

DE WOON-MAKER

A BUILDING FOR MAKERS: WORKSHOP AND RESIDENCE.

Master Thesis | Research

DE WOON-MAKER

A Building for Makers: Workshop and Residence.

RESEARCH REPORT

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INTRODUCTION

This research is prior to a building design within the field of dwelling. In a world of mass housing and mass production I want to suggest a starting point for a more diverse living environment on both an urban scale as well as the building scale. My thesis is that craftsmanship has to be seen and therefore, it needs to be taken back into the city centre.

The main part of the research takes Amsterdam, where the project is located, and its image as the "creative city" as a starting point. A historical outline and some current data explain how making has separated from living and that this is still the issue.

The more philosophical part of the research touches upon why making has an emotional influence on the personal life of the craftsman and as a connecting factor how this can spread to a community. This again opens the economical factor for the craftsmen.

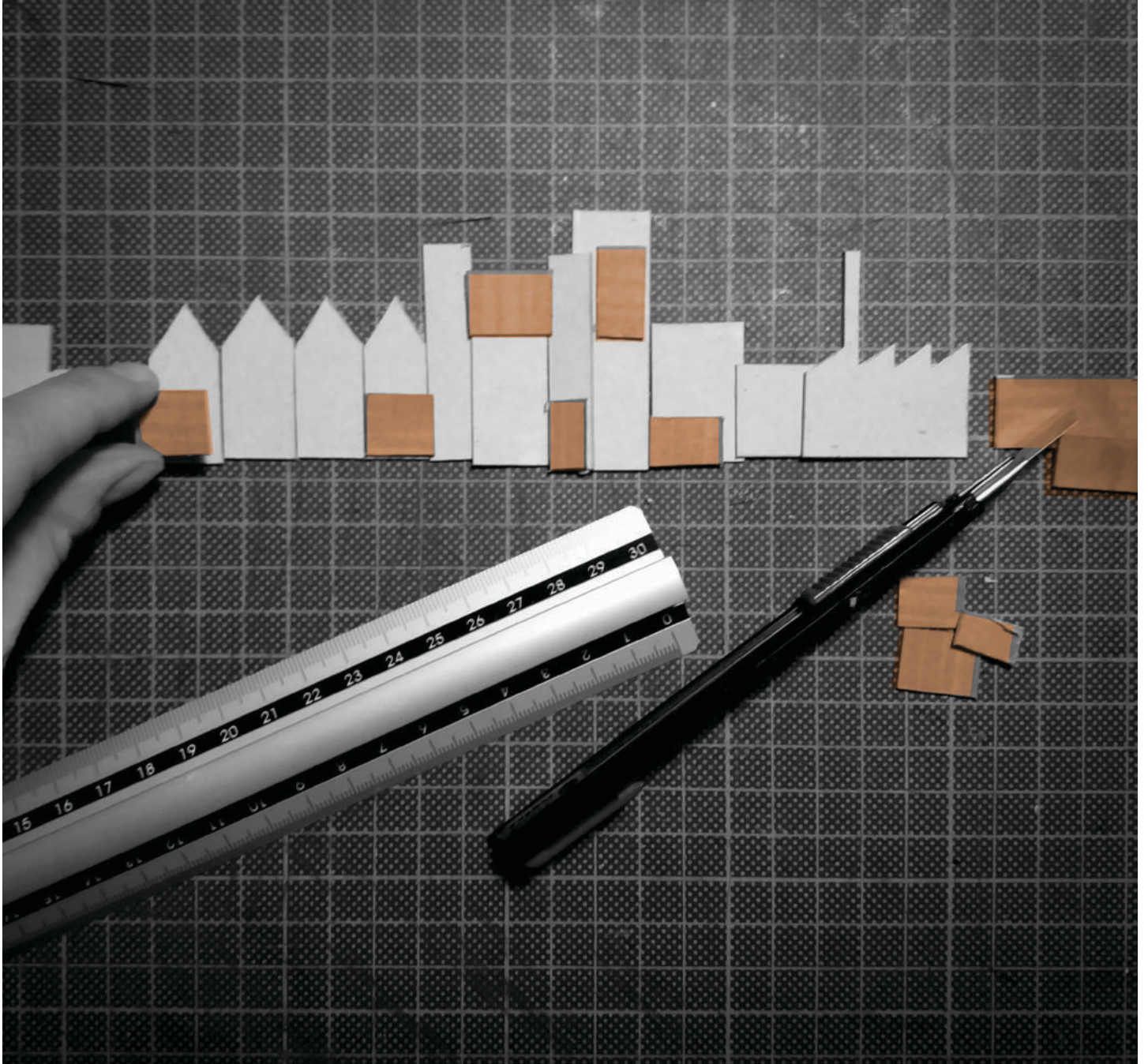
Finally, the research leads to certain user groups and a design assignment for the thesis project.

Since Havenstad, the plan area, will become a big new development in Amsterdam, the HafenCity project in Hamburg has been analysed. In a next step, an urban design concept according to these findings and the study of the existing plans of the municipality of Amsterdam for Havenstad was necessary in order to set up a context for the building design.

The zoom-in from an urban scale to a building scale starts with a plan analysis of four projects that combine working and living in different ways. As a conclusion, useful design principles are put together in a matrix, including the Holzmarkt project that has been touched upon in the first chapter.

The conceptual design included at the end of this report takes into consideration the conclusions of the research and analysis. It is a first attempt to come up with a volume and some major design guidelines for the project. In the concept phase, the public part as an essential piece of the design and the dwellings are composed in their overall volume. Additionally, the two parts are looked at separately to determine design guidelines for the project and to have an overview of the scale of the project. In a next step of the design, it is important to put a design focus on certain parts of the project in order to attain the depth that is aimed for at the end of the thesis project.

LOST CRAFTSMANSHIP



MANIFESTO

Making is out of sight.

Everybody possesses things and more things. But nothing is made any more. Where are the things made? Out of the city, out of the country. Who makes things? There is a high pressure on young people to go to university, to always strive for the highest. But what if this doesn't make you happy?

Making makes happy.

Makers are dedicated to their work. Their heart lies in what they are making. This is the highest dedication to work one can have, if there is an actual outcome it will be fulfilling. But it's not seen. How can people value the things that they do not see?

Making in the city.

Let the making be seen! Show it to the public! Let small businesses make artisan, local products in sight of their customers, right in the centre of the new addition of the city of Amsterdam. Making has to be reintroduced into the city centre. Make it dense with an urban character, keep the traces of the harbour that has once been there. Make a place where things are made!

Making connects.

Makers must live in collaboration, in a community, where everyone is participating. The inspiration will spread like a virus among them and reach out of the building, out of the block, into the whole city. Let the creative people shape a diverse neighbourhood. They need to live right inside of it, next to their workshops, on top of them, in them.

Making the city of the future:

A vibrant city, a mentally healthy city, a diverse city. In order to achieve this identity for the city we need to bring back the makers, and their families. We need to involve the craftsmen with their expertise and "hands-on" creativity for our city of the future.

- Miriam Walther



DEFINITION OF CRAFTSMANSHIP

MY APPROACH TOWARDS CRAFTSMANSHIP

The Cambridge Dictionary defines *craftsmanship* as the "skill at making things, or the skill with which something was made or done, especially by hand"¹.

Craftsmanship is thus defined by two main aspects: Making by hand which leads to a unique product and the skill that is required to make it. The craftsman stands central because he is the person who has acquired these skills through intensive practice and uses his own hands to make something. Sennett describes his work as "quality-driven work"², so the desire to achieve the best work he can do comes from the person himself. This leads to an emotional connection and a certain pride towards the end product.

However, the emotional connection from the customer's side can only evolve if the process can be seen. In contrast to a mass produced product, there is an interaction between the maker and the customer. The creative process between the two leads to an individual outcome that both sides are emotionally connected with. The craftsman is not just a maker of the product but he is also a designer who interacts with his customer.

In this research, it is investigated what kind of building the maker needs to support his own lifestyle and interact with his customers. He is not trained for this interaction, his practice lays in his making but his skills have to be much broader. Bringing makers and their customers together and enable the creative process between them has to work automatically. In a neighbourhood where they live and work close to each other, the enthusiastic customer comes by and is part of the process.

1 Cambridge Online Dictionary. (2018). *Meaning of "craftsmanship" in the English Dictionary*.
2 Sennett, R. (2008). *The craftsman*, p. 241.

THE CREATIVE CITY

AMSTERDAM AS THE CREATIVE CITY

Amsterdam likes to describe itself as the creative city. The city wants to be “an attractive home” to creative people by providing them an inspiring environment³. This is not only the historic centre with the canal band itself but also its rich cultural life and museums⁴.

Amsterdam has one of the biggest creative industries in Europe which has attracted many big international firms.⁵ While it is certainly an achievement to attract those firms with mostly international employees that bring a lot of money to the city, small businesses are not to be neglected. In contrast to the big firms, where international employees only stay a limited amount of time, the often self-employed small businesses need to establish locally and are therefore bound to their location. Thus, the persons opening their small business in Amsterdam are going to stay in the city and not just passing through.

There is an overlap of the professions belonging to the creative sector with those in the crafts sector. While arts and culture, media and entertainment, creative business services, intensive knowledge and creative retail are mostly not addressing crafts, most of the professions listed in the category “other” can be counted to the crafts sector. Examples are the clothing industry, leather industry, furniture industry or jewellery industry.

In his book “The Rise of the Creative Class”, Richard Florida distinguishes the *Creative class* from the *Working Class* and the *Service Class*, who are mainly paid to “execute according to plan”, as being “paid to create and have considerably more autonomy and flexibility than the other two classes to do so”⁶. According to his definition, different types of craftsmanship can be added into the *Creative Class* or somewhat in between the *Creative* and the *Working Class*, but never into the *Working Class* alone because as makers they are always involved in the process of the design.

All making professions that are overlapping with the creative sector are listed in the category defined by the OIS as “lower and middle-income creative professions”⁷. That is the group of people that mostly has a higher educational degree and brings diversity to the city but needs support especially at the start.

In its budget of 2019, one of the ambitions of the municipality is to make more “creative workspaces available”⁸. This is an ambition that could especially support creative makers.

