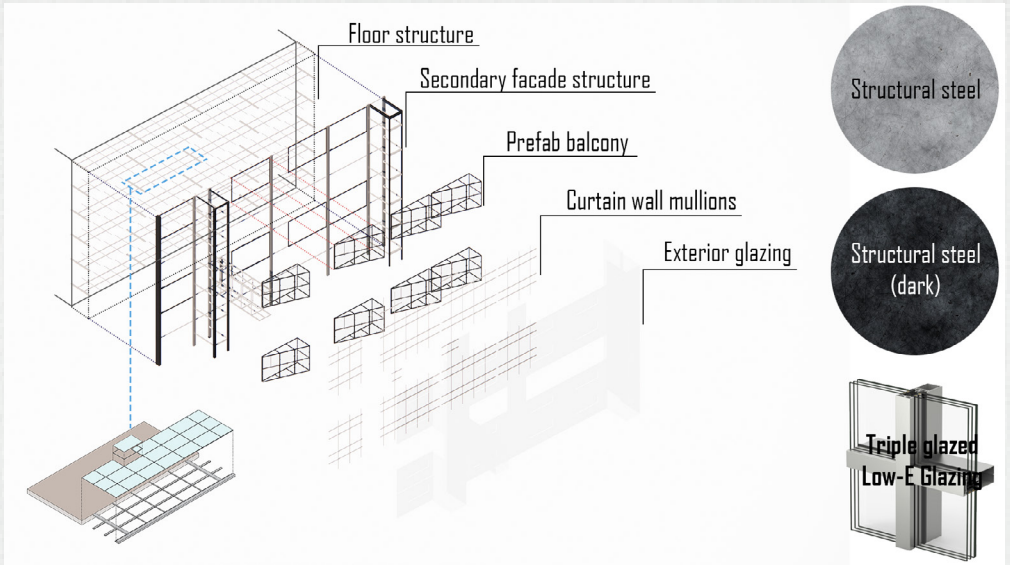
Aside from concrete, steel is used as a secondary structural material to construct the gallery, which consists of several layers. First, the secondary façade structure is attached to the concrete via steel beams, under which smaller beams are attached to form a grid that supports the floor panels. The prefab balconies are then attached to the secondary façade structure followed by curtain wall mullions and the exterior glazing which is triple glazed low-emissive glazing.

Structure - facade

Concrete structural wall

Insulation

Prefab baywindow

Masonry exterior wall
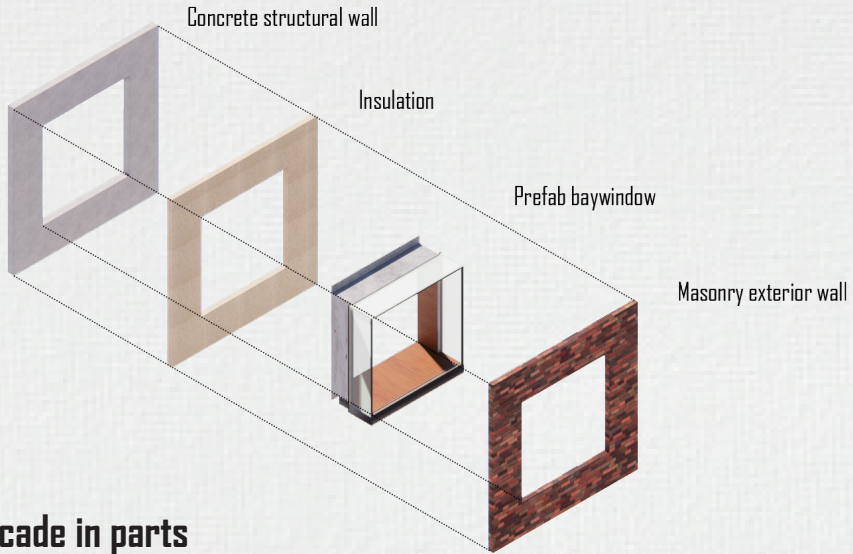
Facade in parts

These are the main layers of the façade, first the concrete wall is placed, on which insulation is applied. The bay window element is then moved into place and attached from the inside. And finally the masonry wall is built into place.

Structure - prefab bay window

5: Interior finish (Oak wood)

1: Structural frame (steel)

2: Structural glazing (Low-E glass)

3: Insulation (Rockwool)

4: Exterior finish (Aluminium)
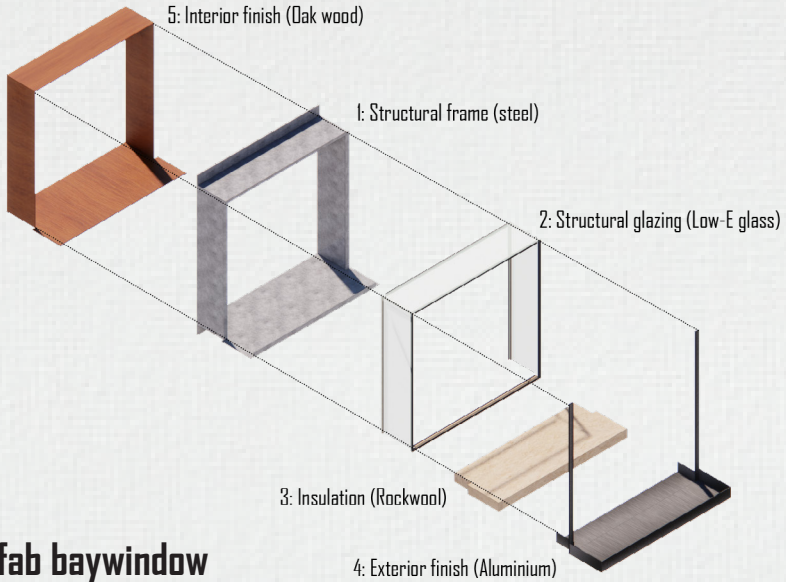
**Prefab baywindow
in parts**

The prefab element itself is supported on a steel frame on which structural glazing is fixed with silicone. The insulation is then put into place followed by the exterior and interior finishing.

Structure - details

D1

+14300

D2

+11000

+8000

D3

+5000

D4

+0

Structure - detail D1

Horticulture planter
450mm soil depth

150mm	Gravel channel
50mm	Drainage element
1.5mm	Root barrier
4mm	Waterproof membrane
80+50mm	Double layered rigid insulation
<1mm	Vapour control layer
40mm	In-situ concrete layer
200mm	Concrete floor element
30mm	Plasterboard ceiling finish on battens

D1

50mm 100mm   200mm

Structure - detail D2

100mm	Masonry
60mm	Air cavity
100mm	Insulation
140mm	Concrete wall element
25mm	Plaster finishing
160mm	Climarad Care HIC

5mm	Steel finishing
20mm	Steel frame
87mm	Insulation
3mm	Aluminium casing

HR++ low-E glazing

Integral blinds

D2

50mm   100mm   200mm

Structure - detail D3

Air brick

Dove-tail anchor

1.5mm	Woodgrain aluminium finish
15mm	European hardwood cover
45mm	Insulation
50mm	European hardwood slab

1-10mm	Floor finish (laminate/carpet)
40mm	Rigid insulation XPS
40mm	In-situ concrete layer
	(with integrated piping)
200mm	Concrete floor element
300mm	Suspended ceiling

Mechanical sunshading

D3

50mm 100mm   200mm

Structure - detail D4

Joint filling

AcousticFoam edgestrip

Ground level

EPDM-foil

Support ridge

Weep-holes

Rubber-granulate

D4

50mm 100mm   200mm

Sustainability concept

Heat Recovery   Concrete Activation   Solar energy   Green roof   Solar Control glass   Recycled concrete from existing building
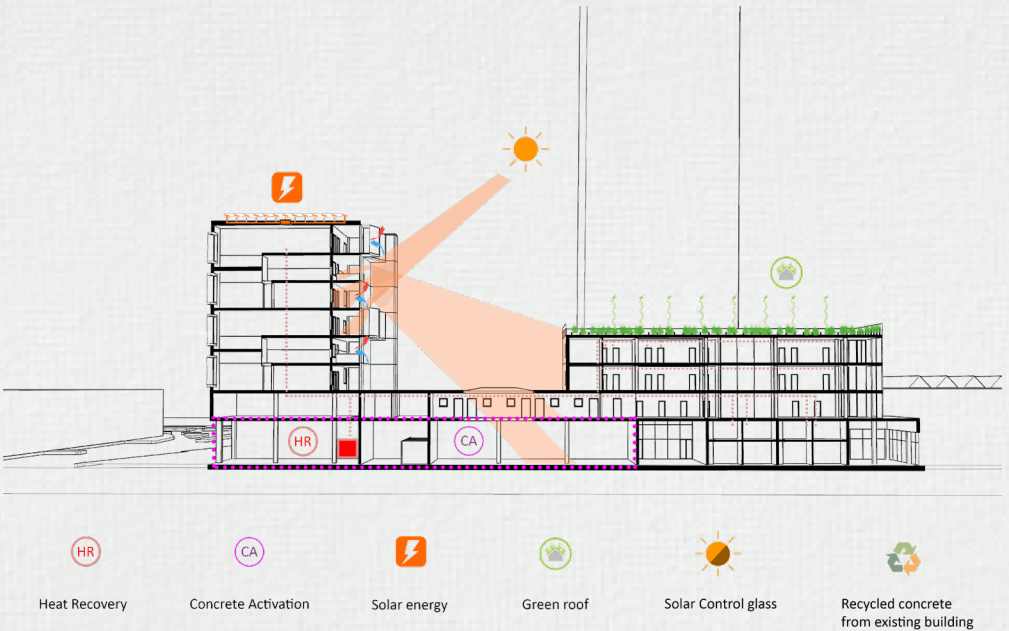
The concrete structure and the transparent plinth allow the implementation of concrete activation to alleviate heating needs of the sculpture workspace and the exhibition hall. The building is equipped with a central heat recovery system and 400 square meters of pv panels to reduce energy usage. Solar control glazing is applied to the gallery which is susceptible to overheating. For the same reason greenery is applied to all roofs increasing the efficiency of the pv-panels as well as preventing overheating of the top floors.

WALKTHROUGH

'We encounter buildings and environments through our entire sense of being. Perceptions interact with memory and imagination to constitute an experience with meaning and temporal duration. Art and architecture are essentially relational phenomena as they express our being in the world instead of themselves or their authors.'

Juhani Pallasmaa - 2018

The Keileweg

Car-sharing   Storage   Bike parking   Commercial

KEILEWERF

Exhibition

Sculpture

ENTRANCE

GROUNDFLOOR +0m   1:200
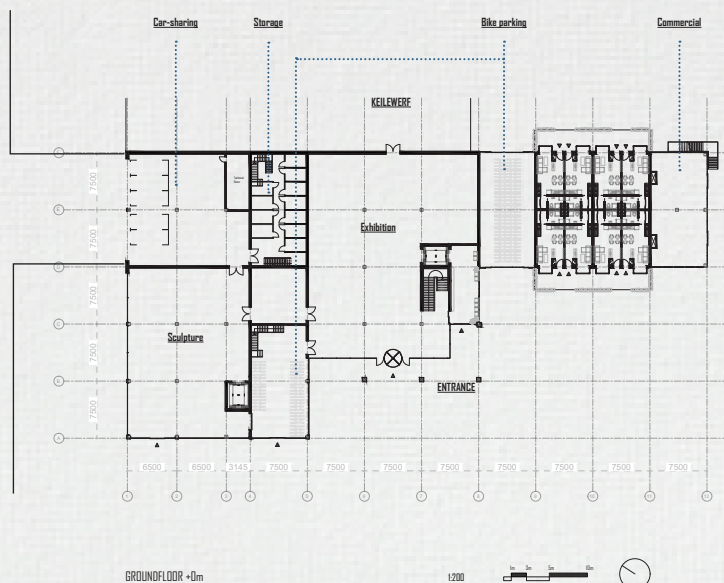
Now I would like to take you on a little tour throughout the building, starting on the main street, the Keileweg.

