G R A D U A T I O N
R E S E A R C H

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H A N D _ M A D E

Architecture
for
craftsmanship

Graduation research document
P2 graduation phase

Hand-made: Architecture for the craftsman and craftsmanship

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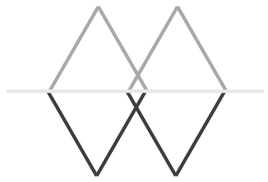


CHAPTER.I
PREFACE

"Our beds are empty two-thirds of the time. Our living rooms are empty seven-eighths of the time. Our office buildings are empty one-half of the time. It's time we gave this some thought."

-Buckminster Fuller, I Seem to Be a Verb, 1970

I Preface

Keywords: Amsterdam 2040 - City living / High density / future oriented / live-work / workhomes

As a born and raised resident of Amsterdam, I have witnessed and experienced the development of the city over the past twenty-something years. While there are many positive developments, some elements are worrying most of the people living here. Some of these issues have to do with the built environment, while other issues are more social. The right way to deal with this is not to only look for short-term solutions, but to anticipate changing needs and act accordingly.

I have witnessed friends and myself being unable to find affordable housing,or have to commute for hours on a daily basis to work. Then there is the growing pressure of traffic, the disappearance of parks and public space, air and water pollution, gentrification of neighborhoods and thus changing identities of historic parts of the city. While these all seem topics that are very far from each other, there seems to be a common note to be discovered. We leave our houses every day for jobs we often don't like, are stuck in traffic, and spend many of our free hours commuting. Research[1] showed that with an average traveling time of 45 minutes to work, people spend more than five full weeks a year on commuting only. This is more than a person usually receives as holiday, and is to be done on top of their normal hours.
Besides obvious issues such as traffic jams, noise and air pollution, accidents, environmental issues regarding the use of finite resources, feelings of frustrations, less time for social activities, there are other issues that are less obvious and have to do with the way we are taught that society works. You have a place to work, a place to sleep, a place to shop, a place to play. The fact that all these activities have become separated had it's reasons during that time, for example health issues during the Industrial Revolution resulting in the separation of residential and industrial areas, the growing efficiency of transport, and cheap gas and oil. This separation has changed society in it's most inner core and has been refined over the course of decades and centuries.

But now we face a whole new set of issues and it is clearly time that we start to think about alternative solutions when it comes to the urban planning of our cities. Is it really desirable to separate all the activities in our life on this scale? Are there benefits to be gained from looking again more closely to how we live, and re-think and re-design this?
Integrating living and working, and other activities such as shopping, social interaction and relaxing, have been known to be beneficial in different ways, such as the inherent affordability, saving of transportation costs, proximity to family, saving of time, flexibility in time-management between living and working, the more intense use of public space and services, and result in healthy neighborhoods with healthy people. But most importantly, we need to ask ourselves the question: Can we really afford to keep wasting time, space and resources on this scale?

The development of live-work dwelling typologies is an interesting one. Historically it was the sole option that has mostly disappeared when alternatives became available through technological advancements. It has resurfaced as an answer to other issues such as affordable work-spaces for artists when warehouses became empty due to more efficient logistics some decades ago and has since then been developed by some and used in different forms and different projects, but has not gotten the attention (yet) that it should.
I was surprised to find out how little literature there can be found in architectural research on the topic of integration of living and working. The research that has been done all acknowledges that this subject needs more attention and there is yet to be developed a common language or architectural typology. There is not even yet a common name for the topic. One author calls it live-work, others call it workhomes, mixed-use buildings or zero-commute housing.

Even though there is still a long way to go regarding the research into this subject, for which I have adopted the term live-work, it is clear that our future oriented designs for our cities could benefit from re-thinking this separation of activities. However, there is more to it than just creating bigger spaces and saying: work here some if you want, which will only result in feelings of loneliness and isolation. What is the actual challenge is that we need to change the way we think about the way we want to live our lives. This is why designers need to think about how to change the urban fabric of our cities, facilitating these new forms of living through integration and interaction on all scales.

This research is my attempt to get a hold of this complex subject and will be done through tackling an issue that is to do with craftsmanship in the inner city of Amsterdam, and more specifically the loss thereof. It is challenging because it is more inflexible than designing the painters'-loft, or the home-office. It entails a more complex program on the scale of dwelling, building and neighborhood, and has in some cases specific needs, and actually in all cases a very specific problem. This I will explain in more detail throughout this research book. What I hope to achieve is a design that responds to these issues in an well-informed way and is on top of that flexible, sustainable and future-oriented, just as all designs should be. I wish you as much pleasure reading as it was for me to write.

- Marilene Y. de Wit

1 | Dolan, T. (2012), p. 2

CHAPTER-II
Research.topic

In this section I will describe the structure of the research and its components.

CONTENT

Assigment

Dutch Housing Studio 'Stronghold Amsterdam'

Around the old city of Amsterdam, lies the Singelgracht. This used to be the fortification of Amsterdam.
Now, centuries later, the Singelgracht has been overgrown with the city, and is now the border between the inner-most center of Amsterdam and everything behind it. This inner-most city of Amsterdam is UNESCO heritage. Beyond this border though, it seems as though the city is already filled as much as possible with buildings, public spaces and dwellings.

Future-driven design

But cities are ever changing, and so are the needs of the people who inhabit them. As technology progresses, and the composition of inhabitants change, so does the way we want to live and inhabit space. In order for cities to remain healthy, it is the task of designers to have knowledge of future developments and answer to these accordingly.

Densification of the inner city center of Amsterdam

Instead of expanding cities, we should and will look into how we can densify them. But how do identity and history fight against the need for high-rise?

Flexibility of the built environment

As the chair of Dwelling states, the ability of cities to remain relevant and healthy lies in their capacity for change. The built environment has a high degree of inflexibility, but advancements in technology have now given us the oppurtunity to change this. This means the possibility to react to societal changes with the built environment, as well as other advantages such as longer life-cycles for buildings.

Sustainable environments

Sustainability is a broad term. But in order for our society to survive we will have to take immediate action. This means taking care of our environment. We need to integrate sustainability in our core of thinking. All future-driven designs should have little impact on the environment as possible, or even better, have a positive influence.

The changing relationship between living and working

The changing relationship between living and working will have a huge impact in our society in the future. But there has not been much research done into this topic. The little literature I could find only speaks in concepts and case studies, but there is yet to be developed typological models and discourse on the subject. For this master thesis, I will investigate this field and make a proposition that is in my opinion, future-driven, densifying, flexible and sustainable.

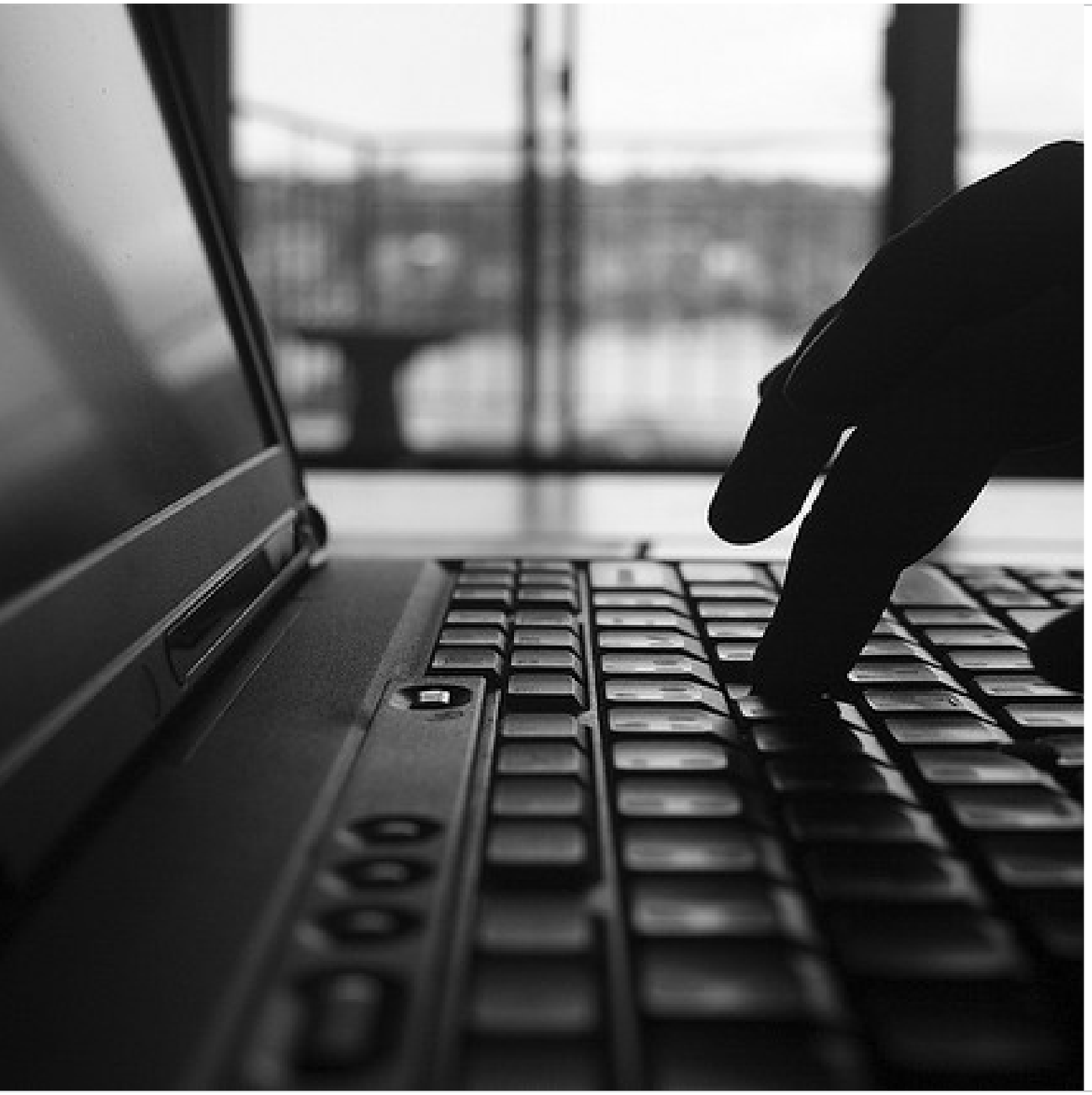
The way I will translate this into a design assignment is via a specific target group, but there are still many blank spaces to be filled in within this subject, which will be one of the challenges for architects of the future.

Research question

"In what ways can living, working and learning in small craft industries be integrated in an inner-city building complex in Amsterdam?"

This research question inherently addresses the topics of live-work integration on different scales, the crafts sector, the loss of knowledge in the field of craftsmanship and possible future-oriented solutions for this, densification of inner-city areas. This raises some questions and subsequently I have categorized these as sub-research questions, that will all be addressed throughout this research book in different chapters. These entail:

1. What sort of spaces are suitable for the integration of living with working?
2. What sort of businesses or clusters in the crafts sector could benefit from this integration?
3. What kind of spaces do these target groups need for their private dwellings?
4. What kind of additional spaces and functions are needed for these clusters, besides dwellings, on a building scale?
5. What are the open spaces needed that connect this on a neighborhood scale?
6, What amount and form(s) of flexibility is needed to make this future-proof?
7. What precedents are there and what can I conclude from these?
8. What are the spaces and social structure needed to integrate learning in the crafts sector with live-work dwelling typologies?



CHAPTER-III
LIVE-WORK

In this chapter, I will answer the following questions:

In what ways can living and working be integrated?
How has the relationship between living and working historically developed?

CONTENT

Definition of live-work

As mentioned in the introduction, there is not yet a common language for a typology that addresses the integration of living with working, as well that it lacks a topic name.
The name I have adopted for my research is that of live-work, as this is the one I have found in more than one source of information and I like the fact that it literally links the words live with work, while saying nothing yet about a specific subject.
Other terms for this type of architecture is workhome (Frances Holliss), zero-commute housing (Thomas Dolan uses this as a synonim for live-work), or more specific terms that are used to define this architecture but are actually only subtopics of a broader definition: loft, home-office. Others use terms that are in turn larger than the live-work topic and could entail other topics as well are mixed-use building or hybrid building.

For this research I will adopt live-work as my working definition. But what is it, and what is it not?

After reviewing literature on the subject, I have found out that, even though every source approaches the subject in it's own manner, there are some common principles to be discovered, which leads me to these conclusions about the live-work typology. It is the architectural type that integrations the activities of living and working under one roof, or in walking distance of each other.
In order for something to be truly a live-work design, it has to comply with certain conditions, such as that it integrates the two not only on a dwelling scale but also on a bigger scale (building or neighborhood) in order to facilitate interaction. It should be a real dwelling typology of it's own; not just a room that can also be used differently. Of course this could be one of the possibilities in the light of flexibility, but the main thing is that the concept of live-work should be able to stay alive after alterations are made in for example business transition or household composition.
Also, added functions are a necessity, inside the building but also on a bigger scale in order for a live-work project to be successful. This inherently means that a true live-work dwelling is never stand-alone, but always part of a bigger concept.

Parts of a dwelling must be reserved for living, and other parts for dwelling. There are multiple live-work dwelling types that solve this in a different way, but they all fall under the live-work typology.

The most inherent principles of live-work are proximity, walkability and community.[2]

"Some see live-work as the most important change-inducing agent to impact cities since the invention of the skyscraper, or at least since cities began to empty out after the Second World War."

- Thomas Dolan

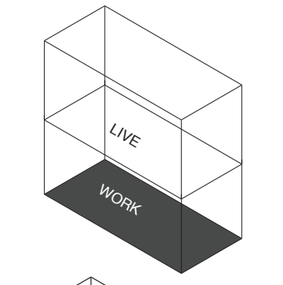
2 | Dolan, T. (2012), p. 9

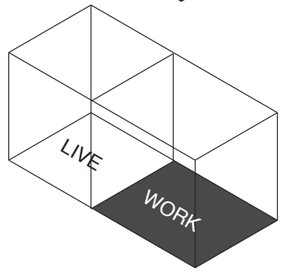
History of live-work

I could write many pages on the history of live-work, but it is not my intention to write a history paper on this subject. This will be a short summary of the most important historical developments within this topic only.

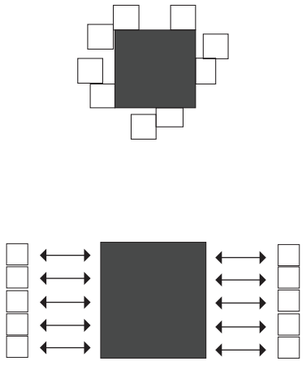
Before the industrial revolution there was little separation between living and working. People that had their own business, usually had this within their private residence. Either the shop or workplace on the ground floor and living above this, or divided in a front-house and back-house.

With the rise of technological advancements industrial activity flourished in what is now known as the Industrial Revolution, and concerns for public health started to surface. First, with the rise of factories it meant that many people now worked in an industry instead of having a small own business. Then, these became so big that they were polluting the residential areas too much. Also transport became easier and this meant the placement of industry outside of the residential zones, which meant the start of commuting. Industrial and residential areas ended up being separated completely. This way of thinking, known as zoning, continued to be refined in the following decades, until there ended up being a complete separation between not only living and working, but also shopping, playing and all other activities, up till the point where it was not even legally possible to integrate them in building projects.





3.2.1: Shophouses



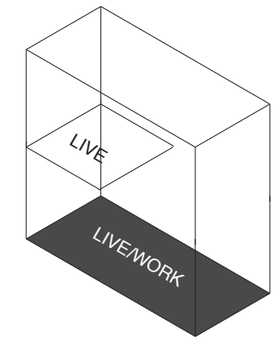
3.2.2: Development of the separation between live and work

In the ‘50s of the last century this started to slowly change again. Modern shipping containers and advancements in logistics rendered many warehouses abandoned. This gave opportunity for artists to settle here in cheap, big, open spaces with high ceilings and the opportunity to live where they worked.

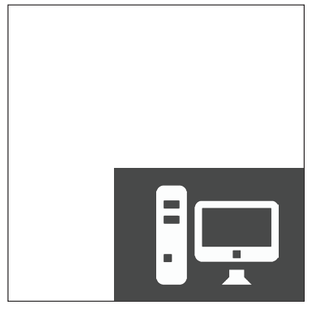
As happens within cycles of neighborhoods, there is the process of inhabitation of less popular areas by artists, them gaining popularity and the upgrading of this neighborhood to higher standards and higher prices, driving away the initial inhabitants. This process is commonly known as revitalization, or gentrification which has a negative undertone. Lofts were becoming more popular and commercialized. It became a style of living though that had nothing to do with the initial artists that lived there*.

When the 80s and 90s gave rise to the internet and home computers, a new era started. Small business could now work from home and started to dedicate an extra room as office space. These houses became known as the ‘home-office‘ type. The development has continued throughout the last decades and taken many forms. But with the traditional home-office also come negative issues such as isolation, because of the lack of interaction with other with the same professional interest. Also, neighborhoods during the day can be un-lively when everybody except you is out, commuting to work, or in, taking care of their families[3].

The next logical step in the development of the live-work dwelling type is to integrate each part of living into a bigger whole, facilitating a true new way of living that excludes commuting and includes interaction, living, business, public space, facilities and services.



3.2.3: Loft



3.2.4: Home office

3 | Dolan, T. (2012), pp. 2-4.

Home-based work in the Netherlands

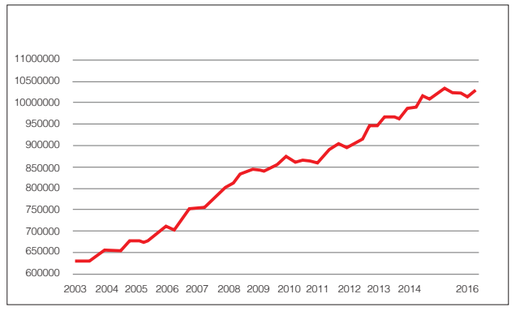
When designing live-work space, it is important to know who to design for. In the Netherlands, more and more people are now working from home on their own business. The majority of these one-man businesses are located in the city of Amsterdam. Also, it can clearly been seen that one-man businesses have a clear preference for either working from home, in comparison to small businesses that are an almost three-way split between working from home, an independent commercial space or a collective commercial space. The amount of live-work projects in Amsterdam does not reflect these statistics at all.

For the following statistics I will only include the persons that spend more than 12 hours per week working on their business.

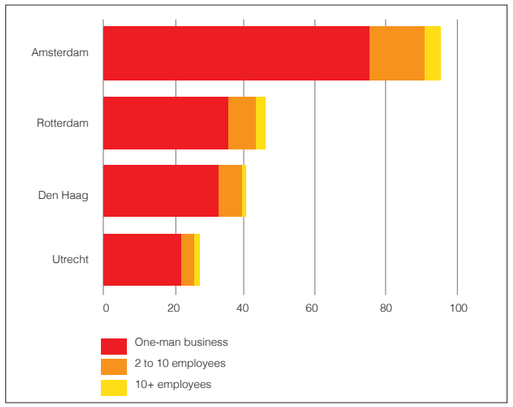
Between 2007 and 2017 the amount of ZZP'ers has doubled in The Netherlands, and especially in Amsterdam. Prognosis show that this amount will only continue to increase in a changing society. Most of this increase is in one-man businesses, working from or near to home.
So the vast majority of businesses is in Amsterdam, and the vast majority of this are one-man businesses. Most of them are in services.

Amsterdam did research in the shortage of business space. There is no conclusive information about the shortage because of the lack of large-scale research, but the municipality has made an estimate based on surveys and expert opinions. Research shows there is not a shortage of small business spaces in Amsterdam bases on only the amount of square meters, but that the real problem is that there is a mismatch in supply and demand based on needs.

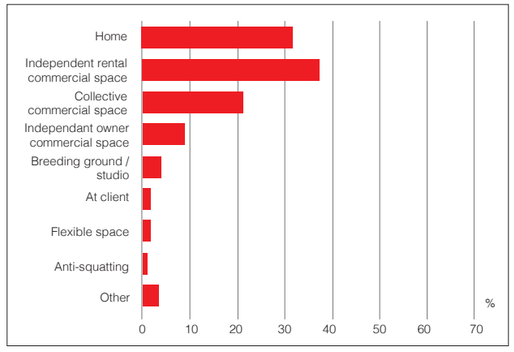
There is a difference in businesses that need a separate workspace and businesses that work from home. Recent studies (2014) show that 65 percent of one-man businesses work from home. These graphs show the current workspace of small businesses and one-man businesses.



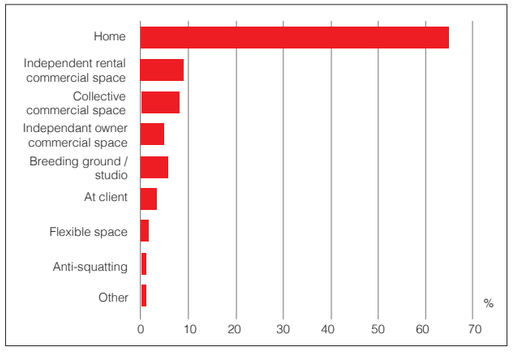
3.3.1: Historic development of number of freelancers in The Netherlands



3.3.2: Number and type of businesses per major city in The Netherlands



3.3.3: Preference workspace for small businesses



3.3.4: Preference workspace for one-man businesses

Advantages and issues of live-work

Living where you work has advantages, as well as issues that can arise when the design does not meet specific elements. The more common theories are about mixed-use neighborhoods and/or buildings, of which live-work design is a specific expression. They are therefore not the same, but the some theories about mixed-use do ally to the live-work topic.

On of the older but still widely quoted books is from Jane Jacobs, 'Death and life of great American cities', in which she describes certain conditions that have to be met in order to create a diverse city. Condition one is the need for mixed primary uses. She says in her introduction of this chapter: "The district, and indeed as many parts as possible, must serve more than one primary function; preferably more than two. These must ensure the presence of people who go outdoors on different schedules and are in the place for different purposes, but who are able to use as many facilities in common." [4]

Another author that wrote a book specifically for mixed-use live-work neighborhoods and buildings in the Netherlands is Henk Bouwmeester, who builds his argument in his book 'Woon-Werk!' on the principle that urban environments originate by placing multiple layers of urban fabric over each other. The diversity that arises from this is what makes an environment lively. In city centers, where living, working and recreating are interconnected makes an attractive living environment for most people. [6]
This is of course opposite from the ideas that were created during the industrial revolution.

Living where you work and working where you live, otherwise stated as zero-commute housing, has some inherent advantages as stated by Thomas Dolan[7]:
Affordability, instead of renting two separate spaces.
- Saving of transportation costs
- Possibility of having two incomes while one is always in or near home
- Time saved by not commuting, leading to more opportunities to walk, garden and socialize
- Advantages of being able to work when you want
- Most live-work designs are located near urban services, amenities and transport

Other authors also state the importance of adding functions to compensate for a high density, such as high quality public spaces and good views. But you also need a high amount of services in the neighborhood and good accessibility if you want to make it attractive for people to live and work somewhere. These are all characteristics of urban environments, which is why mixed-use environments work best in cities near the center, and less well in suburban areas.[8] The dynamic is one of the key elements for a mixed-use of live-work design.

But live-work designs can not only be beneficial to the inhabitants, but also for a city as a whole. The central hypothesis is that widespread creativity, applying a cultural perspective to urban development as well as using art disciplines and their commercial manifestations drives deeper transformation in cities. These contribute not just to adding economic value and jobs, but more importantly, to the evolutionary process by which individuals, the city, society and the economic system grows as a whole." [9]

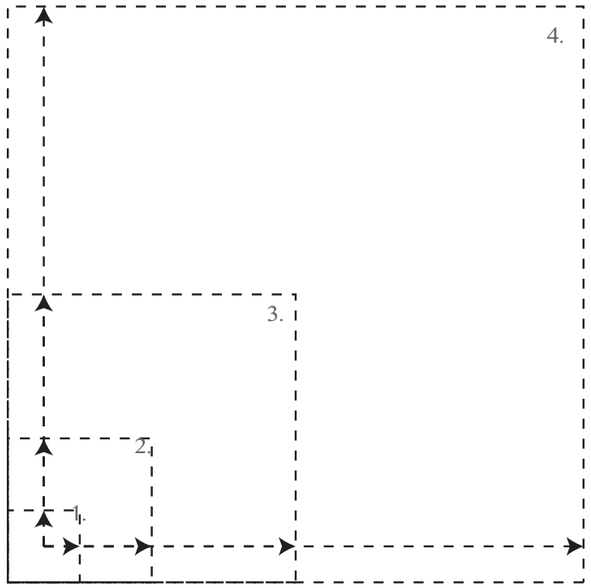
There are some issues that can arise though, with badly designed live-work environments. These mistakes can be very common. For example[10],
-Failing to understand live-work's inherent potential for isolation
- Failing to locate the project on or near a great street or to design opportunities for interaction within the project.
- Renting the live-units and work-units separately, which results in a building where there is living and working but not live-work.
- Believing that live-work can work in isolated industrial districts
- Locating high-end live-work ownership dwellings in an industrial environment, which will result in complaints and ultimately the zoning back to a residential area
- Creating a creative environment for live-work, and then pushing out the creative people such as artists and small-business entrepreneurs for higher rents, resulting in a failure of the concept
= Developing an individual live-work project aimed at artists and small-business entrepreneurs, then allowing the project to devolve into strictly residential; the result will be a greatly diminished sense of community within the project.

4 | Jacobs, J. (1961), p. 152
5 | Bouwmeester, H. (2007)
6 | Bouwfonds. (2014), p. 36
7 | Dolan, T. , 2012, p. 4
8 | Landry, C., 2014, p. 5
9 | Dolan, T. , 2012, p. 4
10 | Dolan, T. , 2012, p. 8

Integration and interaction

When mixing working with living the scale of integration is an important factor.

What factor is best depends on the type of business, the stage the development of the business is in, the level of representativeness that is wanted, and the type of neighborhood that is wanted. This scale of integration also has implications for the type of interaction between the private, collective and public spaces, as well as the characteristics of the building, neighborhood, district and city.



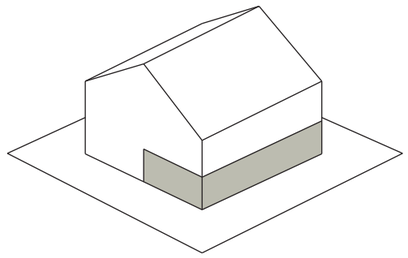
1. Building
Interaction between living and working inside a building, the sharing of facilities.

2. Neighborhood
Interaction between the buildings, infrastructure and collective/public space.

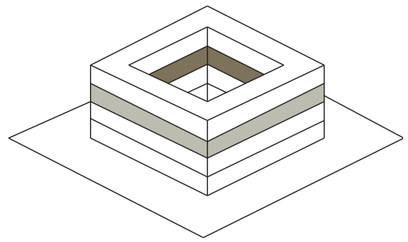
3. District
Interaction between the neighborhood and the direct surroundings. What identity to connect to is important. Does the district connect to its surroundings, or create a strong own identity.

4. City
What function does the area add to the city. What role does it play in the bigger organism.

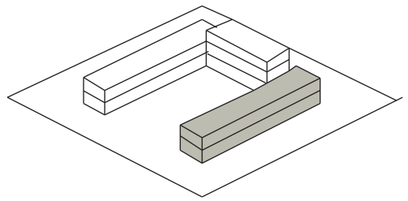
3.5.1: Scales of interaction



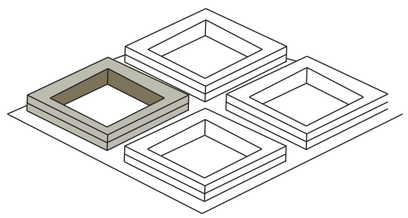
Dwelling scale:
A working place inside, or right next to, the dwelling. They are physically connected and can be used in a flexible way, according to the current needs.
The type of inhabitant is usually a starting business, working from home.



Building scale:
Separated working spaces in a building where people live, work, or live/work. This creates an opportunity for people that want to live close to their work, but want to avoid conflict between working and living. This combination also intensifies the use of space, because it creates sharing opportunities.



Urban ensembles
Living and working take place within a spatial configuration of multiple buildings. This can create shared facilities and collective (outdoor) space. Also, it has more opportunities for representative value.



Neighborhood scale:
Working and living are physically separated. Working is clustered in bigger units. It can give identity to the neighborhood and have high representative value. Also it creates business opportunities for facilities in the neighborhood, such as restaurants. In this scale, integration with public space is important.[11]

3.5.2: Scales of integration

11 | Bouwmeester, H. (1997), pp. 98-101.

Typologies and types

TYPOLOGIES

Most research seems to define the typologies in live-work design as an expression of the proximity between live and work.

There can be distinguished four possible relationships between living and working, according to Jasper van Zwol[12].

1. Two-in-one - Living and working are integrated
2. Together but separate - Living and working take place in parallel
3. Shared premises - Living and working take place in the same building
4. Seperate premises - Living and working take place at entirely different locations

In practice, we often encounter hybrid forms and changing combinations of the integrated live/work variant. While other researchers and architects have other definitions of the separation between living and working, the basic principle stays the same.

In the book written by Thomas Dolan on the subject of live/work, he makes three types of distinctions[13]:

- Live-with
- Live-near
- Live-nearby

These don't say anything about form and dimension; only about the relationships.

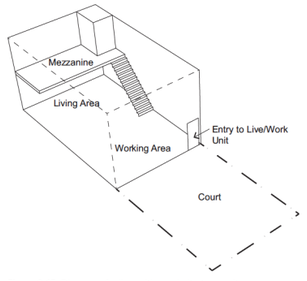


Figure 2-15 Diagram of a live-with proximity-type unit.

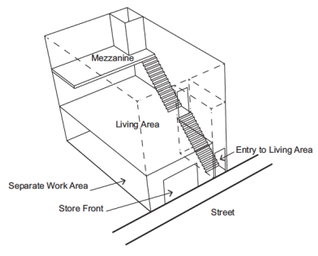


Figure 2-17 Diagram of a live-near proximity-type unit.

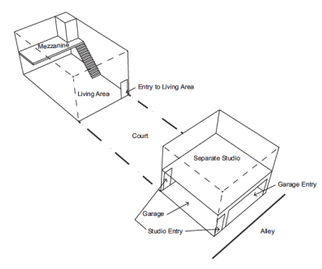


Figure 2-19 Diagram of a live-nearby proximity-type unit.

3.6.1: Live-with, live-near and live-nearby dwelling typologies diagrams

TYPES

While all important literature on live-work designs seem to agree on the usefulness of classifying designs based on the proximity of live and work activities, the classifications of types are widely different. For this purpose, I have listed the types used by Thomas Dolan and the ones used by Frances Holliss.

According to Thomas Dolan[14]:

- Warehouse Conversion
Conversion of an existing commercial building to multiple live- work units, often called lofts
- Home Office
Home occupation in or on the same property as the residence of any kind
- Townhouse (shophouse)
A stand-alone building, either attached or detached, that is physically set up to accommodate a variety of uses by a single user (no legal separation between residential and non-residential uses).
- Flexhouse
A building that learns: preapproved flexible use in a townhouse module, live-works, housing-over-retail live-near units. Separate entrances for live and work.
- Courtyard Live-Work
A multiunit community of live-work units enering off of one or more courtyards.
- Urban Loft Complex
"Lifestyle" lofts in a new building or a renovated commercial building.
- High Density / Podium
Live-work units in a taller building with structured parking and liner retail, live-work, or flexhouses entering at street level.

The most fundamental difference in approach seems to be the that Dolan classifies the types on a dwelling scale but then also states how these units relate to the building or environment on a larger scale as well. Frances Holliss classifies her live-work dwellings (or workhomes as she names them) based on where the working spaces are located relative to the living spaces, and also resulting in a shape-type that has implications for the urban layout, which she names 'block plans'. While this seems similar, the approach to classify the units is different.

12 | van Zwol, J. (2005), p.30

13 | Dolan, T. (2012), pp. 16-18

14 | Dolan, T. (2012), pp. 19-25.

Frances Holliss makes in her book the distinction between the dominance of live-work inside of a dwelling the most useful typological distinction. She claims that "all workhomes can be categorized according to their dominant function as home-dominated, work-dominated or equal-status."[15]

As a spatial strategy, she then adopts the live-with, live-near (which she calls live-adjecent), and live-nearby categorization made by Thomas Dolan.

On her website, Frances Holliss has developed what she calls patterns for workhomes, which are a 'collection of generic spatial designs or patterns which we have produced to illustrate the various ways in which work and home functions can be combined.'.[16] She defines twelve 'pattern families': For the purpose of this project, I have defined several of these types that could be useful in my project.

"Cities, towns and villages that are designed and organised around home-based work are likely to be radically different from those designed and organised around industrialised production."

- The Workhome Project

-Basement:
Workhomes in which the work activities take place mainly in a basement.
-Basic workhome:
Adaptations of an ordinary two storey house of moderate size.
-Infill:
Workhomes in which work and home elements are placed side by side along the street frontage. Often the work element "infills" between houses.
-Layer cake: Multi-storey workhomes in which work and home elements are interleaved floor by floor.
-Loft
Workhomes where the work element is in the attic. Often there is a workspace on the ground floor as well.
-Machiya
Workhomes based on the traditional Japanese Machiya which incorporates small gardens at intervals in the depth of the site, separating the building into different zones.
-Off the Peg
Work-dominant plans inspired by the idea that a workhome might be created from a combination of "off the peg" space-enclosing elements.
-Passage
Workhomes in which the work element is in the back garden, accessible by a passageway between the houses.
-Shop/house
The traditional "living above the shop" arrangement.
-Transformable furniture
Workhomes incorporating dual-use spaces that are transformed by special furniture.
-Workbay
The commonest form of workbay is a back extension on an ordinary house, but workbays can also be front, side and upward extensions.
-Workbox
A more sophisticated version of the traditional shed at the bottom of the garden.

15 | Hollis, F. (2015), p. 91.

16 | The Workhome Project. Retrieved from http://www.theworkhome.com/introducing-pattern-book/, visited on 28-dec-2017.

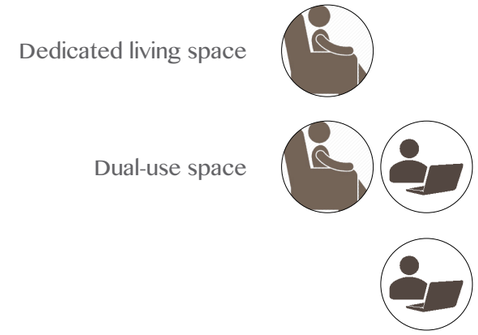
Design principles

The following topics are lists of design principles, following Francis Holliss' strategy for designing workhomes. This is just an introductory overview, I intend to use parts of this terminology for analyzing other live-work projects, and for parts of my own design brief.