What are the creative people that Amsterdam seeks to attract like? The creative person in a general understanding can be characterized as flexible, self-employed, with a lifestyle where life and work are not clearly distinguished any more, who is looking for others to collaborate with.

Florida argues that the location choices of creative people are based on their lifestyle interests, so they are not necessarily moving where the jobs are. In his research, he found that people are moving to “places that are tolerant, diverse and open for creativity”⁹ which makes Amsterdam and its attitude as a city a perfect choice of location for makers.

A building for makers facilitates the image that Amsterdam wants to create in its own city branding. It addresses a group which belongs to several groups in society that could get more attention with a pioneer building and at the same time with its concept strengthen the philosophy of Amsterdam.

TAKEAWAYS

- Focus on small businesses instead of big ones
- Creative people: craftsmen are part of it
- The idea of a maker building fits with the image that the city wants to have for itself

3 City of Amsterdam. (2018). *Policy: Developing artistic talent*.

4 IAmsterdam: *Creative Industry Fact Sheet 3*, p. 4.

5 City of Amsterdam. (2018) *Budget 2019: 1.2 billion for investment in a liveable city*.

6 Florida, R.(2004). *The Rise of the Creative Class*, p. 8.

7 Federova, T. & Onderzoek, Informatie en Statistiek, Gemeente Amsterdam (2015). *Amsterdamse Ambachtseconomie 2010-2014*.

8 cf. 4, p. X (Preface).

9 cf. 4, p. 10.

THE CREATIVE CITY

A MIX OF WORKING AND LIVING

Amsterdam is growing by about 12.000 people per year. With the newly to be transformed area "Havenstad", adjacent to the city centre on the west side, the municipality is making way for about 70.000 new dwellings as well as up to 58.000 new work spaces¹⁰.

In their strategy, the mix of functions plays an important

"The mix of functions is necessary to keep economical diversity."¹¹

- Municipality of Amsterdam

role. Work spaces have to be connected to living spaces not only on an urban level but up until a building level, meaning that living and working could be combined in the same building, a "Woon-werkgebouw" as they call it¹².

Because of the location so close to Amsterdam's centre and the high costs of rents, the mix of functions is a logical consequence. On top of that, this is considered crucial to ensure a varied economy¹³.

The proximity to Amsterdam's centre also encourages a sustainable approach on traffic where the car is the least relevant means of travel after public transport and the bicycle. With work and living space provided in one neighbourhood, the ways to work are limited to walking or bike distance. This is not only sustainable for the environment but also saves the travel time, especially during rush hour. Another aspect why the mix of functions in a neighbourhood is important, is to avoid times that nobody is around. If people work and live in one neighbourhood, it will be lively during the day as well as in the evening and at night.

In the vision of the municipality two kinds of mixed work-

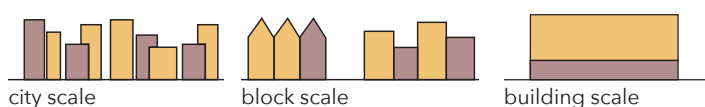


Fig. 1: Mix of Functions on all scales

BETWEEN CREATIVE AND PRODUCTIVE DISTRICT

ing and living neighbourhoods are planned. One is called the *Creative District* which is planned close to the city centre and already partly established on the long pier of Minervahaven. The other one is the *Productive Neighbourhood* closer to the highway ring to be reached by car easily¹⁴. The project area at *Moermanskkade* lays exactly in between those two, reachable from the ring but still close to the city centre. Therefore, craftsmanship could fit there as the perfect gradient in between the two. In the strategy for Havenstad an emphasis is laid on small businesses, including work space especially for the crafts¹⁵.

TAKEAWAYS

- Vision of Havenstad envisages a mix of functions (working and living) on all scales of the city
- 24 hour activation of the neighbourhood
- Sustainability: short or no ways to work
- In between "creative" and "productive" district

10 Programmabureau Haven-Stad Ruimte en Duurzaamheid, Gemeente Amsterdam. (2017). *Haven-Stad: Concept Ontwikkelingsstrategie*, p. 33.

11 cf. 9, p. 8.

12 cf. 9, p. 21, 28.

13 cf. 9, p. 32.

14 cf. 9, p. 8.

15 cf. 7.

Fig. 1 own illustration.

SEPARATION FROM THE CITY

HISTORICAL OVERVIEW

The combination of working and living in general was very prevalent before the Industrial Revolution not only in farm houses on the countryside but also in the city. The buildings that people both worked and lived at were named after the kind of work that took place there, e.g. "bakehouse" for the house of the baker. Only in modern times, the word "house" has changed its connotation with only buildings that people dwell in¹⁶.

In medieval times, the crafts were organized in guilds, organization-like communities sorted by profession. All shoemakers lived in one street, the bakers in the other. Thus, the neighbourhood they lived in was determined by the profession. Thereby, strong communities formed which were organized almost as associations. They ensured amongst others fair prices and quality.¹⁷ The typical house consisted of a workshop on the ground level, accessible from the street side for customers. The more "dirty" work took place on the back side. Living then happened above, on the higher floors of the building (see figure X).

With the beginning of the Industrial Revolution at the end of the 19th century and the enormous growth in population that went along with it, living conditions in the city were catastrophic. Frances Holliss, in her research on the architecture of home-based work, states overcrowding and poor sanitation as the main reason. Instead, home-based work was blamed. This was the shift towards mass-built social housing, which improved hygienic conditions but made working at home impossible or even prohibited.¹⁸ As a side effect the gender role was enforced, making an income from home impossible for the woman and



Fig. 2: The workshop and shop for customers on the ground floor

putting economical pressure on the man as sole wage earner.¹⁹

At the latest with Ebenezer Howard's garden city plan from 1902, zoning became common practice in urban planning making the combination of working and living very rare and usually only has a connotation with artists that work in their ateliers.

Only in the 1960s, Jane Jacobs started to question zoning in urban planning with her book "The Death and Life of Great American Cities". She suggests that a city needs diversity which is created when four conditions are applied: A mix of several primary functions that ensure the use in different times of a day, short blocks that provide opportunities to take different paths and turn corners, buildings of different ages and a rather high density.²⁰ Thereby, she encourages the mix of working and living on a block level. In the example of Jane Jacobs who fought against plans for a freeway through the SoHo district of Manhattan which was dominated by low-value and unoccupied build-

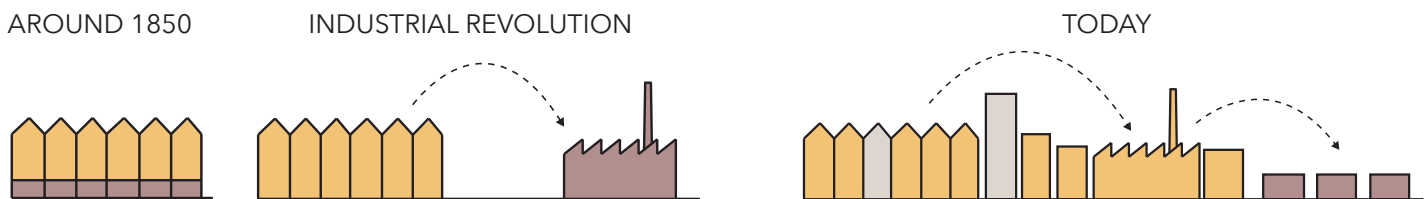


Fig. 3: The relationship of working and living before, during and after the Industrial Revolution

16 Holliss, F. (2015). *Beyond Live/Work*, p. 1.
17 InfoNu. (2018). *Het leven in de middeleeuwse stad*.
18 cf. 16, p. 125.
19 cf. 16, p. 130.

20 Jacobs, J. (1998). *The Death and Life of Great American Cities*, p. 150.
Fig. 2 Bildarchiv Preussischer Kulturbesitz.
Fig. 3 own illustration.

SEPARATION FROM THE CITY

ings. The cheap lofts slowly were occupied by artists who grew into a numerous community. When developers got hands at the area over the years, the area became gentrified and turned into an expensive housing area.²¹

Since most North-Western European cities are still dominated by post-war urban planning, zoning is very visible. Some big new developments like the new HafenCity district in Hamburg (see page 24) are starting to incorporate the mix of functions on a bigger scale.

With the internet some professions are completely independent from their location, so today many jobs can be done from home and "home office" has become a common term. However, professions in craftsmanship have more specific requirements of space, they need more than just a desk.

There still is not "the one" typology for home-based work but there are contemporary precedents that share certain features (see pages 47-55). It becomes clear that buildings need to be designed especially for the combination of working and living to enable this for craftsmen today.

The Pullens Estate in South London is an example of a building originally planned for living and working between 1887 and 1901. It has been refurbished in 2010 and is still very popular for small crafts and design businesses that have developed a strong community.²² Several times per year, the yard is opened for the public with a winter market and other events that are taking place.²³

This trend can also be seen in Amsterdam where the quarter "De Pijp" south of the canal ring gains more popularity for single crafts businesses. Around 30 businesses have



Fig. 5: Pullens Estate South London

formed a collaboration running a website together called "Ambachten - Made in De Pijp". Various activities are organized, for example *Craft walks* and open days²⁴. Thereby, over time a brand is formed.

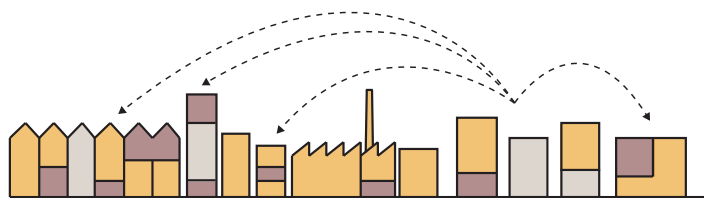


Fig. 4: Making should come back into the city centre.

TAKEAWAYS

- Cities have to adapt spatially in order to bring craftsmanship back into the city.
- Buildings need to be designed especially to make home-based work possible.
- Creative people attract people!

21 cf. 16, p. 58.

22 cf. 16, p. 141.

23 Pullens Yards. (2018). History.

24 Ambachten De Pijp (2018). *Ambachtelijke bedrijven in de Amsterdamse Pijp*.

Fig. 4 own illustration.

Fig. 5 Pullens Yards. (2018). *News*. Retrieved 02-11-2018 from <http://www.pullensyards.co.uk>.