Immediately in view is the block which houses the atelier typologies. On the side of the block, a mural is painted with similar colours and motifs as the art found on the Keilwerf, relating the two buildings. The mural also serves as a point of recognition from afar.

As we move further along the main street, the plinth suddenly opens up to reveal the main portal towards the centre of the quadrant. The open space becomes increasingly green and between the buildings a green hill is placed which functions as a bike shed for visitors.

Entrance

Car-sharing   Storage   Bike parking   Commercial

KEILEWERF

Exhibition

Sculpture

ENTRANCE

7500

7500

7500

7500

7500

7500

6500   6500   3145   7500   7500   7500   7500   7500   7500   7500   7500

GROUNDFLOOR +0m   1:200   1m   3m   5m   10m
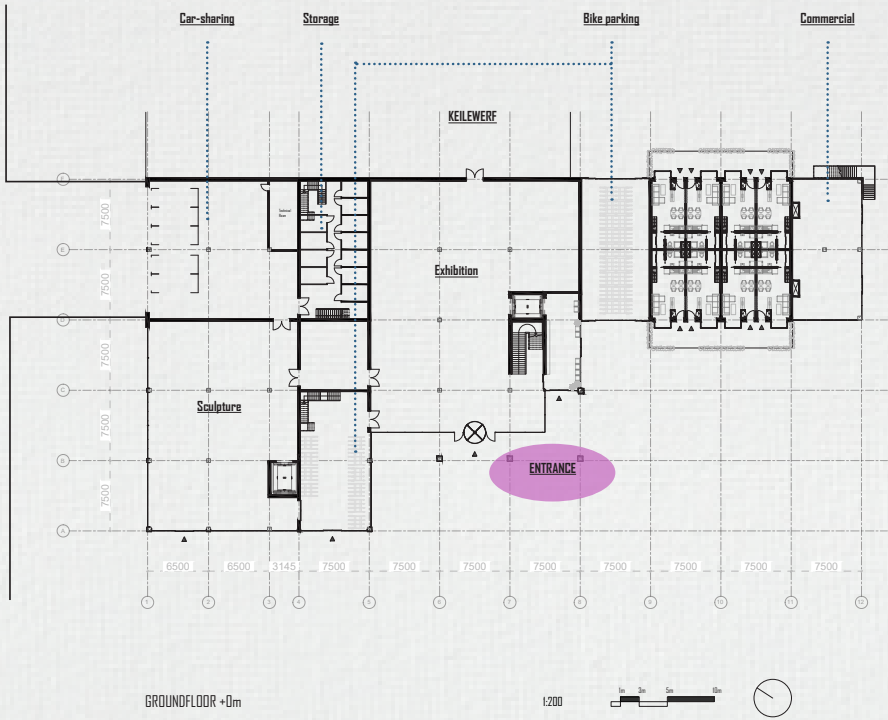
As we move along the hill we arrive at the main entrances
of the building.

The entrance is indicated by the change in façade depth and floor tiling. From this view we can also clearly see the contrast between the brick façade and the glass bay windows protruding from within, which is a metaphorical expression of the relationship between traditional artistry and the artistry of the new digitalised era.

Typology: LOFT

To the right on the ground floor we find the LOFT typology, which has a floor area of 34 square meters. The living room and kitchen are located towards the outer façade where the extended bay window maximises the sunlight intake. The sleeping quarters are located at the height of 2.4 meters to provide an extra layer of privacy and underneath it we find the bathroom and the closet room.
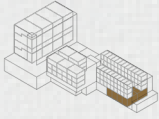
Gross floor area: 34 m2
Max. inhabitants: 2

7500

3750

1:50   1m
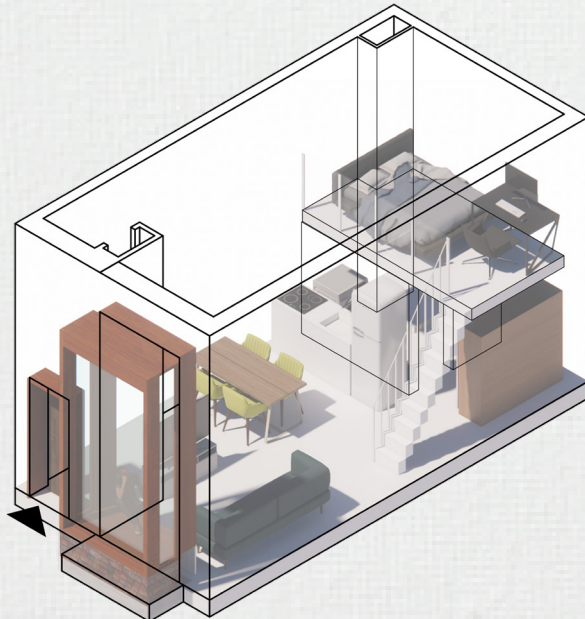
Exhibition hall

Next up is the exhibition hall at the centre of the building where artworks are put on display, artworks by residents and the Keilewerf have priority to be showcased in this space, but it can also be rented out to the public for certain events. The space is freely accessible to the public and serves as a way for residents to promote their work to the outside world. The hall can be subdivided by curtain systems that create little pockets where separate exhibitions can be held at the same time.

Car-sharing   Storage   Bike parking   Commercial

KEILEWERF

Exhibition

Sculpture

ENTRANCE

| 7500 | 7500 | 7500 | 7500 | 7500 |

| 6500 | 6500 | 3145 | 7500 | 7500 | 7500 | 7500 | 7500 | 7500 | 7500 | 7500 |

GROUNDFLOOR +0m

1:200
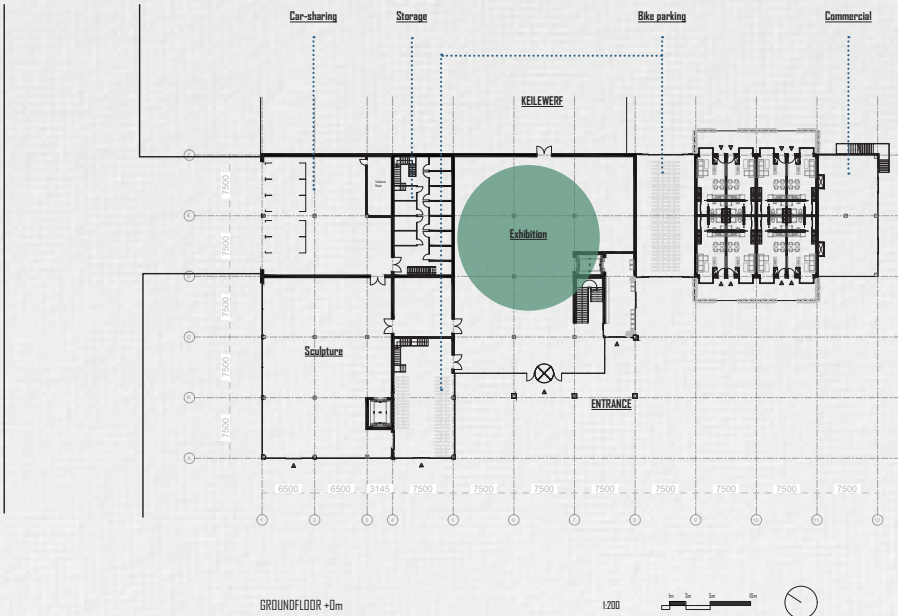
Sculpture hall

If we take the main staircase to the first floor and make a right, we'll end up in the sculpture workspace, which has two floors. On the ground floor is an open space with a maximum height of 8m for bigger art projects. The plinth curtain wall can be folded open for easy transport of artworks and materials to and from the space. On the second floor are work benches for sculpturing on smaller scale.

Workspace

Meeting rooms

Terrace

Sculpture

Exhibition

Multi-functional space

1ST FLOOR +5m

1:200
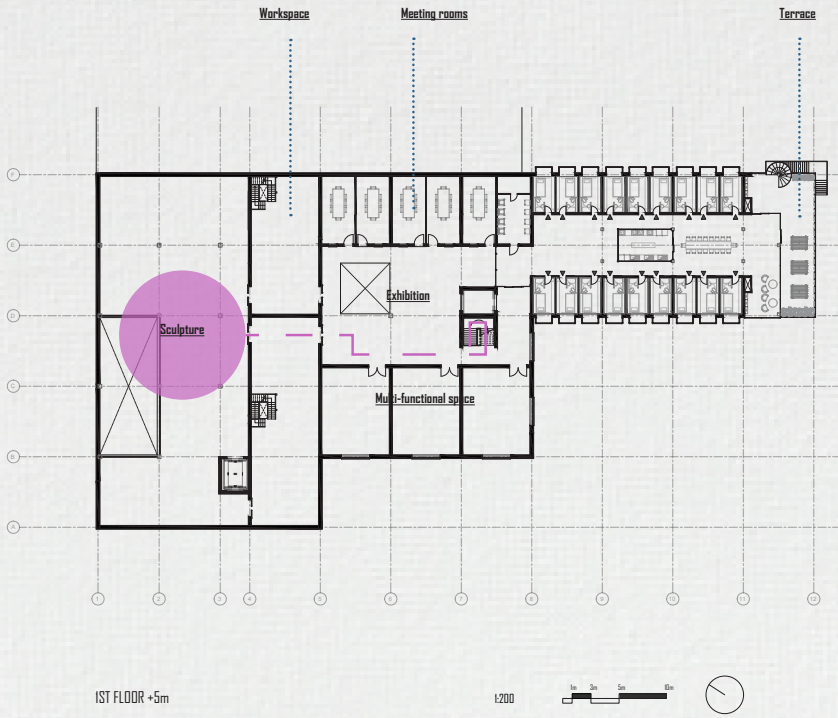
Terrace

Now we move back to the central staircase and take a left, entering the co-living section which is connected to the terrace with a view on the sculpture garden.