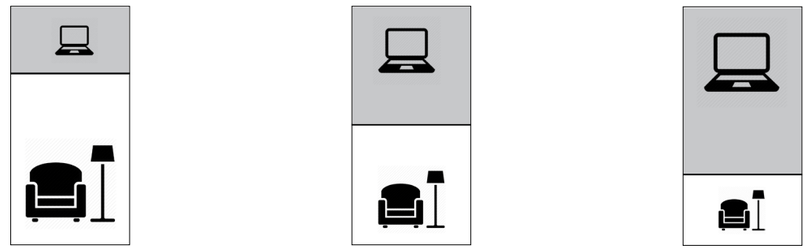
User groups

Juggling parents	Combine their productive work with their caring responsibilities
Backbone of the community	Visible, well- known members of their local communities
Professionals	Including architects, photographers, teachers, and health-care professionals.
24/7 artists	Have a pre-occupation with work that over-rides 'normal' working hours or life-style
Top-up home-	Supplementing a low household income through based work
Craft-workers	Including furniture-makers, mechanics, carpenters, caterers, plumbers and curtain-makers.
Live-in school	Employees who are paid to 'live-in', for example, caretakers and residential care-workers.
Start-up	Start-up businesses
Student	Spending many hours a week in home-based work which is often their sole source of income

Patterns of use



Dominant function



3.7.1: Dominant function in live-work dwellings

Types of workplace

office	market	staff accommodation
study	eating/drinking	library
consulting room	extended use of domestic	showroom
studio	facilities, as in catering or	gallery
workshop	childminding	transforming space
garage	caretaking/security	multifunctional space
shop	director's accommodation	

Entrance

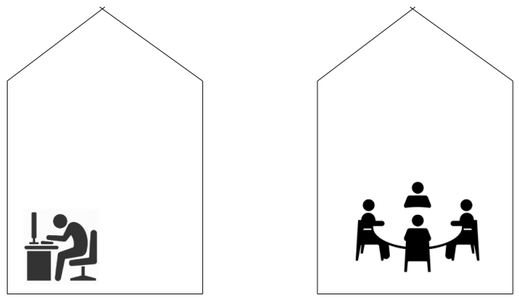
Single entrance

Separate, adjacent entrances for the two functions

Separate, non-adjacent entrances for the two functions.

3.7.2: Entrance types

Public/private workspace

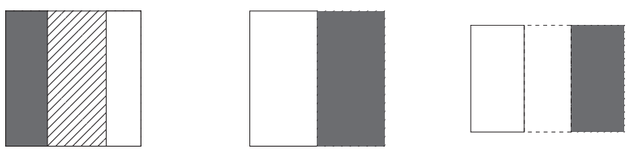


Private
- From household
- From clients

Public
- On appointment
- Walk-by / walk-in

3.7.3: Private/public workspaces

Spatial strategy



Live-with

Live-adjecent / live-near

Live-nearby

3.7.4: Spatial strategies

As urban design strategies, Holliss defines the following[17]:

1. Allotment block: The urban block that includes a social/ exercise function, such as allotments or a running track

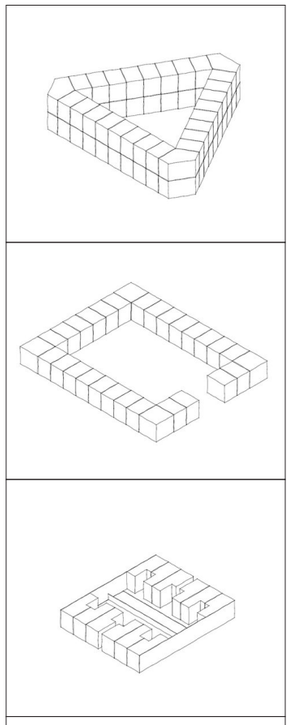
2. Courtyard: The urban block with semi-private residential entrances in the centre and workplace entrances on the street

3. Intermediate passages: The street with rear workplace entrances accessed through intermediate passages in the street

4. The linear court

5. The mews

-



3.7.5: Urban design strategies

17 | The Workhome Project. Retrieved from http://www.theworkhome.com/introducing-pattern-book/, visited on 28-dec-2017.

CHAPTER-IV CRAFSMANSHIP IN.AMSTERDAM

In Amsterdam, there are certain professions that qualify as crafts.

What are these professions?
What are the issues with this sector?
How does this sector relate to the rest of Amsterdam?
What are the developments within this sector?

CONTENT

Definition of craftsmanship

In everyday language, craftsmanship often stands for professional competence, thoroughness, authenticity and quality. The word craft sometimes also gets a negative charge in the sense of outdated occupations that are under threat of extinction.

Two essential characteristics of the craft are:
- Small scale;
- Manual nature of production.

Inherent to these characteristics are independent business operations, participation of the entrepreneur in planning, production process and sales, customization of an individual nature and a large share of the labor factor.[18]

Craft professions have a great dynamic, with old crafts modernize or disappear and new crafts present themselves. Partly because of the application of new technologies within crafts takes the importance of knowledge and training strongly, as well as the need to look beyond the national borders.
In addition to knowledge, craftsmanship and the associated skills, entrepreneurship is vital for the future of crafts.[19]

Image 4.1.1: Logo Amsterdam Made

At the moment, craftsmen that have their business in Amsterdam are forced to leave their workplaces. For example in de Pijn in Amsterdam, that is well known for, amongst other things, it's variety in small shops and crafts. This year, three out of thirty craftsmen in de Pijp have to close their doors because the development plan of the municipality has changed from working to living units. [20]

This is not a wanted development in the eyes of many inhabitants of Amsterdam. Also, the succes of a city like Amsterdam is due to the integration of living, working, bar, restaurants, and shops. When pushing all small businesses to the perimeters of the city, much of this value is lost.

The municipality does acknowledge this fact, and has established 'Bureau Broedplaatsen', that concers itself with accomodathing crafts and creative professionals in the city of Amsterdam. They published several surveys and studies. One of the conclusions is that more than 50% of creative professionals prefers a common workspace, knows as 'broedplaats', which translates to breeding ground.[21]

18 | Braaksma, R., & Snel, D., 2002, p. 7

19 | Handmade in Holland: Vakmanschap en ondernemerschap in de ambachtseconomie, 2013

20 | Vaessen & Westenenk, 2017

21 | Bureau Broedplaatsen, 2014. p. 9.

Clusters of crafts professions

The crafts sector is big and diverse. Therefore, the crafts industry has been divided into 3 main classifications - technique, health/food and creative. Within this, there are eight clusters of crafts professions. Within these clusters most professions can be classified. There are a few that are more dual in nature, or very specific, but I will leave these out of this scheme.

Clusters in craftsmanship: according to CvAE (Centrum voor de Ambachtseconomie).*

1. Building crafts: crafts: mason, carpenter, concrete borer, painter, plasterer, roofer, joiner, street maker, glazier
2. Building caretaking crafts: window cleaner, cleaner, chimney sweeper
3. Installation and electrical engineering: Plumber, heating engineer, electrician
4. Metal and woodworking and other production crafts: banker, welder, furniture maker, tailor, musical instruments maker, leather worker, glass blower
5. Repair crafts: Bike repair shop, clothing repair, clockmakers, shoemaker, car mechanic
6. Health technology and external care: optician, hearing care professional, dental technician, hairdresser, pedicure, beautician
7. Food crafts: pastry chef, butcher, ice cream maker
8. Creative and communication crafts: photographer, game developer, ceramist, sound engineer, PC repairman, web developer, graphic designer

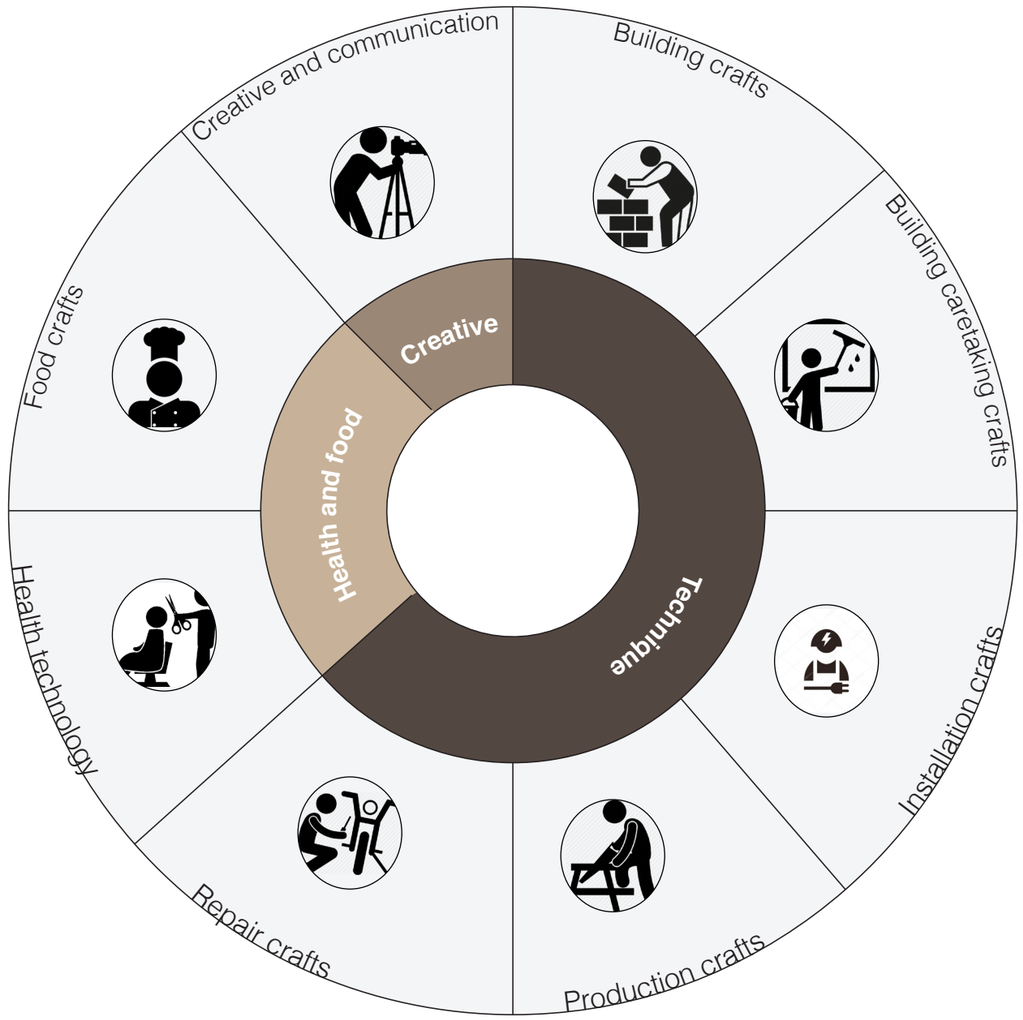


Image 4.2.1: Crafts clusters

Crafts economy in The Netherlands

10% of the working population of the Netherlands works in the crafts sector. This is an historically low number.

420.000 Companies in crafts sector

84% of the crafts economy is based on one-person companies

815.000 persons working in the crafts sector

E 165 bln Generated revenue per year. [22]

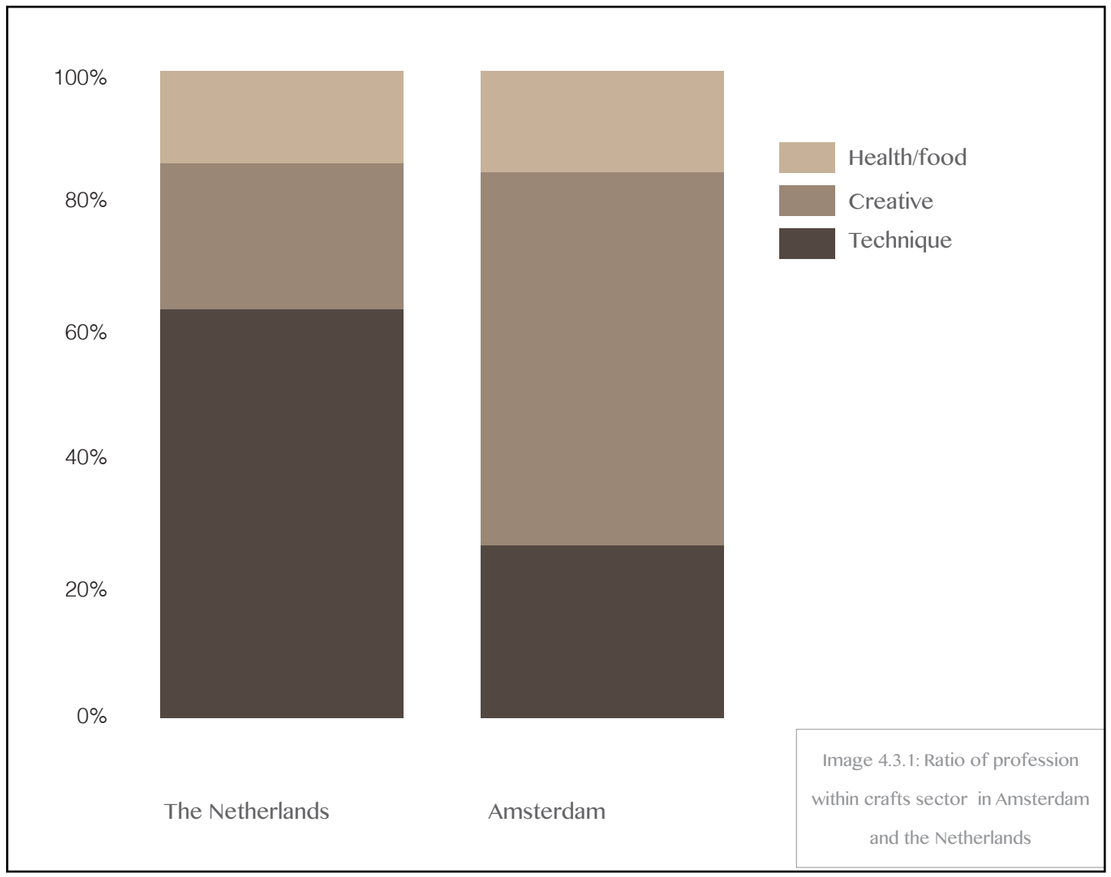
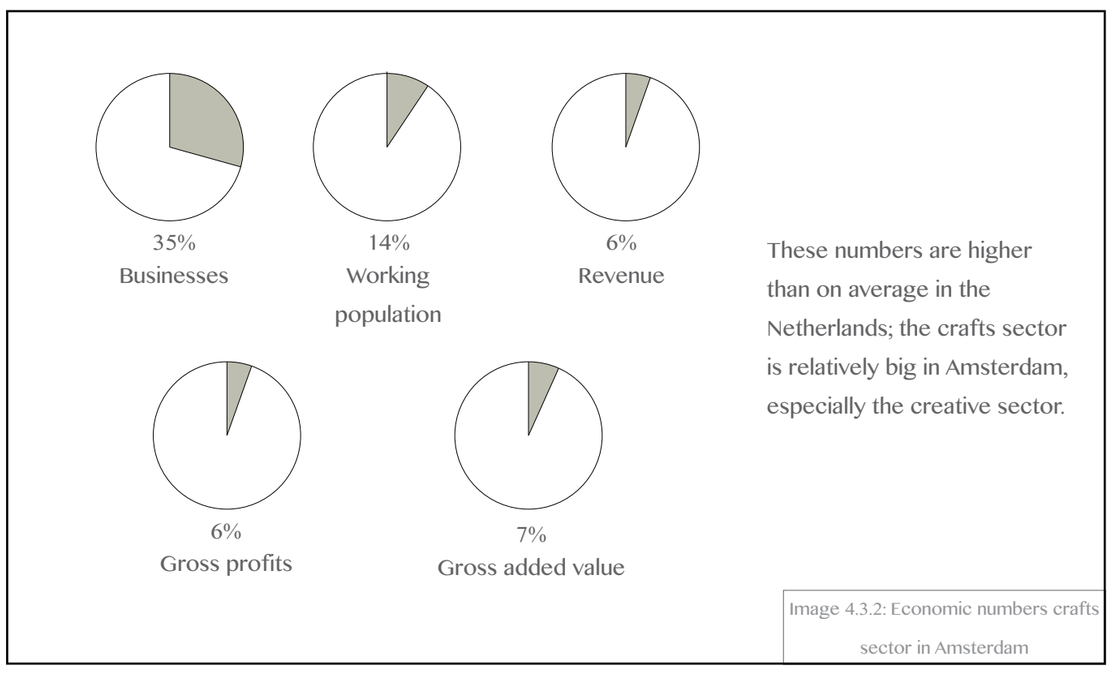


Image 4.3.1: Ratio of profession within crafts sector in Amsterdam and the Netherlands

As is visible from the graph, the creative sector in Amsterdam is significantly bigger than in the Netherlands. In total, the creative sector has 46.768 working professionals, against 20.061 in technique and 11.657 in food/health.[23]

A specific problem for crafts in Amsterdam is finding a suitable commercial space, with or without parking. This is especially a problem for craftsman in production crafts, such as wood- and metalworking. This is due to the large spaces needed for their line of work, en the high costs per square meter in Amsterdam. They are pushed to the perimeters of the city.



These numbers are higher than on average in the Netherlands; the crafts sector is relatively big in Amsterdam, especially the creative sector.

Image 4.3.2: Economic numbers crafts sector in Amsterdam

22 | Centrum voor Ambachtseconomie. http://www.cvae.nl, visited on 11-12-2017.

23 | Fedorova, T.,2010. p. 6.

Facts and figures

Workspaces of craftsmen

51m2

e 177,- /m2/year

In the center district of Amsterdam, the average small business working space is small with 51m2, compared to the rest of Amsterdam which is 92m2. Prices in the center are relatively high, on average in Amsterdam this is e116.[24]

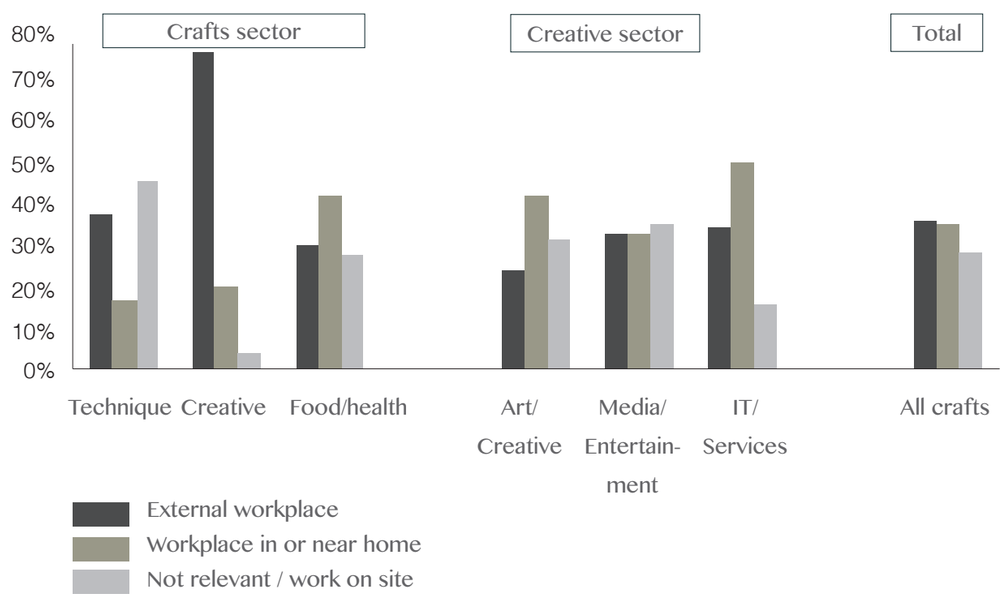


Image 4.3.3: Amount of external or home-based workplaces per crafts sector

Collaboration with other craftsmen

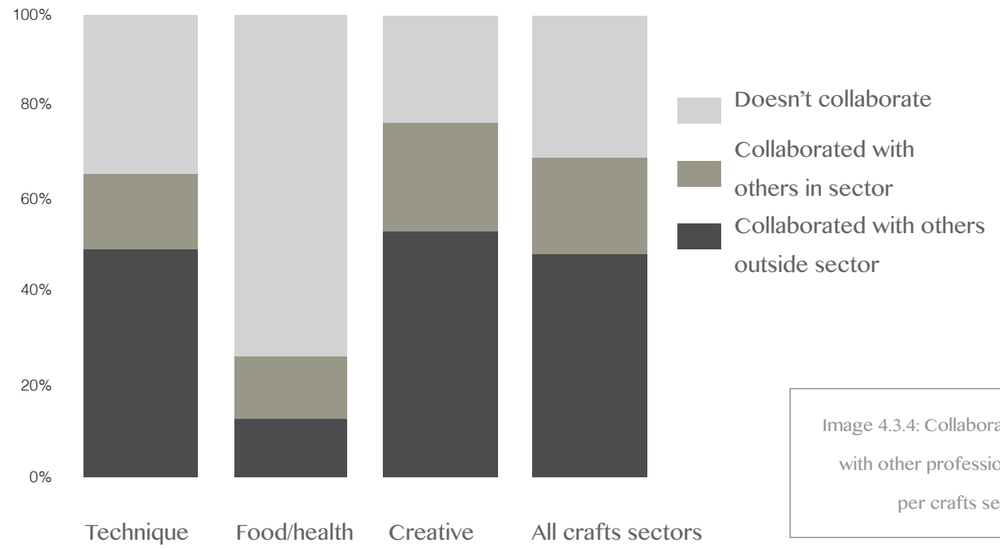


Image 4.3.4: Collaboration with other professionals per crafts sector

Most prefer working together. From these numbers 68% says that this is because of the reason that it is good to do projects together.

Male/female ratios in craftsmanship professions

	♂	♀
Technique	90 %	10%
Creative	69%	31%
Food/health	45%	55%
Total	70%	30%

Image 4.3.5: Percentage of male/female per crafts sector

24 | de Ruiter, S. & van Oosteren, C. 2012

Problems for the future of craftsmanship

Shrinking amount of workers and professionals in small craft industries

An important and current issue in the crafts sector and society as a whole is the disappearance of craftsmanship. This is due to the fact that many experienced seniors are retiring from the sector, and too little young starters are educated. This is a phenomenon called “dubbele vergrijzing”, also “double greying“. It is an expression stating the more common phenomenon of the aging population, with the added issue that there is a shrinking amount of students, while the sector as a whole is still growing. This results in a huge shortage of workers in the (near) future.

1 in 16 craftsmen retire yearly

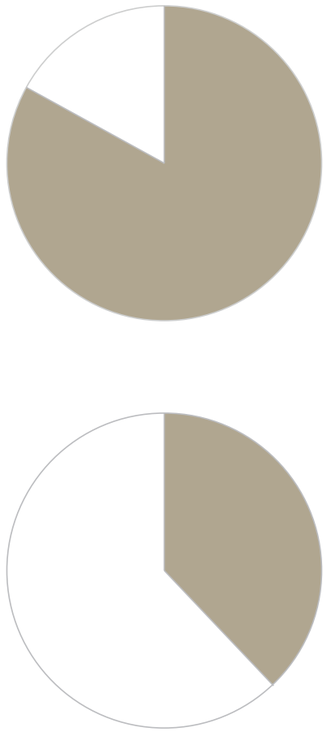
4.4.1: Amount of professionals in the crafts sector retiring yearly

815.640

people working in the crafts sector in The Netherlands (distributed over 420.000 businesses).

485.000

new employees needed before 2025, because of the retirement wave.[25]



4.4.2: Graphs showing the gap between supply and demand in the crafts sector.

The amount of people in The Netherlands that find the crafts industry an important sector is 83 percent. The amount of people that would consider such a career is only 38%.[26] Experienced professionals leave the crafts sector, and not enough young people choose to follow an education in on of the many professions. This will leave the crafts sector with an enormous gap of professionals trained in crafts.

In Amsterdam, 43% of the small crafts industries, an absolute number of 3.500 companies, offer an internship or learning place, excluding the one-man-businesses.[27] More than 20% want to offer a learning place but can’t do this because of financial reasons.

25 | Rabobank (2010). Retrieved from IkGaStarten.nl on 10-11-2017.

26 | Rabobank. Retrieved from https://www.ikgastarten.nl/mijn-branche/ambachtelijke-bedrijven-nog-zeer-belangrijk on 10-11-2017

27 | Fedorova, T.,2010. p. 8.

CHAPTER.V
LOCATION.CHOICE.& CRAFTS.CLUSTER.CHOICE

What location have I chosen for this assignment?
What specific crafts sectors (target groups) have I chosen for this assignment?

CONTENT

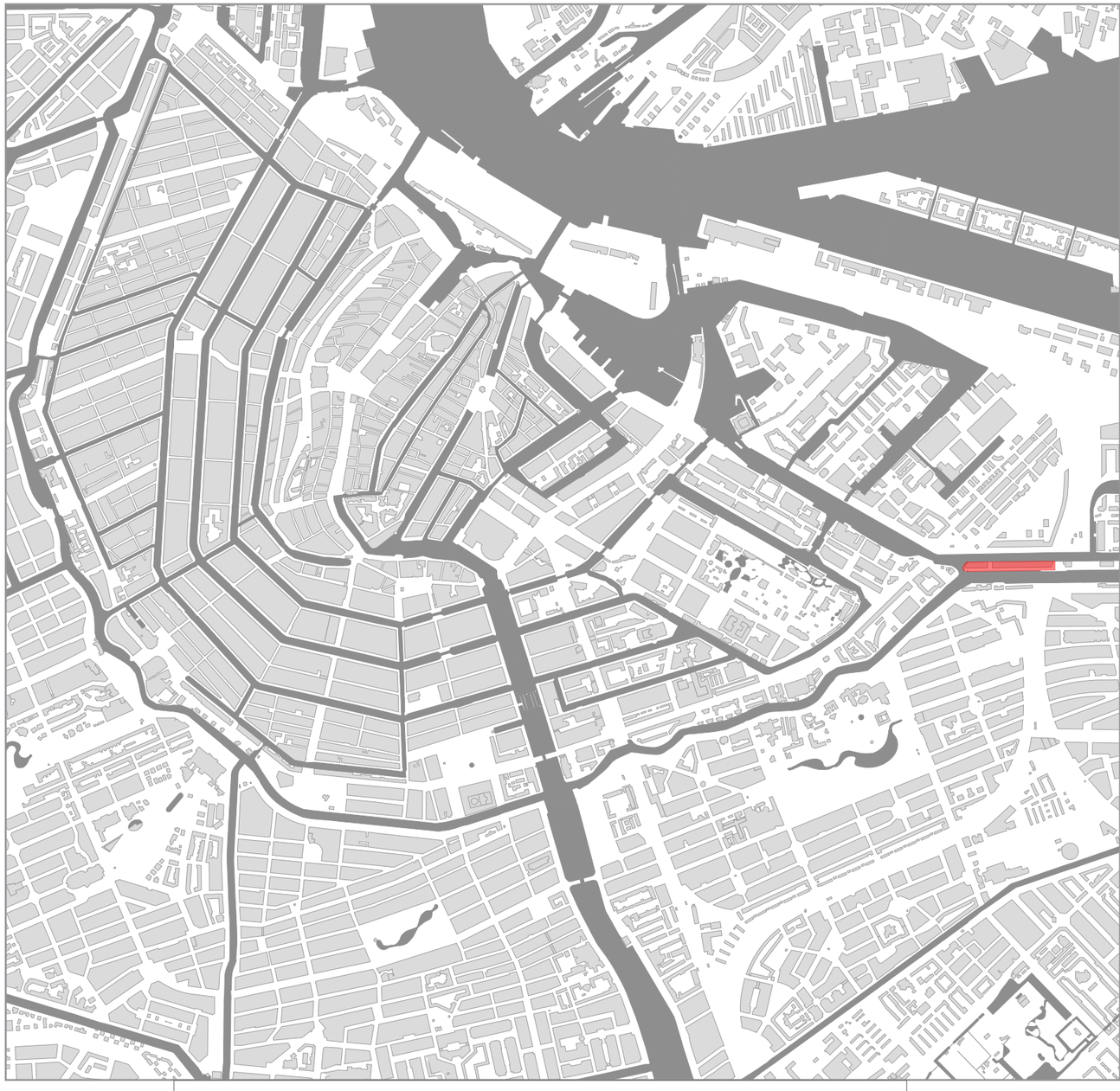
Choice of location

From the perspective of this graduation assignment, we were invited to pick our own location for our graduation research. One that we see as a good fit between a topic of our own choosing, site opportunities and target group. The site requirements were that it needs to be in the city center of Amsterdam, in specific on the Singelgracht belt. This is the old fortification ring of Amsterdam and represents the border between the old city center and expansions made over the following centuries. Also, the topic and site need to be future-oriented in the sense that it should respond to anticipated future developments in the physical and social strucure of the city. Of course this freedom also represents that site, topic, target group and research questions need to be something of which a interesting synthesis of ideas can arise.

In the east corner of this historic city belt lies the Zeeburgerpad, which was made as a dike to split up the canal De Nieuwe Vaart in 1875 because of water pollution issues. This long and narrow plot is uncharacteristic for the rest of the center of Amsterdam and has been a topic of discussion for many decades. I will go into greater detail about the history, present and future of the site in chapter IX: Site analysis. But what I can say is that one of the main motives behind choosing this location has to do with how it represents many possibilities, due to the fact that it is one of the biggest sites in the center of Amsterdam that is still mainly undeveloped; scattered with old and decayed buildings used for industrial purposes. Also, the history of the site and the fact that this history, identity and layout fit well with plans for development specific for industrial and crafts activities - as the municipality also has declared in their vision for the future of the city - made it a good fit for a project that entails live-work urban and architectural design. Furthermore, the fact that this plot is so uncharacteristic, respective to the rest of Amsterdam, triggered my curiosity to find out what possibilities there are for urban development besides the more standard Amsterdam building block. In combination with the added quality of the dual orientation to the waterfronts, making it a narrow island on the east edge of the city center, it seemed to me that this would inherently entail interesting qualities and challenges to work with and learn a lot from.

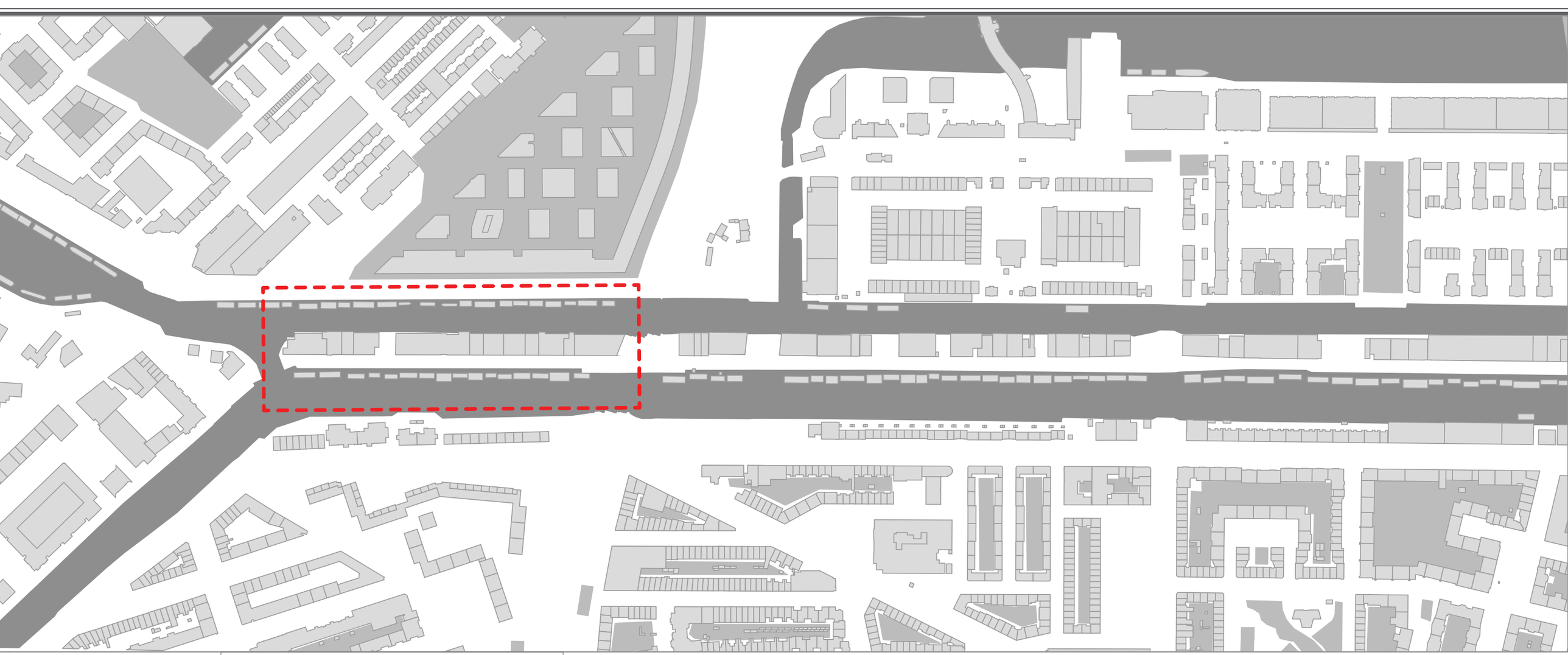
A city center location is pre-eminently a place for creative workplaces.

A high density of people at a certain location facilitates meeting and contact and makes the rise of new ideas and innovations more likely. [28]



5.1.1: Map of Amsterdam, indicating in red the Zeeburgerpad site

28 | Bouwmeester, H. (2007), p.14



5.1.2: Map of the Zeeburgerpad and it's direct surroundings

The whole Zeeburgerpad is much longer, stretching to1700 meters, but I will develop for this project the part going up from the historic mill up to the traintracks. This is the portion of the Zeeburgerpad that is still part of the cetnrum desitrist, opposed to the rest that is part of under the eastern district.

5.1.3 to 5.1.6: Top 4 photographs:
Going down the Zeeburgerpad

5.1.7 to 5.1.8: Middle 2 photographs:
Views on the mill

5.1.9 to 5.1.10: Bottom two photographs:
The houseboats on the waterfront

Right on the edge of the city center, bordering the Singelgracht, there is a piece of land that is 1.7km long and 35 to 40 meters wide. This has a dual orientation on the water and is one of the last pieces of undeveloped land in the city center. Therefore it has great potential qualities. At the moment it is inhabited by old buildings that ere ready for demolition that hosts small businesses, There is almost no people living there, except for in the house boats in the water. This is why there is great potential for a densification task as well. This area has a rich history of industry, and this identity should be maintained in the future. This is why small craft industries would fit well in this location. I will provide a more detailed description and analysis of the site in following chapters.