SEPARATION FROM THE CITY

DISTRIBUTION OF THE CRAFTS IN AMSTERDAM

Looking at the different parts of Amsterdam, it becomes clear that *creating* crafts and *food/health* crafts are already established in the city centre as well as Amsterdam west, east and south, close to the old centre. In contrast to this, the *making* crafts are clearly outside of the city centre and even outside of the ring.

INFO BOX - SUBGROUPS OF CRAFTS

CREATING

- Visual artists
- Designers
- Software Developers
- Architects

MAKING

- Building Sector
- Metal, wood and other production
- Repair

FOOD/HEALTH

- Hairdressers
- Ice Cream Makers
- Bakers
- Beauty Salons

There are a total of around 78.000 people working in the crafts sector in Amsterdam of which 60% in the creating crafts, 23% in the making crafts and 17% in the food crafts. Compared to the rest of the Netherlands the creating crafts are strongly represented, as in average there are more than 60% in the making sector.

WHERE ARE THE CUSTOMERS?

While the creating sector is quite independent from the location of their customers who are mainly from the Netherlands or even from abroad, the technical and food sector need the direct contact from the customers that are nearby. In both sectors things are made that physically have to get to the customer. Therefore, it is logical that they have a more local client base.

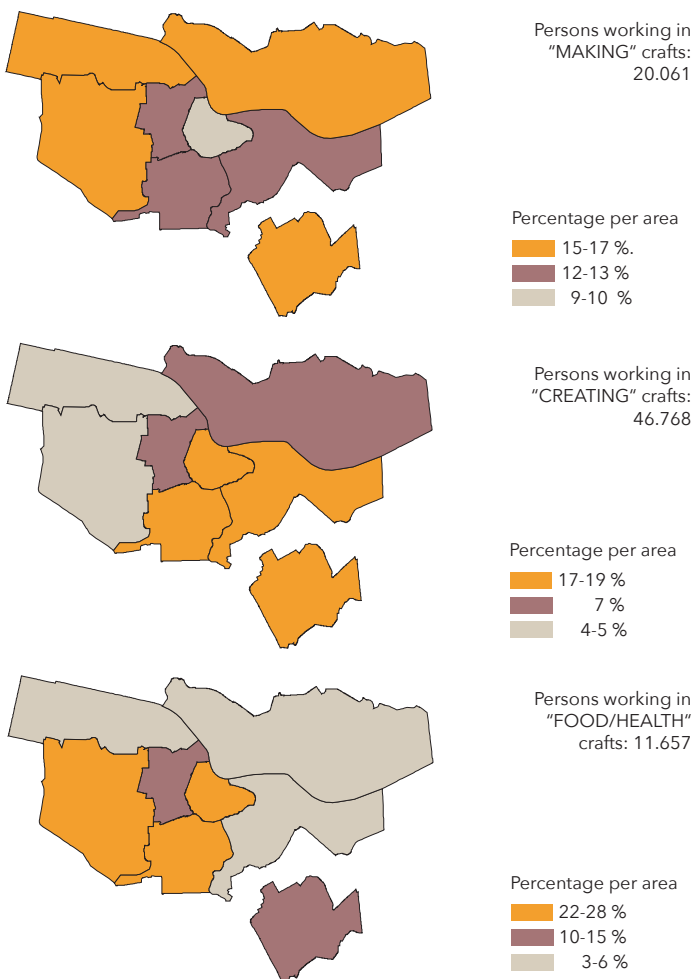


Fig. 6: Distribution of people working in the three crafts sectors in the districts of Amsterdam

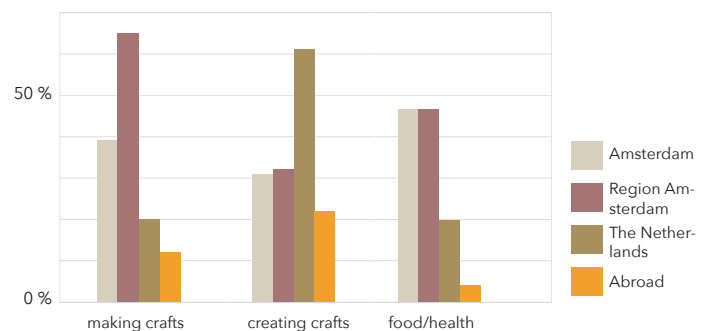


Fig. 7: Distribution of customers per crafts sector

Fig. 6 Federova, T. & Onderzoek, Informatie en Statistiek, Gemeente Amsterdam. (2015). *Amsterdamse Ambachtseconomie. 2010-2014*, p. 28.

Fig. 7 cf. Fig. 6, p. 34.

SEPARATION FROM THE CITY

SIZE OF BUSINESSES

In s research held by the OiS and CvAE businesses with up to 100 employees are counted as craft producers. In the Netherlands as well as in Amsterdam more than 80% of the crafts businesses are one-man-operations²⁵. Only 6% of the handicraft businesses in Amsterdam count more than 4 persons. From figure 8 it becomes clear that a number of 19% of the people working in a crafts business with 2-4 people is a potential not to be disregarded. Counting all small businesses up to 4 people a total of 94% of the businesses and 61% of the people would be addressed. This includes the business owner as well as the employees.

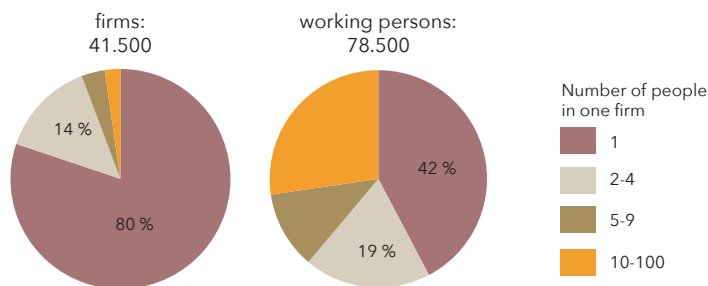


Fig. 8: businesses and working persons sorted by number of workers

SURFACE AREA REQUIRED IN ALL FIELDS

Making crafts use twice as much space than the average of all crafts. However, 46% of them use less than 100 m² which could be a guideline to still make it economically successful to include the making crafts into a housing block. Out of the creative crafts, 80% use less than 60 m² and almost 30% of them even less than 20 m². By focussing on the crafts with a smaller spatial need, all crafts sectors can be included which will make a diverse user group within this specific field. Different sizes of workspaces which are adaptable in size as well as workspaces that can be used collectively can support the diversity. On top of that, the individual units require less space if the work that takes up a lot of space is done in big shared workshops.

	average surface in m ²	less than 20 m ²	20-60 m ²	60-100 m ²	more than 100 m ²
making crafts	127	16	20	20	44
creating crafts	68	22	32	32	17
food crafts	55	28	52	52	8

Fig. 9: Average surface area of the workspace per crafts sector

FUTURE LINK: CRAFTS IN THE CITY

In the same survey, especially the people working in the making crafts claimed that they are struggling to find suitable work spaces, in location as well as renting costs. Another point that was mentioned as what the municipality could do to support crafts businesses is to creating breeding grounds for creative people, which comes back to the ambition of the municipality for 2019 mentioned above.

In order to bring all crafts back into the city, these points have to be addressed and a building for makers could be a starting point to bring the making crafts back into the physical and visual reach of the citizens of Amsterdam.

TAKEAWAYS

- Making crafts are based outside of the city centre but their customers are local.
- Focus on small businesses (mostly one-man operated or up to 3 employees)
- Different sizes of workspaces up to 100 m² ensure a diverse mix of businesses out of all crafts sectors.

25 cf. Fig. 6, p. 6.

Fig. 8 cf. Fig. 6, p. 21.
Fig. 9 cf. Fig. 6, p. 42.

MAKING MAKES HAPPY

MAKER'S DEDICATION

The visible, physical outcome that craftsmen produce is one part of their dedication. It is made with skill, developed over years of practice and professional training. Dedication plays an important role in the way craftsmen work. The aim is not to produce many products as fast as possible but to produce every single object in a way that the maker is satisfied with the work he has done and which can be seen in it.

"Making is thinking."²⁶

- Richard Sennett in *The Craftsman*

With his statement in the book *The Craftsman* "Making is thinking"²⁷, Sennett brings the creative process of the craftsman to the point. During the making process the product is developed further, it forms while it is made. Adjusting and re-evaluating are part of this process. All this leads to the emotional connection to the piece mentioned before.

On the other hand, the customer can also be part of the process if he is able to talk about his wishes beforehand. Here, the craftsman as a person becomes the key to selling the product by making the customer excited. Who else but him who already has the dedication could be more enthusiastic about the product?

In the second book of his trilogy on skills for everyday life, *Together*, Sennett claims that "craftsmen who become good at making things develop physical skills which apply to social life"²⁸. By this he means that they develop intuitive social skills that come from the everyday experiences within their way of working and social interaction with customers.

Since the small crafts business does not have an extra showroom in the city centre, the craftsman's workshop itself serves as the showroom where the customer can directly follow the making process. The craftsman is the main link between the product and the customer and therefore he should be living in the city centre, side by side with his customers.

A GUITAR MAKER IN AMSTERDAM

"My life is dedicated to making classical concert guitars that sound as beautiful and powerful as possible."²⁹

- Jeroen Hilhorst

Jeroen Hilhorst has been working as a guitar maker in Amsterdam for more than 20 years now. He initially studied Dutch linguistics and literature and worked in the software industry for 13 years. His reason to change fields and start his own business was mainly because he was not happy with the work he was doing. His father and grandfather were both carpenters so he inherited the idea of doing things with his hands. He stated that working with his hands suits his character³⁰.



Fig. 10-13: Jeroen's guitar making workshop in the attic of his home

TAKEAWAYS

- The craftsman as a person is the link between the product and the customer.
- Emotional connection from the customer's side evolves if he can follow the process.

27 Sennett, R. (2008). *The craftsman*, acknowledgements.
28 Sennett, R. (2013). *Together*, p. 199.
29 Jeroen Hilhorst Concert guitars. (2018). *Welcome to my website*.
30 Hilhorst, Jeroen. Telephone Interview on 25-10-2018.