Sculpture

Exhibition

Multi-functional space

1ST FLOOR +5m

1:200

Co-living SE-block

Deck

2ND FLOOR +8m   1:200
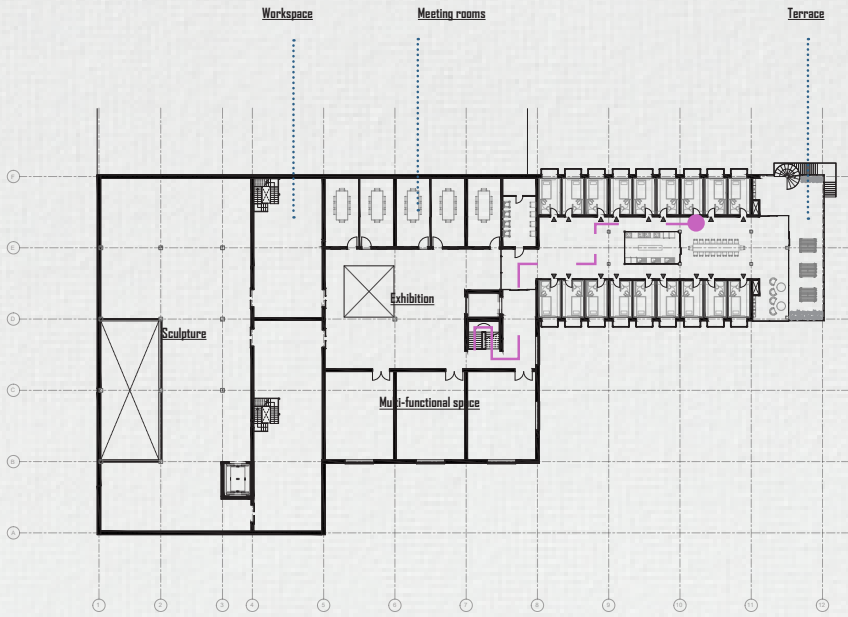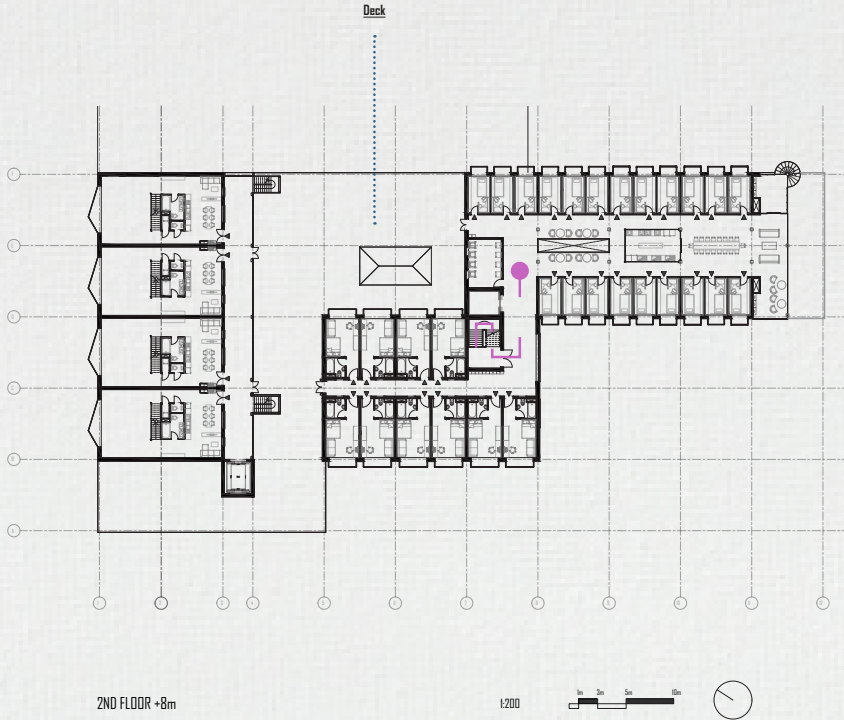
Moving on to the second floor we have reached the level of the deck, which is directly connected to the co-living section on this floor which has a communal space in the middle of the hallway which includes space for studying, cooking and eating. The flooring and the doors are made from timber with the same appearance and the doors are pushed back into the wall to create the illusion of a wider hallway. The wall finishing is a mix of coloured patterns which follows the colour palette of the mural on the exterior façade.

A skylight allows sunlight to penetrate into the hallways and connects the floors visually, adding to the sense of collectiveness.

Typology: POD

Behind these doors in the co-living section we find the Pod typology, an extremely small apartment of 9 square meters, it is designed as a co-living apartment targeting creatives with a smaller budget that still want to live in close proximity to workspaces. This small living space is made possible by placing a murphy bed in combination with a custom bathroom module which significantly reduces the sanitary space. On top of the module is a partly suspended ceiling which houses the piping. The bay windows add another 1.5 square meters to the space and greatly reduces the feeling of compactness one might feel.
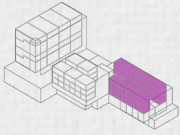
Gross floor area: 9 m2
Max. inhabitants: 1

2467

1:50   1m
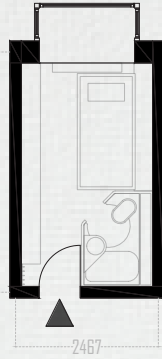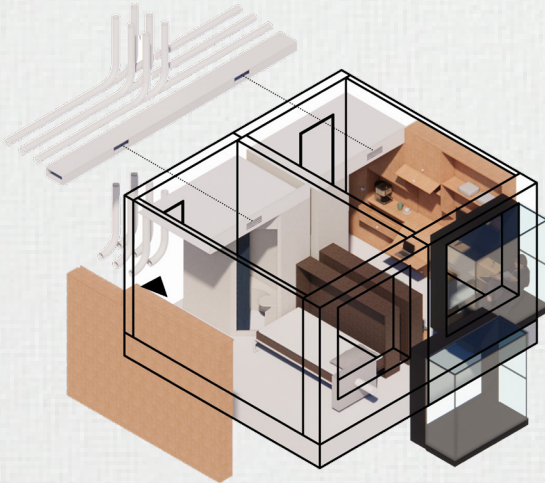
Co-living Centre block

And as we turn around, the co-living section continues to the building block in the middle where the studio typology can be found.

The interior walls in this hallway have small cubbies built into them where residents can put a part of their identity on display so that other residents can become aware of what their neighbours might be like without actually knowing them, adding to the sense of collectiveness.
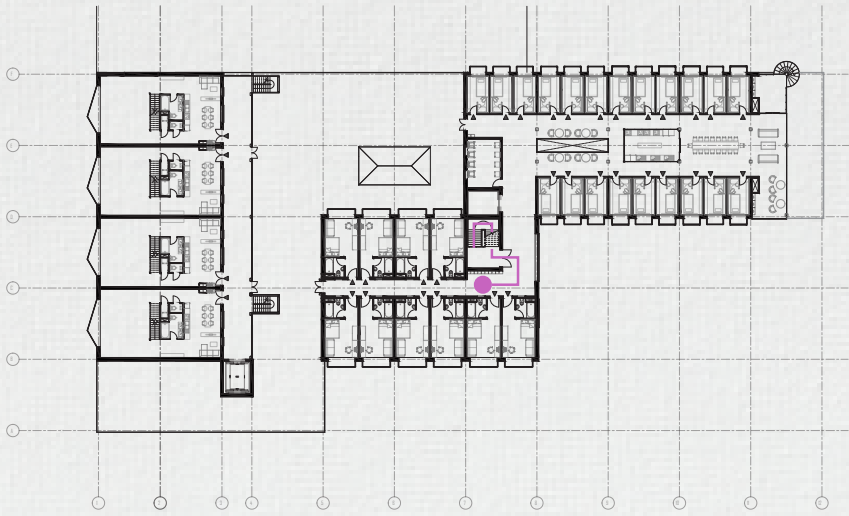
2ND FLOOR +8m   1:200

Typology: STUDIO

The Studio typology is the second smallest apartment with a floor area of 22 square meters and has the configuration of a typical studio apartment. The space is yet again extended into the outside world by a bay window, which is slightly larger than the one found in the Pod typology.
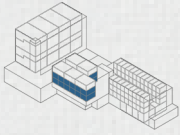
Gross floor area: 22 m2
Max. inhabitants: 1
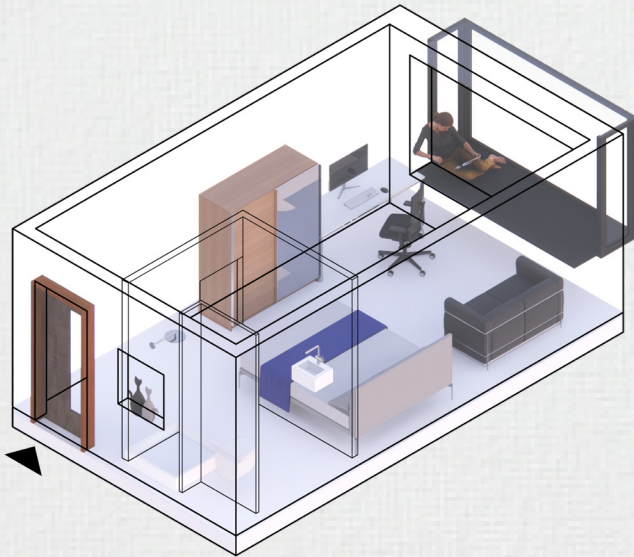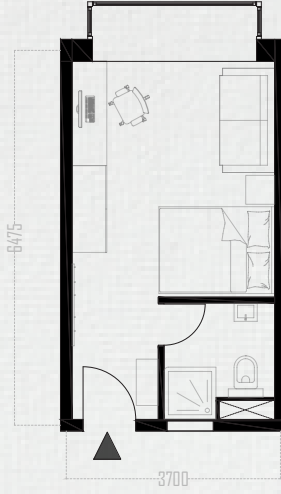
Horticulture garden

As we continue through the staircase we end up on the 4th floor, the floor where a bridge connects all the blocks together. It is also on this floor that we find the horticulture garden, where residents can get their hands even dirtier than in the workshops or simply enjoy the view.
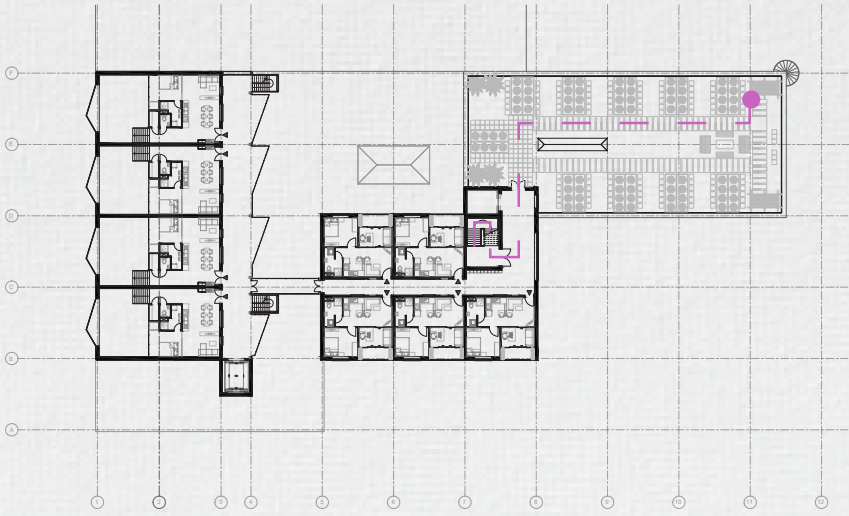
4TH FLOOR +14m

1:200
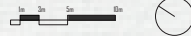
The bridge

As we come back inside we see the hallway leading to the bridge, where the studio+ typology can be found.
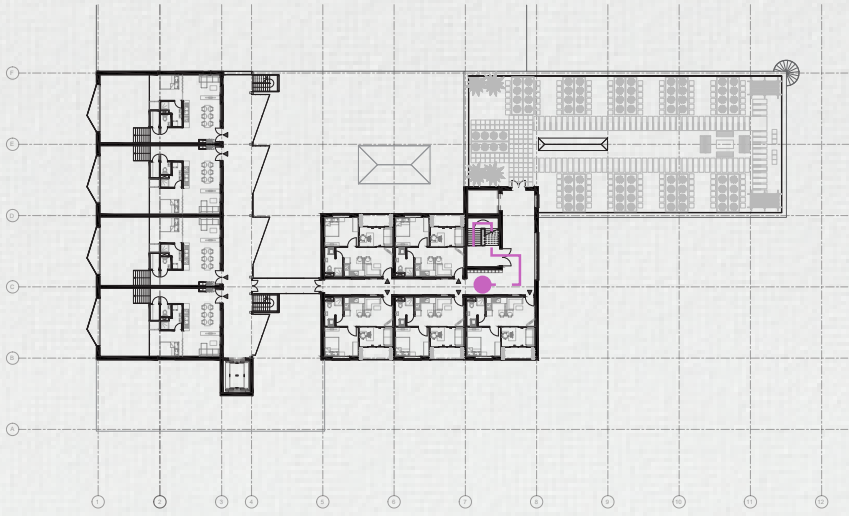
4TH FLOOR +14m