Choice of crafts clusters

Because of the long and narrow dimensions of the site, the design will inherently be a long strip divided into several buildings. This means there can be space for multiple types of businesses.

The biggest sector in Amsterdam is the creative sector. This can be divided into 'light' creative work, which does not need a lot of heavy machines, and the 'heavy' cluster, which does need machines and heavy workplaces. Both sectors need a different scheme in relation to living and working.

4. Metal and woodworking and other production crafts: banker, welder, furniture maker, tailor, musical instruments maker, leather worker, glass blower

8. Creative and communication crafts: photographer, game developer, ceramist, sound engineer, PC repairman, web developer, graphic designer

Possibly I can also include repair crafts and/or food crafts, as they also provide valuable services to the surrounding neighborhoods. But this will be decided after evaluation from the design brief and urban scheme.

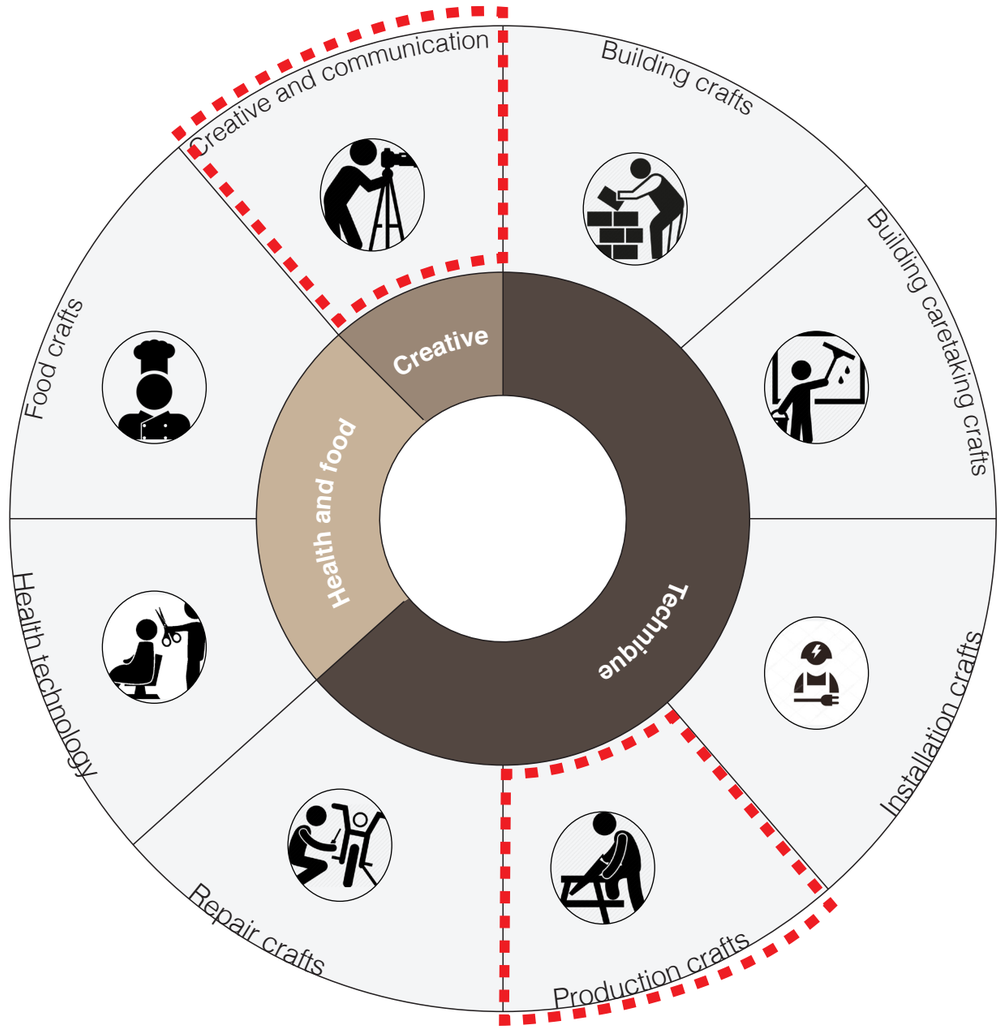


Image 5.2.1: Crafts clusters
Choice indicated in red

CHAPTER.VI
TARGET.GROUPS

Starting entrepreneurs in the crafts sector are the target group for this design assignment. Specifically, craftsmen in the creative crafts and the production crafts. In this chapter, I will discuss the conclusions I have made following literature and articles on the matter.

CONTENT

Starting entrepeneurs in crafts

Business development

In every business there are different needs at different stages of the business. For this purpose I have made a distinction between four different stages, describing the business activity and what factors are important for each stage.
As a rule of thumb, the average business expansion curve can be described as an S-shaped curve. First infancy, then expansion, maturity and decline.

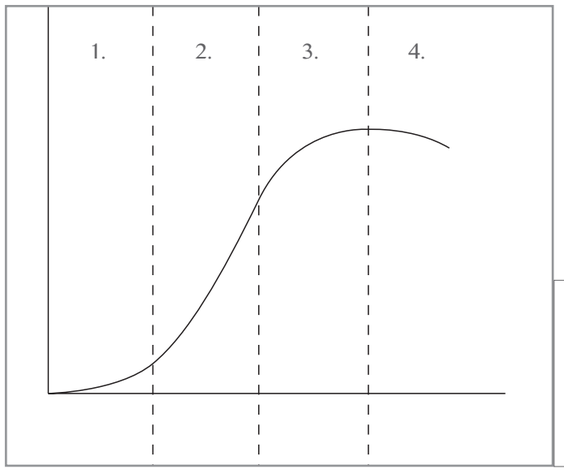


Image 6.2.1: Business expansion curve.

Stage 1: Infancy or 'living room business'

In this stage most business activity takes place from home. There is not enough revenue (yet) to rent a separate space.
The place of settlement is mostly determined by their social network, such as family, friends and neighbors.
Also, they look for places to live and/or work where there can be an exchange of professional interests, ideas and facilities. Therefore a clustering of same types of business is important. Personal contact is essential in this stage. Space needs to be cheap and flexible. Also, facilities such as bars/ restaurants and office facilities such as print shops are wanted.

Stage 2: Expansion or 're-starter'

After an average period of three years, the business starts to expand. Increase of revenue and profits, increase in production, amount of employees, and an expansion of services.
Credibility starts to become more important. Entrepreneurs will start looking for separate spaces.
This space needs to be recognizable. Close to the dwelling, but separated from each other.
The space needs to be flexible enough to respond to (rapid) growth.
Proximity of services, network and dwelling environments stay important.
Usually, re-starters are in live/work dwellings, clustered in a multi-company building, or rarely have an own small company space.

Stage 3: Maturity

As the company is now fully operable, the seperation of spaces starts to become more important. Office and storage both need more space. Usually the business is now located in an office or industrial area, depending on the type of business, with enough expansion possibilities. The spaces need to be efficient, and logistics are important. The choice of location is also dependent on the availability of educated employees.
Some types of businesses can still be combined with dwelling, but as business grows, so will the tension between dwelling and working.

Stage 4: Decline / innovation

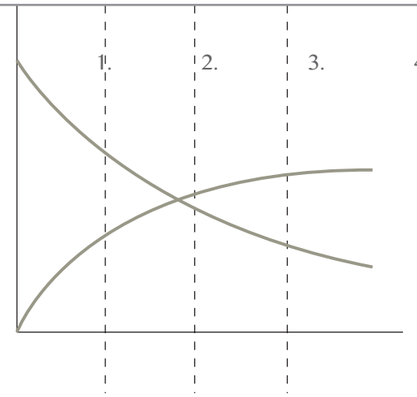
Usually, a company reaches a point where there business starts to decline. Either they will need to scale down in space, employees, and services, and make cuts to make up for loss in revenue. The reasons for this can be diverse but have to do with market competitiveness. Usually, after a period of decline there will be a period of innovation. This will determine whether a company will be able to stay alive in a competitive environment.[29]

29 | Bouwmeester, H. (2007), pp.82-85.

Spatial requirements

For each stage in business development, there can be different spatial needs. Below are listed the spatial needs per stadium of business development[30]: They are categorized on the average needed size, the functional needs, and the personal wishes for live-work environments. The sizes do not include space for heavy machinery in the production crafts cluster.

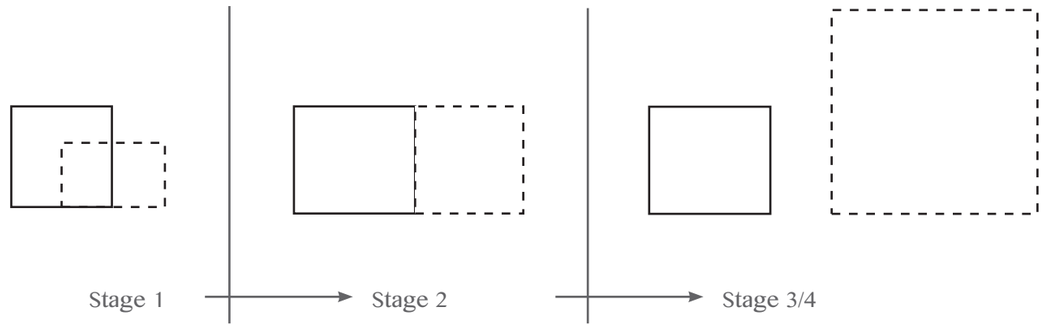
Stage	Size	Functional wishes/needs	Owners' wishes/needs
1.	< 40 m2	Cheap, flexible, business-to-business activity, personal contact, (separate) workspace, proximity of services	Dwelling motives are the decisive factor, combination of private and work, proximity of social network.
2.	40-100 m2	Extra space separate from dwelling and possibility of growth, representative and professional appearance, accessibility, parking space	Proximity of dwelling environment, social network
3 / 4	> 100 m2	Accessibility, representativeness, efficiency (suppliers, sales market), job market	Less important, business factors determine the type of space and location



As the business grows and reaches different stages, the factors for decision-making start to shift from personal to functional considerations.

33%

One in three people who work from home are not satisfied with their workplace. Top reasons include[31]:
- Division working and living (33%)
- Size of workplace (32%)
- Presence of reception room and conference room (20%)
- Presence of other entrepreneurs (17%)



Businesses that are in stage 1 and 2 have a specific interrelationship between living and working. After these stages, the separation of the two becomes desirable. For this purpose, I will from this point on not discuss anymore the mature companies that want this separation, but focus on young companies for which the integration has benefits on more levels.

30 | Bouwmeester, H. (2007).

31| de Ruiter, S., & van Oosteren, C. (2012).

Creative and communicative crafts

In the creative and communicative cluster of crafts, the following professions could be included:

- Photographer
- Game developer
- Ceramics
- Sound designer
- Software developer
- Website designer
- Graphic designer
-Interior designer
- Illustrator
- Tattoo artist
- and more

The cluster of creative industry and communication is characterized as enterprising, highly educated and growing: with 1 to 2 employees, the cluster has a relatively high share of entrepeneurs and is by far the cluster with the highest proportion of working with at least a completed MBO education (96 percent).[32]

This cluster represents 23 percent of employment in the craft economy and has achieved employment growth of 9 percent between 2008 and 2013.[33]

9%

96%

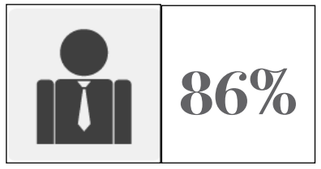
23%

32 | Structuuronderzoek 2015 Ambachtseconomie, p15

33 | de Ruiter, S., & van Oosteren, C.,2012, p12.

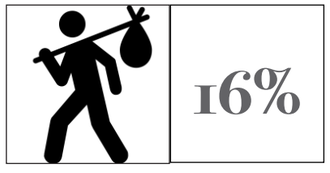
Creative crafts cluster characteristics[34]

It has many “new“ professions within the crafts sector
It’s the fastest growing cluster within the crafts economy
Professions that are best represented within the city of Amsterdam are the advertisements business, software development business, and creative arts
Highly educated
When not working from home, they prefer shared commercial spaces (41%)
Use of social media and network

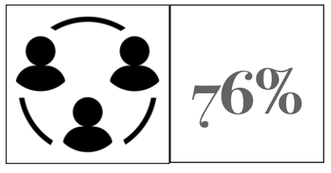


Of all businesses in the creative crafts industry, 86% is a one-man-business.

In the creative cluster, 43% of the businesses are home-based.

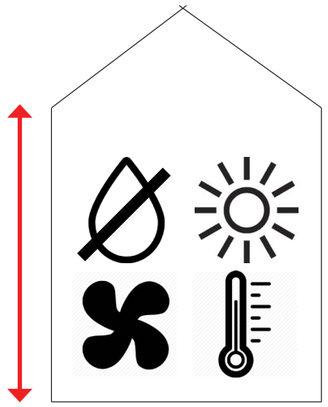


Of these businesses, 16% has trouble finding a suitable workplace to carry out their professional services.



The creative crafts industry is characterized by a high degree of collaboration between professionals.

Workspace preferences[35]

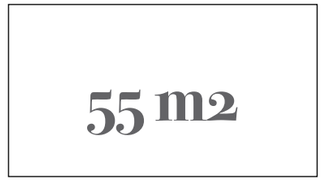


- Climate that is dry, warm, plenty daylight, well ventilated.
- High ceilings

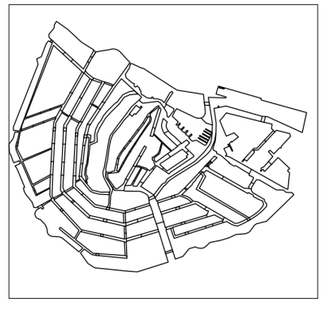
Fast internet connection

Computer

Storage space



The average workplace for a professional in the creative crafts industry is 55m2.



Most businesses are located inside the ring of Amsterdam

For specific professions there might be added demands, such as good sound isolation (filmmaker, sound designer). Also, an ‘inspiring surrounding‘ is usually named as a desirable quality, which has a high degree of subjectivity.

34 | de Ruiter, S., & van Oosteren, C. (2012), p. 12

35 | de Ruiter, S., & van Oosteren, C. (2012), p. 39.

Metalworking, woodworking and other production crafts

The separate workplaces, so detached from the dwelling but inside the building, will vary between private, collective and public. These are spaces that are added to the functional program of the building, in order to create the right setting for craftsmanship in both working, sharing and educating.

Types of professions that belong to this cluster include:

- Metal workshops
- Wood workshops
- Furniture makers
- Welders
- Clothing maker
- Musical instrument maker
- Leather worker
- Glass blower

Within the cluster of metal, wood and other production craft, the decline in employment is the strongest (-12 percent).[36] This is also due to the loss of knowledge in this cluster of craftsmanship and globalization of large companies that are competitive in this field (cheap production, sales and marketing).[37]

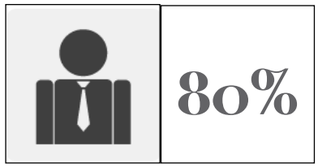
12% **26%** **8%**

36 | Structuuronderzoek 2015 Ambachtseconomie, p15

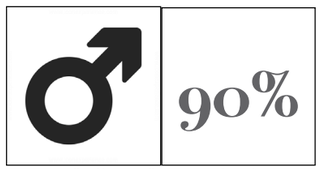
37 | de Ruiter, S., & van Oosteren, C.,2012, p12.

Production crafts cluster characteristics[38]

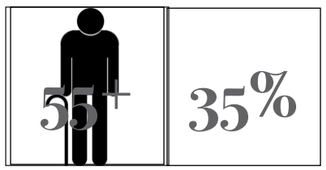
Shrinking (12%)
Out of all crafts, wood and metal production are shrinking the hardest due to aging professionals.
Aging population ('greying')
Shrinking amount of people per business (3 to 2 within 4 years)
5% decline in professionals since 2010
-growth of amount of businesses 8%
High percentage of male
High amount of 55+
Varied clients
In production crafts, many need a big workspace
Workspaces spread out over the entire city, more outside of the ring
Workspaces inside home, a commercial shared building or on industrial terrains.
- Most are lower educated, or learned in practice. 26% is highly educated.



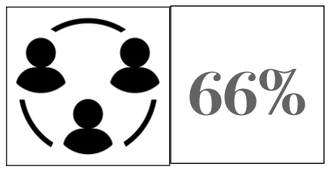
Of all businesses in production crafts, 80% is a one-man-business



90% of all craftsman in the production cluster is male.

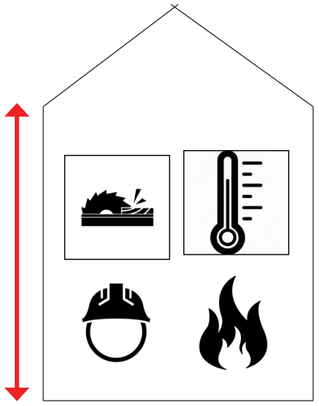


High amount of 55+ professionals (in age)



Collaboration with own or other crafts sectors.

Workspace preferences[39]



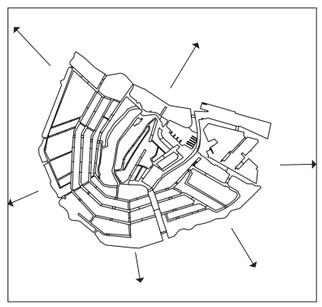
- Safety and fire regulations
- Constant climate
- Daylight
- High ceilings

Big amount of storage space

Parking and unloading space

Fast internet connection

On average, a workspace needs to be 100+ m2. Some of this space can also be shared with other professionals of the same cluster.



Most businesses are outside of the ring of Amsterdam. Highest concetration is in Westpoort.

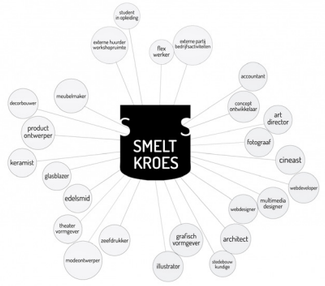
38 | de Ruiter, S., & van Oosteren, C. (2012), p. 12

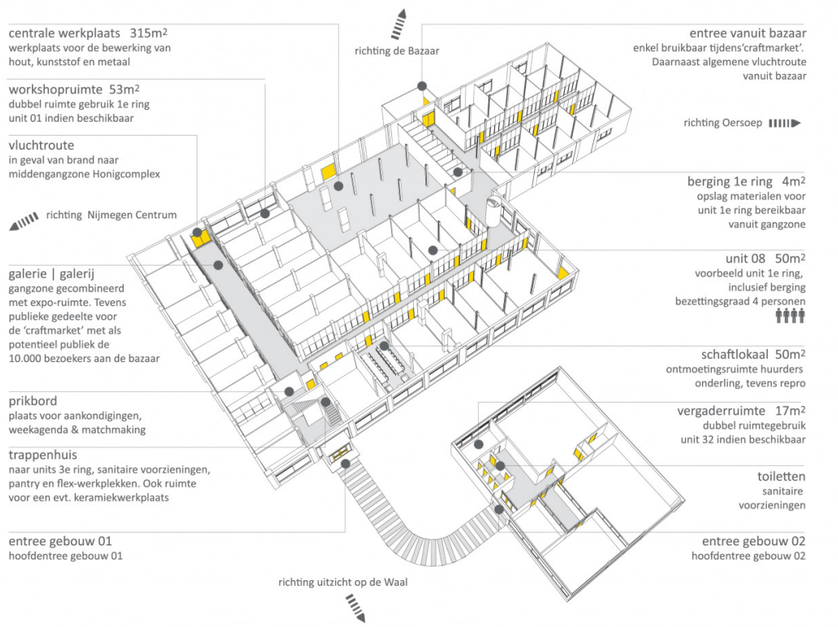
39 | de Ruiter, S., & van Oosteren, C. (2012), p. 39.

Example of shared workplaces

Smeltkroes, Nijmegen

This layout is an example of how multiple professions can utilize the same space. This is a company where you can rent space per day. The layout offers insight in the amount of space needed for multiple companies to work together at the same time.





6.3.1: Internal layout of 'De Smeltkroes'

Werkplaats 'Het Oude Ambacht', Someren

Image 6.3.2: Photograph of the workspace of 'Het Oude Ambacht'

Combinations of multiple woodworking machines: 400m2
Storage space for materials: 250m2[40]

Some of the facilities can be shared, which reduces space.
A furniture maker, woodcrafter and musical instrument makers are more likely to work together for example than a glass blower.

40 | Het Oude Ambacht Someren. Retrieved from http://www.hetoudeambachtsomeren.nl/wie-zijn-wij/werkplaats/, visited on 1-12-2017.

C H A P T E R . V I I
Adding.knowledge.
in.craftsmanship

Knowledge is power.

- Michel Foucault

CONTENT

Educating the new generation

At the same time that the amount of jobs in the crafts sector are rising because of economic growth and demand for crafted goods and craftsmanship in general, the amount of schooled professionals is declining, at the amount of people retiring is rising. This will result in a staggering shortage of craftsman.
This will hurt the economy as well as cultural and social heritage. There are some professions in serious danger of going extinct, with all knowledge of these trades lost.

There are a few initiatives, such as SOS Vakmanschap, that acknowledge this and try to gain awareness and participation in recruiting new students.
Within the different crafts sectors, working by learning is an important form of training, especially for the pupils who come in from MBO courses and like to work with their hands.[41]

Most one-man-businesses are not licensed to offer internships or learning-working places. About half of the licensed companies do offer these. For the ones that don't, the main reasons are that it due to

- A lack of subsidy
- A lack of space
- A complicated registration procedure
- Difficulties finding suitable candidates.

87% Of all one-man companies in the crafts sector, 87% does not do anything for educating the new generation. This is because they are officially not registered as employers.

50% Of all companies with personel, about half have does offer internship places or learning workplaces.

18% Of all companies in crafts, 18 percent indicates that they would take on interns if they had a suitable space for this purpose, but they are having a hard time finding this. In the technique sector, this amount is even higher (27 percent). For the creative sector this is a little lower (16 percent).

26% Mostly, the lack of suitable internship places is because of lack of subsidizing from the government. Would take on interns, if they was more subsidy available from the government.

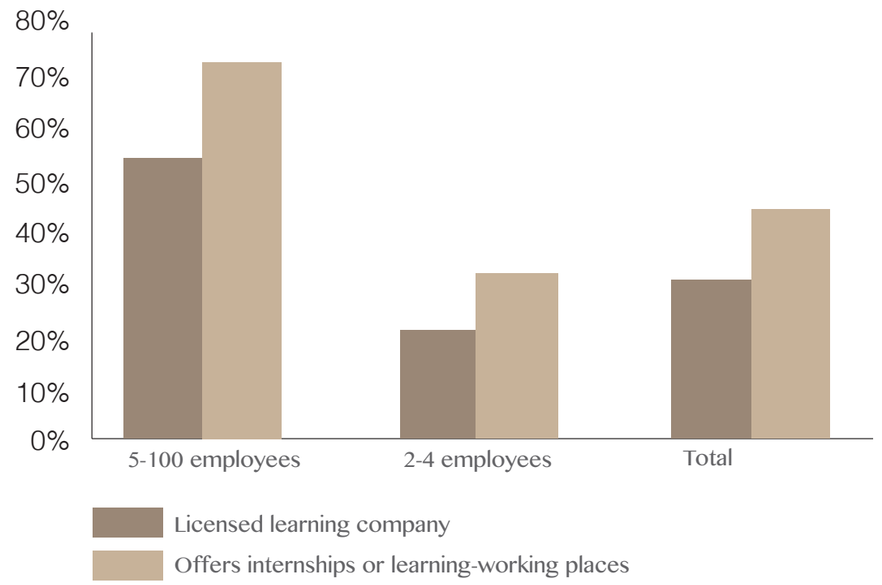


Figure 7.1.1: Amount of internship and learning-working places

41 | de Ruiter, S., & van Oosteren, C. (2012). p. 43

Re-valuating craftsmanship

One of the main reasons for the rapid decline of craftsmanship, is the lack of incentives for young students to choose a profession in one of these field. This is due to the lack of recognition that these professions get in the economy. Working with your hands is, in The Netherlands, seen as a second-rate profession, and most will rather choose a profession that gets more recognition and will generate more money.

Prof. Dr. Arjo Klamer researched this and in his publication he arguments how and why we should change the way society looks at craftsmanship in order to save it. He also compares the Netherlands to other countries where the crafts culture is much stronger and sees a strong correlation between the way society views the craftsman and how strong this economy is. Only getting more students to enroll for an education in these fields is not enough. He claims that the craft industry should be focused on a revaluation of the crafts.[42] Because, as he also states, those craftsmen make a substantial contribution to the quality of modern life.
Other sources for this: Richard Florida (The rise of the creative class), Richard Sennet (The Craftsman, 2008).

Re-introducing the master title for craftsmanship

The opportunity to gain a master title is for example an important medium for stimulating the youth to chose crafts for their education. At the moment, 78% of all professions do not qualify for a master title, which is a recognition of skill. Of these most are in favor of re-introducing this title because it would be good for the crafts economy in the Netherlands.[43] Klamer states that the prospect of the master title and the advantages that come with it will prevent a major dropout in the learning trajectory.[44]

At the moment in 2017 there are several education that are speaking with the Ministry of Education about re-introducing this title.[45]

An important part of re-vaulating craftsmanship are the gulds. Historically, these were the organizations via which knowledge and experience were transferred and where new members were trained in their profession.

In the Netherlands, there is the organization 'Gilde Nederland', an umbrella organization which represents 65 guilds. At the moment, it is more an organization that combines volunteers and targets the 55+ group to transfer their knowledge in various fields in a non-profit way.

Real guilds in the historical way of meaning are reduced to a few, such as 'Smedengilde van St. Eloy', 'Gilde van Vrijwillige Molenaars', the 'Gild Fryske Mounders' and the 'Ambachtelijk Korenmolenaars Gilde'.[46]

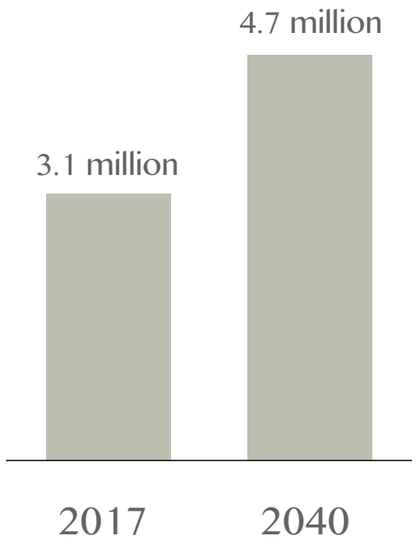
There are many more guilds in the Netherlands, still combining professionals from the various crafts professions. For example the 'Gilde van parketteurs', who state on their website that the reintroduction of the master title is a hot topic within the entire crafts sector. Their guild wants to actively participate to make this possible.[47]
Many more guilds make statements like these on their websites and in their magazines.

MEESTER
Boulangère Patissier

42 | Klamer, A., et. al. (2013), p. 3.
43 | van Brakel, R. (2011)
44 | Klamer, A., et. al. (2013), p. 16.
45 | VanTol & Breet: Retrieved from https://vantolenbreet.nl/berichten/, visited on 2-1-2018
46 | Wikipedia. Retrieved from https://nl.wikipedia.org/wiki/Gilde_(beroepsgroep), visited on 2-1-2017
47 | Gilde van parketteurs: Rretrieved from https://www.gildevanparketteurs.nl, visited on 2-1-2017

Seniors retired from the crafts sector

Everyone knows the phenomenon of the aging population. The aging of the population of The Netherlands will continue to increase, reaching it's peak in 2040.
The composition of the population is changing; the number of elderly people is increasing, and so is the average age of the population. This first of all has to do with a birth-wave that occurred after the second world war, of which a big portion is now reaching retirement age. Secondly, in the sixties and seventies there was a decrease in births with the widespread use of contraceptives. Also, the fact that people in general reach a higher age plays a role.
This will increase pressure on the working population and economy. In 2040 this phenomenon, also known as the 'grey pressure', will reach it's peak.



No memory of having starred

Atones for later disregard,

Or keeps the end from being hard.

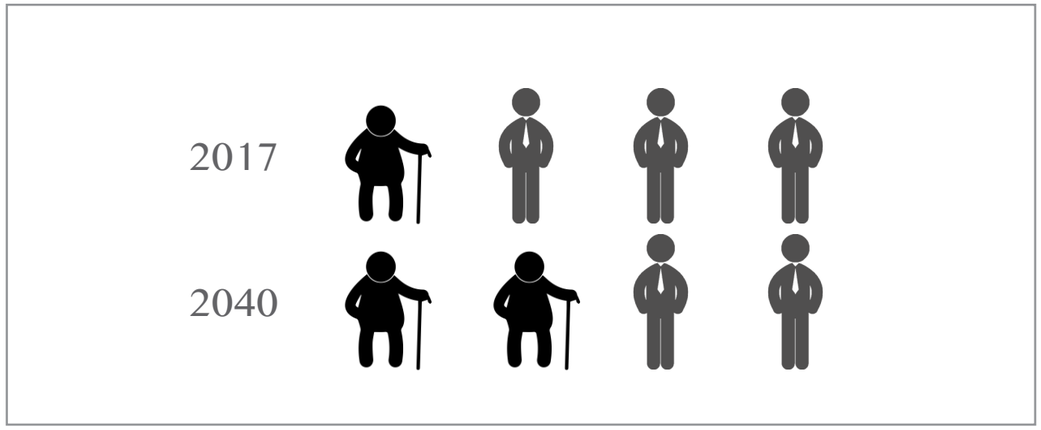
- Robert Frost, Two Tramps in Mud Time

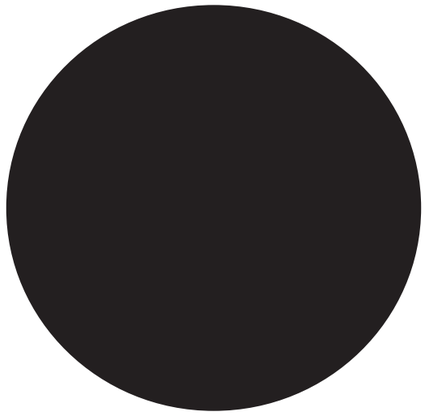
There is a distinction to be made in the aging population. At the moment the age for retirement will be scaled up to 67. Some people look forward to their retirement; this is not the case for everyone. This group of people fall into a ‘black hole‘ after retirement. This comes with feelings of depression and a loss of self-worth. Feeling like you have no purpose anymore and being a progressing burden on society in terms of money, care, social obligations.
Besides this, these seniors have a lifetime of knowledge, in both life experience as work-experience. It is somewhat a shame that this knowledge is instantly rendered useless.

We are prepared in life for many things. But after we finished our career, the amount of people that don’t know what to do with their time is high. A daily rhythm is important. But a lot of people experience boredom and depression.
The satisfaction from work disappears. This is a component of life that is important to many people, and gives meaning. If this falls away it can feel like they are no longer useful to society. Some alternatives are volunteer work, in which way you can still contribute to society and get appreciation from others.

On the other hand, loneliness can have a high impact on your health. High blood pressure, stress-levels and chances for depression. There is 14% more chance to die early when you feel lonely. This chance is twice as high as with obesity.
Loneliness increases with age. Half of all people above 65 feels lonely. The most lonely are the single living elderly with not many social relations. Active participation in volunteer work or other social activities decreases the chance on loneliness significantly. Studies show that staying active after retirement helps for health and social network. [48]

For this issue there are some socio-economic problems that are occurring and that will only increase in time. Some of these issues are:
- The way that the burden of the aging population is divided between generations and withing generations themselves
- The pressure on the care system. This needs to be expanded and be accessible to everyone.
- The participation of elderly in economic, social, political and cultural life, so the knowledge and skills of the elderly can be used effectively.
- The ‘grey pressure‘ on the working population
- Increase in need of special services
- Increase in need for specialized dwellings for elderly.





900.000

Cases of loneliness reported at the moment in the 65+ group of the population. It is probable that this number is even higher in reality.

48 | Ouderenfonds. Retrieved from https://www.ouderenfonds.nl/onze-organisatie/feiten-en-cijfers/, visited on 15-11-2017.

Working after retirement

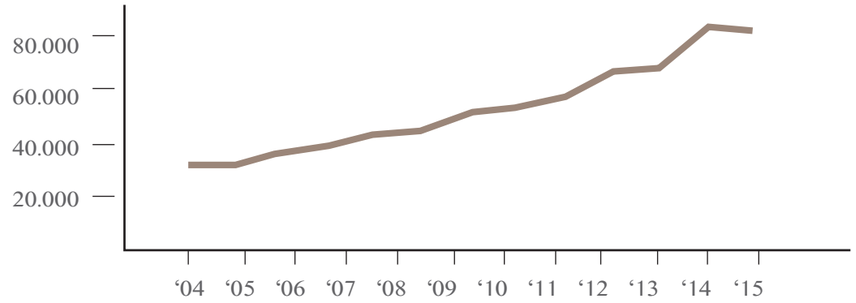
In the future, there are more 65+ seniors that are
- single
- high educated
- healthy
- active

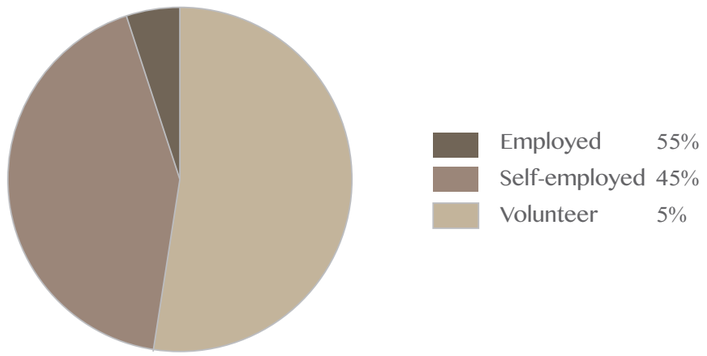
Within this new generation of seniors there is potentially a large source for time, knowledge, skills and social networks. The problem is that elderly don't get work easy because younger people are cheaper. One of the main solutions is to become self-employed, or do volunteer-work. Also the more gradual exit from work is something that is gaining attention in society.
At the moment, 180.000 out of 3,1 million retired elderly continue to work. There is a fairly new law (2016) that makes this more attractive. Projection is that this number will continue to rise in the future. Already a large portion of these seniors that work after retirement is self-employed, and this is also projected to rise.[49]
The biggest increase in seniors working after retirement age are the self-employed workers, according to the RSVZ.