Fig. 10-13: private photographs from Jeroen Hilhorst

A NEW GENERATION OF MAKERS

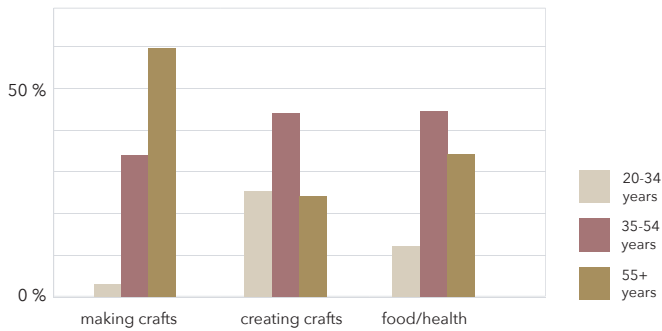


Fig. 14: Age groups per craft sector in Amsterdam

As can be concluded from fig. 1 above, the making crafts sector seriously lacks young people, while 60% of the people are going to retire within the coming ten years. In contrast to that, more than a quarter of the people in the the creating crafts sector are younger than 34. How come that the creating crafts sector is so attractive for young people? In fig. 2 it becomes clear that new crafts that are forming mainly within the creating crafts sector. This is due to technological innovations, which also means that traditional crafts are transforming or even disappear³¹.

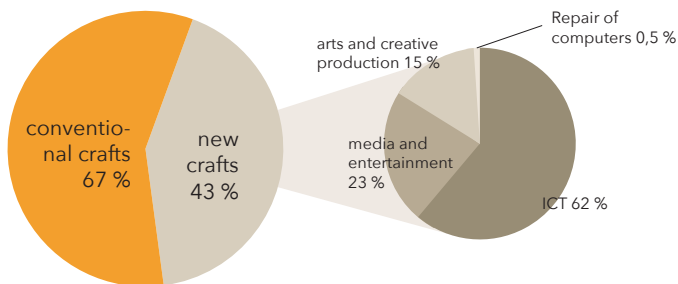


Fig. 15: Percentage of new crafts and further subcategories

The new crafts consist of mainly ICT (information and communications technology), media and entertainment and 15% arts and creative production. All in all, they already make up 43% of all crafts in Amsterdam (fig. 15). Therefore, the new crafts offer big chances including for example prototyping with 3D-printing or laser-cutting technology. This is especially interesting for the customer because in contrast to e.g. in an ICT office, 3D-printing is

interesting for the customer to watch. On top of this, a focus has to be put on the young people in the conventional crafts as there will be a lot of potential for transformation when the older generation is leaving within the coming years.

level of education	making crafts	creating crafts	food/health
university degree	26	91	23
intermediate vocational education	63	7	65
lower vocational education	11	1	7
technical training			
no special technical training	26	45	21
technical training	46	32	54
learning in practice	25	21	19

Fig. 16: Level of education and professional training

It is striking that more than 90% of the people working in the creating crafts field have a university degree, in the making crafts it is only about a quarter of the people. Instead, almost half of them followed a professional training in their craft. The focus of the city should lie in supporting the young people in the making crafts as the highly educated people in the creating crafts field are coming to the city anyway. For the making crafts more than just housing needs to be offered in order to be attractive.

The new generation of makers has to consist of both young makers in new crafts fields as well as those young makers who are able to adjust the conventional crafts to go along with a contemporary lifestyle.

TAKEAWAYS

- There is a new generation of makers due to crafts that have formed out of technological innovations.
- By offering more flexibility and adapting to the lifestyle of the younger generation, there is a great potential to revive the traditional crafts.

31 Federova, T. & Onderzoek, Informatie en Statistiek, Gemeente Amsterdam. (2015). *Amsterdamse Ambachtseconomie 2010-2014*, p. 22

Fig. 14 cf. 31, p. 32
Fig. 15 cf. 31, p. 22
Fig. 16 cf. 31, p. 31

MENTALITY CHANGE

Work is a big part of life. It is necessary to earn a living and it is a huge part of one's time each day that is passed at work. The thought that work and life should be separated is represented by the *nine to five mentality* that developed with the baby boomers generation. Recently, this has been changing towards a lifestyle where life and work are more interconnected. The switch between private time and working hours has to be made much faster. "Flexibility" has become the key term. Some new professions like bloggers cannot even draw a line as their work is their life. In the crafts field where the making of things takes place at one particular workshop, work and life becomes distinguished more automatically. However, if the architecture provides the possibility to live this more spontaneous lifestyle even in combination with workshops, younger people will be more attracted towards this field.

It cannot be taken for granted that crafts collaborate with each other. Every individual crafts business struggles on its own to survive, some more successful than others.

As mentioned before, several crafts businesses have started to form collaborations for promotion and exchange in "De Pijp" in Amsterdam. Thereby, they can be found easier on the internet and their joint events like open days are attracting more people³². However, the creating of a real brand is missing because there is no day-to-day community.

This becomes much more evident in a project in Berlin called *Holzmarkt*³³. There, independent maker's businesses and musicians have formed a collaboration for a building complex which hosts workshops, ateliers and practice rooms as well as event spaces like a concert and market hall. They are all individual small businesses that produce artisan things like a bakery for cinnamon rolls or a shop that sells decoration made from recycled plastic. It quickly has become a hotspot for small crafts and a place to hang out with like-minded people at the river front of the Spree. A brand was created which has an impact on the whole neighbourhood and it is known far beyond the city.

Creating a brand which can have a broader impact on the surroundings is an important factor for the marketing of the building. It becomes a well-known name throughout the city, an "insider tip" for tourists. People know what kind of businesses and atmosphere they can expect in this building which is why they go there. Special events like a Christmas market or concerts add to the place-making effect of the building. What is missing in the *Holzmarkt* project is the long-term living. The area is alive day and night due to the public functions that include restaurants and event spaces but it still feels a little artificial. If the makers were living at the same place, it would become even more authentic.

TAKEAWAYS

- In the mentality of the millennial generation work and private life are more interconnected.
- A strong collaboration can lead to the formation of a brand with a wider impact.
- Buildings should enable a faster switch between work and leisure time.

32 Ambachten De Pijp (2018). *Ambachtelijke bedrijven in de Amsterdamsse Pijp*.

33 Husten, M. & Wöhr, S. (2014). *Holzmarkt: Konzept & Architektur*.

WORKING NEAR HOME

Jeroen, the guitar maker from Amsterdam mentioned above, started his business from home for economical reasons. He set up a workshop in the attic of his house where he worked until the neighbours retired and were disturbed by the noise level during the day. He had to move his workshop to an external place which he found in Amsterdam North, nine kilometres from his home. It was the cheapest suitable place available for him in Amsterdam. He stressed that although he enjoys his work, intensive craftsmanship is paid very poorly and working outside of home means extra costs. The biggest disadvantages at the new location for him are the travel time and that he does not have a computer there, since he still prefers to do his administration from home³⁴.

In this story it becomes evident that for economical reasons it can be easier to start up a business from home. In the making crafts that have more specific requirements or emit a lot of noise this can cause problems within a quiet residential area. This means that also the mentality of the people living around the makers has to become more open towards a mixed life/work environment. On a building level, some special requirements like noise cancellation have to be considered.

A big advantage of working from home is the short way to work which saves a lot of time each day as well as travel costs. Administration can be done directly from home without going back and forth making the communication and contact to customers easier. The proximity of home and work space also makes it possible for young people to combine their own business with a family.

On top of that, working at walking distance from home makes a car unnecessary. Car sharing concepts could be used when it comes to a truck for occasional transportation of larger materials that are not delivered to the location.

“The workshop is the craftsman’s home.”³⁵

- Richard Sennett in *The Craftsman*

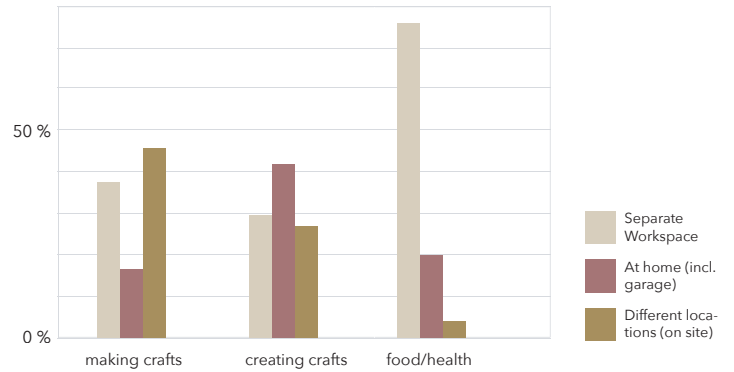


Fig. 17: Workplaces of the different crafts sectors

While it is obvious that the food/health sector mainly has a separate workplace to make and sell for example ice cream, more than 40% of the creating crafts are already working from home. In the making sector this number is the lowest of all three, counting only 18%. Almost 50% of them work on different locations, depending on where the client is.

In order to enable the making crafts to work at home, some requirements have to be met in order to integrate small workshops with living. The making crafts are closest to their customers, so they should be living side by side.

TAKEAWAYS

- A short way to work saves a lot of time (and it is sustainable!)
- Making crafts have to be close to their customers.
- Some requirements need to be met for the Making crafts to be able to work near their home.

34 Hilhorst, Jeroen. Telephone Interview on 25-10-2018.
35 Sennett, R. (2008). *The craftsman*, p.53.

Fig. 17 Federova, T. & Onderzoek, Informatie en Statistiek, Gemeente Amsterdam. (2015). *Amsterdamse Ambachtseconomie 2010-2014*, p. 37.