1:200
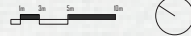
Typology: STUDIO+

This typology has a floor area of 45 square meters and comes with a separate workspace and loggia. This typology is especially suited for non-traditional creatives who work digitally and creatives who need to meet with clients on a regular basis.
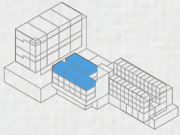
Gross floor area: 45 m2
Max. inhabitants: 2

7500
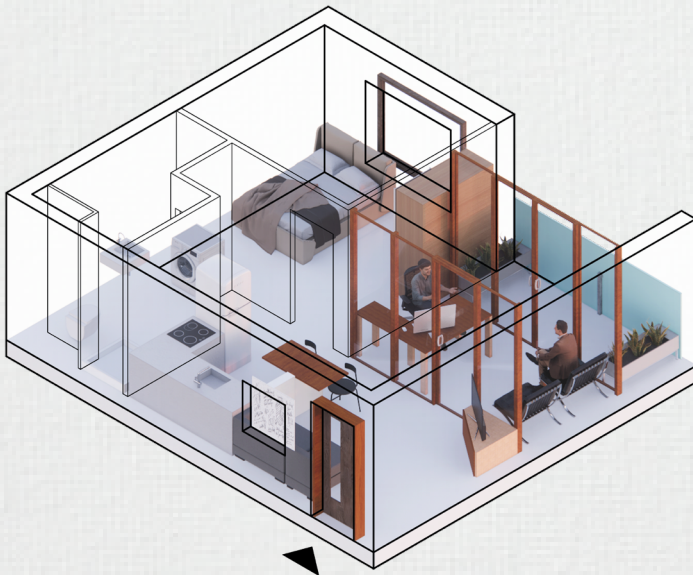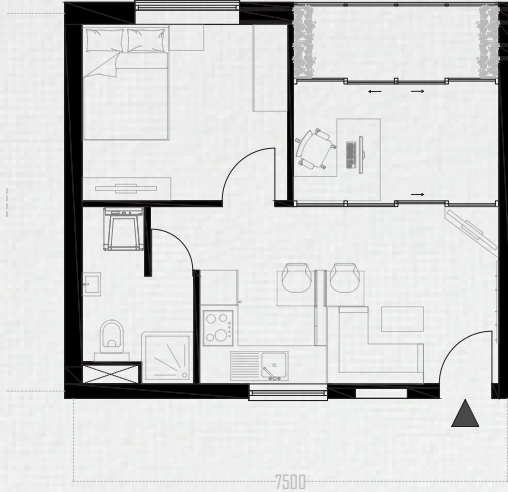
Gallery 3rd floor

The next stop is the gallery,
Which is fully translucent, maximising the sun exposure of the
inner façade and the living spaces behind it. The inner façade is
cladded with perforated timber panels reducing the air-bourne
noise within the gallery. On the fourth floor and the seventh floor
the gallery is extended with prefabricated balcony elements that
function as balconies for the Atelier typology.

4TH FLOOR +14m

1:200
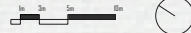
Typology: ATELIER

Which is the second largest typology with a floor area of 90 square meters of which 34 square meters is dedicated to a north facing workspace which gets diffuse natural light, making it especially suitable for painters. The living space is kept as open as possible by placing the sanitary spaces in the centre to allow sunlight to reach the kitchen and the living room.
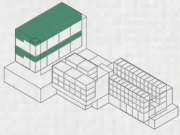
Gross floor area: 90 m2
Max. inhabitants: 2

7500

13000   3020

1:50   1m
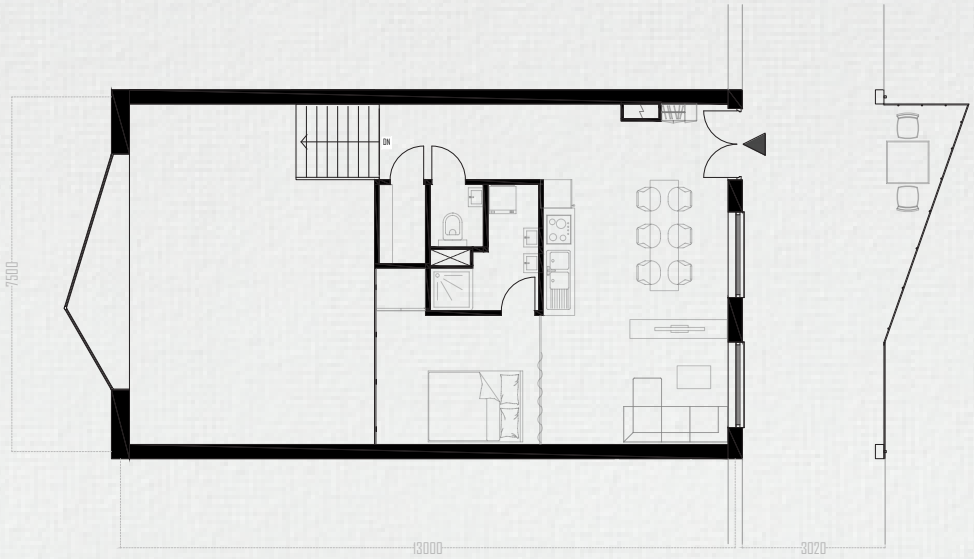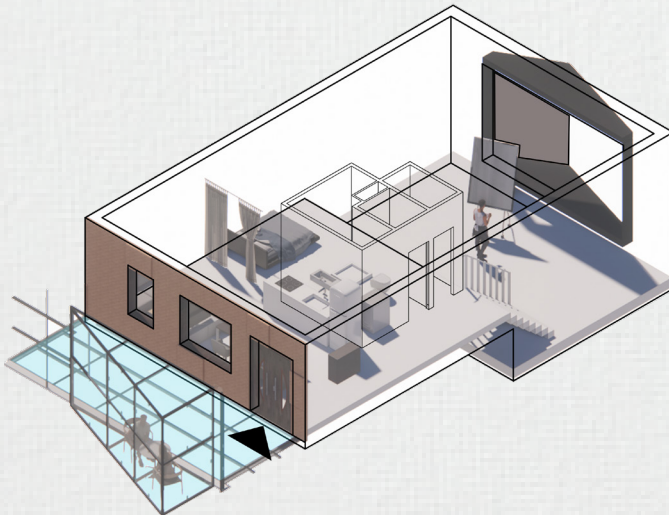
Typology: ATELIER DUPLEX

Under the Atelier typology is the Atelier Duplex, the largest typology with a floor area of 140 square meters of which around 40 square meters goes to the workspace.
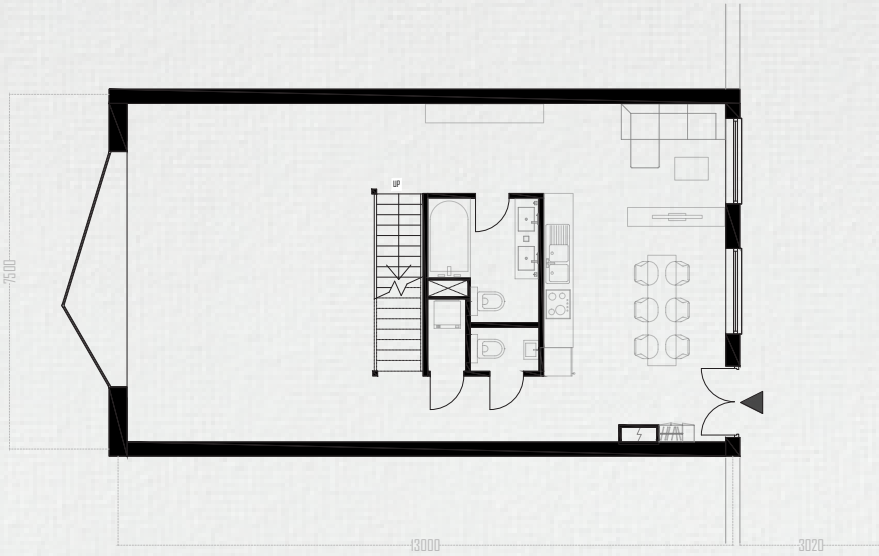
The lower level has a similar open plan as the atelier typology above it with a slightly larger kitchen and an additional toilet and laundry room.

On the top level it has a study room and two bedrooms and that connect to the balcony which is located on the gallery.
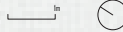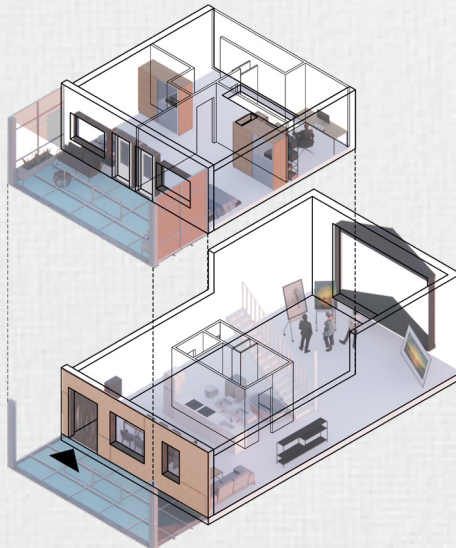
Gross floor area: 140 m2
Max. inhabitants: 4

7500

13000   3020
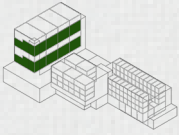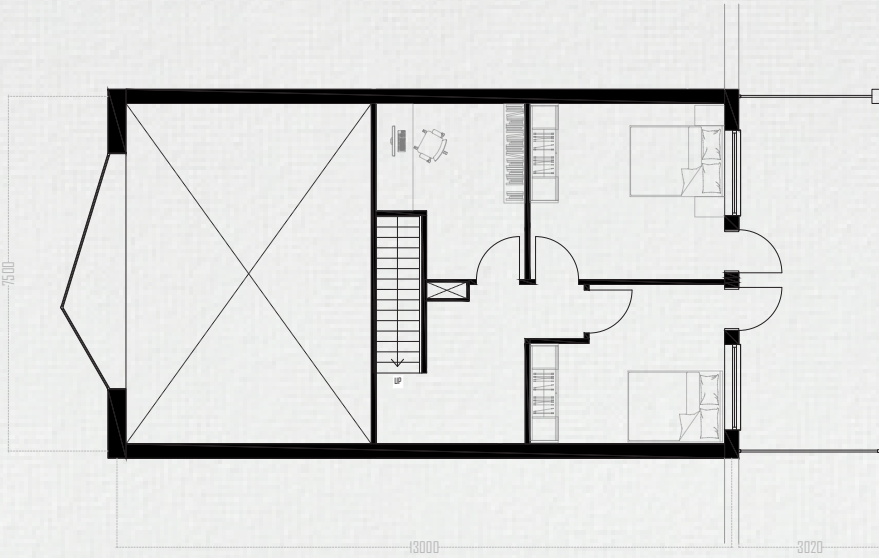
First Floor

1:50

Gross floor area: 140 m2
Max. inhabitants: 4

7500

13000   3020

Second Floor

1:50   1m
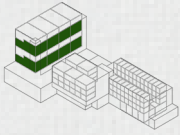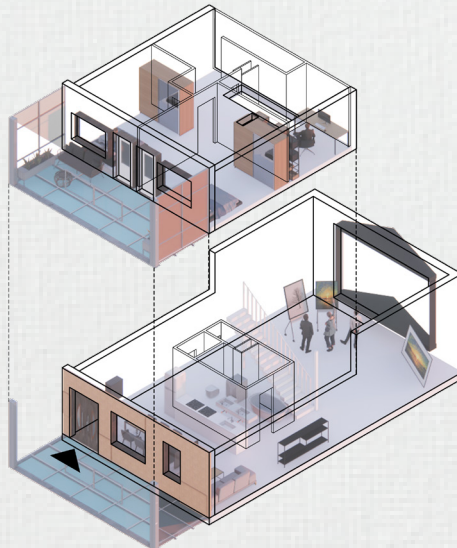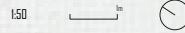
The birds-eye view from the south side, showing that the bay windows can also be used as a means for self-expression, which at night may turn into a colourful scene, bringing liveliness into its surroundings.