Specification of group

Seniors that are (in progress of) leaving the labor market, are educated and possess a life-time of knowledge from a specific sector in the small craftsmanship sector, and have an interest in transferring this knowledge to younger entrepreneurs in this same sector. This specific seniors group is mostly self-reliant. They feel like they can be an added value to society because of their knowledge. Being in a surrounding with others (young and old) that have an interest in the same specific work-related sector will be an enhancement to their everyday life. These elderly want to increase their network instead of it decreasing. They want to avoid falling into a 'black hole' after retirement. Especially the single seniors that want to avoid loneliness and want to live in a building with a mix of other seniors and young entrepreneurs with an interest in the same field of knowledge.

Qualifications:
- Senior (55+ to 75)
- Has lots of knowledge about craftsmanship
- Single living
- Self-reliant
- Highly educated
- Want to participate in activities





7.3.2 and 7.3.3 Self-employed after 65

49 | Planbureau voor de Leefomgeving (2013), VERGRIJZING EN RUIMTE
Gevolgen voor de woningmarkt, vrijetijdsbesteding, mobiliteit en regionale economie. PBL, Den Haag,

CHAPTER-VIII
WORKHOMES
CASE.STUDIES

CONTENT

Case studies introduction

For uncovering interesting ideas about other buildings an indispensable research method is to analyze other buildings on aspects that might be important for your own design. As a setup I have chosen two buildings that I will describe with project information, photographs, drawings and concept information. After this I will split the analysis in different subjects. I have done this because this will provide me the opportunity to first describe general information about the subject from literature, in text and schemes, because the possibilities are usually far more extended than I can put into several case studies. After this subject introduction I will provide drawings and schemes that will explain the case studies in that aspect.

I have selected the following two buildings as complete case studies for now. In the final page of this analysis I have included a list of other interesting projects as well that might be interesting for further analysis in the following weeks.

Tetterode, Amsterdam

A building with multiple interesting aspects. It is older, re-used from the original factory function, and has expanded with newer buildings over time. It was inhabited by squatters for a long period of time. It is used for living, dwelling and also has many live-work loft-style units originally inhabited by artists. It is a popular building now for live-work intentions, because of it's layout, strong sense of community and central location in the city of Amsterdam.

Schiecentrale 4b mei Architecten

This is one of the newer live-work buildings I could find solid documentation on. It entails the newer ideas on live-work and therefore this can provide me information about how new designs can approach this subject in a contemporary way.

These two case studies are both live-work buildings but very different in many aspects which I will describe on the basis of different analysis subjects. In addition to these, in some of the analysis subjects, I have done an extra building that was interesting in that aspect. For example the building Multifunk on Steigereiland in Amsterdam, which is interesting in its flexibility aspect but does not provide zero-commute housing and is therefore not interesting in some of the other aspects.

Analysis subjects:

I have analyzed the case studies on the following aspects:
- Project information and photographs
- Concept
- Program
- Location
- Urban configuration
- Building circulation
- Connection to the street
- Courtyards
- Dwelling entrance types
- Proximity of working and living activities
- Flexibility
- Relationship between living and working units
- Dwelling type
- Dwelling orientation

In the end I have done a quick analysis of an interesting Thomas Dolan Architecture live-work project. It is not in the Netherlands since his office is based in the USA, but as a design concept it is interesting and I wanted to highlight his design principles separately.

TETTERODE

Location: Bilderdijkstraat, Amsterdam
Architects: Hartkamp, Merkelbach
Client: Original: Tetterode Lettergieterij
Year: 1901, 1912, 1921, 1941, 1949
Program: Basement and ground floor: 55 work spaces. Upper floors: 65 private units (live-work mostly). Extra program ground floor: Kindergarten, gay club.

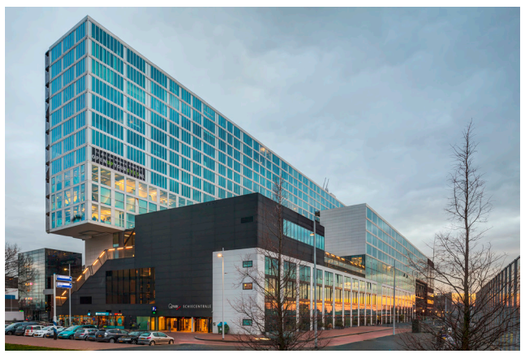
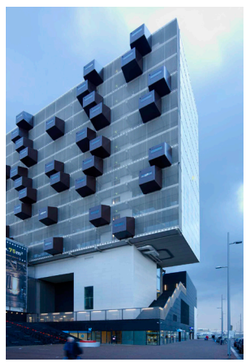
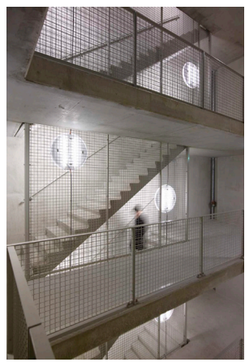
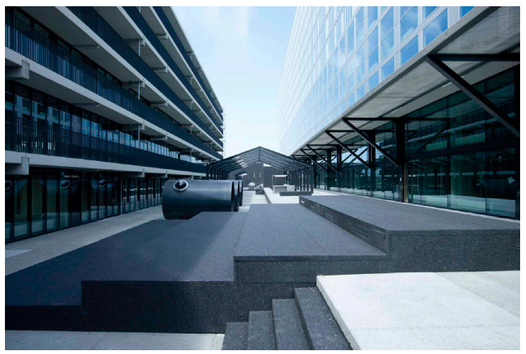




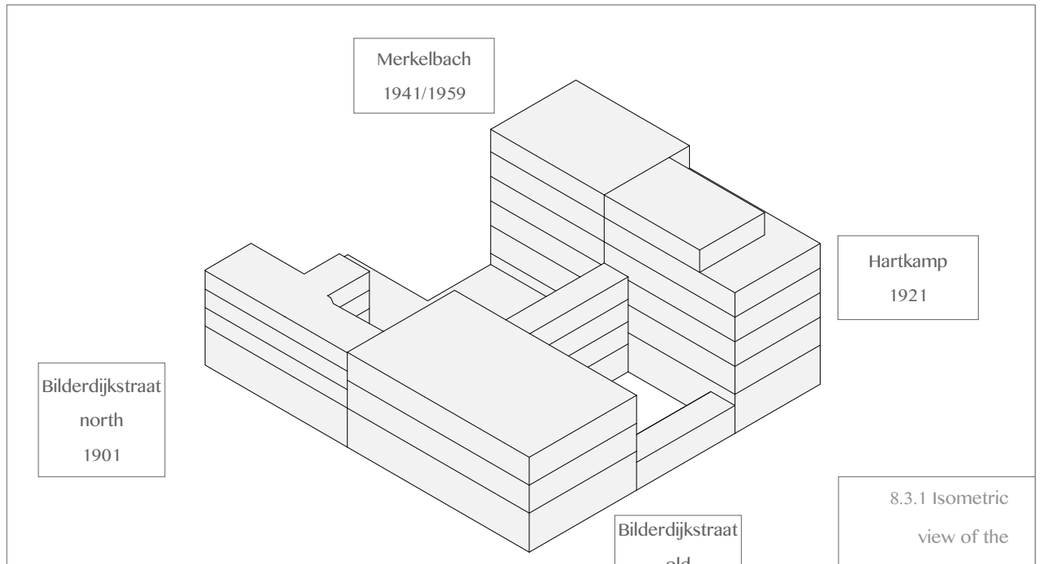

8.2.1 Photographs of the Tetterode complex

SCHIECENTRALE 4B

Location: Schiehavenkade, Rotterdam
Architect: Mei Architects and Planners
Client: Ontwikkelingsbedrijf, Proper Stok, PWS
Year: 2008
Program: Total floorspace 55.000m2. 7000m2 office space, 156 live-work apartments, 20 quay homes of 3.5 stories, day-care, supermarket, sports hall, parking garage, multi-functional deck and solar terrace.

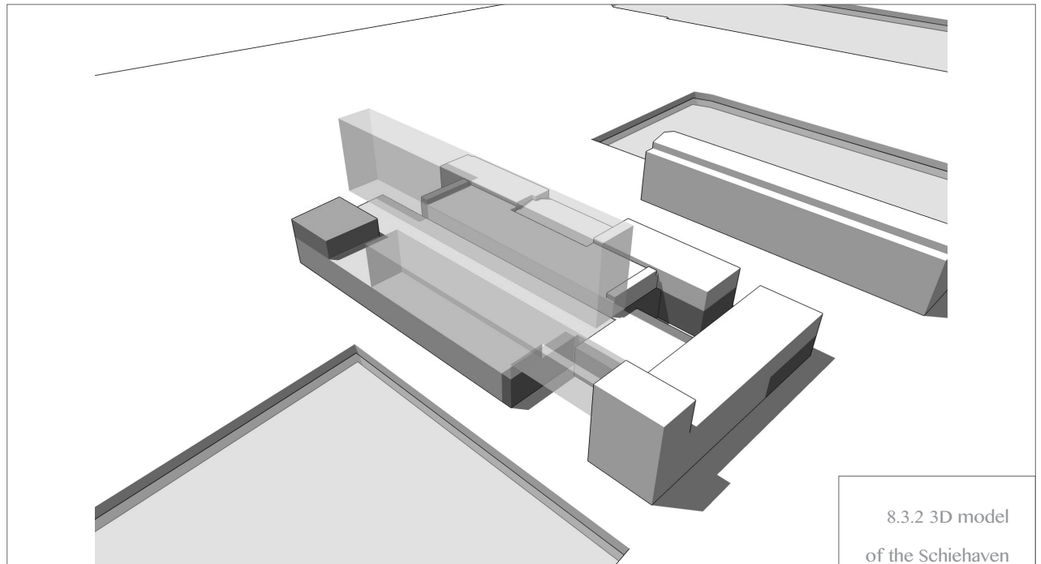

8.2.2 Photographs of the Schiecentrale 4B complex



8.3.1 Isometric view of the Tetterode complex

The Tetterode complex was designed to house a factory for making cast-lead printing types (lettergieterij). This building is actually an ensemble of four different buildings that have been built over the years. They are named the Old Bilderdijkstraat and North Bilderdijkstraat buildings (Hartkamp, 1901), the Hartkamp building (Hartkamp, 1912), the Merkelbach building (Merkelbach, 1941 and 1949).
In between these the building consists of single or double height ground floor level units, added in 1921. Also there is a bridge connecting the Hartkamp and old Bilderdijkstraat building. In 1981 the factory moved out and the building was taken over by a squatter collective

The huge domestic structure of about 80 residents in 65 living-spaces and studios is piled on top of a busy work environment. Throughout Tetterode's ground floors and basement, and in the Merkelbach L-1 "entresol" are work-places: around 55 spaces are rented to outside businesses (there is a waiting list!) - thus the lower parts of Tetterode are 'connected to the city' by way of a population of commuters.[50]
The building has undergone many changes over the years. Many apartments are used as live-work spaces in various forms. All private units are part of the 'Collective' and you need to be accepted to live or work here.



8.3.2 3D model of the Schiehaven 4B complex

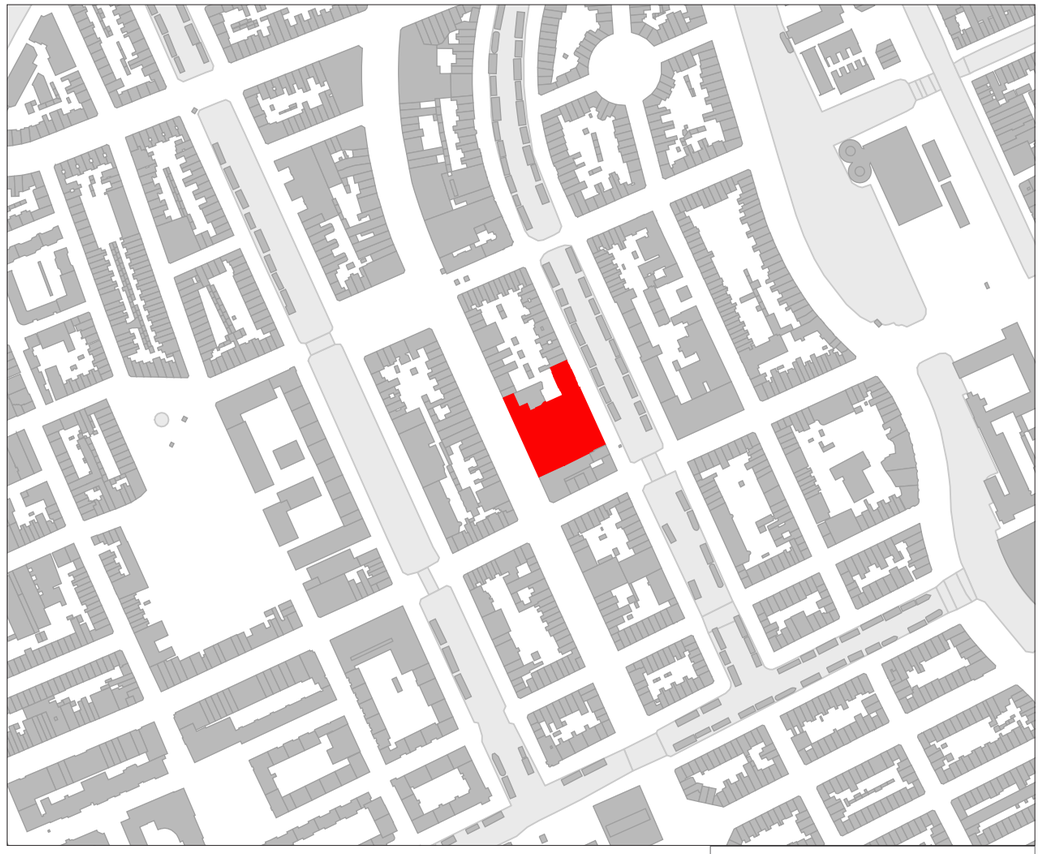
The Schiecentrale is a mixed-use building complex, used for living, working, shopping, parking and recreating. Parts of it are older, and the Schiecentrale 4B building has been the latest addition to the ensemble. As a whole, the concept is a business and creative breeding ground.
The concept for the whole area was for the Schiecentrale to become the creative center of Rotterdam.

The building consists of a combination of dwelling units, working units and live-work units. The first four floor are a parking garage and also holds a supermarket, gym,, playground and daycare center. On the waterfront side, there are full-height dwellings of 3.5 stories with an own entrance on the waterside. The roof is this is designed as a courtyard for recreating. Then on top of this are two towers, of which the first floors are for rentable working units. The top floors in the two towers consist of live-work units.
The buildings tries to identify itself with the scale and identity of the harbor, as is clear for the concepts drawn by Mei Architects. It is a high building of 130 meters long and 50 meters wide, towering above the older buildings that used to be a powerplant.[51]

50 | Carr-Smith, D. (2005).

51 | Mei Architects and planners. Retrieved from http://mei-arch.eu/projecten-archief/schiecentrale-4b/ , visited on 12-12-2017

Tetterode



8.4.1 Site plan of the Tetterode complex
Scale 1:5000

The building is inside of a building block, bordered on the left by the Bilderdijkstraat, on the right by the Da Costakade and to the bottom by the Kinkerstraat. The building block is 62 meters wide. The building has grown over time, adding to it over the years.

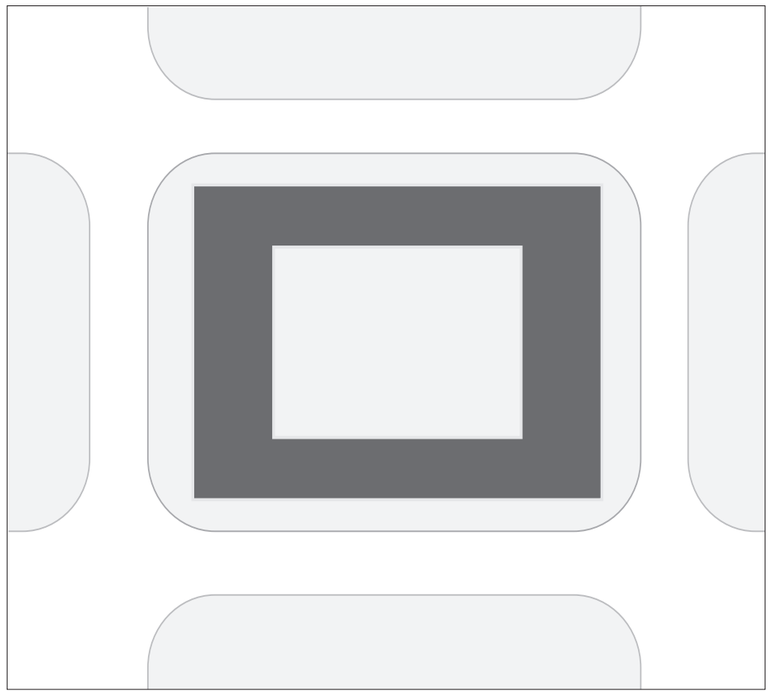
Schiecentrale 4B

8.5.1 Site plan of the Schiecentrale 4B building
Scale 1:5000

This building is freely positioned at the head of the water on the Schiehavenkade in Rotterdam. It uses its orientation to the water as one of the qualities for the dwellings and workspaces.

Leupen defines some basic configurations for building blocks, that have their own characteristics.[52]
For the two case studies these configurations are:

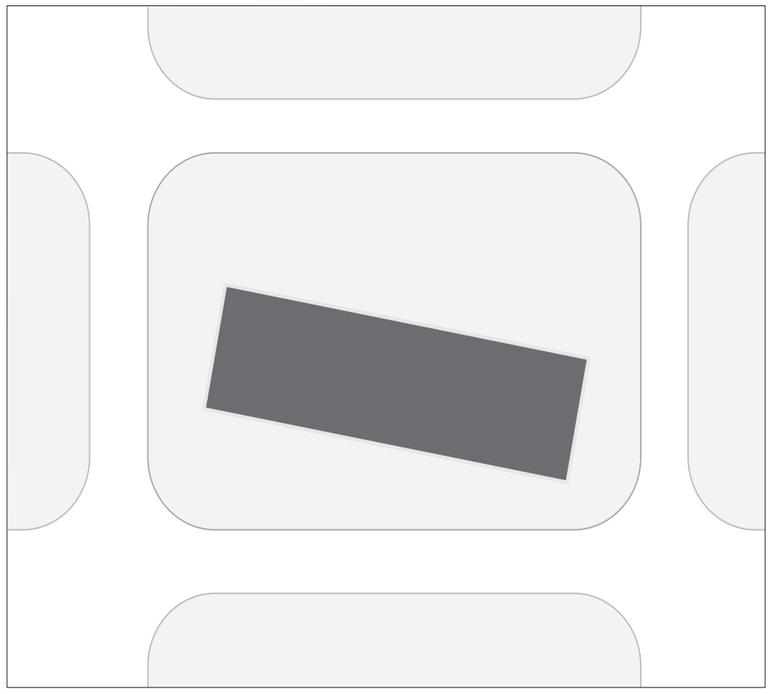
TETTERODE



8.5.1 Closed building block

The building is part of a building block. It is bordered on both sides with other buildings inside this block. The block is 62 meters deep, and bordered on the north side by a canal.

SCHIECENTRALE 4B



8.5.2 Freestanding object

The Schiecentrale 4B is part of a freestanding object. It is the foremost building bordering the water on the long side. The edges are free, and the back side is bordered by another building, together making the whole ensemble.

52 | Leupen, B., & Mooij, H. (2008), pp. 196-197.

Introduction

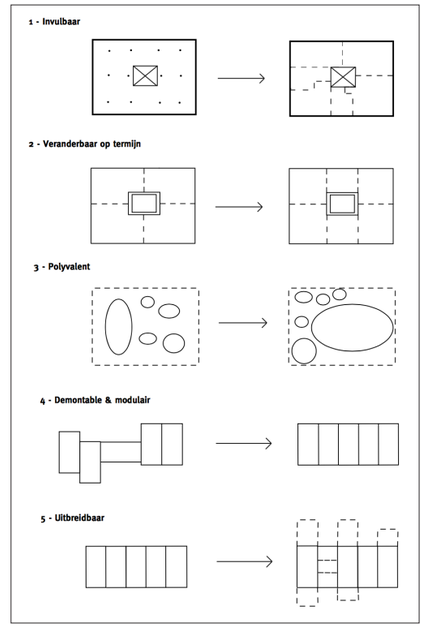
Flexibility in building knows many forms. A building can be flexible in use, structure, facade, routing, and many more things. It can be an efficient way to make a building more future-proof and thus sustainable, because the life-span can be increased. The kind of flexibility needed for this is dependent on the type of project and intentions for the future.

For live-work type projects, flexibility is a key element for successful design. This is visible in every book and report written about live-work projects. For example the report written by the Bouwfonds in 2014 says the following:
“Flexibility is the keyword when realizing live-work dwellings. You need to anticipate the future. The dwellings need to be able to withstand time. ... A better way of naming the concept might be functional neutrality. The layout of the floor plan needs to be suitable for multiple purposes. High ceilings and good dimensions will take you a long way.“[53]

Jasper van Zwol states that “given the instability of the live/work programme, the principle of ‘form follows function‘ can no longer be regarded as a general stepping-off point for a design. No tailor-made affair then, with close-fitting spaces for specific functions, but sustainable buildings capable of accommodating change. ... Programmatic flexibility with an interchangeability between functions of living and working are, together with cultural durabilitym key to a buildings’ useful life.”[54]

ANA Architects have made a study and report on flexibility, inclusive of their own building ‘Multifunk’.[55]
They have made a flexibility matrix for 20 projects that place the different variables into a comparison as an attempt to measure the degree of flexibility. On the left are the different types of flexibility they have encountered in their studies. In the matrix they have used the following criteria as an addition:
- Amount of functions (1, 2, more than 2)
- Scale level of flexibility (unit, circulation, building)
- Time span of flexibility (Only at construction, one-time only transformation, perpetual possibilities)
- Ownership (rent, buy)
- Management strategy (proposed choice, something in between, anything is possible)
- Changeability of building components (layout, wet cells, installations, unit separations, unit functions, circulation, facade, outside space)

Globally, there can be distinguished 5 main types of flexibility.[56]
1. Layout: to be determined by the user
2. Changeability over time: with the help of possibly some structural changes, adaptability in floor plan layout, unit size and/or function.
3. Versatile: to be used for different functions without spatial adjustments.
4. Demountable & modular: consisting of elements that can be detached and attached again.
5. Expansion: Designed to give the opportunity to add spaces later in time.

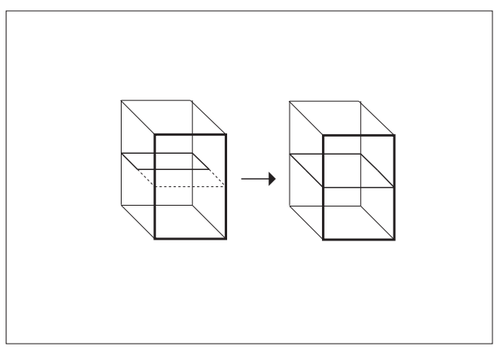


8.6.1: Types of flexibility scheme

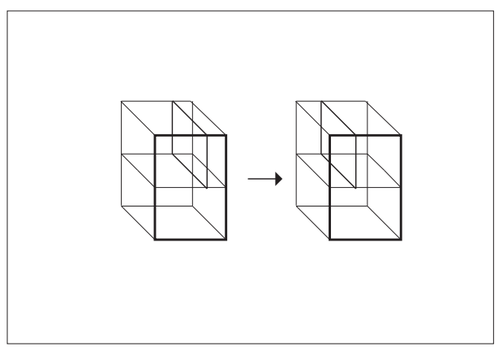
53 | Bouwfonds. (2014), p. 36
54 | van Zwol, J. (2005). p.40
55 | ANA Architects. (2014), p.27
56 | ANA Architects. (2014), p. 25

For live-work buildings flexibility might exist in two scales. The first is flexibility on a dwelling scale, the second on a building scale.

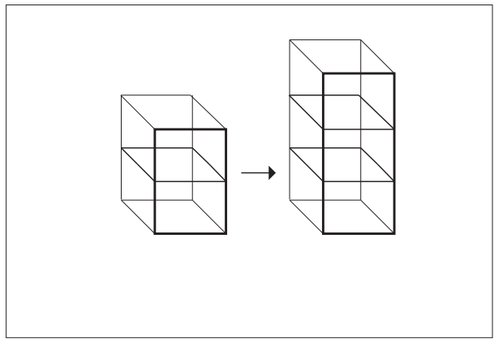
This flexibility study is about the possibility of adapting to changing needs for dwelling and/or working, due to changing household composition or business type or stage.
On a dwelling scale I have studied the following options:



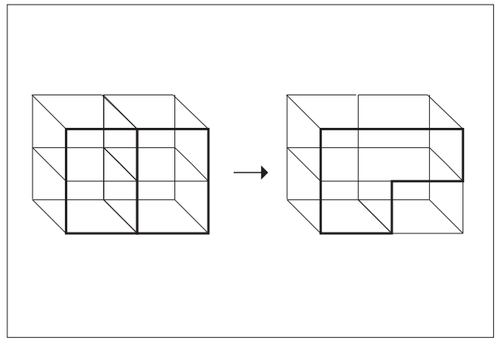
1. Creating more m2 in the same amount of m3.



2. Shifting the ratio of live-work within the same amount of m2.



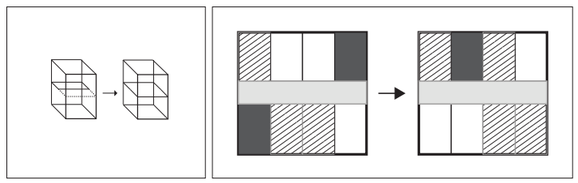
3. Creating more m2 by adding to the volume.



4. Taking m2 from the collective spaces in the building.

8.6.1: Dwelling scale flexibility types

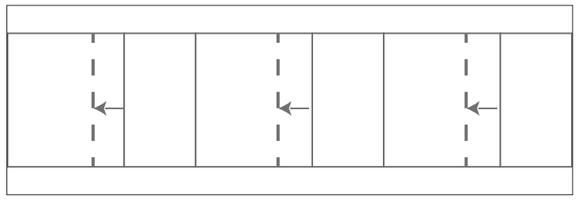
Tetterode



Flexibility: Versatile and changeable. Dwellings with high ceilings, give the opportunity for making a second floor. Also, units change their function over time.

8.6.3 Flexibility schemes Tetterode

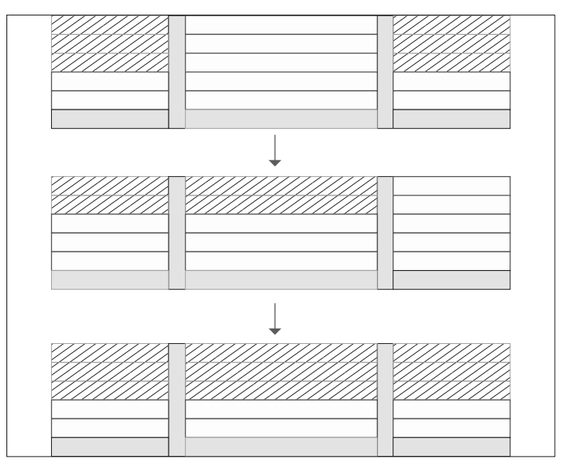
Schiecentrale 4B



Flexibility: Changeable. Possible adjustment of the width of the walls of the live-work units.

8.6.4 Flexibility scheme Schiecentrale 4B

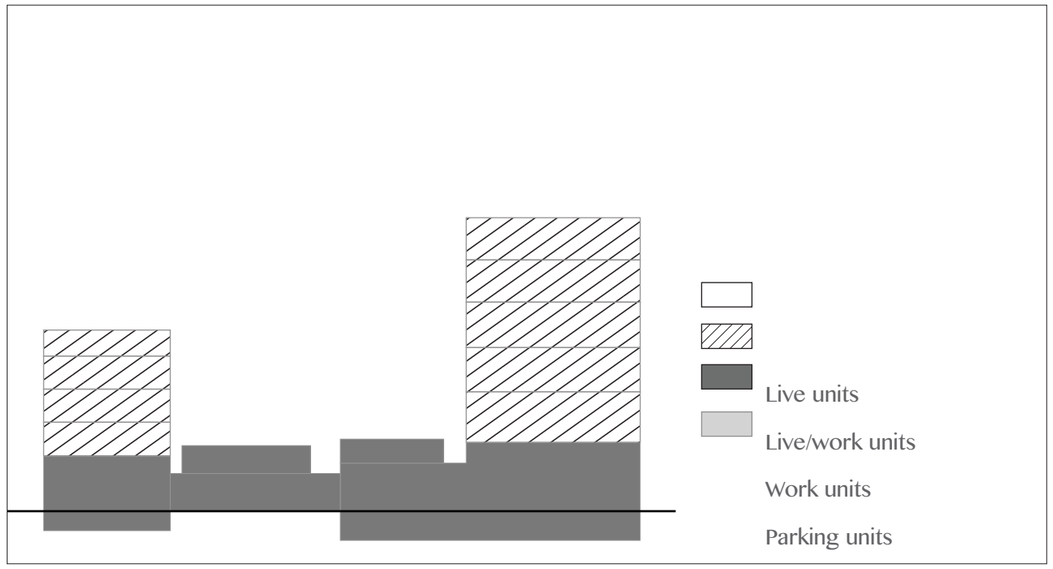
Multifunk



Flexibility: Versatile. Relationship between work and dwelling can change over time. On building scale only. This is made possible by making two separate routing systems, so living and working can be flexible without interfering with each other.

8.6.5 Flexibility scheme Multifunk

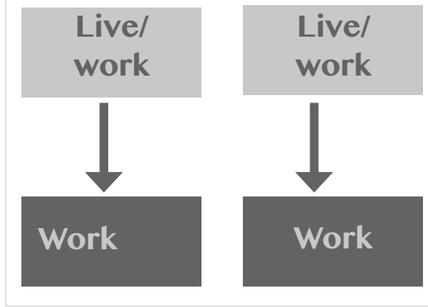
TETTERODE



8.7.1: Scheme of program Tetterode

In the Tetterode complex the layout of the building is complex, partly because it has organically grown over time. There are not two units alike. Most units in the top floors are used for living or live-work units. Most of the units on the ground floor with entresol and the basement are used as work units. There is no separate parking space inside the building. In total the complex is divided into four parts/buildings, each with its own system.

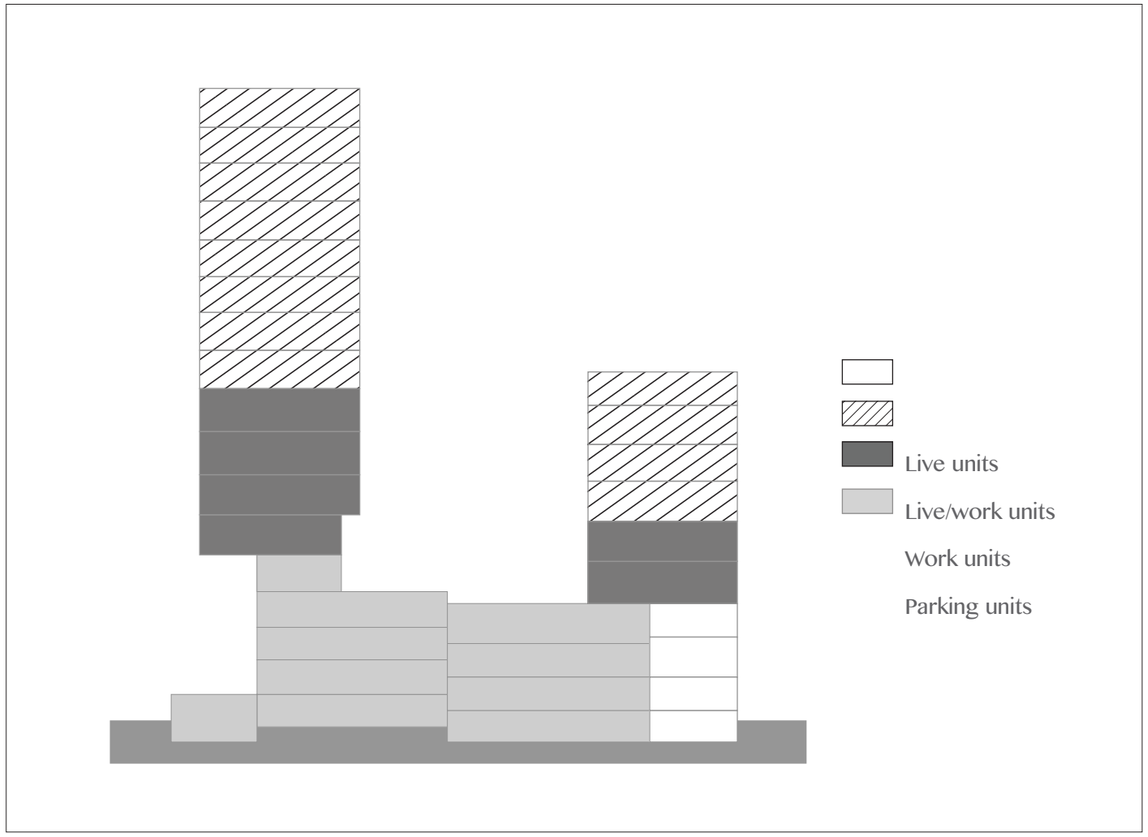
Both buildings are very different but use a similar stacking scheme, with the top layers being used for live/work units. It is one of the few similarities between the two buildings.



Workspace types

In the Tetterode complex, the live-work units are artist style lofts, usually ‘rommelig‘ and poorly maintained. The working spaces are workshops for artists, also they integrate woodworking studios and other heavy machinery professions.

SCHIECENTRALE 4B



8.7.2: Scheme of program Schiecentrale 4B

The layout of the Schiecentrale is quite clear. On the ground floors there are 4 layers of parking, with on the water side the waterfront apartments. Above that are two towers, with public space in between. The first 2 or 4 layers are used for work units, the units above that are live-work units type lofts.

Workspace types

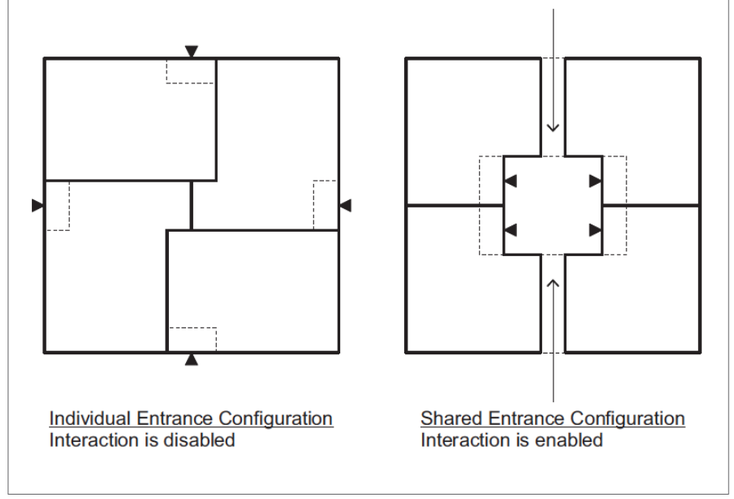
In the Schiecentrale complex, the working units are office-type spaces that you can use or rent.