SHARED WORKSPACES

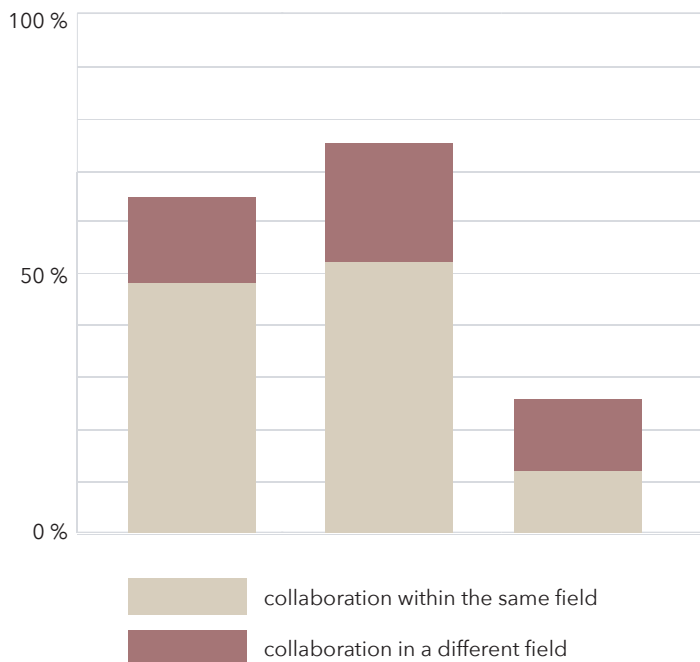


Fig. 18: Collaboration with other firms within the different crafts sectors

Fig. 1 shows that around 50% of the businesses in the making and creating crafts are working together with businesses from the same field. Almost a quarter of the creating crafts additionally collaborates with other fields. For the food crafts, collaboration is not so relevant because usually the process is faster and happens entirely in one place.

While creating crafts collaborate as needed for bigger projects that they cannot do on their own, the making crafts could collaborate spatially. Combining crafts that need similar bigger machinery which is not in use at all times could profit from a shared workshop. Some synergies could be provided locally while others, which are not used frequently, could also be provided within the neighbourhood or another part of the city. The collaboration on different scale levels is sustainable because all machines are provided per capacity that is actually needed.

In reality, it must be said that the synergies would have to be quite specific in order to share most machines. Instead, the shared workshops could be divided by material (wood, metal, ceramics) with additional flexible space to spread out if needed. To give an example, Jeroen mentions that he needs a big saw in order to cut new big chunks of wood into handleable pieces about once or twice per year. He is doing this externally at his brother's workshop³⁶. In the shared workshop he could reserve an additional work space next to the machine for a day or two to cut and order his new material.

Several small businesses in one place could profit from each other not only economically by sharing certain workspaces but they can also inspire each other. With a shared workshop space, the community will grow together because makers are getting to know each other. This will have an influence on the residents of the building as in a solely residential building in the city it can be hard to form acquaintances with the neighbours. If people meet each other in the workshops, it is easier for them to bond.

With *working* to be seen for the public, the collective spaces within the community of residents become even more important.

TAKEAWAYS

- Makers are already working together, the building could support this even more.
- More efficient use of space and machines due to collaborations
- Like-minded people can inspire each other.

36 Hilhorst, Jeroen. Telephone Interview on 25-10-2018.

Fig. 18 Federova, T. & Onderzoek, Informatie en Statistiek, Gemeente Amsterdam. (2015). *Amsterdamse Ambachtseconomie 2010-2014*, p. 35.

ALTERNATIVE COMMUNITY

SUPPORTING YOUNG MAKER BUSINESSES

With the flexibility in the lifestyle comes the self-employment. As mentioned above, most people in the crafts already have this flexibility. On the other hand, there is a big economical pressure. Small businesses cannot buffer times with less turnover easily and the income of entrepreneurs in the crafts business is generally lower than the income of employees in the same field and the average annual income in the Netherlands³⁷.

In the *Holzmarkt* project referred to before, the firms have to apply with a business idea and are accepted if the association thinks they fit with the community. The firms are provided an opportunity to start up and after five years they have to look for a different place³⁸. The idea is that the *Holzmarkt* as an iconic place helps them to establish and when they can stand entirely on their own, they will not have trouble to find another place. This is a rather radical example, but some limitation could be applied by e.g. votes within the community.

A building that has formed a brand and therefore attracts customers by itself can serve as a start-up hub for young people that want to open their own business within the crafts field.

In a building for small business starters, there should be a possibility for short-term living within the building. The combination with dwelling offers them a flexible lifestyle and the opportunity to live in the city when starting up their business. On top of that, the overlap of life and work is not only dense in the amount of square meters but also in terms of use at all times of the day.

TAKEAWAYS

- Possibility for makers to live and work in the city, from the very start of the business
- Start-Up opportunity for young makers: The building as a brand attracts customers.



Fig. 19: River side walk at *Holzmarkt* Berlin



Fig. 20: Inner square facing the river at *Holzmarkt* project Berlin

37 cf. 18, p. 13.

38 Husten, M. & Wöhr, S. (2014). *Holzmarkt: Konzept & Architektur*.

Fig. 19 own photograph.

Fig. 20 own photograph.

DEFINING A USER GROUP

After the investigation of the crafts field in Amsterdam and its sub groups a user group for the project can be defined more specifically.

With regard to the makers, all crafts sectors are included but the focus lies on makers that are producing something that can be seen and where the process of making is interesting for the customer.

To give some examples from all fields, this could be a furniture maker, an artisan baker and a maker of 3D-printed jewellery.

The building should offer a variety of apartments for makers, their families and other people that enjoy the community. This means that the building is open for everyone but the ones that have their workshop inside are guaranteed an apartment. In this way, makers and customers will truly mingle and successful makers that are expanding their business outside of the building have the possibility to continue to live in their apartment.

All other apartments are rented which will guarantee a faster change of residents than owner-occupied flats. Especially young people who start their own household move into rented flats (69%)¹. The average in the Netherlands of rented and owned apartments is exactly reverse². People between 25 and 34 stay in an apartment on average for about 4 years³. Aiming for young people within the rented sector will ensure that apartments become available on a regular basis. Makers living in the shared apartments or new starters will get preference on the apartments available.

TIME-LINE - EXAMPLE

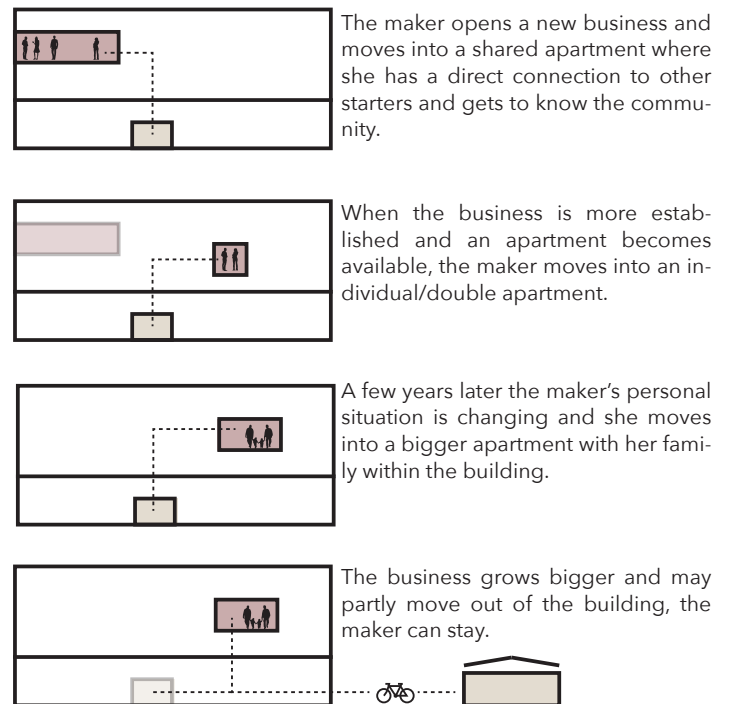


Fig. 22: Scheme - Example of a maker living and working in the building

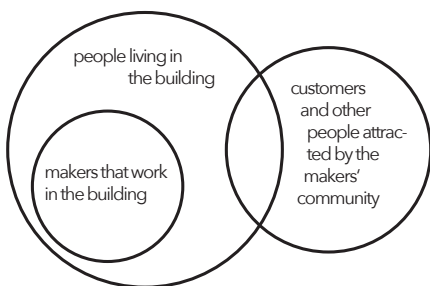


Fig. 21: Relation makers / customers / residents

A DYNAMIC MARKET

In order to make sure that enough apartments are available for the makers that have their own workshop within the building, a regular turnover has to be aimed at. With the shared apartments, a place to live is always ensured for the maker that starts up his own business. Vacant rooms can temporarily be sub-rented to students or internationals that just arrived in Amsterdam to reach an optimal utilization of the dwelling places.

39 Blijie, B., Groenemeijer, L., Gopal, K. & van Hulle, R. (2012). *Wonen in ongewone tijden: De resultaten van het Woononderzoek Nederland 2012*. p. 53.
 40 Eurostat Statistics Explained. (2016). *Housing Statistics (2016)*.
 41 cf. 39, p. 21

Fig. 21 own illustration.
 Fig. 22 own illustration.

USER GROUP

A COMMUNITY NOT ONLY FOR MAKERS

All people who live in the community, makers and non-makers, have a similar mindset. They want to decide together and are being engaged to participate. Persons that actively participate are wanted for the community because here-by it becomes alive. This group is open-minded towards the interaction with the makers and with each other which also makes them likely to become customers eventually.

The community also gives an organizational framework to the activities taking place within the building. Although the whole community should be seen as one and there is a big overlap, the organization within has to be distinguished.

First, the organization of the collective workshop spaces which has to be organized more centrally. In institutions like the Holzmarkt in Berlin or the makerspace in Hanover which is a shared workshop, this is done by founding a limited liability company or corporation. Thereby, members have to pay a fee to use the workspaces and it is ensured that the machines work properly and there is guidance, also for safety reasons. It is still desired that members get involved in the configuration as well as the community.

Secondly, the community of residents of the house aims more at a balanced living together in the house and to organise some events and assemblies of the tenants. This could be organized by the tenants themselves in an association structure.

The idea is spread by those people because they are already convinced of the concept and they will invite friends and colleagues. Thereby, the community is strengthened further and the brand can establish. This is the reason why non-makers want to live there, because the place is known to the public. It becomes a vibrant place outside the main working hours of the makers due to the activities of the non-makers.

The external user group that lives in the building is also

important economically. It will be the biggest part of the dwellers. Having this pool of dwellings for external people and makers in rented apartments will ensure a regular change of people. It could be the stepping stone before buying an own house in the neighbourhood for a truly permanent place.

The architectural features of the building should stimulate the non-makers to be part of the community in everyday life.