REFLECTION

The relationship between research and design.

Two ends of a spectrum

Design and research within the field of architecture are two aspects that appear to be on two ends of a spectrum. The dichotomy of design and research resembles that of the intuitive and the analytical mind. As students of architecture, we are taught to distinguish between these two modes of thinking, but also to understand that they are inseparable in the way the one feeds into the other.

The intuitive and the analytical mind

The process of design is comparable to the act of putting together a puzzle without knowing how it would look like in the end. In the beginning, most of the puzzle pieces are missing, or have the wrong shape. Often enough the intuitive mind would start to suggest the shape of certain puzzle pieces – the massing of the building, for example – which remain vague. Research, which engages the analytical mind helps to correct the shape of these pieces, which would lead to changes in the intuitive ideas. The design intuition answers the question of "how do I want it to be?", while the analytical research tells us "why do it this way?" and "how can it be achieved?". As a designer, I often find myself favouring the intuitive mind, which acts as the source of inspiration and resembles the 'me' in my designs. However, in my current stage as a designer, the architectural intuition is still in its infancy. Intuition is however, a design tool that develops overtime to become sharper through the accumulation of experience and know-how, much of which comes from not only the act of design, but rather the act of research. Not only does research tell us the how and why on specific occasions, but ultimately changes who we are as designers, on an intuitional level. In this sense, the analytical and intuitive mind are separated but constantly influenced by the other.

Looking back at the design process, I identify three elements that have influenced my design the most: Guiding theme, functionality and the genius loci.

Guiding theme (intuitive)
During my design processes, intuitive ideas would often accumulate into what is referred to in the architectural theory as a 'guiding theme'. A narrative or core idea that threads most if not all aspects of the design together, acting as a guide for the seemingly infinite number of choices throughout the design. In this project, the guiding theme is 'synergy', synergy between the traditional creatives/creative age and the new, digital creatives/ creative age. The idea of creating a synergetic environment was an intuitive idea that occurred at the very beginning of the design process, but it was not until a couple of weeks before the P2 that it was recognized as the guiding theme. The research on the target group and collectiveness was in great part what turned an intuitive idea into a fully defined strategy.

Functionality (analytical)
As architectural designers we are not only subject to our own will, but even more so to the will of the ones we design for. We need to make sure that we know the behavioural, mental, physical and spatial requirements of the users and that the design meets these requirements. This responsibility necessitates us to educate ourselves on these topics in order to refine our ideas and to guarantee a design that functions according to the needs and wishes of its users.

Genius loci (analytical/intuitive)
A building is never a stand-alone entity, but is tied to its surroundings. This is the context behind the design and should be used to inform the design in any way possible. Think of sun-orientation, wind, climate, soil, all of which are topics of research. The genius loci also includes social-ecological topics such as the local municipal vision and the local creative economy, which were especially important for this project. In addition to its function as a primary source for analytical data, the genius loci can also function as a source of inspration for the intuitive mind. A source of information that cannot be interpreted in numbers, but rather by an accumulation of senses, a feeling. It's the taste of salt in the air, the sounds of a bypassing train, or the way the wind caresses the skin, all of which

engages the intuitive mind. Personally speaking, this abstract source of insipration is perhaps where the the true essence of the genius loci lies, but ideas that come forth from it are often seen as subjective and spontaneous. And not only is it subjective by nature, but also very difficult to be linked to or supported by the analytics. Thus the relationship between the intuitive part of the genius loci and the other design elements becomes a one-way-road, whereby it solely exerts influence and is unable to be influenced by elements other than itself.

The guiding theme, functionality and genius loci engage different modes of the mind, but ultimately come together to inform a single design.

DESIGN   RESEARCH

GUIDING THEME   FUNCTIONALITY

GENIUS LOCI

intuitive mind   analytical mind
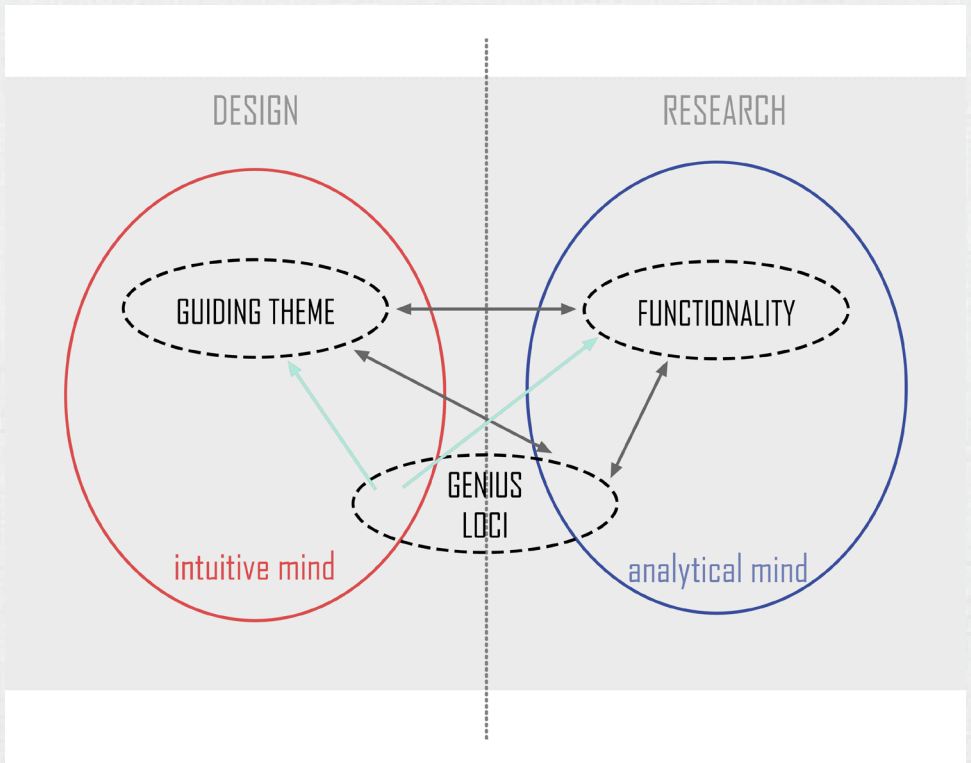
# The body of research which has informed the design can be categorised as:

Historical research
Literature research
Case studies
Field research
'Online brainstorming'

This chapter shortly describes the categories of research done and the main findings that have guided the design in an impactful way.

Historical research

As part of the target group study, I delved into the history of the creatives, in particular the history of creative housing and the political history regarding creative housing in the Netherlands. The historical research shone light on the hardships experienced by the creatives in regards to housing, both in the past and the present. It further solidified my motivation to design for this target group and also provided a historical context from which the target group could be understood. The findings pointed to the extreme lack of suitable accomodation for creatives within Rotterdam, with affordability being one of the biggest issues facing the creatives. This part of the research did not result in design decision directly, but made clear what the core issues were to which the design would need to offer solutions to.
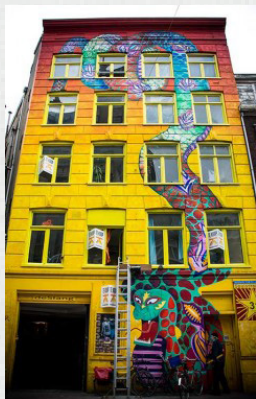
Literature research

After identifying the core issues regarding creative housing, I then looked into the definition of creatives in literature studies. In pursuit of solutions to the affordability issue, I looked deeper into the creative work itself, and the role creatives play within the creative industry. After all, affordability is not only the result of high housing costs, but also the dire financial circumstances creatives find themselves in. The understanding of the structural workings of the creative industry and the different roles of different types of creatives within it was impactful to the design. It led me to see the possibility of dwelling to act as more than simply accomodation, but also as a catalyst for success within the creative industry. This part of the research became the analytical study that would support the notion of synergy and transformed the intuitive idea of 'synergy' into a guiding theme.

Creative value chain/subsectors	Art & Cultural heritage	Media & Entertainment	Creative Business Services
Creation			
Production		Creative industry	
Publishing & Exploitation			
Distribution			
Consumption			

Case studies

Creativity does not emerge from thin air. It is an accumulation or a synthesis of the collective creativity, which are pre-existing ideas embedded in case-studies and literature. Architecture is one of the oldest discplines, in order to avoid reinventing the wheel, it is in our interest to learn as much as possible from what has been done by dissecting and understanding the knowledge buried within the built environment. Therefore, a part of research was dedicated to analysing four existing creative work-live housing projects:
Tree House - Bo-da Architecture
KLEO Art Residences - JGMA
Atelierwoningen Zomerdijkstraat - Zanstra, Giesen & Sijmons
Cheval Noir - L'Escaut + Atelier Gigogne

All projects were analysed on the aspects of circulation, live-work configuration and routing. The Tree House and KLEO Art Residences for example, utilise the corridor typology, which contributes to the space-efficiency and affordability. This led to the choice for the corridor typology as the main circulation type within the design. The other two case studies showed how the gallery typology in combination with height variations within the same apartment would allow the creation of atelier studio's which are neccesary for the design to accomodate a wider variety of creatives. A design goal that came forth from the guiding theme. This is one of the many examples of the cycle of influence between the intuitive and the anlytical minds. The intuitive idea of 'synergy', the literature research and case study findings came together to determine the circulation typology and very much defined the concept of the interior layout of the design.
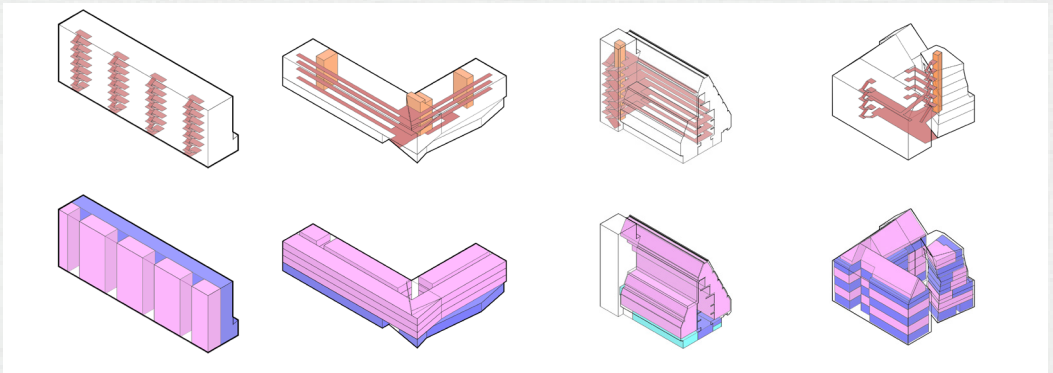
Field research

Field research was conducted on several occasions at three locations:
Strijp S - Eindhoven
Blaak - Rotterdam
M4H - Rotterdam
The field research on Strijp S was at the beginning of the studio as a way to familiarise ourselves with dwelling design, where we looked at the typologies, urban setting and the atmosphere in order to formulate a urban masterplan for M4H. Looking back, this part of the research has had a huge impact on the final design. By allowing the students to design the urban setting, it enabled us to define and modify to a certain extent the genius loci, which is normally predetermined. Although in our assigned quadrant we decided

to double down on the existing genius loci (creative zone with Atelier van Lieshout and Roosengaarde), the possibility was there to change it all. The designed genius loci in our case (quadrant A) gave form to the conceptual massing of my building and was partly responsible for my choice for creatives as the target group.