Introduction

The way you enter a building and go to your private dwelling unit characterizes the building and also the connection it has to it's direct surroundings and public space.

For the purpose of a totally residential building the intended infrastructure is usually different than for live-work dwellings. This has to do with multiple reasons, such as the interaction between inhabitants which is one of the foremost rules of designing live-work buildings, the integration with it's surroundings which is equally important, the collective sharing of spaces and facilities, the connection to the street that might be important for businesses, seperate entrances for dwelling and working for representative values, and so on.

With these case studies I have analyzed the entrances from the outside to inside, the routing inside the building, the placement of communal outside spaces, the placement of the staircases, and the connection to the street level.



8.8.1: Entrance configuration diagrams bij Thomas Dolan

TETTERODE COMPLEX

Main entrances and inside building circulation

The building consists out of several parts, called ‘enclaves’. The ground floor connects all of these. Then the staircases go up to their individual enclaves, where the apartments are located.

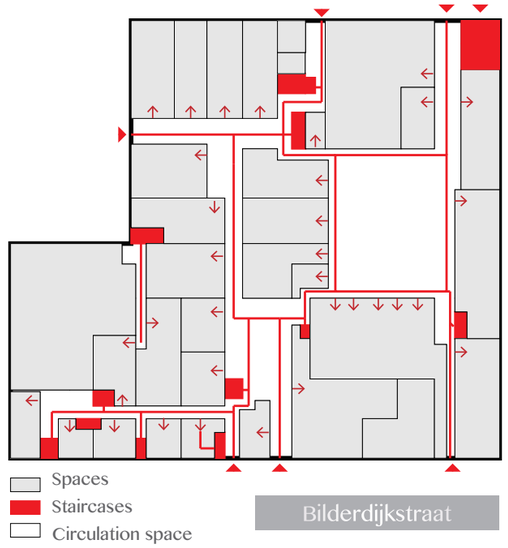
The middle entrance at the Bilderdijkstraat is the most public one, connecting directly to the reception hall. The others are only for the residents.

Connection to street

Several of the units on the ground floor are directly connected to the main street via their own private entrance, indicated in color. Most of the time, these also have a door into the building. The other units, indicated in gray, can only be accessed from inside the building.

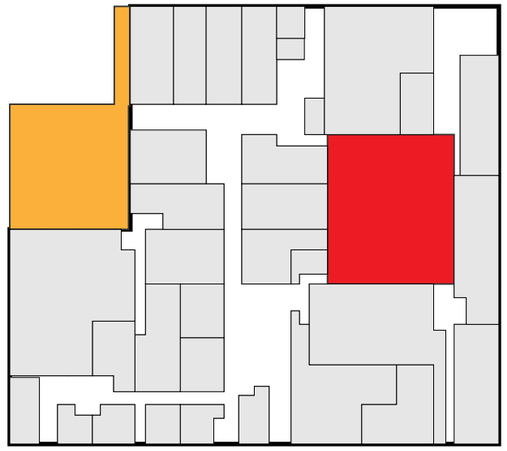
These are mainly spaces rented out separately to businesses that benefit from visibility and clients passing by on the street.

The large space on the left corner is a kindergarten, which has no connection to the rest of the building.

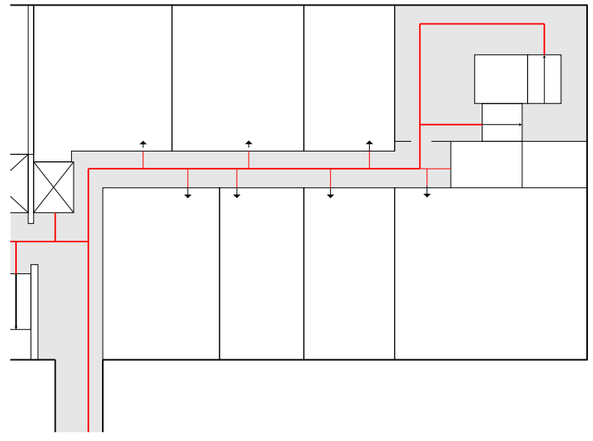


8.8.2: Ground floor circulation scheme Tetterode

8.8.3: Street connection scheme Tetterode



8.8.4: Courtyard scheme Tetterode



8.8.5: Dwelling entrance scheme Tetterode

Courtyards

The red courtyard combines all the ‘enclave‘ entrances together.

The galleries and hallways on the floors above also have visible connections to this courtyard. It is the place that literally combines all the different buildings together in a community.

The orange courtyard is private for the kindergarten, indicated in orange.

Dwelling entrances

In the upper floors the apartments have been grouped in what it calls ‘enclaves‘. Each staircase gives access to one of these, each with it’s own identity and configuration of apartments. The type of access is a corridor.

This results in a confusing routing through the building; a visitor is lost easily. “... after Dacostakade’s central access to standardised stacked floors it can seem a frustrating maze terminated by locked enclaves with no bells.“[57]

57 | Carr-Smith, D. (2005).

SCHIECENTRALE 4B

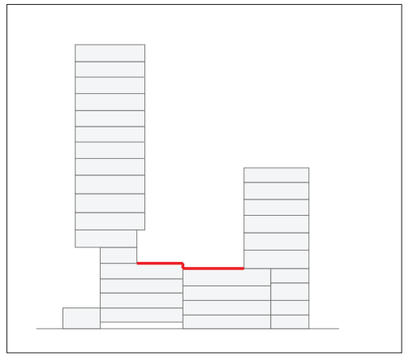
8.8.6: 9th floor scheme showing circulation of live-work units

Main staircases and circulation inside building

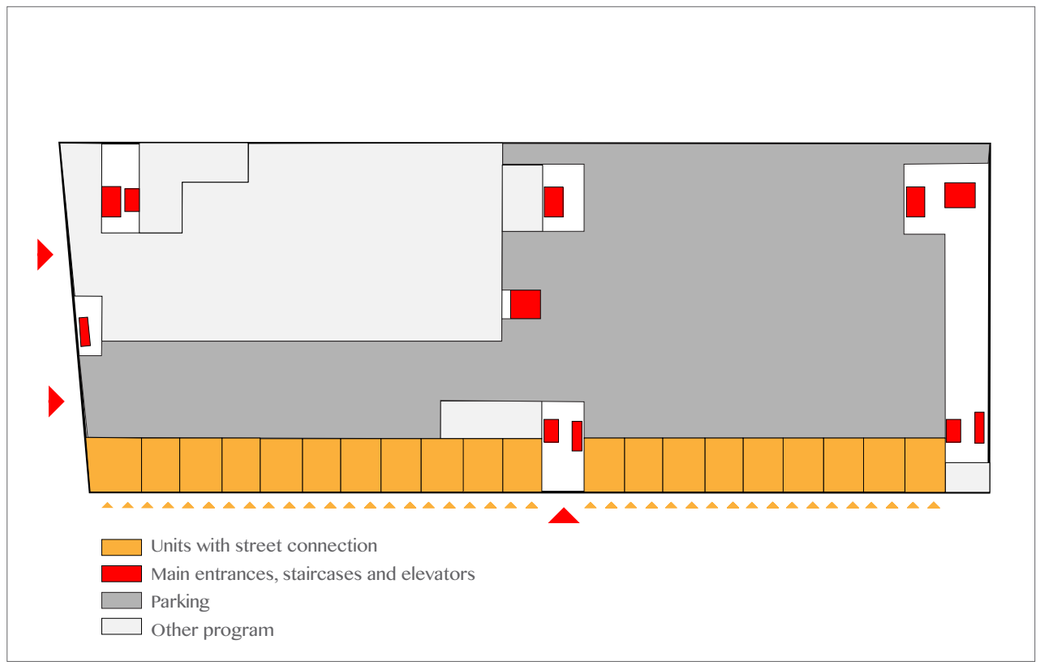
Inside the building on the level where the live-work units are located, all units are accessible via a gallery that spans the entire length of the two towers. All units have only one entrance. On the other side of the gallery it gives access to the storage units, attached to the building facade.

Courtyard.

There is a courtyard located on the top of the roof of the parking garage, on the fourth floor, which is where the towers begin. This does not provide a direct connection to any of the live-work dwelling units.



8.8.7: Scheme of building section indicating the courtyard.



8.8.8: Ground floor scheme showing the connection to the street of the ground floor dwellings

Main entrances and connection to street

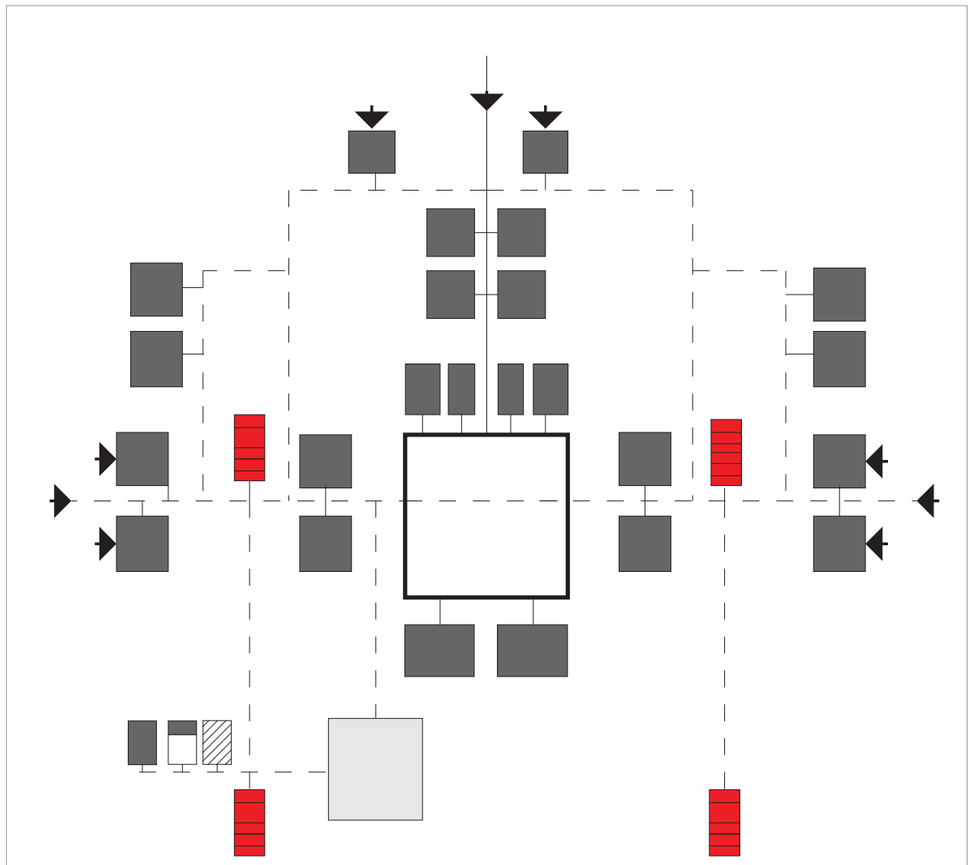
There are 20 dwellings that are oriented towards the water on the quay. These dwellings are 3.5 stories high and have their own ground floor entrances. These dwellings are not the live-work units. The rest of the building on the ground floor is parking and a supermarket. These dwellings provide a direct access to the garage on the second floor.

Circulation type principle: Gallery

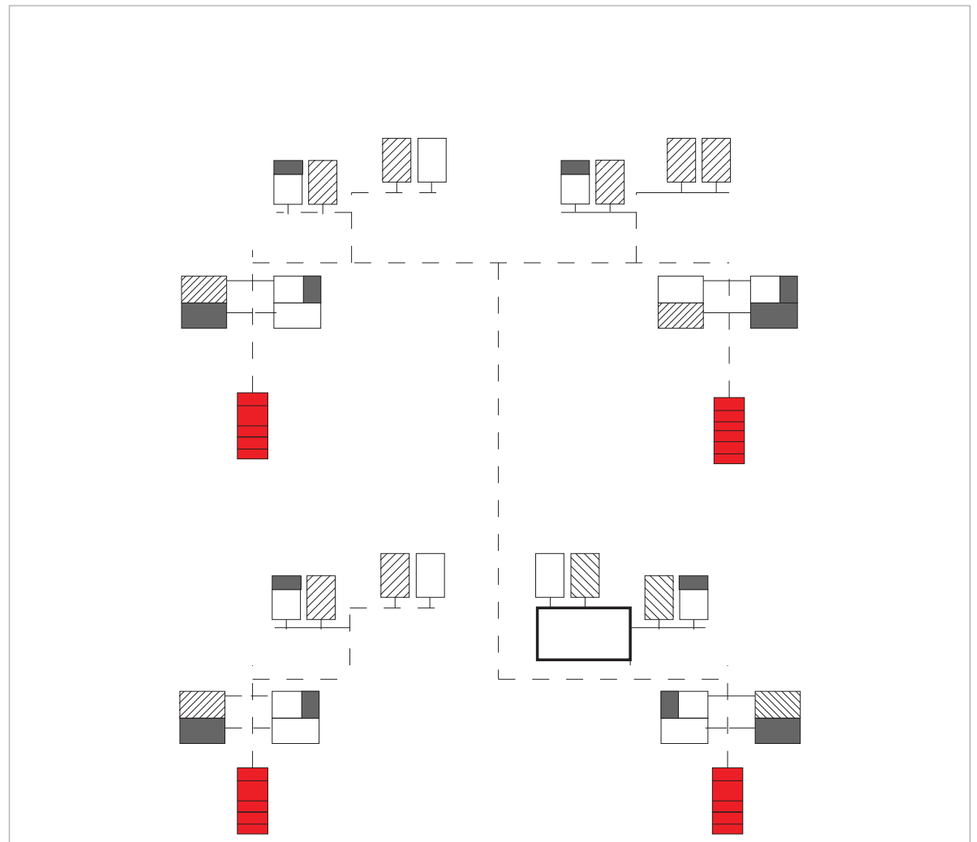
8.8.9: Gallery principle scheme

The main principle for the circulation on the upper floors is that of the gallery, from which the dwellings can be entered on one side. This can give access to many dwellings per staircase/elevator, and give fexibility for the width of the live-work units. It is a simple yet effective solution when designing flexible dwelling units, and can lower the costs because of the small amount of vertical shafts needed.

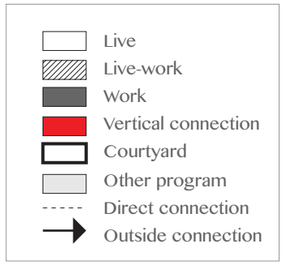
TETTERODE



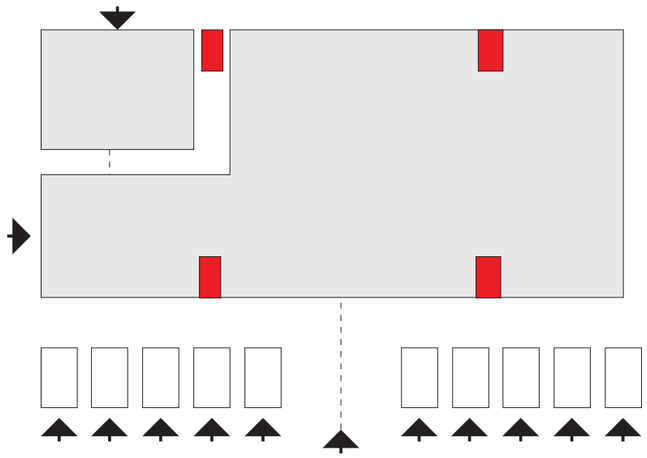
8.9.1 Relational scheme Tetterode ground floor



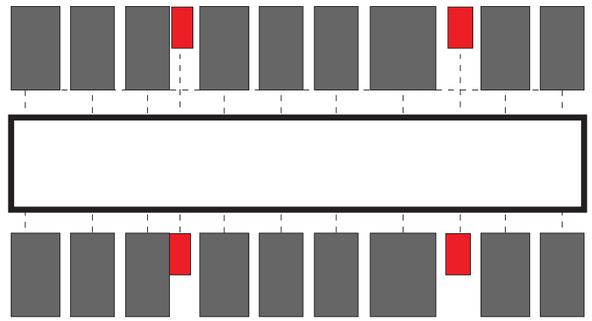
8.9.2: Relational scheme Tetterode upper floors.
Sizes and amounts of units, size of spaces, configuration and layout are all schematic.



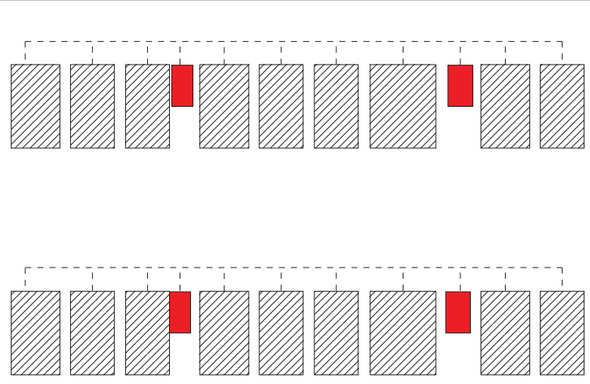
SCHIECENTRALE 4B



8.9.3: Relational scheme Schiecentrale 4B ground floor



8.9.4: Relational scheme Schiecentrale 4B 4th - 8th floor



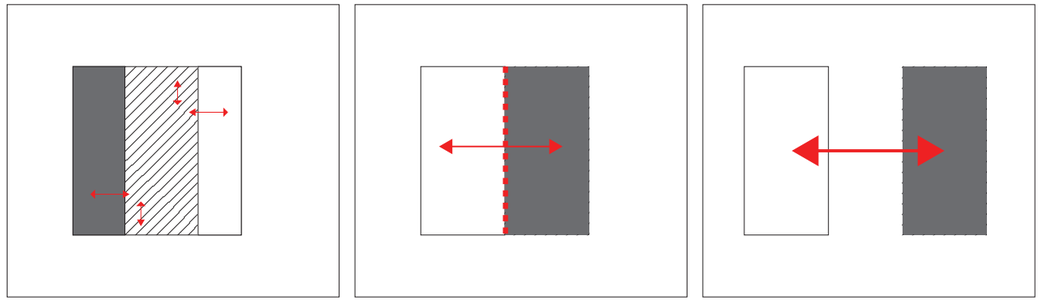
8.9.5: Relational scheme Schiecentrale 4B 9th floor and up

Live
Live-work
Work
Vertical connection
Courtyard
Other program
Direct connection
Outside connection

In this building complex, use is differentiated per floor. On the ground floor there are the waterfront dwellings, on the middle floors the working units and on the top floors the live-work units. They are internally connected via staircases and elevators inside the building, leading on to galleries that span the entire length of the building.

Introduction

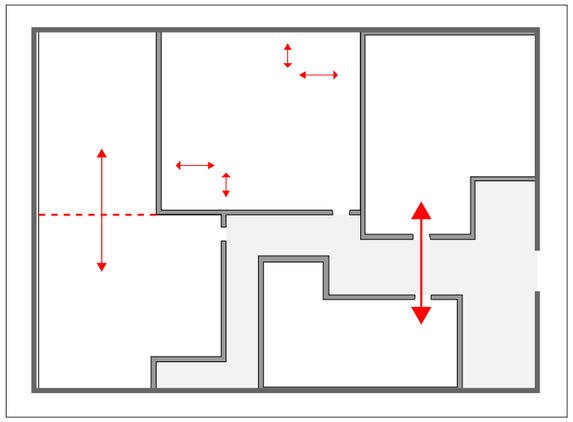
Thomas Dolan and Francis Holliss distinguish in their books on live-work three main types of proximity in live-work units. It does not say anything about the spatial configuration of the dwelling, but is saying something about the integration of living and working on a dwelling scale. These typological schemes express if a dwelling can be seen as live-with, live-near of live-nearby. [58] [59]



8.10.1: Schemes displaying the proximity types of live-work units (gray is work, white is living)

TETTERODE

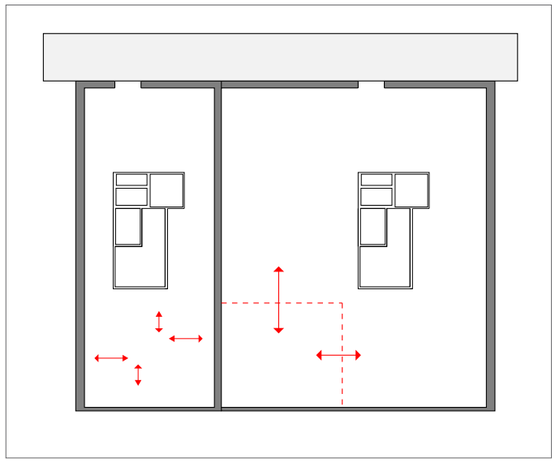
The Tetterode complex has different types of proximities between living and working, all scattered throughout the building.
Some rent a apartment on one of the top floors and one of the big workspaces on the ground floor. Most use their apartment as a live-work apartment of the live-with type.
But there are also examples of the live-near and the live-nearby proximity types.
For example this floor where there is one apartment live-with, someone that works and lives in the same space. Another apartment makes it possible to divide workspace from the living space. The third one rents two apartments with the entrances facing eachother; one for living and one for working.



8.10.2: Scheme of the Merkelbach enclave on the second floor.

SCHIECENTRALE 4B

In the Schiecentrale 4B complex, all apartments are lofts of which the layout could be determined by the future owners.
All apartments share the same core, which holds the kitchen and the wet cells.
Around this is living space that can be freely divided by non-structural walls.
The apartments could therefore be a live-with or live-near proximity type live-work unit. Also, the width of the units can be adjusted over time creating more possibilities in floor plan layout.

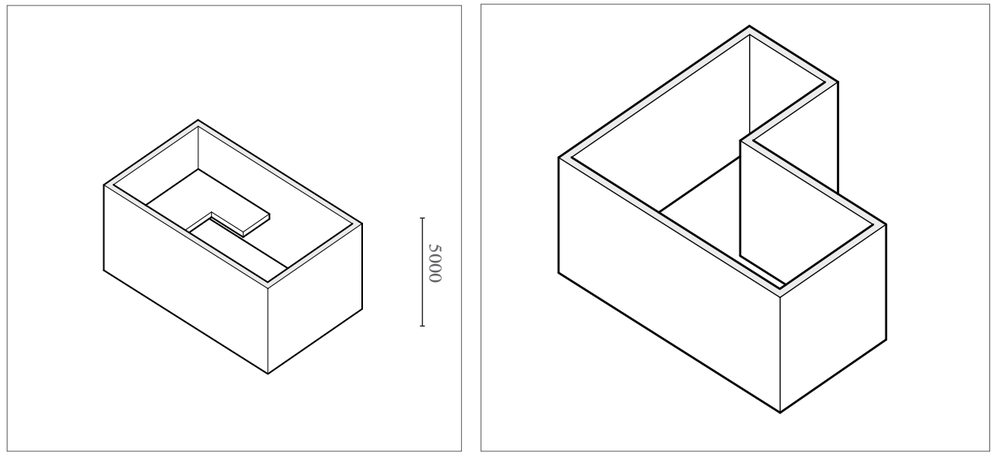


8.10.3 Scheme of two live work units in the Schiecentrale complex on the 9th floor

58 | Dolan, T. (2012)
59 | Holliss, F. (2015).

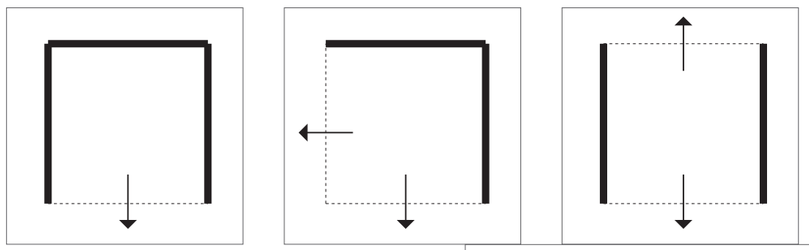
TETTERODE

Type



8.11.1: Isometric two dwellings Tetterorde, 1:200

Orientations



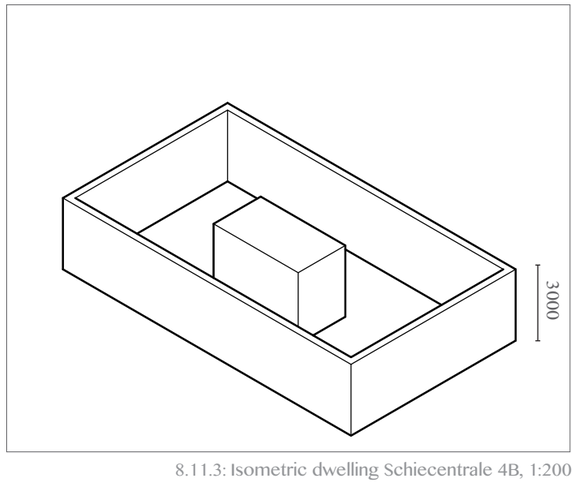
Multiple types:
- Single
- Double
- Double open ended

8.11.2: Orientation types

Basic type is apartment with a high ceiling, addition of a split level floor. But in the Tetterode complex, all apartments are different in shape, size, and use, and if the height was used to create extra m2 and in what way. It is because it has organically grown over the years, and adjustments have been done to the walls. Because the walls are not structural this was possible. Sometimes apartments are added together, or made bigger or smaller, depending on the needs of the current residents. Most units are used for a live-work combination.

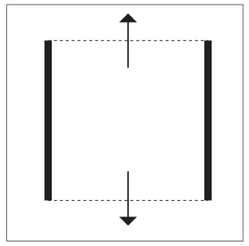
SCHIECENTRALE 4B

Type



8.11.3: Isometric dwelling Schiecentrale 4B, 1:200

Orientation



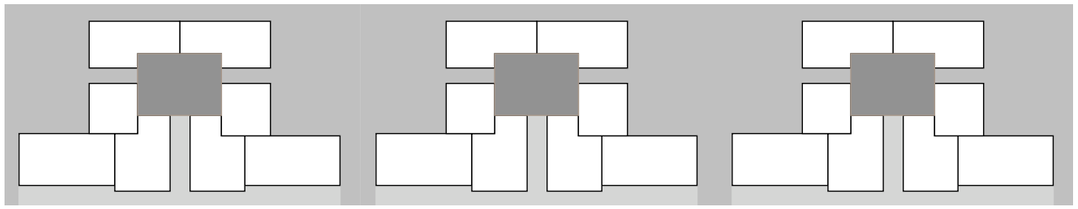
One type:
- Double open ended

8.11.4: Orientation types

Apartment of variable width, with core holding the kitchen, bathroom, toilet and storage spaces. The floorspace around it can be used as wished for working and living. In reality, the apartments being sold on Funda are all listed as simple 1 or 2 bedroom apartments, where the work- part of the dwelling has been deleted. This could be due to the fact that apartments are not listed as suitable live-work typologies in the pattern book by Frances Holliss. In the Schiecentrale complex there are dwellings of 3,5 meters high, with two entrances. One on the waterfront and one from the parking garage. These would be more suitable live-work typologies, but are used for only dwelling in concept.

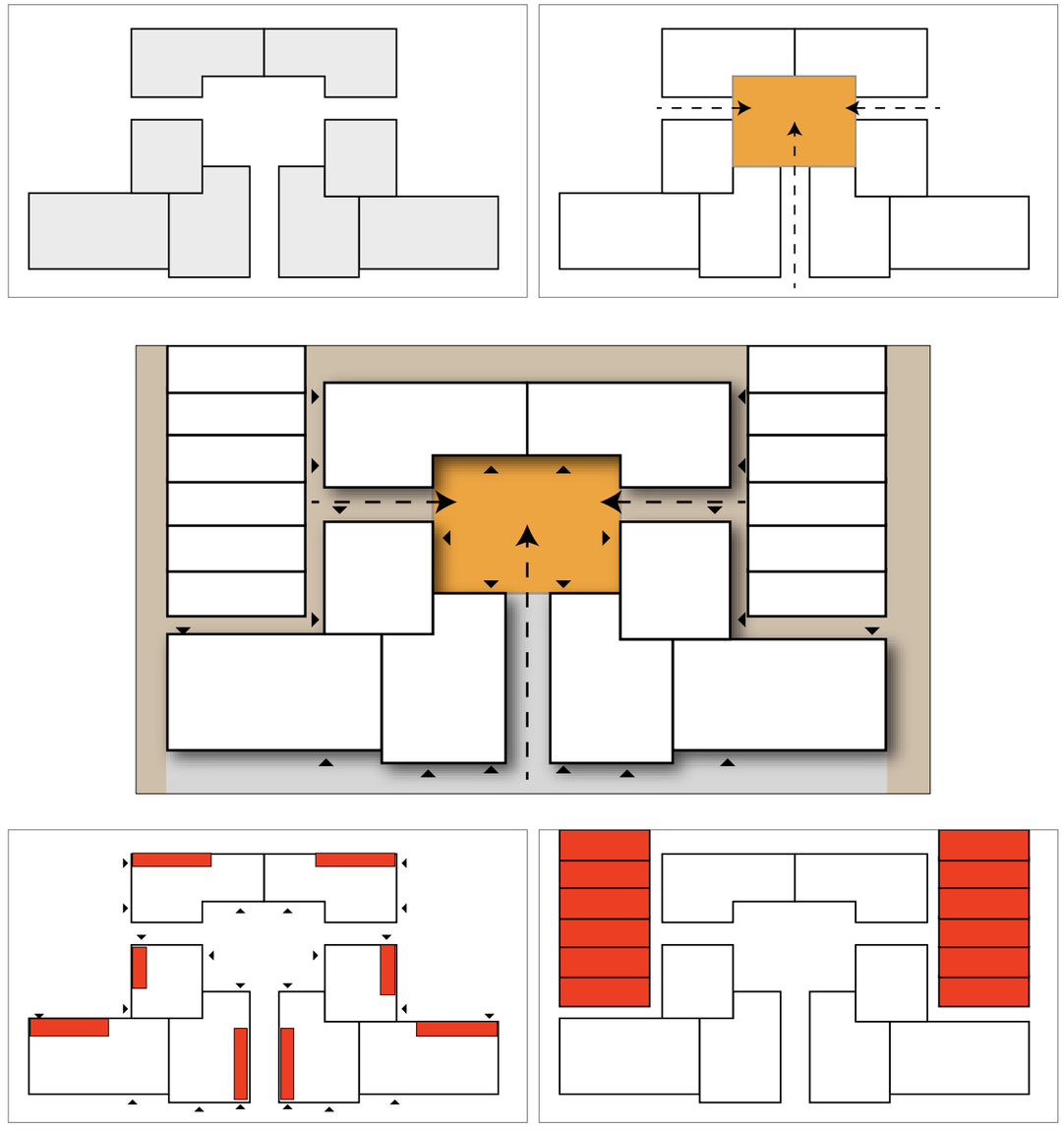
In this specific project, he creates entrances onto a courtyard, as well as separate entrances from the street. The composition of the buildings surround the courtyard, leaving three openings from which to access it. The building composition also generates a negative space, which he uses to create parking spaces. The courtyard is central in this project, as he also underlines the importance of courtyards for live-work projects.

The whole projects consists of a series of eight of these buildings next to eachother, creating an inner and outer open space, one on the street side which is public and used for parking, and one enclosed, private courtyard that is shielded from the street.