THE THIRD USER GROUP

Last but not least, the third user group of the building is the public that comes from the neighbourhood and the whole city as clients and for leisure. They do not only come to see the makers at work and to buy their products but they also come to enjoy a cup of coffee or a beer. This is where the gastronomical part attached to the food crafts becomes even more important. On top of that, the connection to the waterfront and the new neighbourhood at *Havenstad* will play an important role in order to attract this user group on a regular basis.

TAKEAWAYS

- Makers that have their own business within the building are guaranteed a dwelling place
- A dynamic change of residents is created by offering only rented apartments which are open for everyone, also non-makers
- the external user group is important economically and the link of the community to the outside

MAKING

MORE SEPARATION FOR THE MAKERS

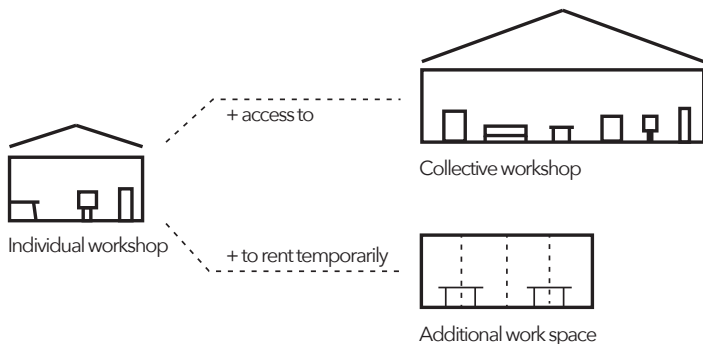


Fig. 23: Work spaces

Each maker has an individual workshop unit, according to his needs in size. A shared workshop offers bigger machines in different fields (wood, metal, laser-cutter etc.). It could be run part-time by several professional carpenters who can help out when needed and organize the space. This should be part of the organization within the community, also in terms of funding. Additionally, work spaces can be reserved for a limited amount of time when makers need more space for a certain task.

The workshop units should vary in size up to 100 m² to serve all crafts fields and different necessities in between. For the collective workshop, synergies of businesses that have similar needs in terms of machines have to be formed. With the collective workshop available, the individual workshops can be smaller than they usually would be. They are mainly for putting the pieces of work together and showcasing them and the process of working to the public. The number of workshop spaces should equal one third of the number of apartments within the building.

LIST OF MAKERS

need of heavy machines:	Potter	Costume Maker
Furniture Maker (wood)	Small Metal-Worker	Dressmaker
Furniture Maker (other materials, e.g. concrete)	Picture Framer	Knit-worker
Glass-blower	Laser-cut Producer	Bookbinder
Shoemaker	Sculpture Artist	Artist
Bike Maker (repair)	Artist	Photographer
Guitar Maker	no need of heavy machines:	Movie Maker
Violin Maker	3D-printed Jewellery	Artisan Baker
	Jewellery Maker	Confectioner
	Goldsmith	Brewer
		Coffee Roaster
		Ice Cream Maker

SPATIAL REQUIREMENTS FOR MAKING

The combination of dwelling and making requires some spatial separation due to the side effects of the production that takes place.

The main issues that are important for all crafts fields are an isolated fire safety system, a sound barrier and a constant temperature⁴². Delivery and therefore accessibility from the street or parking lot and storage are points that need to be considered in the spatial organization of the building.

Additionally, the making crafts require a barrier for dust, and an isolation towards the dwellings to prevent travelling vibrations. The structure should be able to support some heavy machinery and the ceiling needs to be higher than usual. For the creating crafts, daylight is even more important to do their work and the food crafts have to meet hygienic requirements.

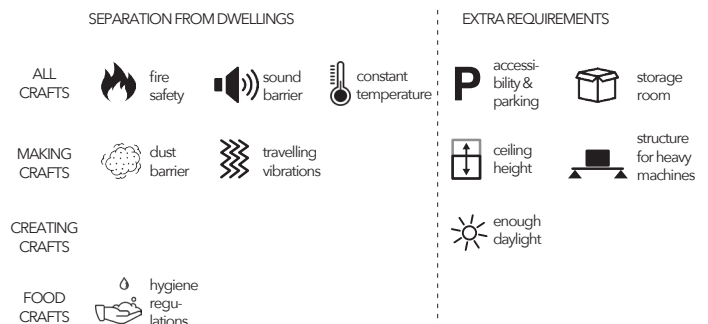


Fig. 24: Requirements for the work places in the crafts fields

42 Federova, T. & Onderzoek, Informatie en Statistiek, Gemeente Amsterdam. (2015). *Amsterdamse Ambachtseconomie 2010-2014*, p. 39.

Fig. 23 own illustration.
Fig. 24 own illustration.

SPATIAL NEEDS FOR LIVING

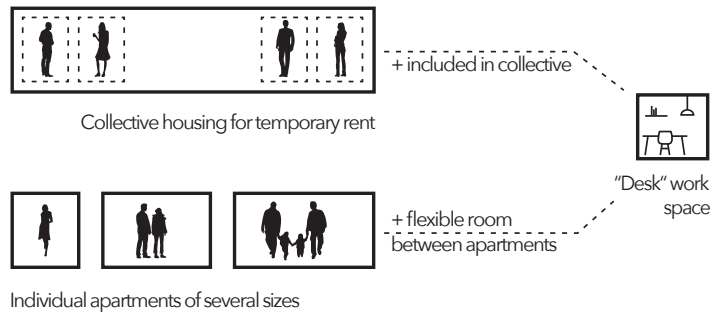


Fig. 25: Living spaces

TEMPORARY AND PERMANENT

One third of the people living in the building are running their businesses in the workshops. They are the main target group and should be guaranteed a dwelling place within the building.

Some shared apartments offer enough rooms to accommodate the starting makers and temporary residents if rooms are vacant. This is a good opportunity for the starters to get to know other makers that just started and grow into the community. It is meant for a period of between a few months up to 2-3 years until the business is established enough and the maker might decide to move into a permanent apartment. Whenever an apartment becomes available, the makers are preferred over external tenants.

ADAPTABILITY

The normal apartments should be of different sizes and adaptable to changing needs of the people living there. This could be achieved by a room in between two units that can be connected with either of the apartments. Thereby, apartments can become bigger or smaller according to the current need. It should also be possible to detach the room from both apartments and rent it out as an extra work desk space if it is not needed by either of the parties next to it.

Fig. 25 own illustration.

APARTMENT TYPES

Since the apartments that are not used by the makers are mainly aiming at young people, mostly single and couple apartment units will be demanded. They should reflect the lifestyle and the feeling of the maker's community in the whole building. There should also be bigger apartments that are suitable for families. All these apartment should be mixed within the building block to create some diversity and a mix of people.

The shared apartments should offer relatively small individual rooms and therefore bigger shared living spaces per apartment. However, enough privacy has to be ensured for the individual rooms within the apartment. Since there are only a few of them and the character is more collective, these apartments could be placed close to the collective circulation.

TAKEAWAYS

- The workshops need to fulfil certain requirements of separation towards the dwellings.
- There are temporary shared apartments and permanent rented apartment in order to guarantee the makers a dwelling place within the building.
- One third of the dwellers have their workshop in the building.

OVERVIEW OF POSSIBILITIES

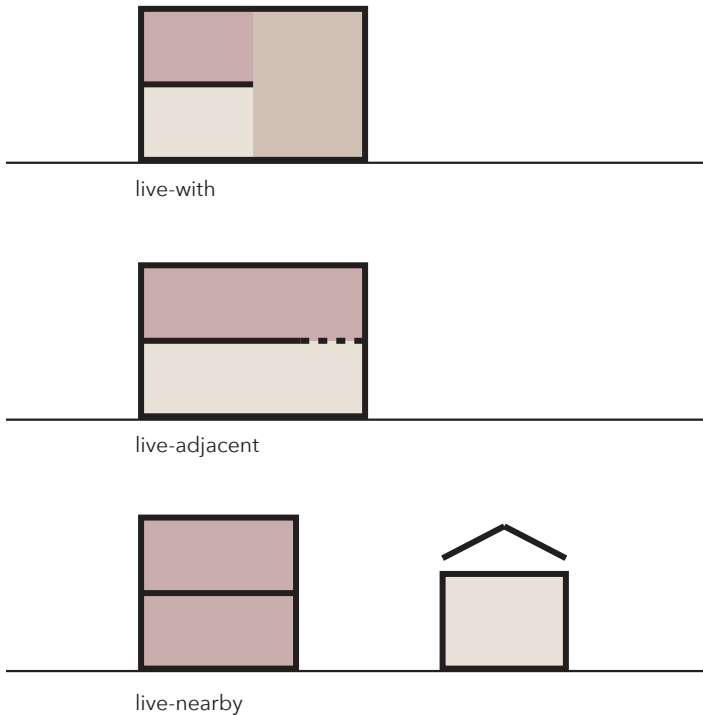


Fig. 26: Collaboration with other firms within the different crafts sectors

On her website “the Workhome Project”, Frances Holliss gives an overview of how working and living can be related spatially⁴³. The diagrams above illustrate the three different possibilities: Either there is no boundary between working and living, the two functions mingle in one room. The second option is to have the workspace separately, for example on the ground floor. It is not necessary to leave the house in order to switch between living and work space.

In the third option, the workspace is separate from the house, e.g. in the backyard or across the street so that the house has to be left to switch functions.

The workshops being open for the public on a regular basis has an influence on the dwellings as well as the collective spaces of the buildings.

PUBLIC / COLLECTIVE / PRIVATE

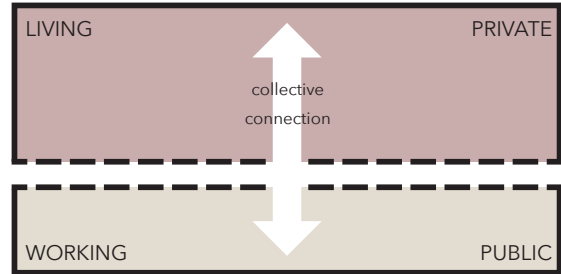


Fig. 27: Scheme - Collective connects working and living

The dwellings need to offer a higher degree of privacy as the maker is dealing with the public all day long in his workshop. On top of that, serving as an attraction point, the maker’s hub will also be busy during the weekends. That is why there must also be collective spaces that offer some privacy for the community of people living in the building. The collective part could serve as the major link between the workshops and public places and the dwellings. With the basic design principles in mind and the conclusions from the previous pages, it becomes clear that a spatial configuration between Holliss’ “live-adjacent” and “live-nearby”⁴⁴ should be attempted.