The field research done at Blaak focused on the notion of collectiveness within dwellings. The findings pointed to the crucial role of circulation in a design which aims to promote collectiveness. In the sense that collectiveness is related to the number of circulation nodes present, the degree of public accessibility and the specification of adequate dimensions of circulation elements. These findings acted as valuable input to the circulation design, where I tried to limit the number of direct access points to and from the public domain as much as possible while maximizing the number of potential circulation nodes.
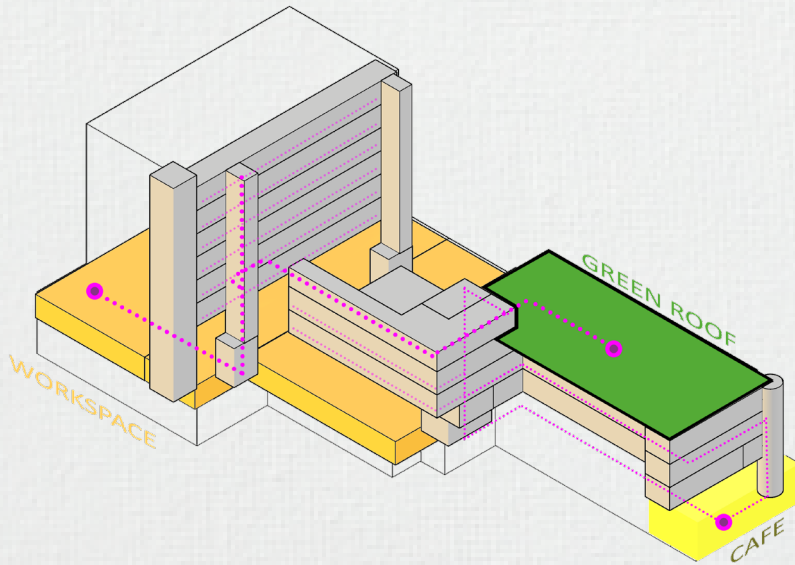
Hotspots encourage movement through the building

'Online brainstorming'

During the design process, I encountered countless problems, some big, some small. They would range from suffering from a major designers' block, or simply not knowing the dimensions of a brick in 'waal formaat'. For many of these issues, I turned to the internet, with Google as a starting point. I would spend hours scrolling through search results while evaluating their trustworthiness or simply look at images on Archdaily hoping for a spark inspiration. This form of research is by no means academic, but it allows for quick problem solving, whether its fulfilling the need of a reference, or to quickly fill in a knowledge gap. And speed is of the essence here. I often hear architects being decribed as a jack of all trades, but a master of none, with which I identify to a certain extent. As architecture touches on so many disciplines it becomes practically impossible to fully understand all aspects of a design, thus when it comes to solving non-crucial questions or problems, we choose to sacrifice precision for time. Personally, this form of research has fed both the intuitive and analytical mind and has been essential to the progression of the design, but there is also a downside to it. Aside from it being non-academic, this form of research comes with other drawbacks as well. The information obtained may be skewered, outdated or flat-out incorrect. It is often difficult to determine the trustworthiness of unverified sources. Another drawback is that it does not guarantee results, as its unstructured research that may or may not lead to a convincing conclusion. I cannot recall the countless hours I have spent scrolling through seemingly interesting articles and images, not realising I was essentially procrastinating in the name of research.

Further reflections

The relationship between the graduation topic, the studio topic, the master track, and the master programme.

The studio topic addresses the creation of an inclusive city, where people of all classes, race, profession, ideals can co-exist in harmony. For the creatives however, Rotterdam has not been nearly as inclusive as it could be. Rotterdam markets itself as one of the most creative cities in the world, but lacks in available work and live spaces for creatives. By choosing creatives as the target group, and focusing on creating suitable and affordable work-live dwellings for them within Rotterdam, a strive is made towards the inclusive city.

Elaboration on research method and approach in relation to the graduation studio methodical line of inquiry. Reflections on the scientific relevance of the work.

The research methods and approaches were in line with those proposed by the studio, which strictly speaking could not qualify as scientific in its entirety. Parts of the research focused more on anecdotal data whereby the number of entries were insufficient to produce repeatable results. For example the research on collectiveness or the online surveys targeting creatives. The results could only be analysed qualitatively. However, if we would bundle and organise all the research on similar topics throughout the years, the outcome may besomething that can be considered to be truly scientific.

Elaboration on the relationship between the graduation project and the wider social, professional and scientific framework, touching upon the transferability of the project results.

The issue of creative housing is multi-dimensional. It encompasses not only the achitectural discipline but also the fields of real estate management, politics and social-economics. The architectural design itself is simply the manifestation of a possible solution. The project results are not transferable when it comes to the physical aspects such as massing and material, as they are based on the genius loci and the designer's subjective

choices. However, the conceptual idea of an environment which promotes individual growth may be applicable outside the scope of the current project.

Discussion on the ethical issues and dilemmas encountered during research and design elaboration phases. Discussion on potential applications of project results in practice.

The necessity of creating affordable housing has lead to the design of extremely small apartments of around 9m2. With this came a question of ethics: As a designer, is it virtuous to offer extremely small living spaces when circumstances demand it? Or is it sinful to even consider creating such miniature living spaces that many would consider unfit for long-term living? Such small apartments are not unprecedented, they can be found in many highly densed areas. Which is also why I believe such aparments may have a bigger chance of being realised in cities that have higher densities. It does beg the question, if such a design would become reality in Rotterdam, would this indicate a shift in the Dutch living-culture? I believe the project challenges the status quo in this specific aspect, pushing the boundaries of miniature living.
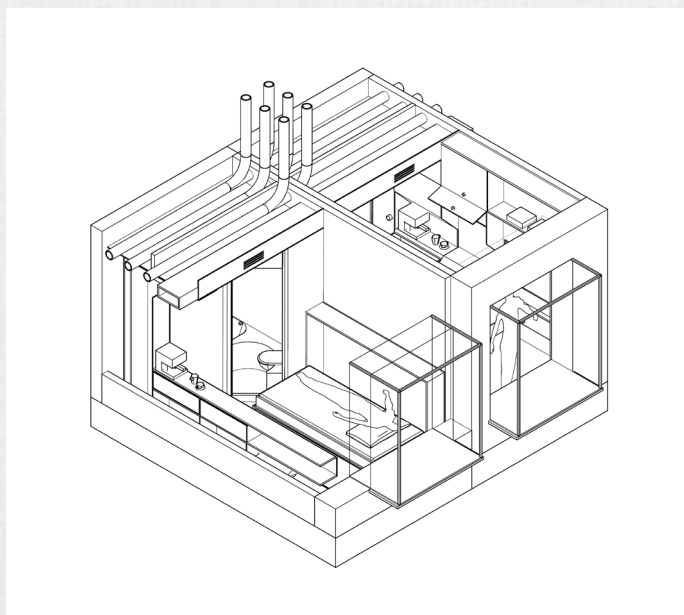
Reflections on a side note

Designing with limitations & The move towards the practical

Throughout my architectural studies, most design processes could be described as 'free-handed', with relatively few limitations. In contrast, the Dwelling Studio required designing with exceedingly more limitations than before. These limitations in the form of regulations, spatial requirements, target group needs/wants, costs have played a big role throughout the decision-making process. The design experience could be described as a constant battle between creativity and rationality. The urge to design freely clashed against the growing number of limitations, which became increasingly important to-wards the final design. In regards to the design, we often see research as a means to a solution. However, during this studio, research has brought up just as many problems as solutions, as research constantly births more questions, which often result in limita-tions for the design. Research in this case acted as a reflective tool. I often found myself stuck within the analytical mindset, thinking and re-thinking ideas and their possible out-comes before actually producing anything. Each new idea would immediately lead down a rabbit hole of internet searches and contemplation. If design and research were two sides of the same coin, I'd be looking at the side of the proverbial coin for hours on end. Reflecting back on these moments I would like to remind myself it's not always possible to find answers to all the questions and that sometimes, taking a step back is the best way to move forward.
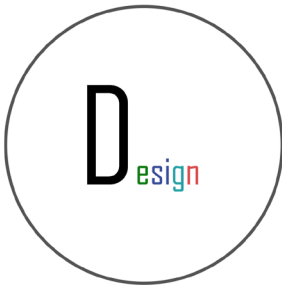
Appendix:
The Collectiveness research

On site interviews with residents of apartment complex Blaak,
presented through a series of drawn-over sketches.

The interviewees were informed of the nature of this study on
collectiveness,
however, effort was made to keep the conversations as casual
as possible.
The questions asked were inquisitive, but not objective-driven.

The study resulted in an analysis of the on site circulation and
accessibility.

Meet **Karin**, a woman in her **30s**, returning from grocery shopping. We encountered her as she was about to enter the building and asked her a few questions about interaction within the building.
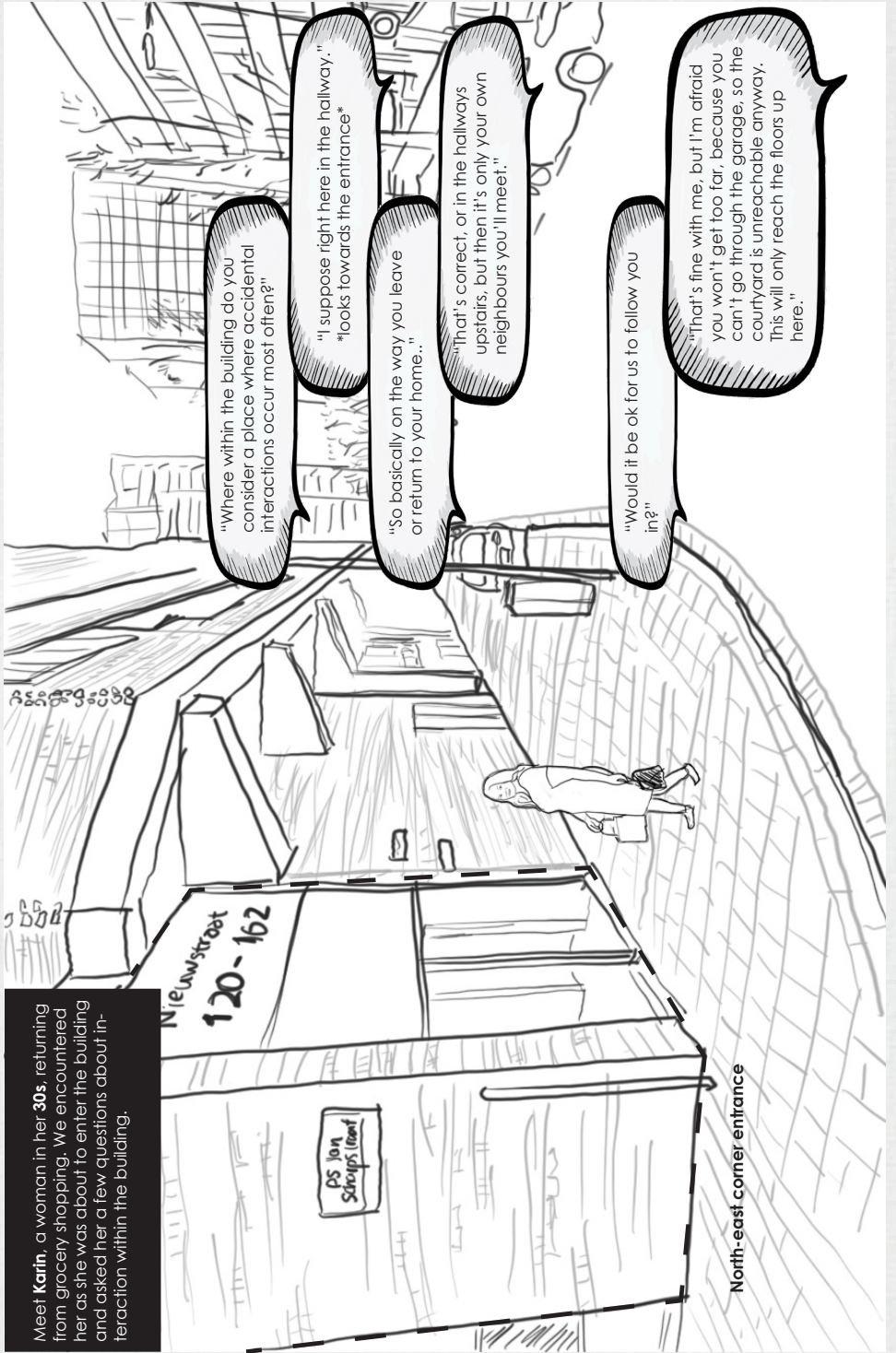
"Where within the building do you consider a place where accidental interactions occur most often?"