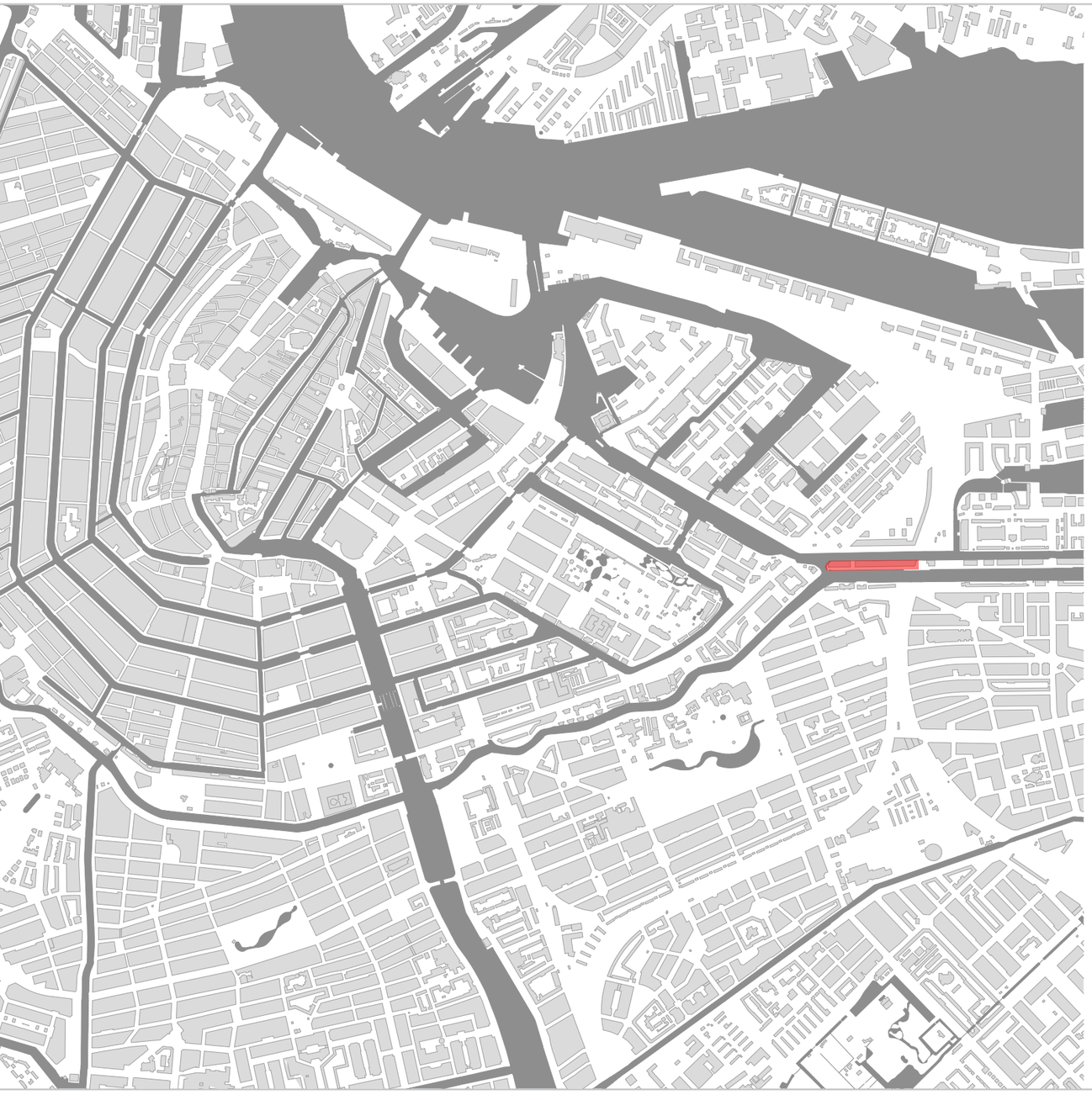
8.12.1: Urban Scheme Westside Place

Thomas Dolan says about on courtyards for live-work environments:
The design of a multi-unit project presents a unique opportunity to make a place that facilitates a sense of community among residents. The architect's challenge is to create common spaces within the project that encourage interaction, invoke a sense of well-being, are comfortable, and in which one can greet a neighbor, then pause to chat or move on. As residents cross paths, opportunities to socialize arise. The "entry situation", that transition between the moment one enters the complex and the time one enters one's unit, provides the greatest opportunities for interaction. Designing projects whose units open onto common spaces increases the chances for such casual meetings. This is the most important role design can play in encouraging a sense of community within a project. The quality of such common spaces can make the difference between an alienating structure and a fully functioning community. This may be the great lesson of live-work courtyard communities: the rediscovery of the power of fully inhabiting a place, and the well-being that results from knowing your neighbors well.[60]



8.12.2: Schemes of the buildings, courtyard and parking spaces and circulation

Thomas Dolan Architecture: Retrieved from http://live-work.com/project-types/, visited on 6-1-2018

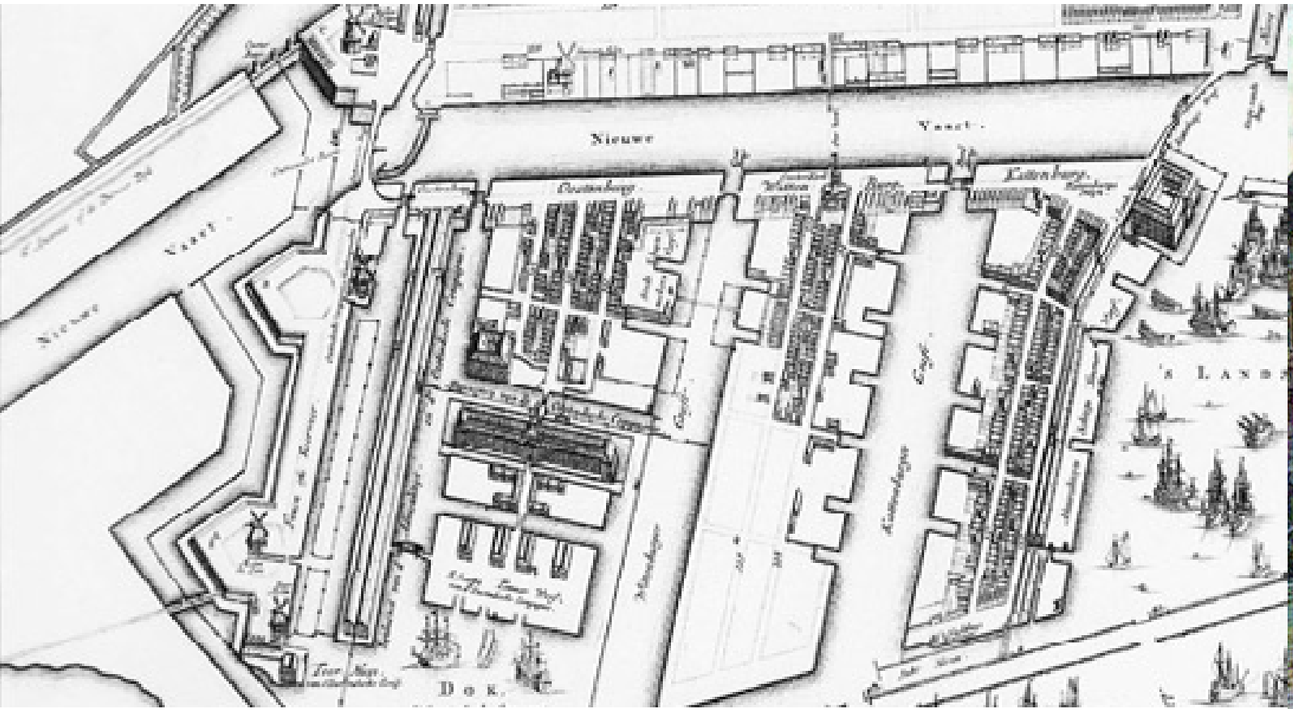


CHAPTER.IX
Site.Analysis

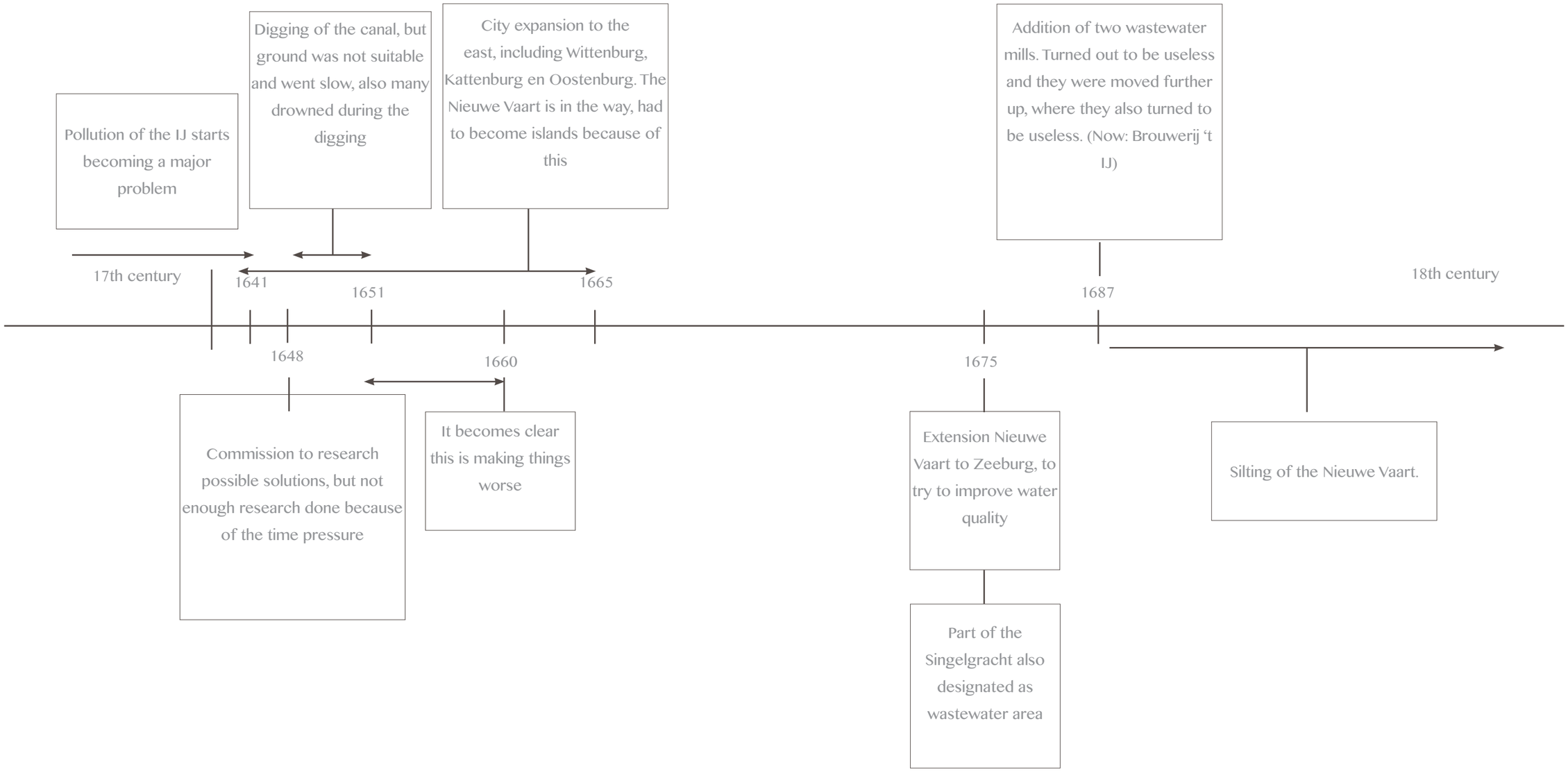
CONTENT

History

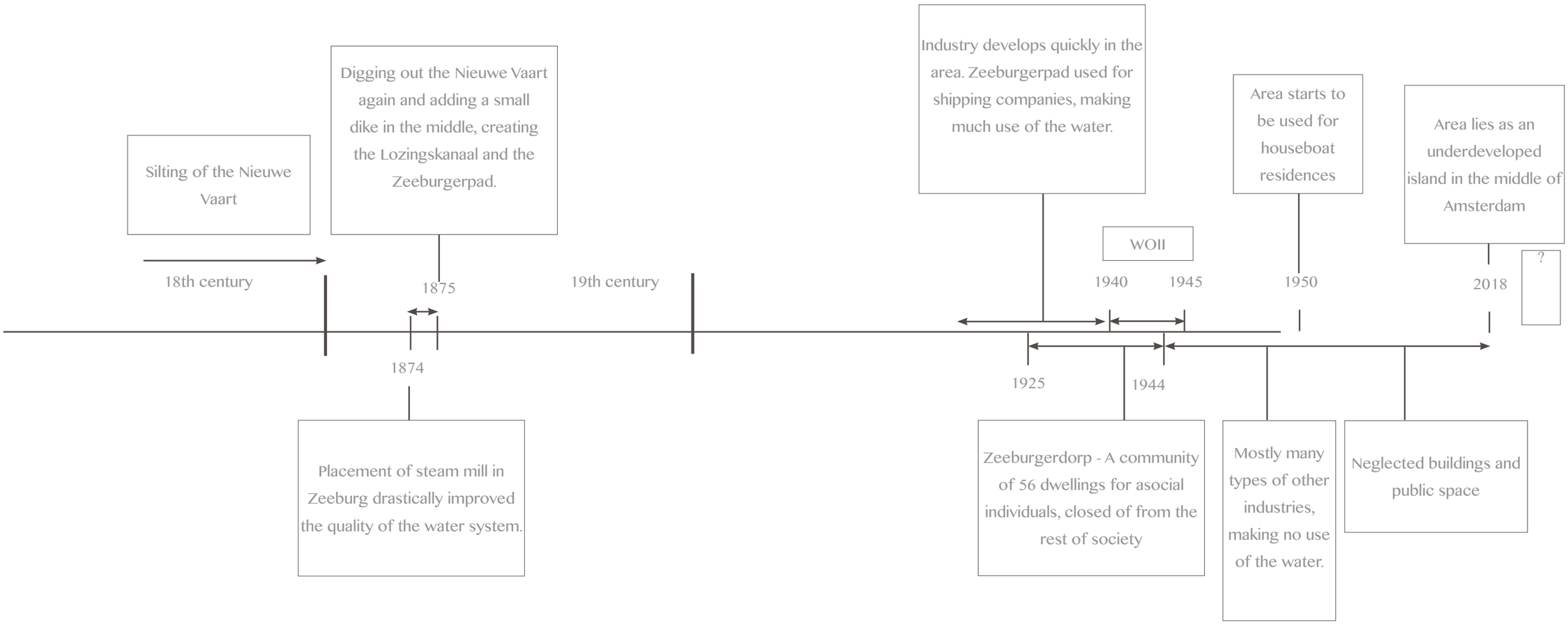
The Zeeburgerpad has always been an area of industry since it was created as a dike in the middle of de Nieuwe Vaart, separating this into two canals. In the end of the 19th century industry developed quickly and because of the excellent location connecting the water to the main body of water the shipping industry filled the Zeeburgerpad with warehouses. These lost their function after the Second World War when the industry moved to the harbor. It was replaced with small scale industry, which way it has remained until the present day.
There were built several waste-water mills for improvement of the water quality of de Nieuwe Vaart, of which the last one (De Gooyer) has been relocated to the edge of the Zeeburgerpad where it remains to this day. It is still the biggest landmark for the area.

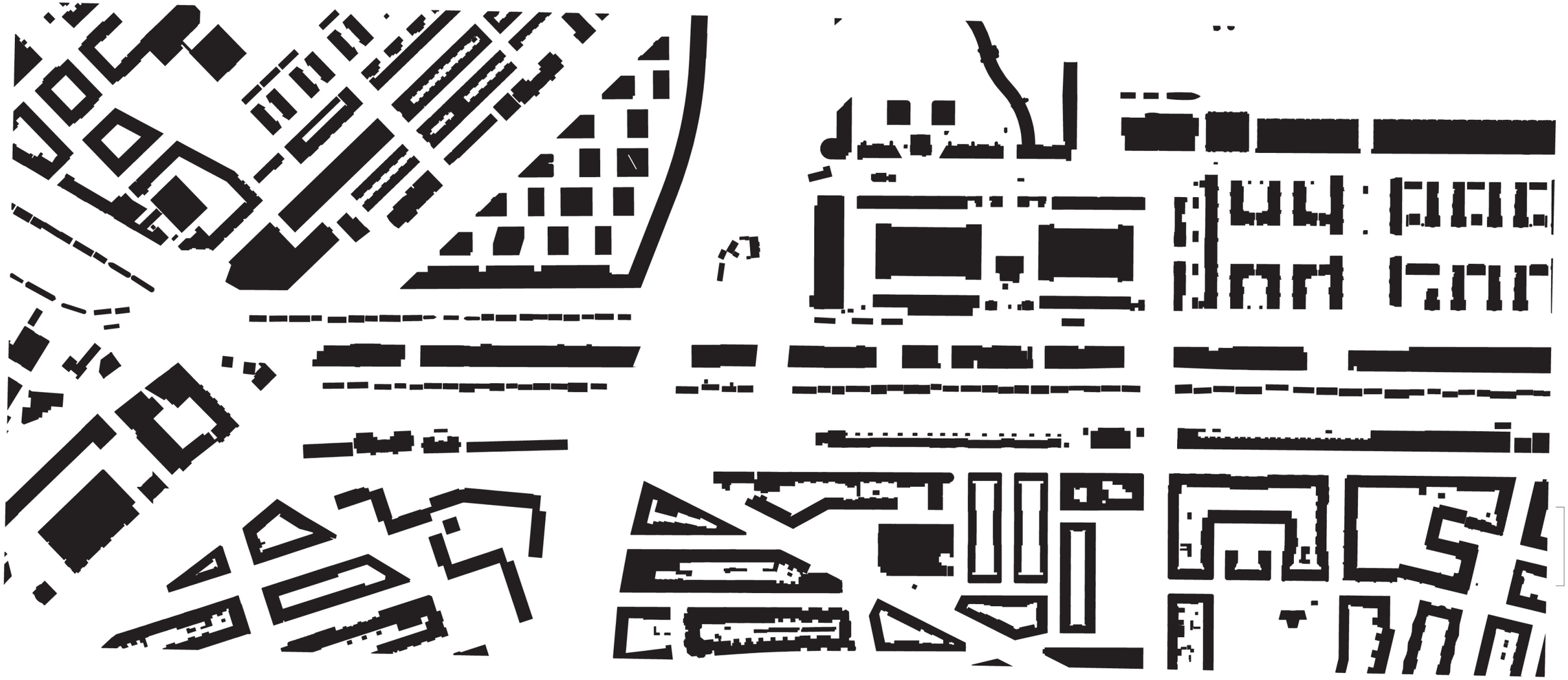


Timeline 17th & 18th Century

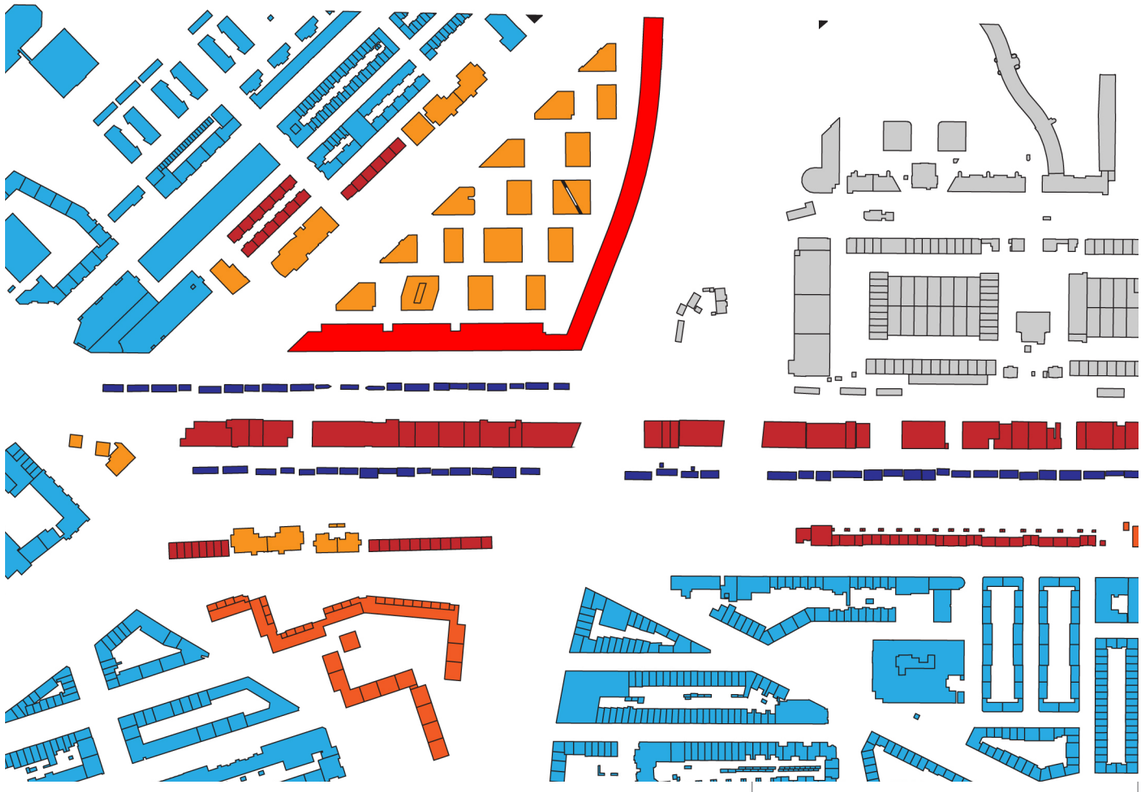


Timeline 19th and 20th Century





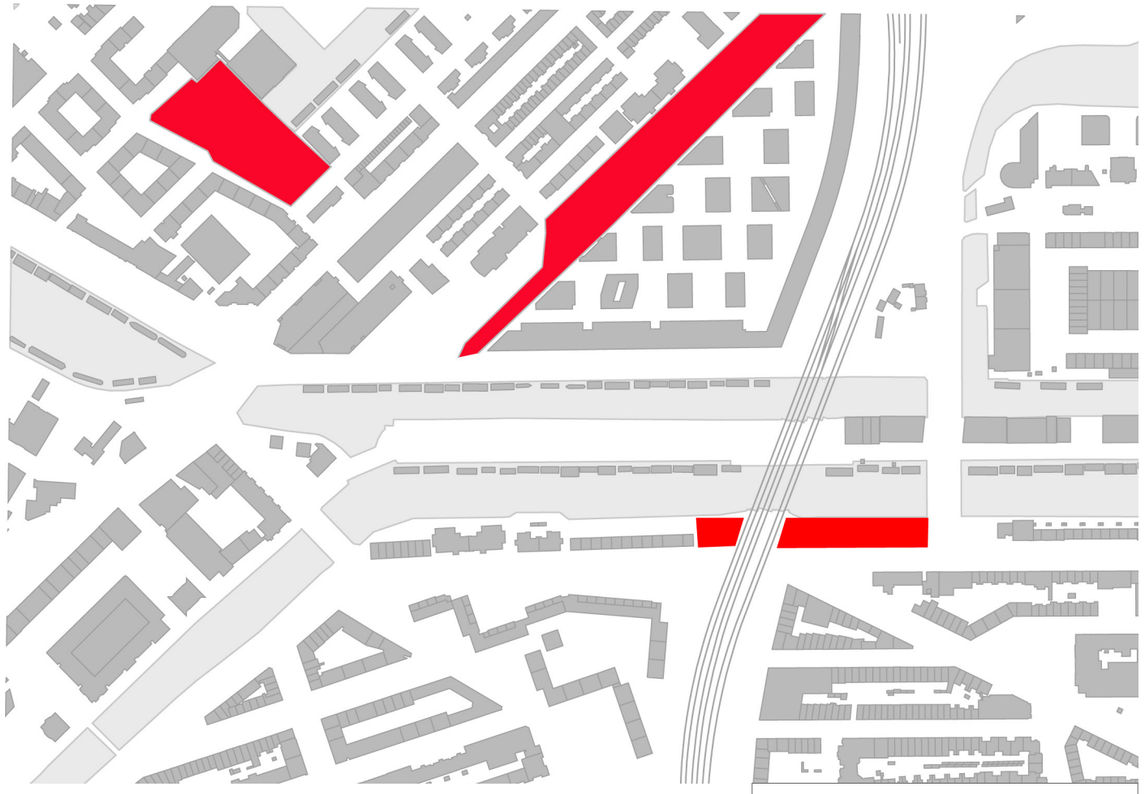
Building block typology



Row buildings
Building strip
Building strip; shaped
Freestanding objects
Closed / half open building block
Industrial buildings / other
Houseboats