In order to have a more profound idea of the spatial configuration of the public working part and the dwellings as well as collective spaces and circulation, Four case studies are analysed further in chapter 5 of the research report (p. 52-61).

TAKEAWAYS

- Public workshops make some kind of spatial separation between working and living necessary
- Working is public, Living is private
- The community and its collective spaces can be the main link between working and living

43 Holliss, F. (n.d.). *The Workhome Project: Spatial Design Strategy*.

44 cf. 44.

Fig. 26 according to Frances Holliss, Designguide Spatial Design Strategy.

Fig. 27 own illustration.

GRADIENT OF PUBLIC SPACES

CHARACTERS OF PUBLIC AND COLLECTIVE

It has become clear that making needs to be public within the building. Therefore it needs to be situated on a place that is directly accessible. However, different degrees of public and collective have to be defined and distinguished in order to be able to come up with a spatial configuration.

The public making is at the same time “dirty” and “noisy”. In order to make it visible and also have the direct physical connection to the public, an in-between layer has to be introduced. Thus, the “heavy” work can only have a visual connection to the customers. They are directly connected through a layer of (work-) shops where the work is finished and showcased. Here, there is also room for collective spaces for the makers as well as some gastronomical facilities that are attached to the food crafts sector. This will invite people to stay around longer and make it not only the place to buy things but also to spend time.

The “in-between” layer will separate the “dirty and noisy” making from the dwellings spatially. At the same time it forms the link between the two conceptually. It is the heart of the building that is also representative to the outside.

An example how to distinguish between different kinds of public spaces is the Holzmarkt project in Berlin. With the configuration of building blocks the public that comes for leisure is guided through the commercial part to reach the waterfront. More privately used studios that are still accessible to the public are placed along a path that runs higher up through the building so that the traffic of people there is way smaller than on the ground floor areas.

The Holzmarkt community is to a large part defined by being a public place. Only due to this, it has become a vibrant place that is always busy which then again attracts both makers that open their business and customers that go to events or just have a stroll along the waterfront.

COLLECTIVE SPACES

The public layer of the building is a vibrant place where makers, tenants and the public meet and interact. However, for the people living in the building there is the need of some additional collective spaces that are of a more relaxed atmosphere. They could rather be seen as an extended community living room, a place to meet the neighbours without gastronomical service. While events are taking place downstairs, the collective spaces on the dwelling floors offer a place to have a tenant gathering or a movie night.

Another kind of collective space is formed by the shared workshops. They could take over the *makerspace* concept, which is gaining popularity in Dutch cities. One example is the ZB45 Makerspace in the East of Amsterdam. A shared workshop is open to everyone and users have to pay a fee to be part of the community. Thereby, the workshop would become collective, but of a more public character than collective spaces on the way to the apartments. The whole neighbourhood and even other parts of the city are involved to participate. The target group would be hobby makers who use the spaces mainly in the evenings and on weekends to activate it beyond normal working hours.

DESIGN QUESTIONS

How can the spatial configuration of the building separate making and living physically while functionally linking it in the everyday life of all user groups?

What architectural elements can be incorporated to make making visible on all scales of the building?

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COVER PICTURES

If not stated otherwise, all cover pictures are my own photographs.

RESEARCH HAMBURG HAFENCITY

Gitta Tolboom, Daphne Visser, Miriam Walther, Bas Mulleners



HISTORICAL OUTLINE

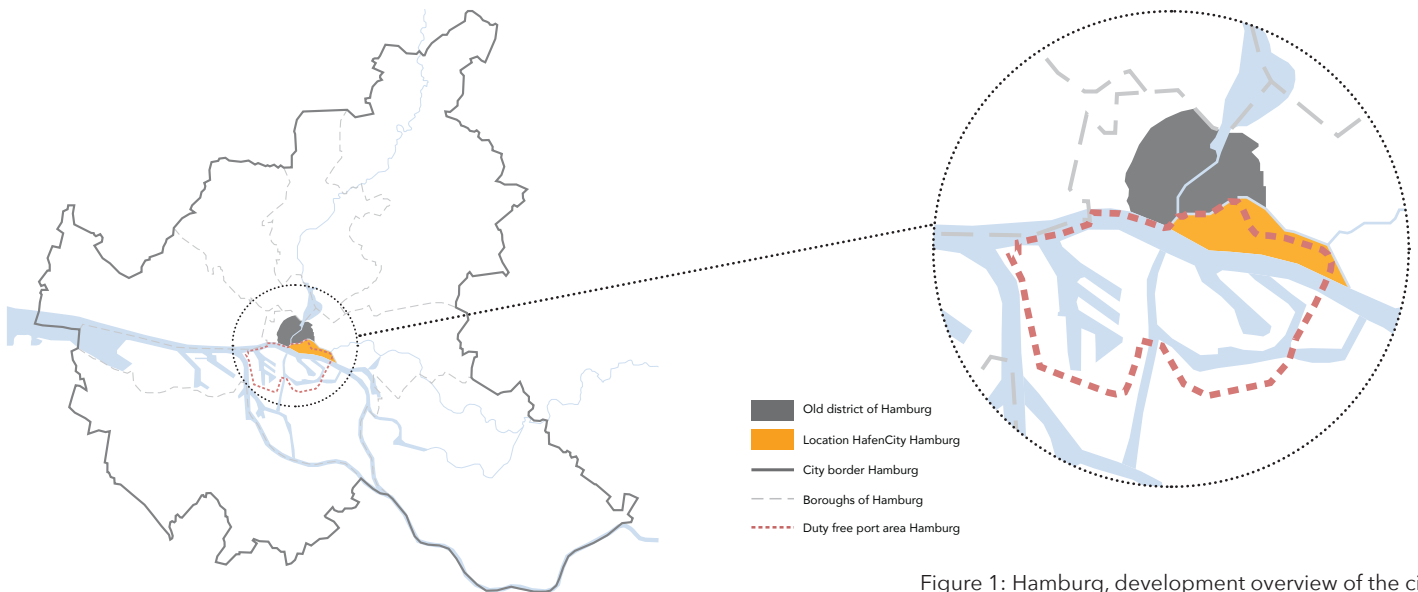


Figure 1: Hamburg, development overview of the city.

HISTORICAL OVERVIEW

In the eighth century a settlement emerged on a tributary of the river Elbe from which the city of Hamburg originated. It started to grow, especially in the 12th century, when trade in Northern Europe began to develop. The Elbe became a trade route and Hamburg was able to grow into a port city due to the exemption from customs duties that the city had received in 1189. The harbour and the city of Hamburg have always been closely linked. This was recognizable in the merchant houses in which living and working was combined.

With the growth of the harbour, new port basins had to be developed because the freight volume increased. This created the characteristic structure of water basins that now form HafenCity.

The exemption from customs duties originally applied to the entire city of Hamburg until in 1870 the border was moved only around the port area. The duty-free zone was separated from the old town by the *Zollkanal*. This development changed the relationship between city and port. The focus here shifted to facilitating storage space. The classic merchant houses were demolished and replaced by warehouses in the late

19th century forming the *Speicherstadt*. Mainly lower storage sheds were built where HafenCity is located now.

This situation remained up to the Second World War. During this period, large parts of the port were destroyed by bombings. After the war the reconstruction started quickly but it became clear that the part of the harbour that forms HafenCity no longer met the requirements for the new ships because the basins were too small and shallow. The harbour was moved to the South bank of the Elbe, which made way to the development of HafenCity from 1997.

A REFERENCE TO HISTORY

At the end of the 20th century, the development of HafenCity started. For this purpose, part of the old harbour was transformed into an area with a mixture of living, working and leisure. In the plan for HafenCity however, some elements can still be recognized from history.

First of all, the characteristic outline of HafenCity has been kept from the former harbour basins. Although some were

HISTORICAL OUTLINE

shortened, they still exist by retaining the quay walls and are used for recreational purposes and multiple harbour cranes next to the piers are a reminder of the industrial character. In addition, several historic buildings have been preserved. A large number of warehouses are still present in the *Speicherstadt*. Some were destroyed in the Second World War, but were rebuilt later. In HafenCity itself just a few historic buildings are still present. Examples are a mer-

chant house in *Brooktorkai*, a warehouse in *Elbtorquartier* and most famously the base of the *Elbphilharmonie* building at *Am Sandtorkai*. Finally, it can be recognized that the lines of building blocks have been retained. However, this did not happen by applying the same strip-shaped building volumes but by placing smaller volumes in the same line. This is mainly recognizable along the remaining harbour basins.