"I suppose right here in the hallway." *looks towards the entrance*

"So basically on the way you leave or return to your home.."

"That's correct, or in the hallways upstairs, but then it's only your own neighbours you'll meet.."

"Would it be ok for us to follow you in?"

"That's fine with me, but I'm afraid you won't get too far, because you can't go through the garage, so the courtyard is unreachable anyway. This will only reach the floors up here."

Nieuwstraat 120 - 162

PS Ian Scheaps Haaf

North-east corner entrance

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Western courtyard

Meet **Menno**, a man in his 30s who works in the field of building physics. We met him infront of one of the stairwells. He lives in one of the apartments on the south side of the courtyard. After a short introduction he was kind enough to give us a tour through the inner courtyards.

"If you could mention one place in this complex where you would have most interaction with neighbours, where would that be?"

I would say that it doesn't happen that much (interaction)...I mean, ofcourse if you see your neighbour you'd have a small chat, but it's the inner city afterall, so people are more...private.
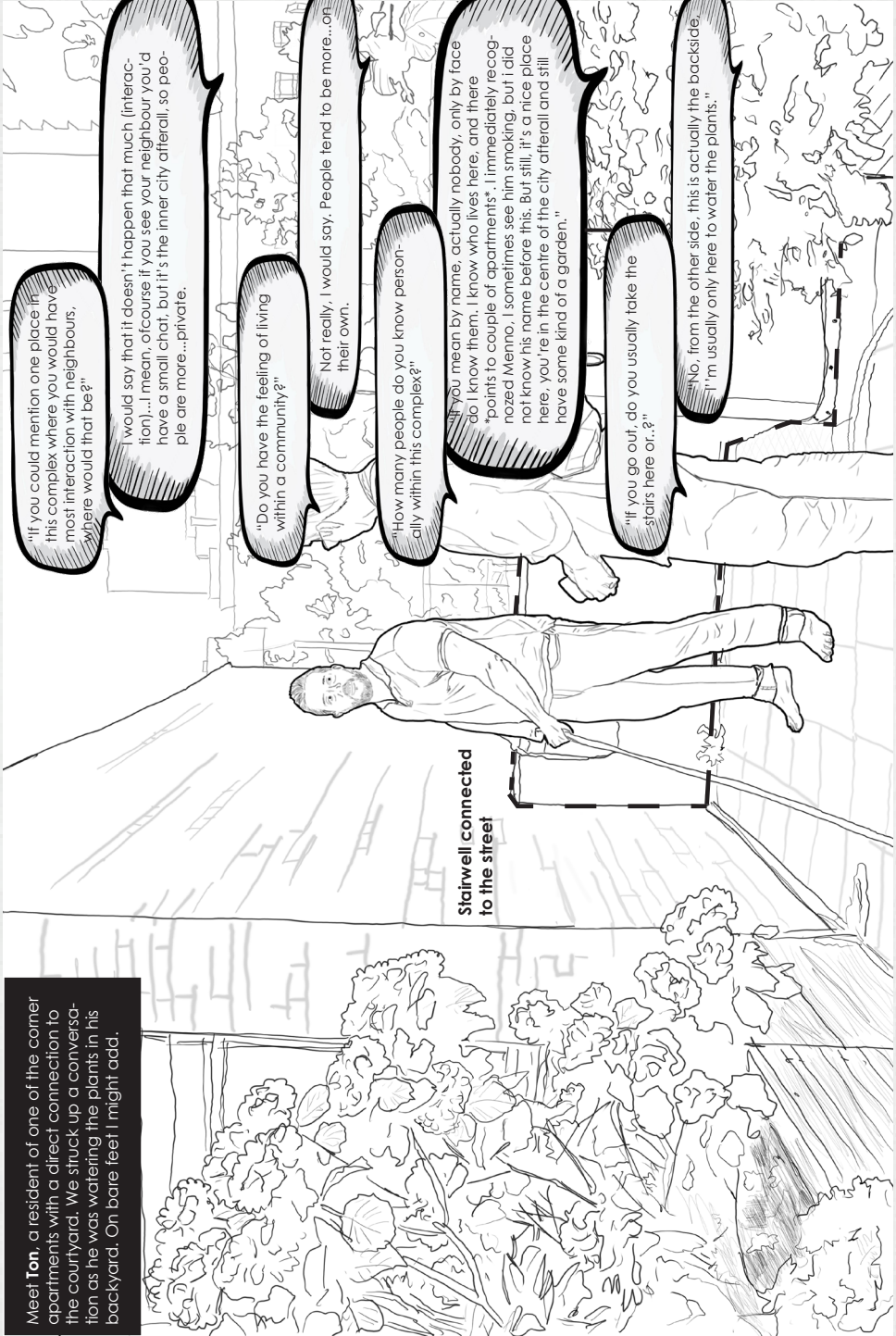
"Do you have the feeling of living within a community?"

Not really, I would say. People tend to be more...on their own.

"How many people do you know personally within this complex?"

"If you mean by name, actually nobody, only by face do I know them. I know who lives here, and there "points to couple of apartments*. I immediately recognized Menno, I sometimes see him smoking, but I did not know his name before this. But still, it's a nice place here, you're in the centre of the city afterall and still have some kind of a garden."

"If you go out, do you usually take the stairs here or...?"

"No, from the other side, this is actually the backside, I'm usually only here to water the plants."

Stairwell connected to the street

Meet **Ton**, a resident of one of the corner apartments with a direct connection to the courtyard. We struck up a conversation as he was watering the plants in his backyard. On bare feet I might add.

Marc lives here

Meet **Marc**, a **71** years old resident with a garden on the inner courtyard. We approached him as he was attending to his garden.

"This area (inner courtyard), is it normally used by the residents?"

"No unfortunately not. We sometimes try to ask (the neighbours) and organize something, but yea then we'll be the ones doing all the shopping.... I'm retired now, I'm 70, 71, but I come from the realm of music and had a youth orchestra, which would sometimes play in Rotterdam, and the neighbours, they would grab chairs and join us for a brunch or something on a Sunday morning. I've done that a few times, but that's pretty much it, it really is a shame, such a shame."

"Yes I agree, some of the other residents we spoke with mentioned the same."

"That's correct, it's not really used alot. Normally on a afternoon I would just watch tv, and if I'm sitting outside I would look at the tower on the other side, in a manner of speaking. Yea it's a shame. Actually, the government owns this ground, I've lived here for 23 years, but before that, there was no door there *points to doors separating the building blocks*. So people could just walk through here, it was meant to be public space."

"So how long ago was that?"

"Well, I'd say about 30 years ago, because when I came here 23 years ago the doors were already there. I don't know if you've been to the Kubus woningen, but it's like that, you can just walk through it. Here we have three paths and they were all open. This is what I've heard."

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"So do you reckon that it's because of a lack of initiative or more, a will of the residents, that the inner courtyard is not fully utilized?"

"Well, I could imagine that if you live upstairs, whether you have much room or not, that you won't been keen to come and sit here with your visitors. It wouldn't be too practical either, now I think about it. If you need to get a drink or something you got to go upstairs again." I've asked people before and offered to organize something before, but for us it's easy, we can just go inside anytime we want. When I turned 65, I had 55 people over here and yea...that's why I chose to live here. Afterall, I like the outdoors, I have a small apartment, but I'm living here for this (courtyard). Because I really enjoy it, there's no sun now, but tomorrow morning the sun will shine and that's great.

"Does this place give you a sense of community?"

"Well, yes, yes. I've lived here a long time and two years ago, I had a few hart attacks within a span of a half year. During that time the other residents showed a lot of concern. They offered to help me, gave me phone numbers...so yea the sense of community is present.
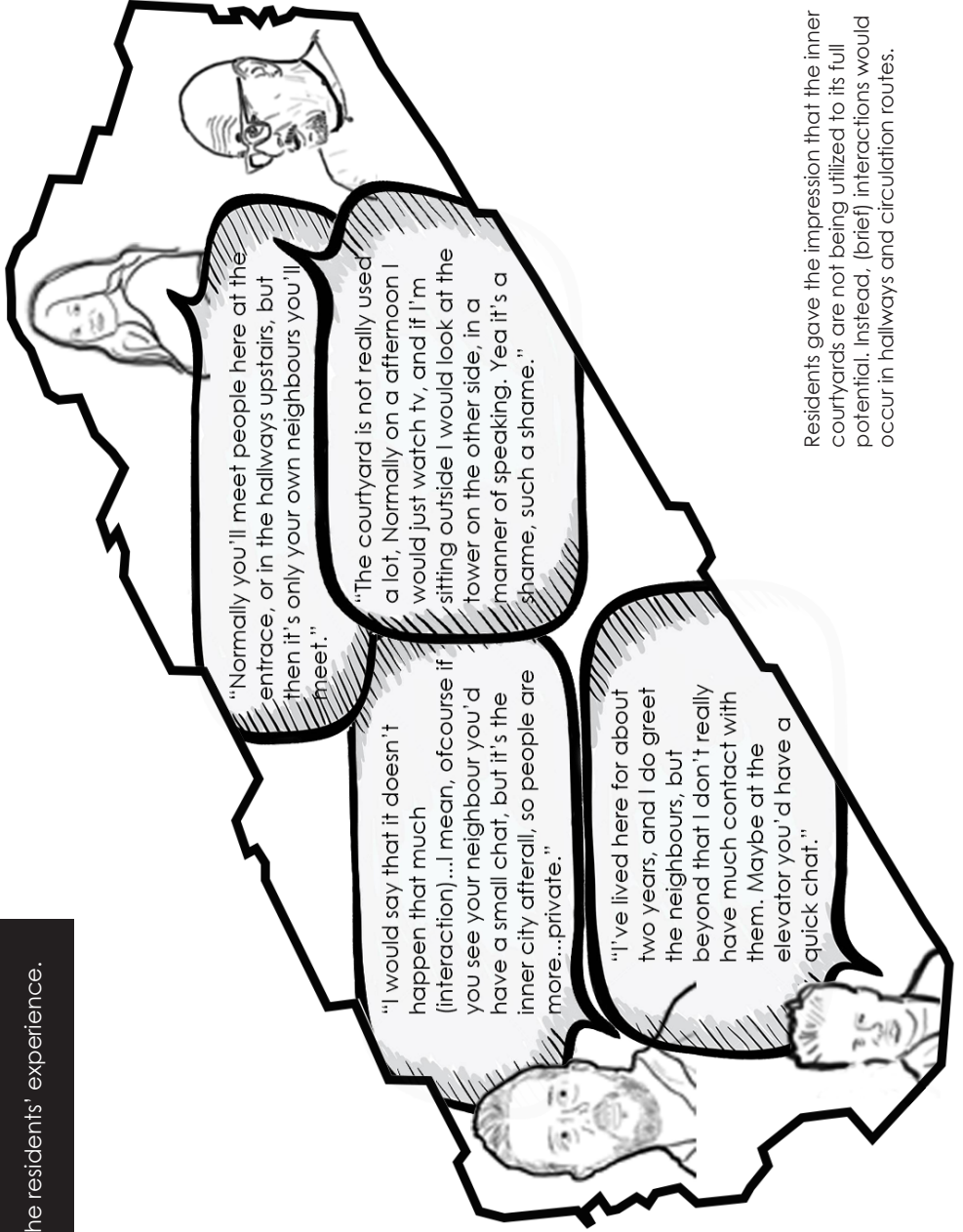
Center courtyard

"Normally you'll meet people here at the entrace, or in the hallways upstairs, but then it's only your own neighbours you'll meet."