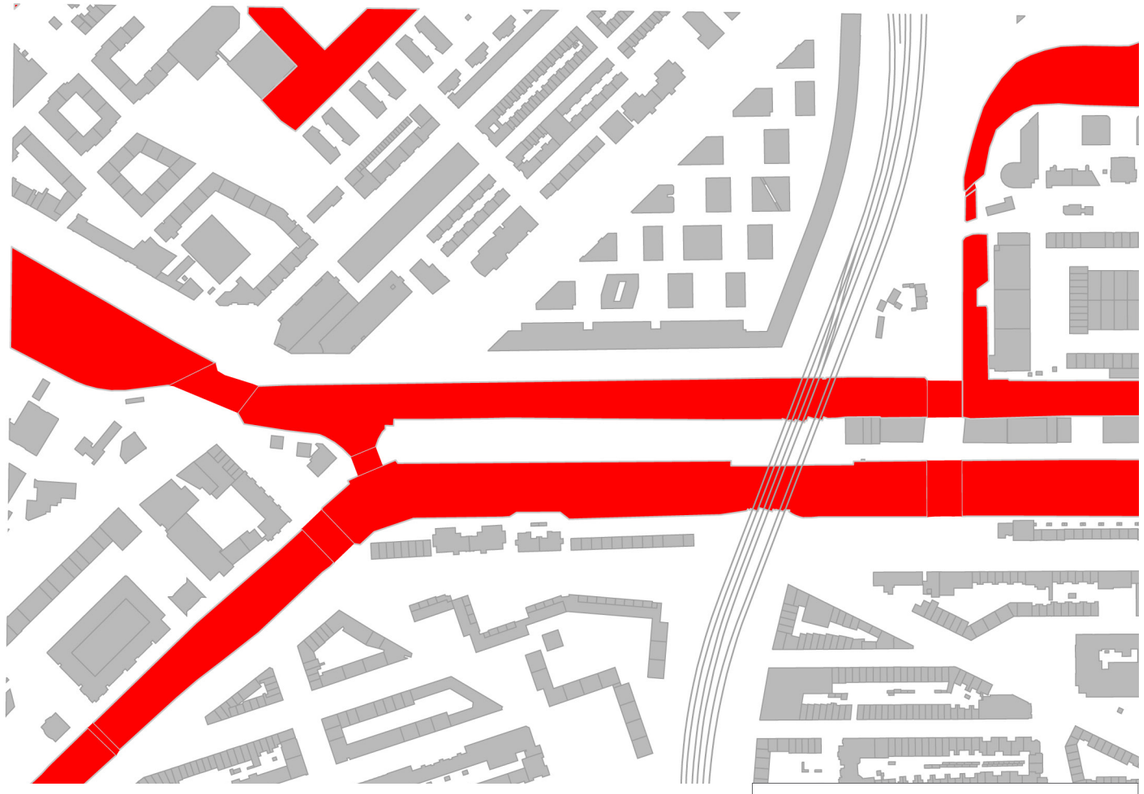
Building block typologies

Scale 1:1000



Public parks

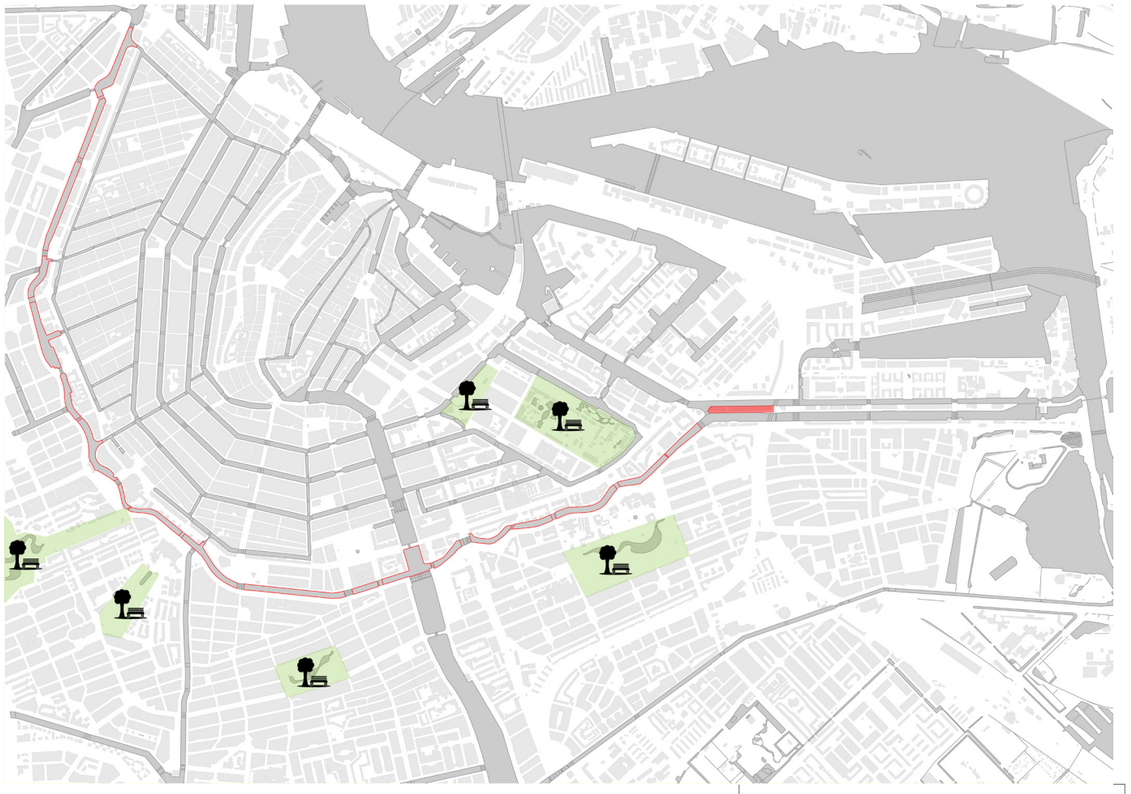
Scale 1:5000



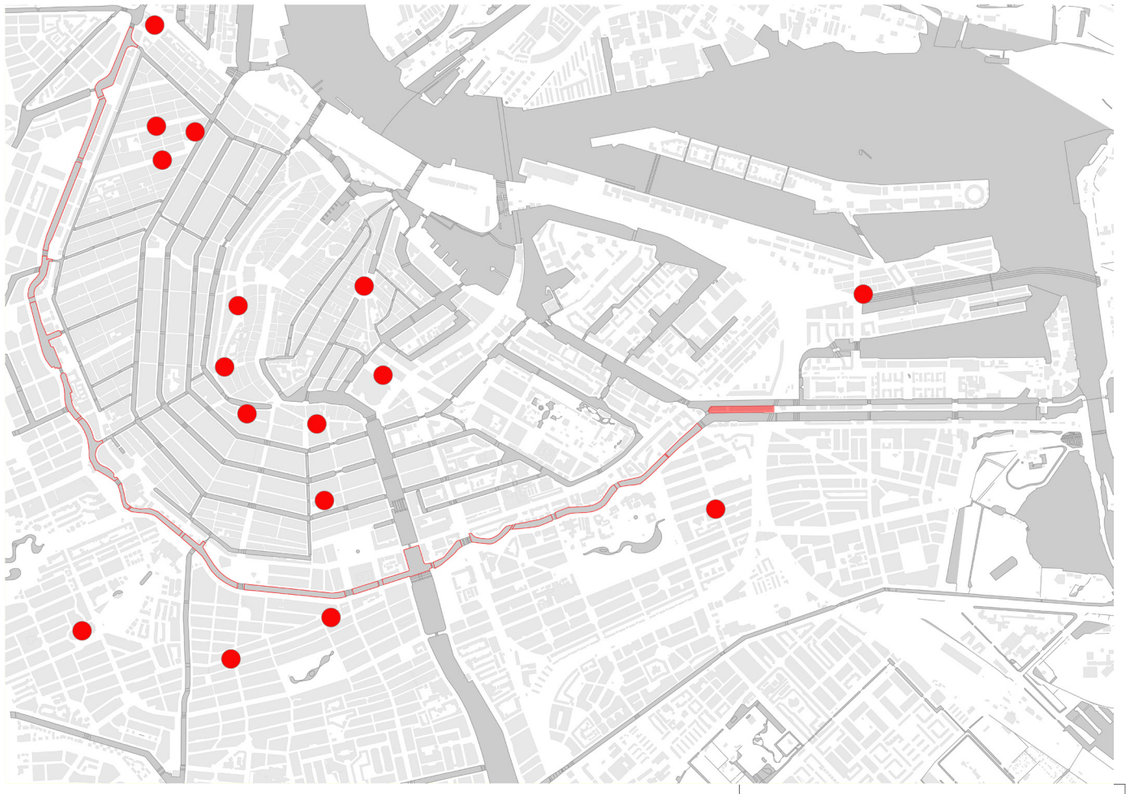
Water

Scale 1:5000

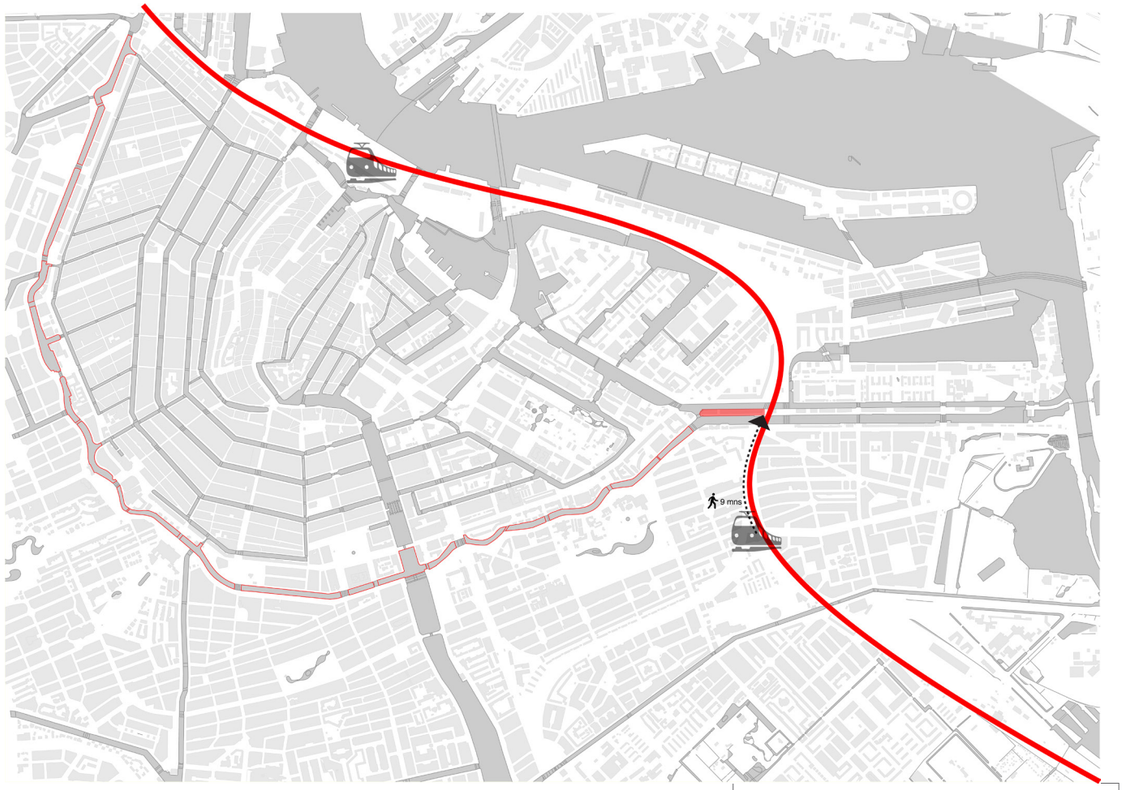
Public space



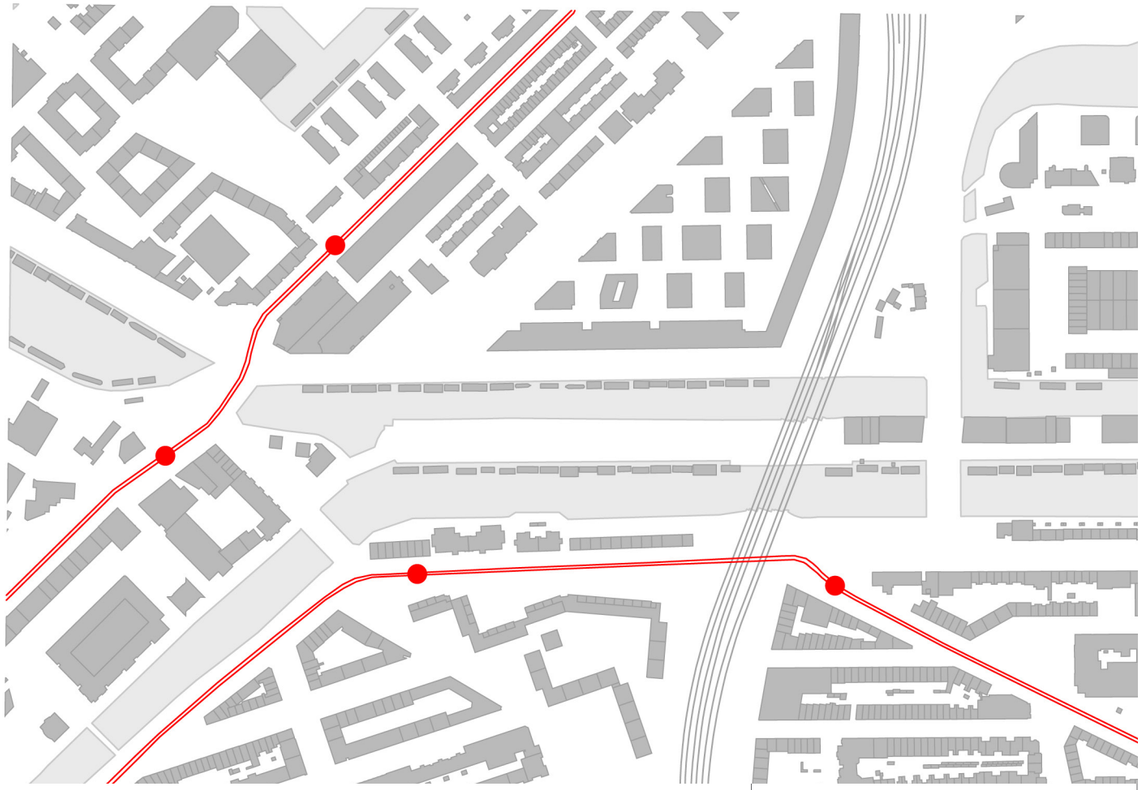
Large parks in Amsterdam



Markets

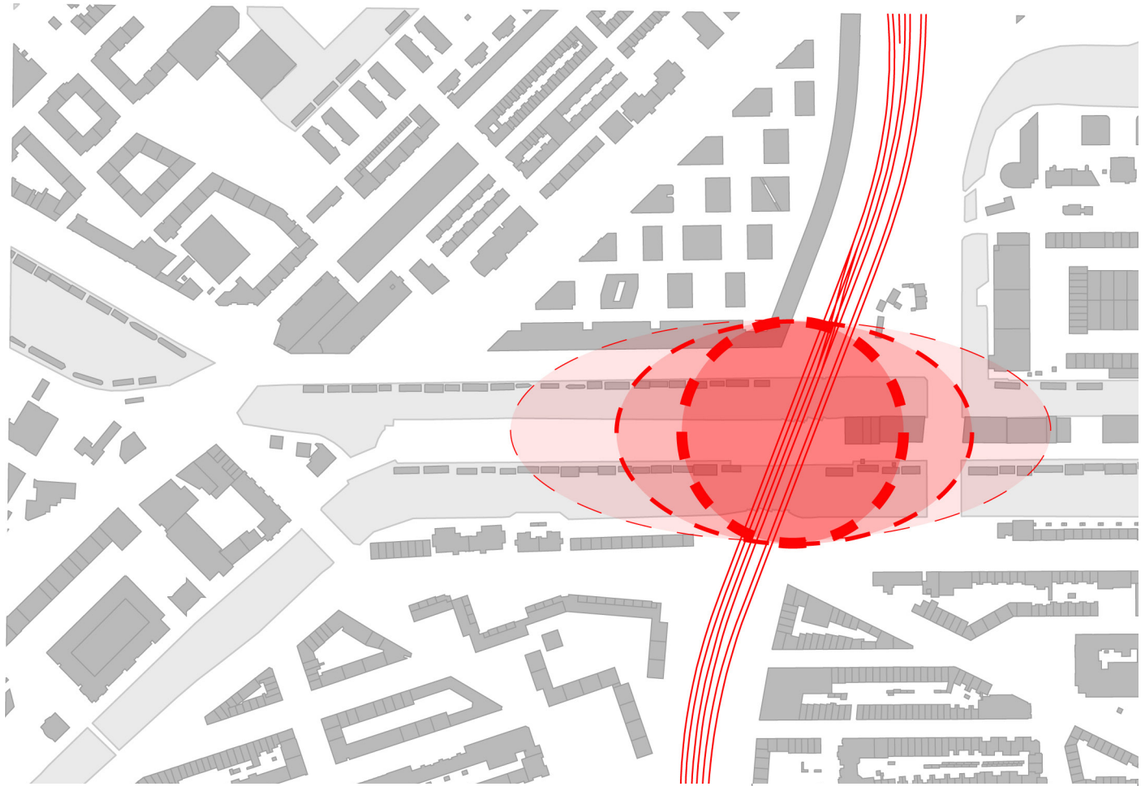


Train



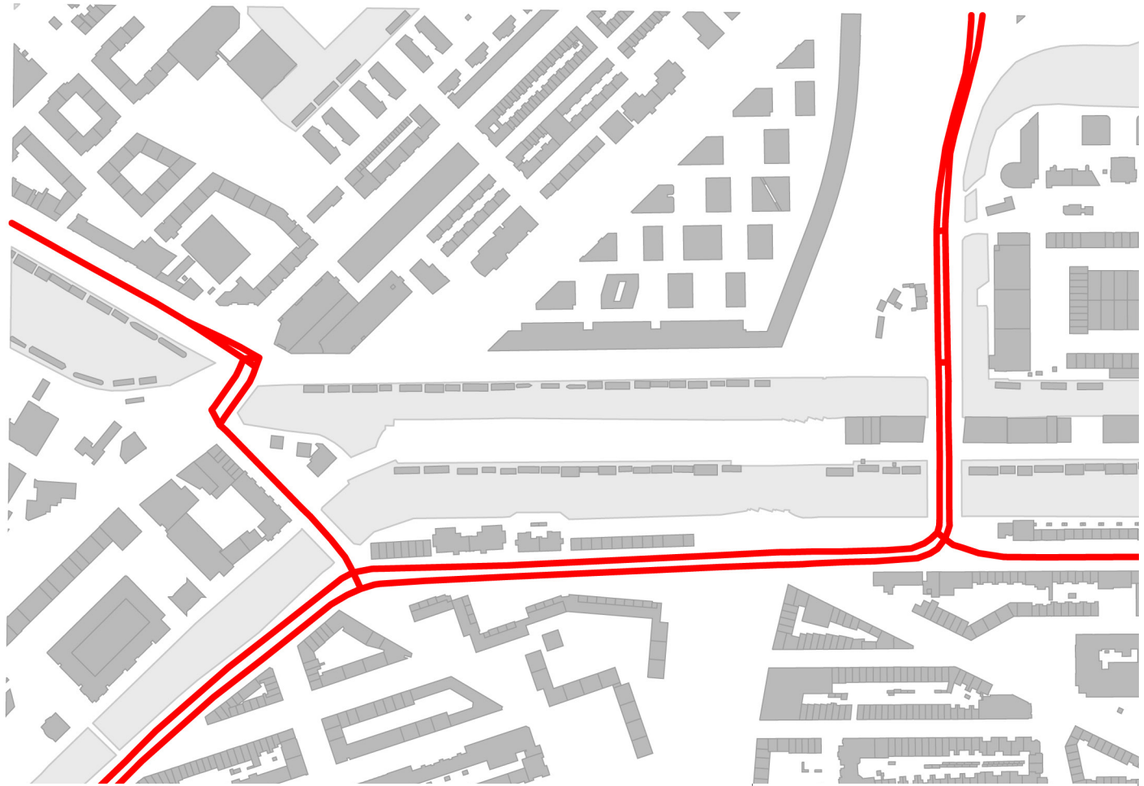
Title

Scale 1:5000



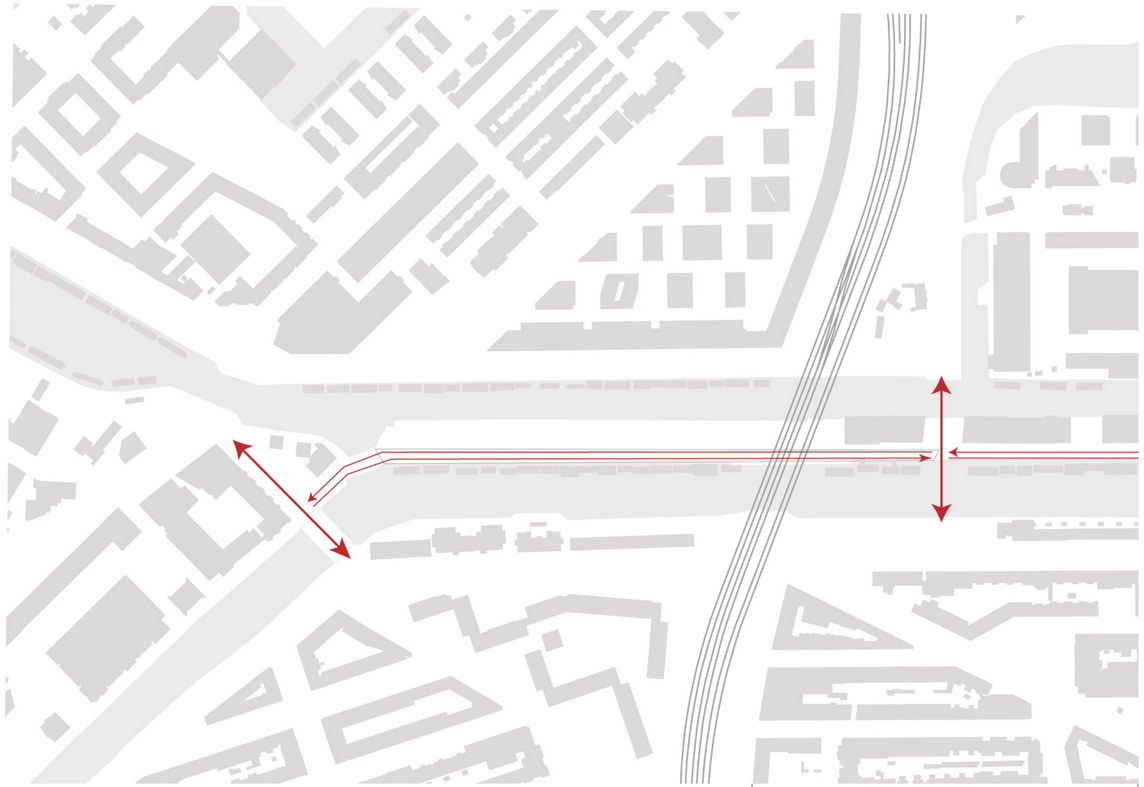
Train track sound nuisance

Scale 1:5000



Main roads

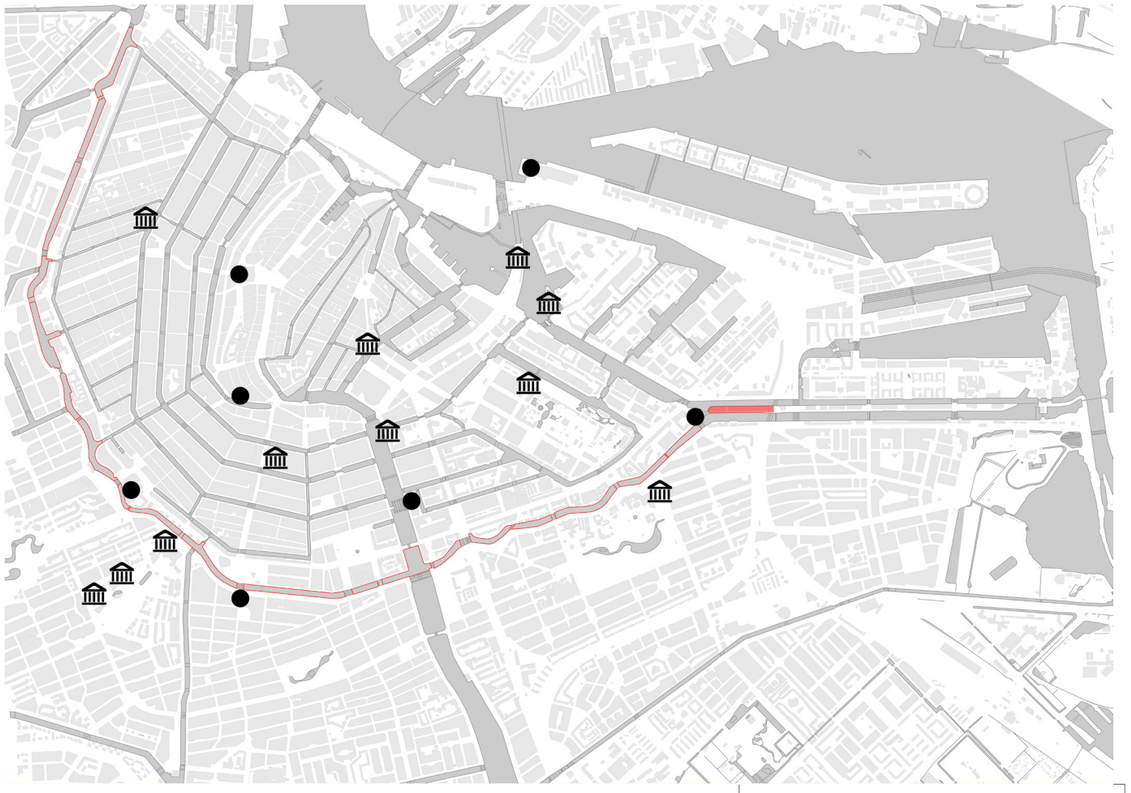
Scale 1:5000



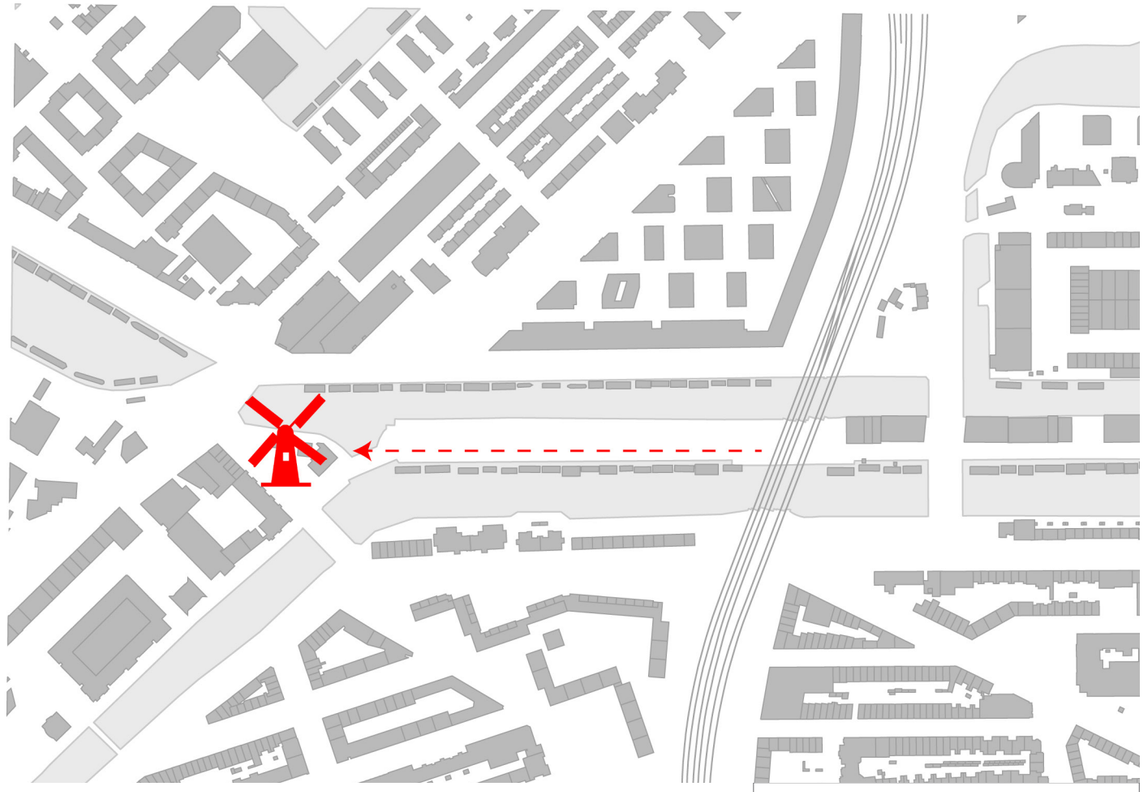
Site access

Scale 1:1000

Attractions



Museums and other main attractions

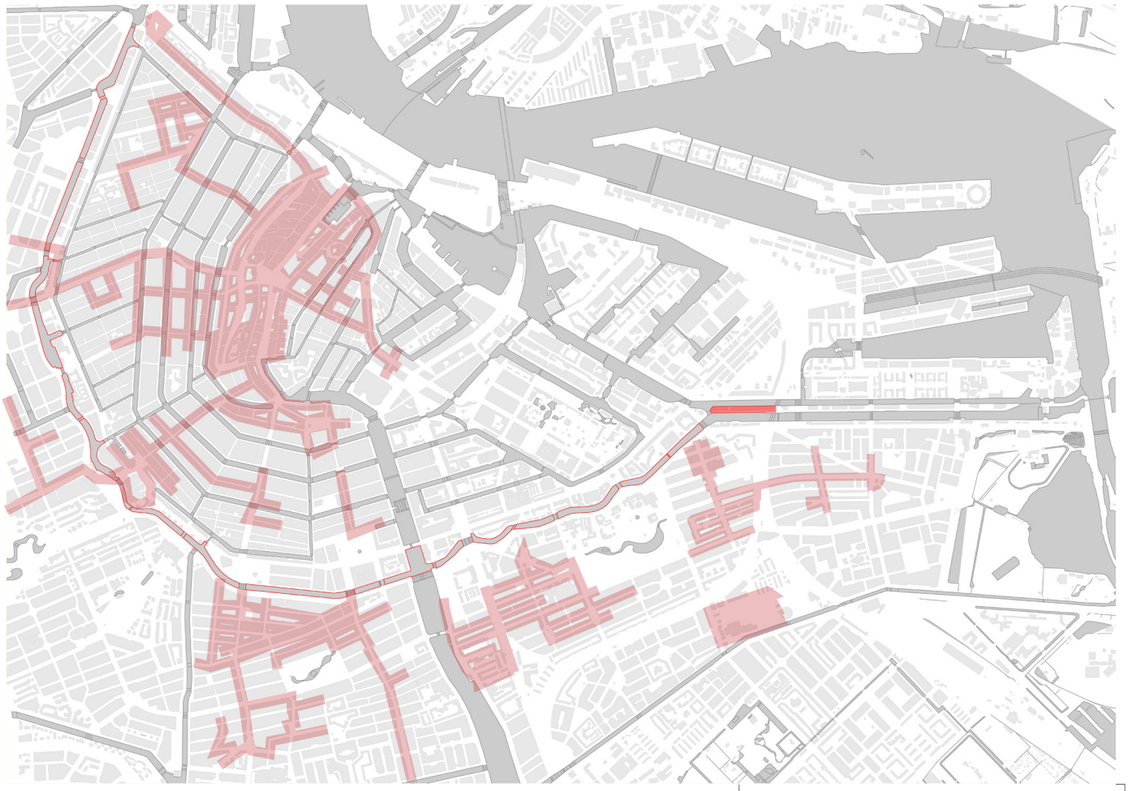


Sight on windmill, the landmark on the edge of the site

Scale 1:5000

The last mill from the historical ones built for the improvement of the water quality, as explained in the history of the site. In the present day the mill is occupied by the beer brewery ‘Brouwerij ‘t IJ’, with a tasting room and terrace, and is a big attraction for both tourists as well as locals.

Functions / services



Busiest streets with shops and services

Red: Bars & restaurants

Pink: Supermarkets

Yellow: Movies

Green: Hostel

Dark blue: Primary school and daycare

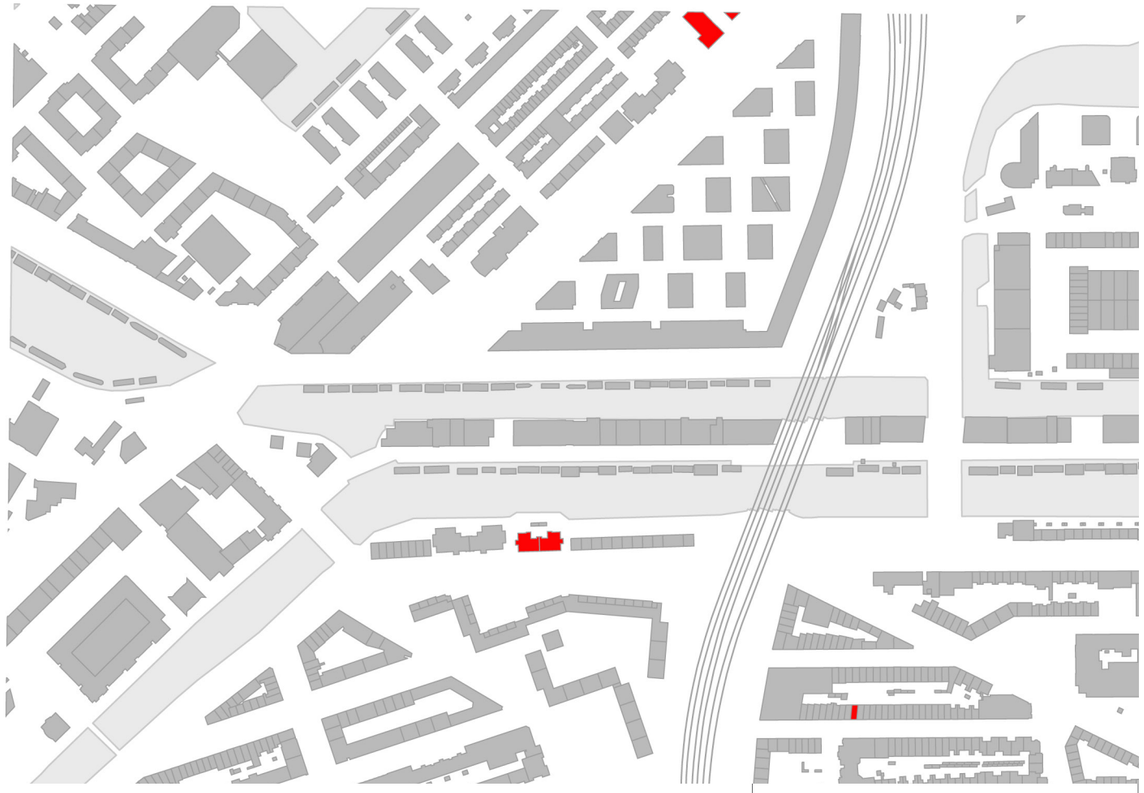
Light blue: Sports

Orange: Medical

Scale 1:5000

Clusters of crafts activities in the city center

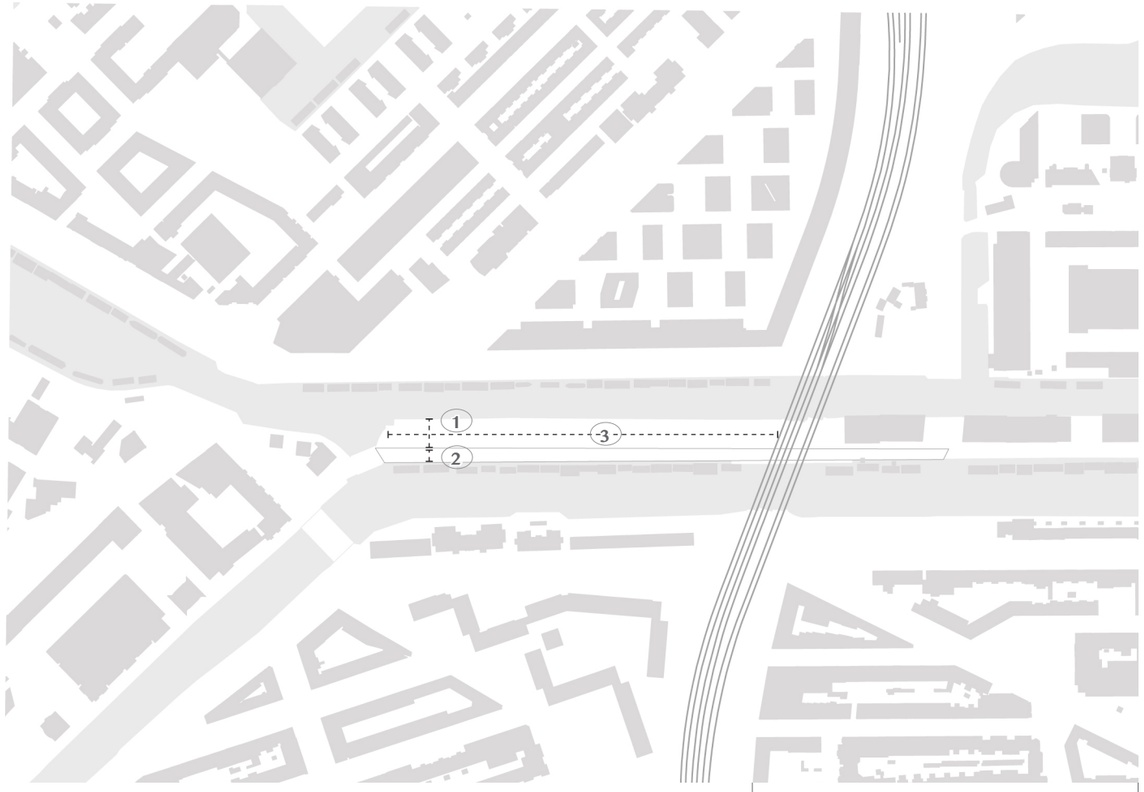
Scale 1:00



Creative breeding grounds in the area

Scale 1:00

Sight-lines and dimensions



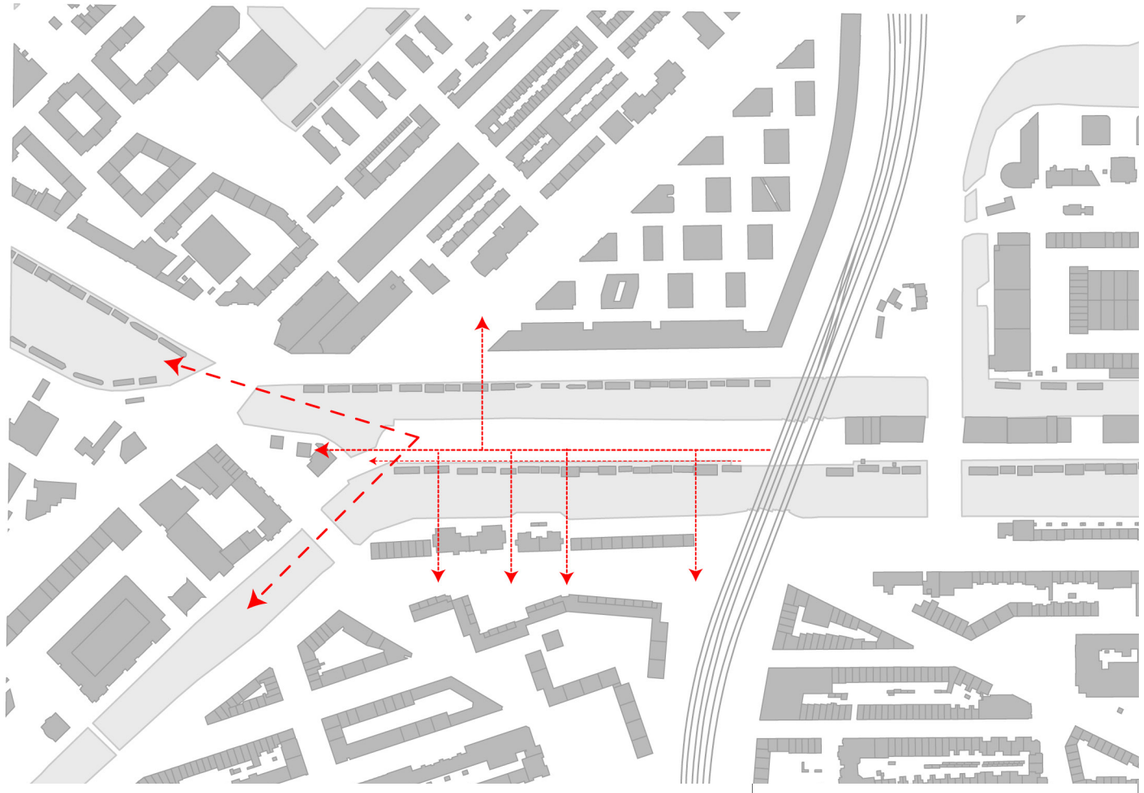
Site dimensions

Scale 1:5000

1 25 m

2 10 m

3 310 m

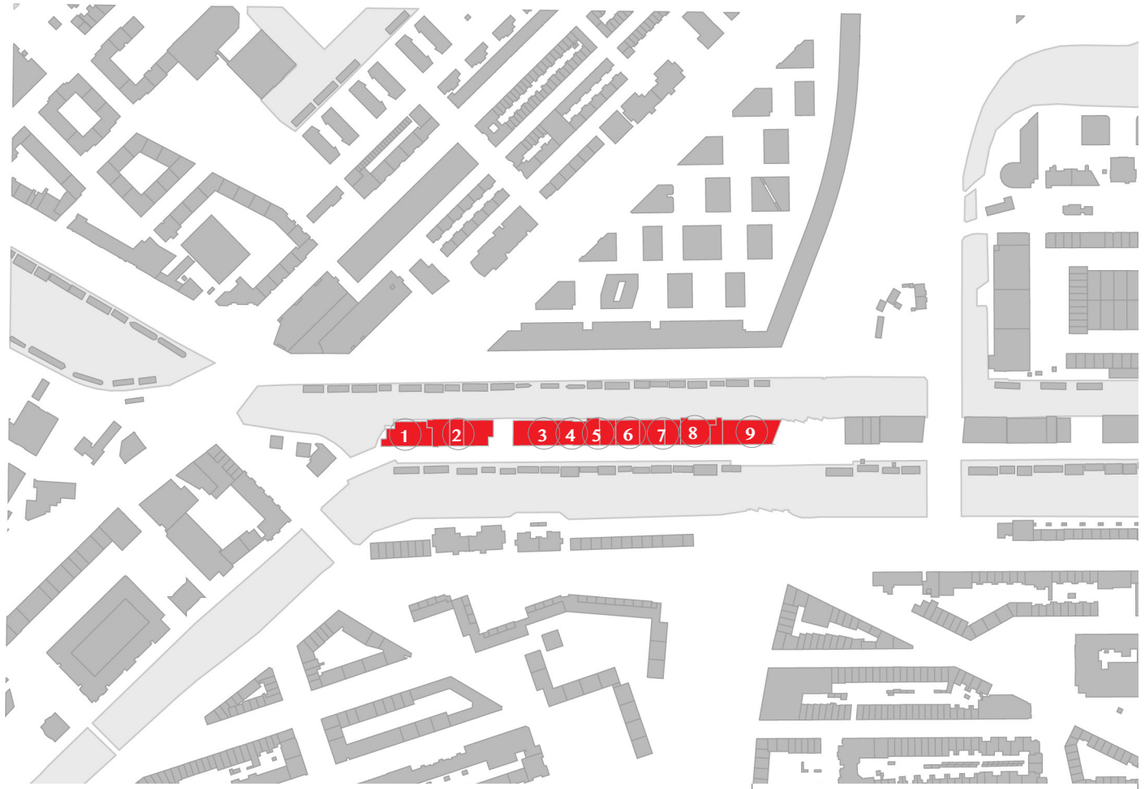


Sight-lines

Scale 1:5000

For the design site dimensions, I will measure up till the existing road in one direction and up to the train tracks in the other direction.
The site dimensions are therefore 25m * 310m = 7750 m2

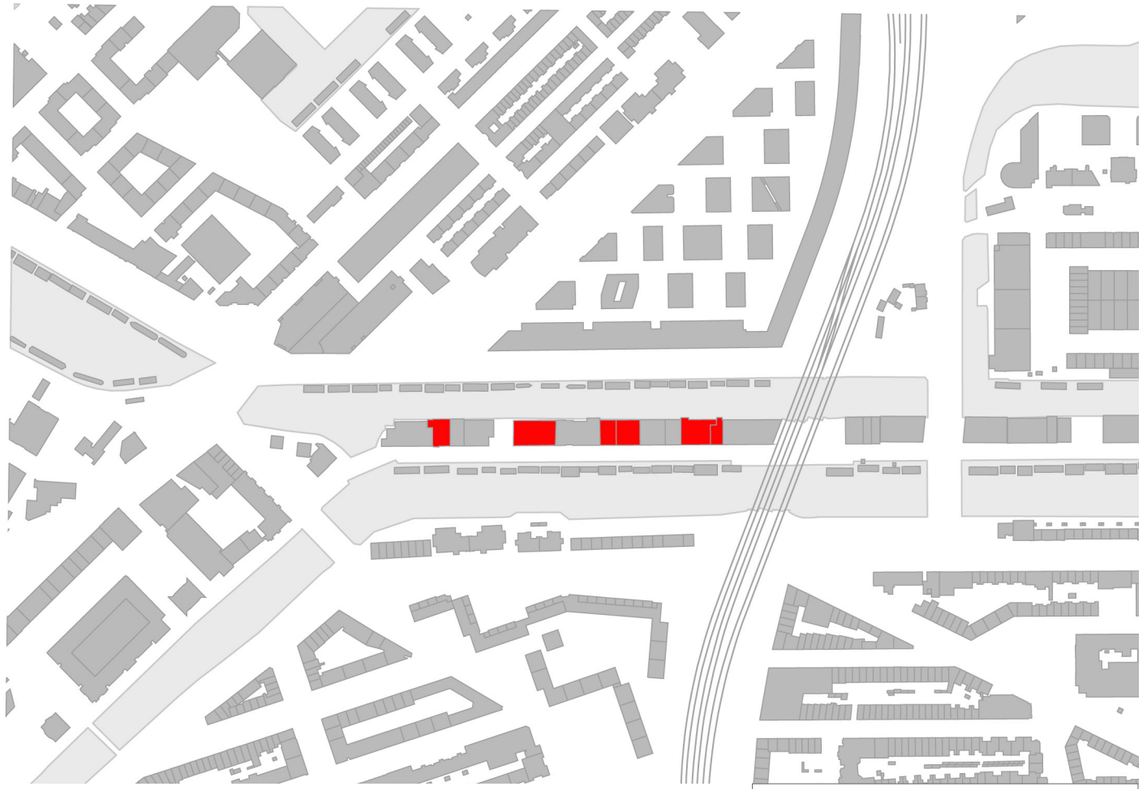
Existing buildings



Building occupants

Scale 1:5000

1. Schnitzel & Weizen: Restaurant
2. Publitas: Graphic design & webdesign
3. Kwik-fit
4. Brouwer: Heating and plumbing
5. Distrikt: Creative agency
6. Zeeburg autoverhuur: Car rental
7. DQL Elektrotechniek
8. Plieger: Bathroom decoration and climate systems
9. Pontmeyer



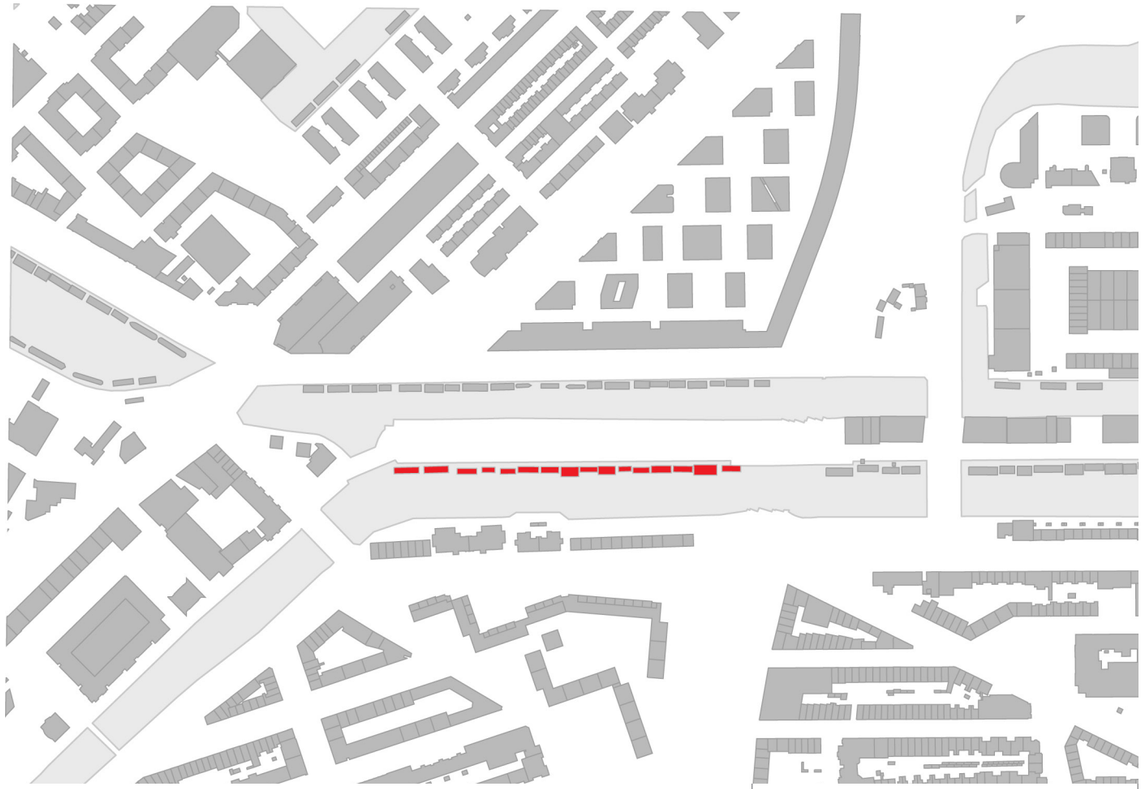
Determined for demolition by the municipality because of bad state.

Scale 1:5000

The architectural and urban quality of the area is low, as has also been stated in a map by the municipality of Amsterdam. The buildings indicated in red are already empty or going to be emply because of impending demolition.

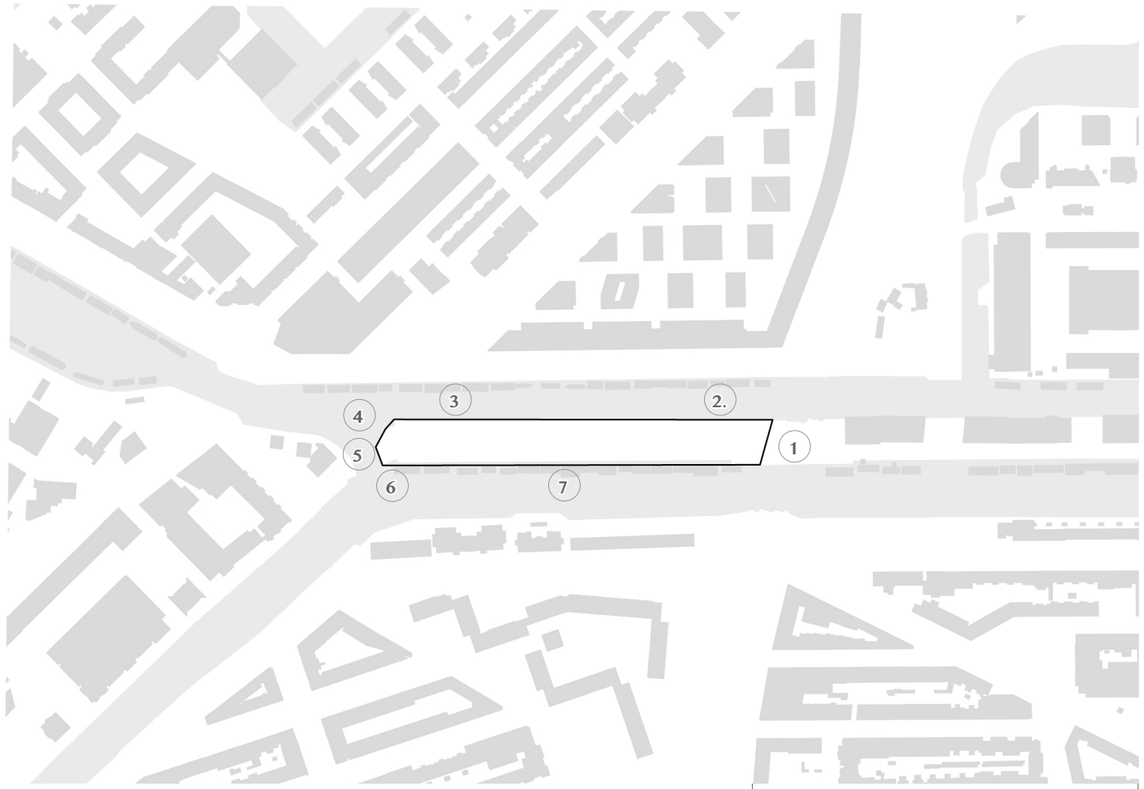
These buildings are a mix of warehouses or low utility buildings, often in bad state.

Edges of the site



Houseboats

Scale 1:5000



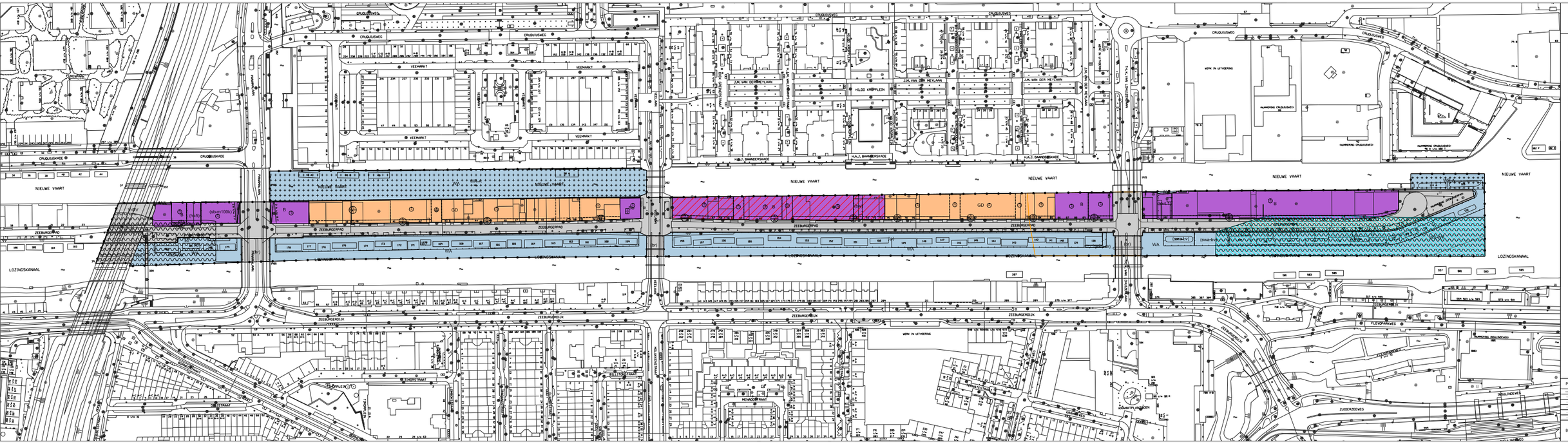
Characteristics of the edges of the site

Scale 1:00

1. **Hard edge:** Train track with road going under the tunnel.
2. **Waterfront edge:** With open embankment, north orientation, view on houseboats and buildings across the water
3. **Waterfront edge:** With open embankment, north orientation, open view across the water
4. **Waterfront edge:** With open embankment, west orientation, open view over the entire canal and the landmark mill.
5. **Bridge edge:** Road with cars, open view over two canals and the entire length of the location, view on the landmark mill.
6. **Waterfront edge:** With houseboats on the embankment, next to the car road, open view over the canal and view on the landmark mill.
7. **Waterfront edge:** With houseboats on the embankment, south oriented, view on buildings across the water.

MUNICIPAL PLANS ZEEBURGERPAD

Mix of working and living



Business

Residential

9.3.1. Municipal plans Zeeburgerpad

Key points:

Small grain size

Mixed use of residential and business

Maximum numbers of layers is 5

Maximum layers on the south side is 4

Maximum height is 16m

Maximum FSI of 3

Sustainable development

Maximum 770 dwellings, any type or target group because of the high demand.

Area needs to have a specific function within the city.

Minimum 25% working/business

No short stay or hotels allowed

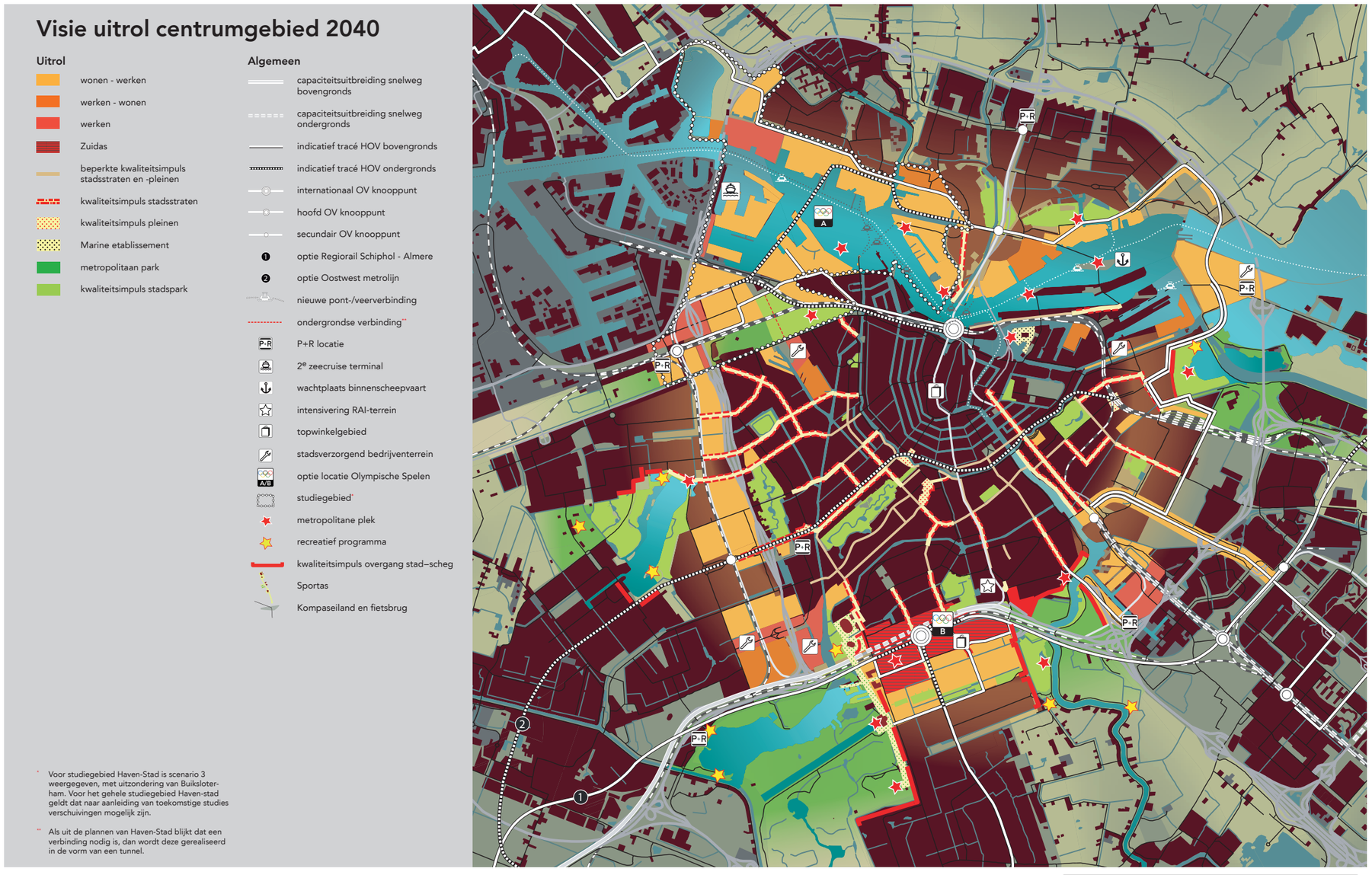
Reduction of offices.

Vision for the area: Mixed functions of dwellings and business, with a caring function on a larger urban scale.

The Zeeburgerpad is clearly indicated as an area where living is combined with small-scale industry.

Right now it is more industry than living, and they want to shift this to more living than industry, thus providing more density to the area. The emphasis is still on the combination of the two.

Besides this it is indicated specially a an industrial zone that is providing services on a city scale, which have not yet been specified further.



9.3.2. Municipal plans Amsterdam 2040

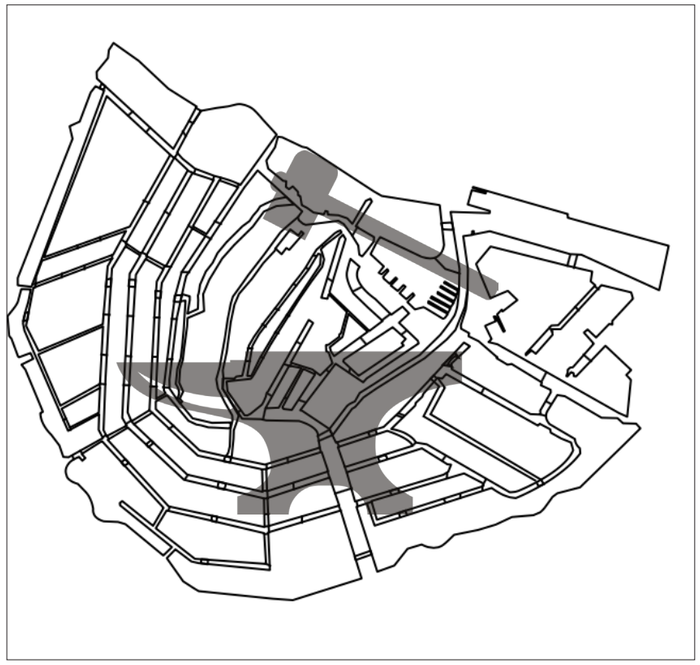
CHAPTER-X
Design.brief

CONTENT

Main concept for the re-development of the Zeeburgerpad

In this future scenario, the master title is re-introduced in society. This will mean a slow re-valuation of the various forms of craftsmanship, and hopefully the attraction of the many new students needed to keep this economy alive.
It seems only logical that Amsterdam should take the leading role in this, and that this shoud be given a place in the city center. I propose for the Zeeburgerpad to be the new center of this initiative.
It could be the center for professionals in craftsmanship to transfer their experience and knowledge, just as in the old days when craftsmen had a strong position in society.
The industrial identity and history of the site underline this ambition, as well as that it fits in the future plans from the municipality for the area (live-work, with a city-caring function).

“Amsterdam as the capital for a re-valuated craftsmanship in 2040“



There are a few concentrations of craft industries in Amsterdam, such as in de Pijp.* Then there are all kind of small companies scattered over Amsterdam, concentrating in the city center (creative) and outside the old center (technique).
These companies are all struggling because of high prices and municipality plans, together with the shortage of professionals due to the aging population and the too small amount of new students.
By getting visitors to the city to visit this new center for the crafts, this will gain attention and will help the crafts economy and keep alive the cultural heritage of the endangered professions.
It will be an area where you can live and work as a professional. But also, it will have a function larger than that. It will be the center where the guilds can gather (regarding the re-introduction of the master titles in crafts).
Also, a place where people from for example the Gilde Nederland (55+ seniors,) can transfer their knowledge and experience in their professional field, either in the collective workspaces as learning-working places or in the main learning building where there are spaces for lectures and workshops.
There will be public, collective and private workspaces, as well as private dwellings, collective courtyarsds, private and public outdoor spaces. Public functions such as a marketplace for visitors, and services for the residents/visitors such as print-shop and cafe.

7.4.1: Map of Amsterdam, showing the crafts and concept for the Zeeburgerpad

Map legend:

Small stars:	Scattering of small crafts companies throughout the city of Amsterdam
Medium star:	Concentrations of craft industries in Amsterdam
Big star:	Proposed new center for the crafts in Amsterdam
Red ring:	Singelgracht (Assignment area)

* Ambachten de Pijp: Retrieved from http://www.ambachten-depijp.nl, visited on 8-12-2017.

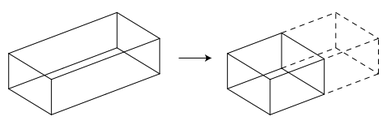
Design Brief

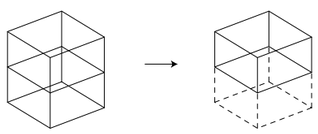
After extensive literature readings, reviews and analysis of live-work project documentation, site analysis, target group research and dwelling typology sketches, there are a set of parameters that are the outcome of this research. I have translated these into physical and non-physical conditions that I will use to propose a design strategy. I will say as little I can about shape and spatial consequences; this will be done in part B: Design concept.

DWELLING SIZES: Flexible, between 30m2 and 90m2

In my design I want to incorporate the principle of flexibility. This results from my research into flexibility and that this is one of the requirements for a successful live-work design.
The apartments should be able to hold changes in
- Household composition: When a starting entrepeneur has a familiy expansion
- Business stage: When the business enters a different stage there should be the possibility of a bigger work-unit.
- Live-work proximity type: The dwellings should be able to change in layout, changing the proximity type of the apartment.

Also there should be the possibility of smaller apartments to ensure the affordability in the city center of Amsterdam, and create a diverse environment for business and creativity.
This results in the fact that there should be dwellings as small as 30m2, and as big as 100m2, all designed as being flexible to change in one or more of these parameters.



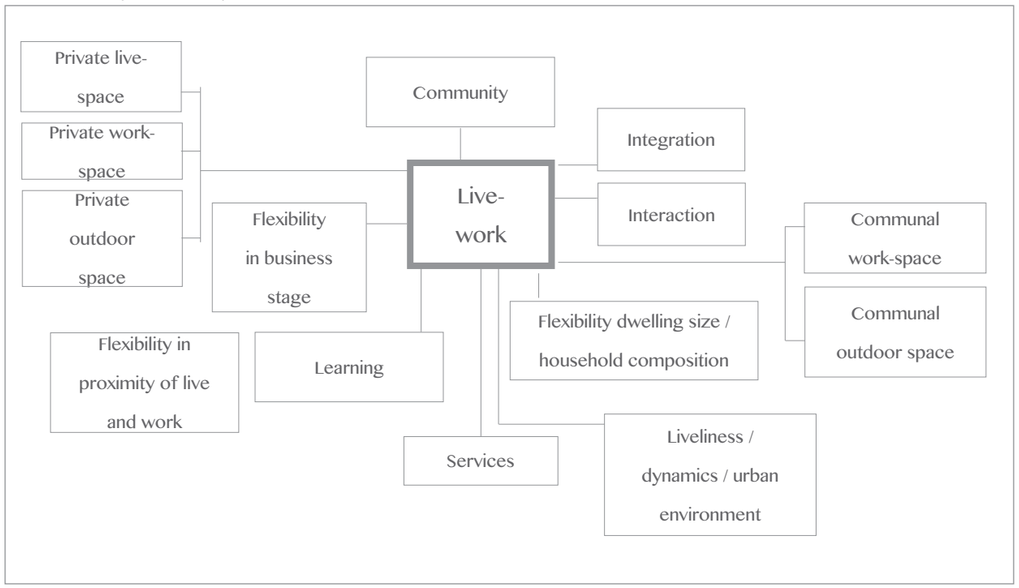


AMOUNT OF DWELLINGS: Between 100 and 150

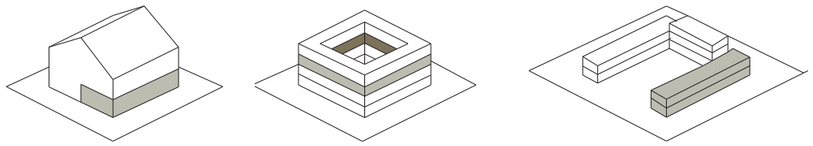
The total size of the plot is 25 m x 310 m, which results in 7750m2. The amount of dwellings can be flexible, because there will be the possibility of shifting the dwellings sizes by adding apartments together or splitting them in two apartments. But it is a densification assignment, so the ratio between FSI, GSI and OSR should result in at least urban or highly urban. Not knowing the details of the urban strategy yet I can't say how much open space there will be, but it seems like 25 to 30 dwellings per building layer, divided over 4 to 5 layers, will be a reasonable amount of dwellings for this assignment as a starting point. With this I am also keeping in mind that there is also space needed for collective work and public services. These numbers will be refined as the urban strategy is further developed.

DWELLING CONCEPT: Live-work

All dwellings will be designed as live-work units, in different expressions, which I will describe in dwelling types and proximity types. There are other things inherent to this concept, such as integration, interaction, sharing of space, services, public space, community, flexibility in different forms and many more which should all be integrated in the urban and architectural design to make it a true live-work design, as opposed to just a workplace attached to a house. In addition to this, I am integrating learning possibilities to the area as an added function of the area.

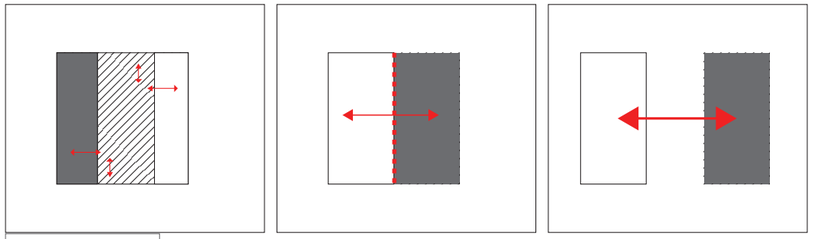


INTEGRATION OF LIVE-WORK: On dwelling scale, building scale and neighborhood scale



PROXIMITY OF LIVE-WORK: Integrate all types in a building, also making it flexible.

There should be a variation in proximity types of live-work, as well as the possibility to be flexible in this aspect. The live-with, live-near and live-nearby types should all be present in the design of the buildings.



COMMUNAL FUNCTIONS: Communal workspace, communal outdoor space, services

All buildings will have a communal workspace as this is part of the main concept. The lay-out of these spaces might differ per building, based on needs of the residents and their businesses.

All buildings should have a communal outdoor space to facilitate interaction, preferably in the form of (a) courtyard(s). Facilitating interaction is one of the key ingredients to a successful live-work design.

Per target group there are different services wanted or needed, of which are partly supplied in the direct surroundings, and the ones that are not should be given a place in the design to safeguard the zero-commute housing concept, in which all basic functions should be in walking distance.

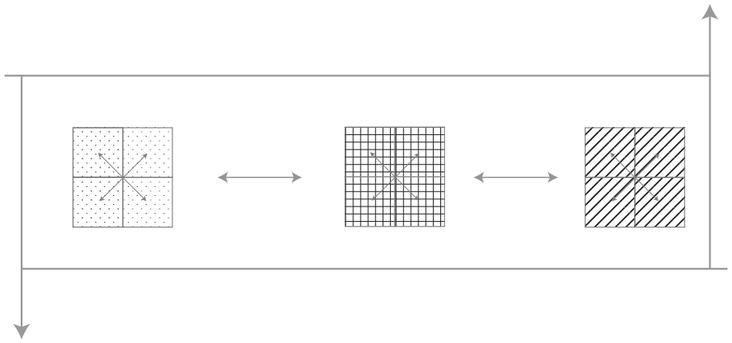
INTERACTION: Facilitate on levels of building, building-ensemble, neighborhood, city

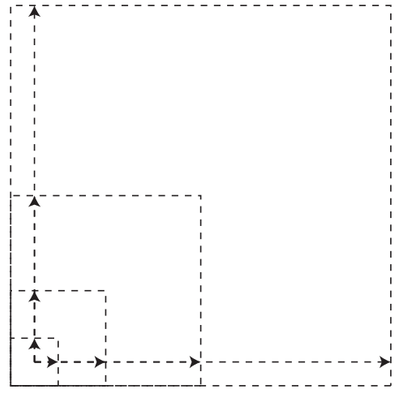
As mentioned before, interaction is one of the key ingredients to a successful live-work design. Preventing isolation and creating a sense of community is important and is what separates a live-work design from a home-office.

Interaction should be able to take place between dwellings, where residents can speak to each other socially or collaborate professionally with members of their own professional cluster.

But collaborating outside your own cluster is also very common in the crafts industry, which is why interaction between the different buildings is also important.

This interaction should then also be able to stretch outwards to the city, by providing services and attracting visitors to the site.





TARGET GROUPS: Diversification based on profession and household composition

There are three ways in classifying the target groups for this project:

- Based on crafts sector cluster

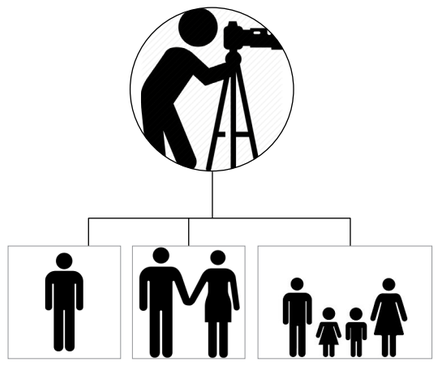
There are two main target groups based on crafts cluster: the creative and communicative arts, and the metalworking, woodworking and other production crafts cluster. The requirements for the dwelling unit as well as the collective workspaces are different for each of these target groups. The main idea will be to group these people per building based on professional interest.

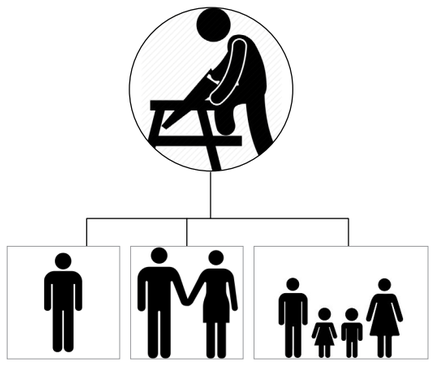
- Based on household composition

As main target group is the starting entrepreneur in crafts, most will probably be a single or double household when starting to live there, with a smaller percentage of young families. But as time goes by the double households might evolve into young families. The dwellings, buildings and environment should take this flexibility in household composition in mind. For dwellings this means flexibility in dwelling layout, for the building and environment this means making it also family-friendly.

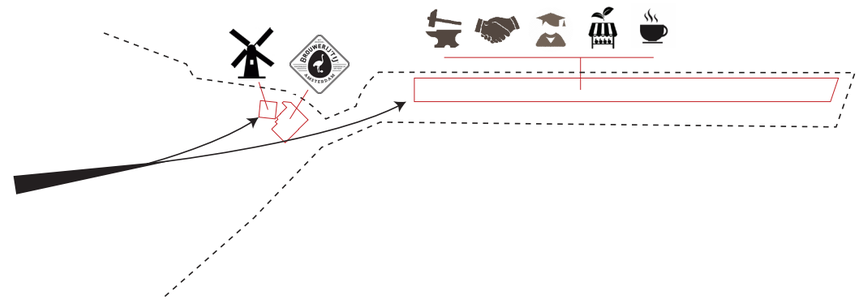
- Based on business stage / type

A starting business with no clients and employees might grow into something bigger. This can partly be resolved by using the collective workspaces. Inside the live-work units themselves and the accesses to these it should be possible to be representative as a business.





ATTRACTING VISITORS: By adding functions: Crafts workshops and shopping, services, learning, market, bar/restaurant



ADDITIONAL FUNCTIONS: Integration of learning

As explained previously, there is goiing to be a huge shortage of skilled craftsmen in the (near) future, due to the aging population and the shrinking amount of new students at the same time.

One of the strategies is to also integrate learning places in the design. This will be done in two ways; by creating the opportunity to have a learning-workplace in the unit or in the communal workspace. Also, there will be a central facility for giving workshops and other learning-related activites, located in a separate building.

Another part that is inherent to the creation of communal workspace is the opportunity of craftsmen themselves to learn from each other.

PUBLIC SPACE: Also for visitors and residents of neighboring areas

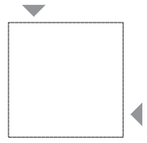
Attracting visitors into the area will be good for the dynamics of an urban environment in which a live-work design can thrive. At least two high-quality public spaces should be designed on the site. This is for the residents as well as for visitors.

FLEXIBILITY: In multiple ways

- Household composition
- Business stage
- Future use
- Construction
- Proximity of live-work
- Communal space lay-out

ENTRANCES: At least two

For live-work units, one of the design strategies that can add quality is the possibility to enter your dwelling from two sides; one to the working part of the unit and one for the living part of the unit. This is the case on dwelling level, but also on building level. Dividing building circulation for residents and for visitors of the business facilitates the possibility of your dwelling and building being representative as a business as well as home.

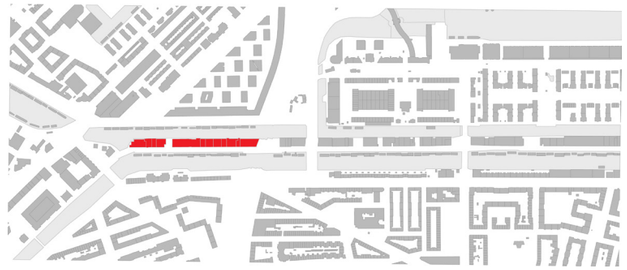


CONNECTION TO GROUND LEVEL: Doors on the street

As many front doors and entrances as possible on the ground level to facilitate interaction. Also using the ground floor bordering the street to turn these dwellings into possible services/shops for the residents and visitors of the area.

EXISTING BUILDINGS STRATEGY: Demolition

Demolish everything on the site, except for the houseboats on the waterfront. The architectural and urban quality is so low that it is not worth preserving. There is one building that is not in such as bad shape; but leaving this building will lower the quality of the new urban ensemble because of it's central location on the site.



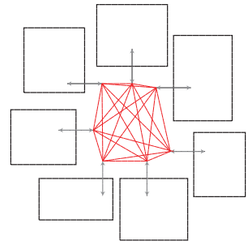
COURTYARDS: Live-Courtyard and Work-Courtyard

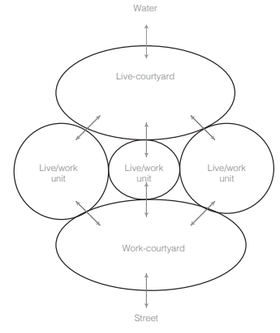
Per building two types of courtyards:

- Live Courtyard

The more private, enclosed type, which is meant for residents, interaction, common activities, as well as a safe place for children to play.

- Work-Courtyard: A place for visitors to enter the building, following the principle of representativeness and dual entrances.





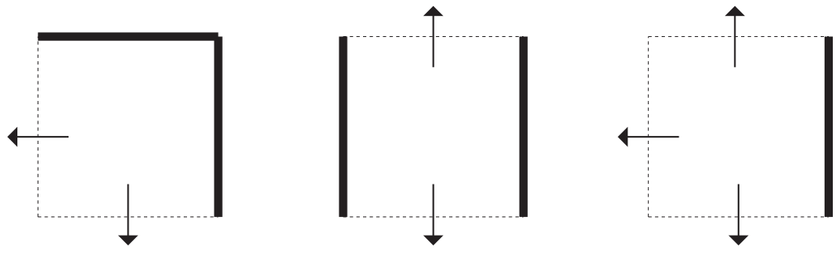
PRIVATE OUTDOOR SPACE: At least one per live-work unit

Can be inside the dwelling envelope as well as outside. These will be designed depending on the building mass, dwelling types and circulation type.

SUSTAINABILITY: Fully integrated

The building should integrate sustainable principles in terms of construction, climate energy and materials.

ORIENTATION / DAYLIGHT: At least two



PARKING: Differentiate between short-term (visitors & clients) and long-term (residents)

As the concept for live-work is zero-commute housing, people will make less use of their cars. Conceptually, this could result in more people sharing a car in the future. Parking should be as invisible as possible. But residents are not the only ones on the site; there are also visitors for the area and clients that are there for business. It therefore makes sense to differentiate between short-term parking above ground and long-term parking underground, which should be integrated in the design per building.

IDENTITY: Should be reflected in urban and architectural design

The urban and architectural design strategy should have a function in itself; because the area is intended as being a function in itself (that of the re-valuation of craftsmanship in Amsterdam and The Netherlands), this should also be made visible in services and amenities, but also in architectural and urban shape resulting in an identity that reflects the concept for the area.

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Images

Chapter III

3.2.1 to 3.2.4: Own images, inspired by the text in Dolan, T. (2012). Live-Work Planning and Design : Zero-Commute Housing. Hoboken, UNITED STATES: John Wiley & Sons, Incorporated, pp. 1-4.
3.3.1 to 3.3.2: Own images
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3.5.1: Own image
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4.3.5: Own image
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Chapter V

5.1.1 to 5.1.10: Own images
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Chapter VI

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Chapter VIII

8.3.1 Own image
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8.5.1 and 8.5.2: Own images
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Chapter IX

All images in 9.2: Own images
9.3.1 Vreeswijk, E., Gadet, J., & van der Eng, T. (2010). Centrummilieus in Oost. Amsterdam: Gemeente Amsterdam. p. 26
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Chapter X

All images chapter 10 are own images