"The courtyard is not really used a lot, Normally on a afternoon I would just watch tv, and if I'm sitting outside I would look at the tower on the other side, in a manner of speaking. Yea it's a shame, such a shame."

"I would say that it doesn't happen that much (interaction)...I mean, ofcourse if you see your neighbour you'd have a small chat, but it's the inner city afterall, so people are more...private."

"I've lived here for about two years, and I do greet the neighbours, but beyond that I don't really have much contact with them. Maybe at the elevator you'd have a quick chat."

Residents gave the impression that the inner courtyards are not being utilized to its full potential. Instead, (brief) interactions would occur in hallways and circulation routes.
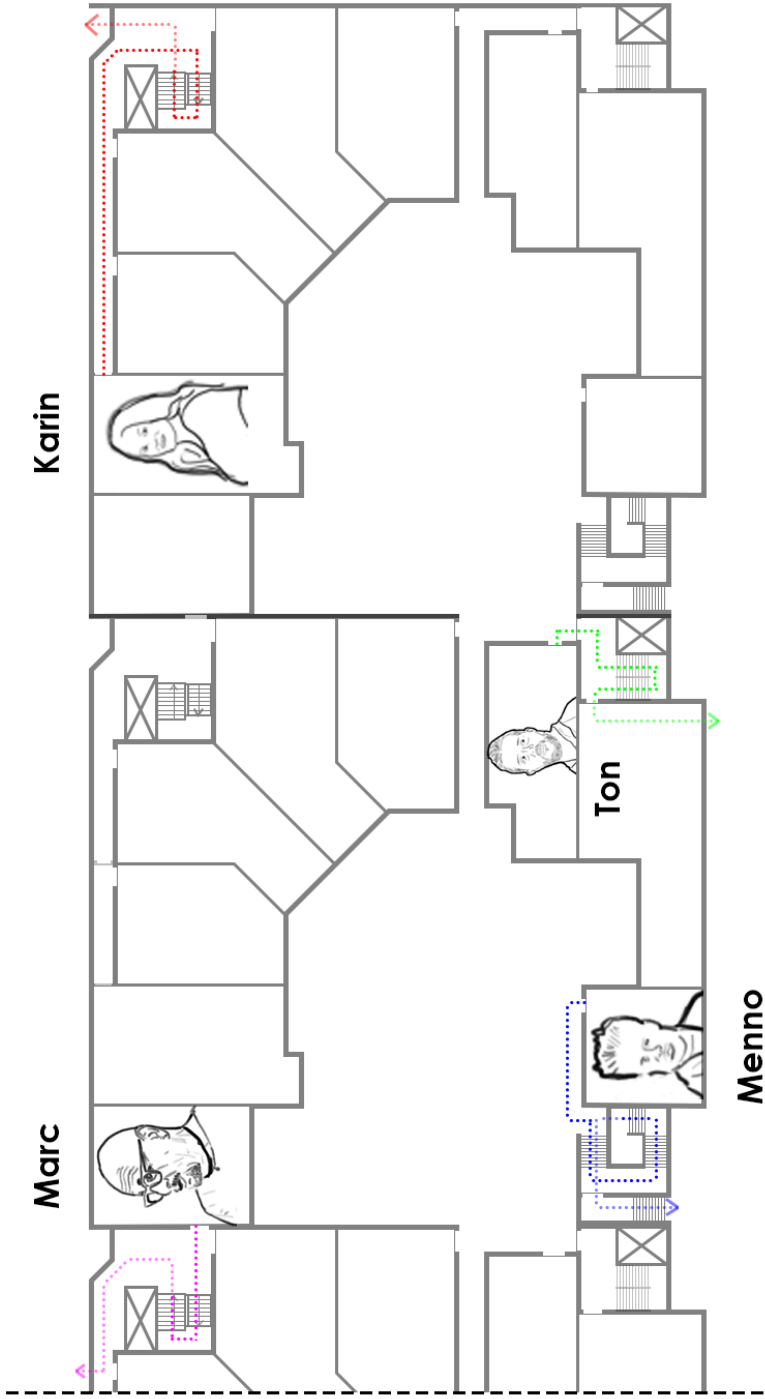
The lively restaurant
The stairwell of meetings
The stacked corridor
The quiet courtyard

and

The man who wished it wasn't.

The observer's experience.

The routes they walk.

Karin

Marc

Ton

Menno
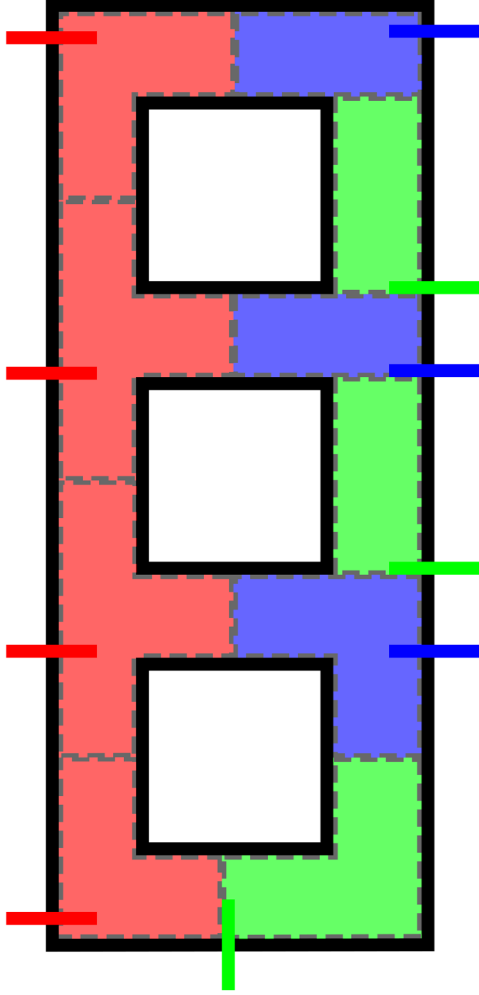
The routing the inhabitants take when leaving and entering the building. A route with the highest possibility of interaction with neighbours.

The quiet courtyard and the routes they walk, how does it relate?

No access to courtyard

Only access to courtyard and courtyard apartments
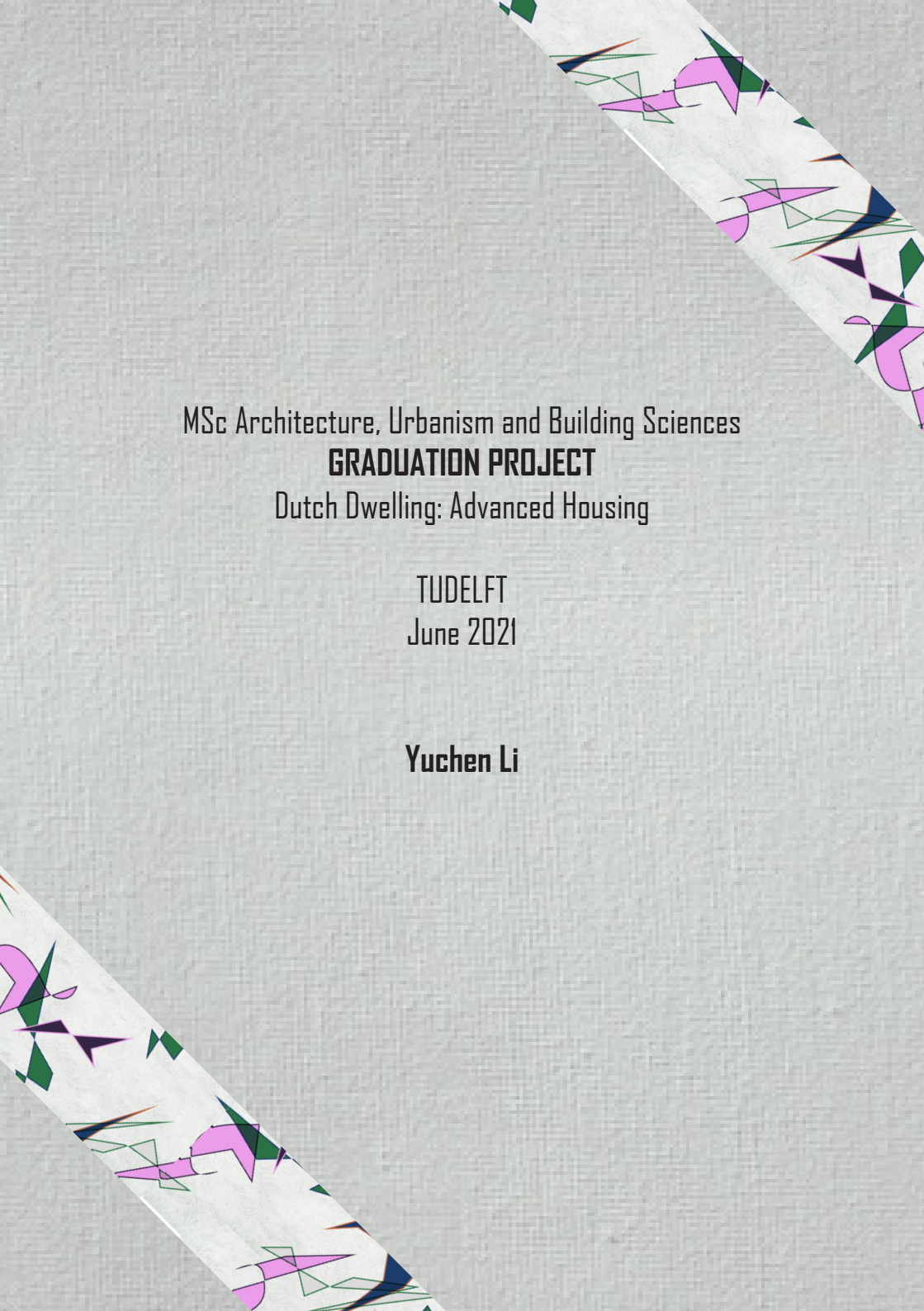
Access to both courtyard and higher elevations

Area with direct connection to marked entrances

A schematic plan-view of the Apartment complex Blaak.

Indicated are the access points located on the outer shell of the complex, each dedicated to a group of apartments.

The complex may seem as a whole from the outside, but is in fact fragmented. Each fragment has its own connection to and from the street.

Our site visits gave the impression that most interaction happens on the route from door to street and vice versa. The fragmentation therefore, may prevent interaction between residents from different fragments.

MSc Architecture, Urbanism and Building Sciences
GRADUATION PROJECT
Dutch Dwelling: Advanced Housing

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Yuchen Li