Figure 2: Map of HafenCity around 1900

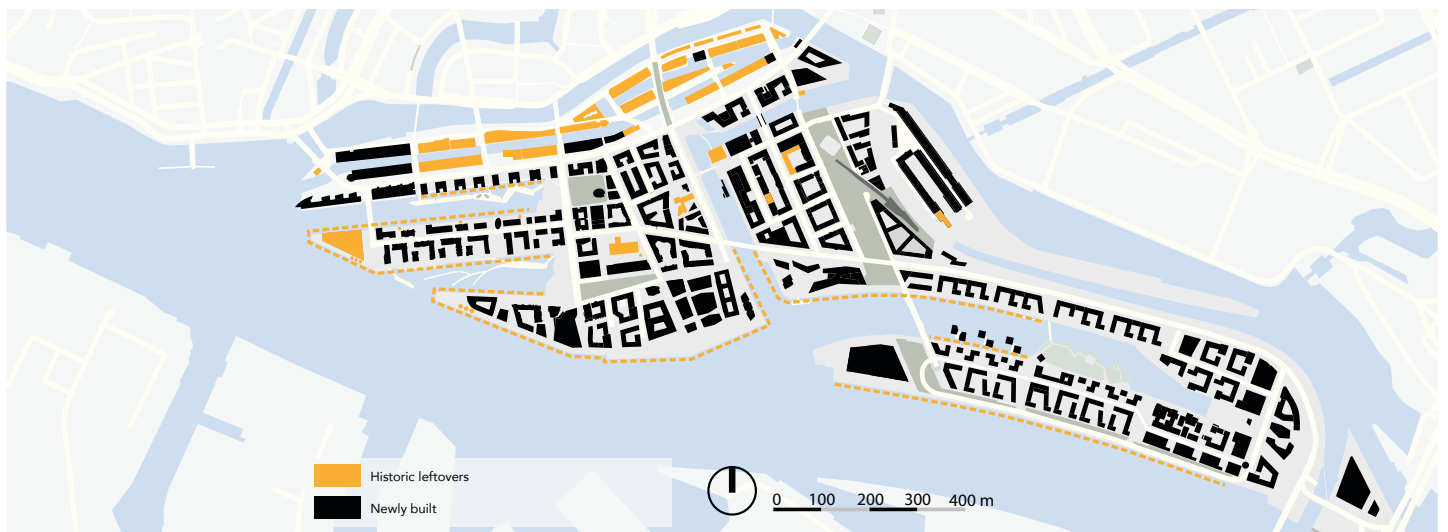


Figure 3: Map of HafenCity around 2030

Fig. 2 own illustration (group work)
Fig. 3 own illustration (group work)

DEVELOPMENT



Figure 4: map of the ten districts within Hafencity

THE 10 DISCTRICTS OF THE HAFENCITY

01 AM SANDTORKAI/DALMANNKAI work places: 2.700 people living there: 1.567	04 BROOKTORKAI/ERICUS work places: 3.350 people living there: 63	07 AM LOHSEPAK work places: 4.700 people living there: 1.365
02 STRANDKAI work places: 4.770 people living there: 1.539	05 ELBTORQUARTIER work places: 3.700 people living there: 777	08 OBERHAFEN work places: 500
03 AM SANDTORPARK/GRASBROOK work places: 2.600 people living there: 584	06 ÜBERSEEUARTIER work places: 6.140 people living there: 2.310	09 BAAKENHAFEN work places: 4.500 people living there: 4.620
		10 ELBBRÜCKEN work places: 2.310 people living there: 1.100

DISTRICTS AND DEVELOPMENT

The Hafencity master plan is divided into ten districts of different characters which are going to be executed and planned from west to east in a time span of about 25 years. The first new buildings were planned directly next to the existing *Speicherstadt* around the *Sandtorhafen* which already attracted tourists from the nearby attractions and the construction of the *Elbphilharmonie*.

The master plan is meant to be adapted to the conditions over time and serves as a general guideline. There are two quarters that serve as business and commercial hubs, the *Überseequartier* and *Elbbrücken*. Generally all quarters have mixed functions providing working and living facilities as well as cultural or recreational facilities.



Figure 5: map of development of the districts

In total there are 730 companies and 40 bigger firms in the Hafencity which are going to provide up to 45.000 jobs of which 35.000 in offices.

Fig. 4 own illustration (group work)
Fig. 5 own illustration (group work)

PEOPLE AND FUNCTIONS



Figure 6: map of the functions per building

CULTURAL FACILITIES

- 01 Elbphilharmonie concert hall
- 02 International Maritime Museum Hamburg
- 03 Automobile prototype museum
- 04 Oberhafen creative quarter in old train shed
- 05 designxport, exhibition and event centre for design

- 06 documentation centre denkmal Hannoverscher Bahnhof

OTHER

- 07 Cruise-ship Terminal
- 08 ecumenical church

EDUCATIONAL FACILITIES

- 09 Katharinenschule (elementary school)
- 10 education and family centre Baakenhafen with elementary school and day-care centre
- 11 school campus Hafencity
- 12 Hafencity University
- 13 KLU Kühne Logistics University

- 14 MSH Medical School Hamburg
- 15 International School of Management
- 16 Frankfurt School of Finance and Management
- 17 6 day-care centres for children that are active, 2 more planned

WHO LIVES IN THE HAFENCITY?

Hafencity and the inner city of Hamburg in general have an image of being only affordable for rich people. There are certainly some very luxurious and expensive apartments within the area but there are even more government-funded or price restricted rented flats. This is meant to ensure a mix of people instead of an elite in the new part of the city. There are cheaper government-funded flats and price restricted rented flats and cooperative housing at a medium price range. In the free market, there are rented flats and sold apartments from joint building ventures between, developers flats and high-end housing in higher price ranges. Families and people who do not need a car are favoured for funded flats. The percentage of families of 22,7% is already higher than the average of 17,3% in Hamburg. The Hafencity GmbH supports and suggests initiatives by

THE SOCIAL IDEA OF THE HAFENCITY

the citizens of Hafencity. They are motivated to engage and participate in the planning of public places like parks and playgrounds. There are several associations amongst the people who live there that have formed, for example the "Friends of the Lohsepark" who encourage activities in the park. People who live in the Hafencity meet in coffee houses and bars mainly on the *Überseeboulevard* which "feels more like a village than a big city", according to people who have already lived there for several years. It seems that the sense of the community grows strong because a completely new part of the city is forming which causes some own challenges for its first inhabitants.

Fig. 6 own illustration (group work)

INFRASTRUCTURE

HafenCity has a mobility concept which is attractive to pedestrians and cyclists with short and appealing routes as well as a network of bicycle rental stands. Between HafenCity and the city there is a barrier formed by the East-West orientated *Speicherstadt*, the waterways and the big road *Willy-Brandt-Straße*. In order to connect the HafenCity better with the city an underground connection was needed. Three new subway stops were placed in the area of HafenCity. On top of that, HafenCity is well con-

nected by other forms of public transportation, such as the rapid transit connection towards the East at *Elbbrücken*, a bus transportation system and several ferry stops connecting to the *Landungsbrücken*.

Also, the mobility concept stimulates car sharing with electric vehicles. Thereby, less parking space is needed, which reduces buildings costs and adds to the character of the area.



Figure 7: map showing car traffic, bike lanes and footpaths

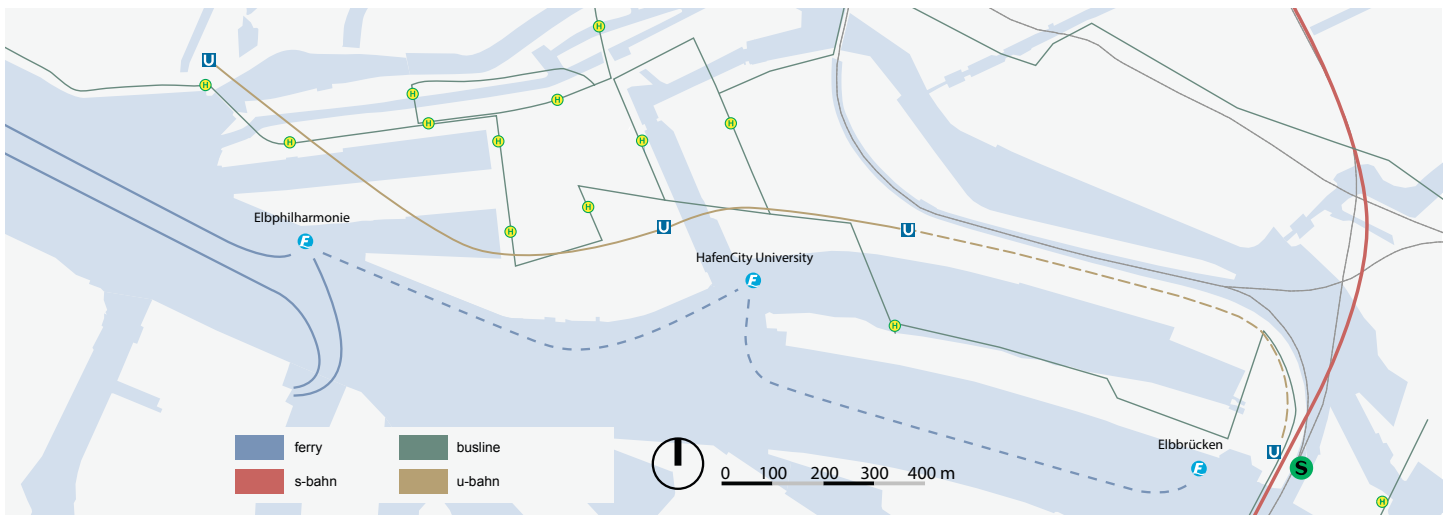


Figure 8: map showing public transportation routes

Fig. 7 own illustration (group work)
Fig. 8 own illustration (group work)

FLOOD PREVENTION

The river Elbe connects the North Sea with the inner city of Hamburg. Even about 70 km landwards, Hamburg has to deal with a changing water level due to the tides. Hafencity is located outside of the area protected by dykes as shown in figure 12. To prevent Hafencity from flooding and at the same time not to block the views towards the water by a dyke the whole area is raised. In addition, by raising the area the development could take place per district instead of the whole construction of a dyke, which would have



Figure 9: diagrammatic section between two former harbour basins



Figure 10: map of heights and evacuation routes

been necessary beforehand. Flood-protected parking garages are situated in the basement of the buildings and in the plinth there are public premises with flood doors. In order to prevent the infrastructure from flooding new infrastructure has been constructed at a flood save level of 7.5 to 8.3 meters above sea level. New flood secure bridges are built and older bridges are raised and renovated. There is one exception, namely the East-West orientated road *Am Sandtorkai/ Brooktorkai* which, due to it's close position to the *Speicherstadt* and its historic buildings, has not been raised. Besides, new flood-secure accesses connecting Hafencity to the inner city, needed to be created. The *Kibbelstegbrücke*, crossing the road *Am Sandtorkai/ Brooktorkai*, provides the connection of Hafencity

towards the area North of *Speicherstadt*. Under normal circumstances the bridge provides a route for pedestrians and cyclists - in case of flooding it provides access for emergency vehicles. In the East a flood proof connection is made via the *Oberbaumbrücke*, *Brooktorkai*, *Shanghaiallee* and *Überseeallee*. Public buses can use this route in case of flooding. In the South, a flood proof connection is made via the *Freihafen-Elbbrücke*. Additionally, a flood secure connection will be made via the *Grossmarktbrücke*, which has not been built yet. The promenades along the water will remain at the previous lower level of the port of 4.5 to 5.5 meters in order to give people a close connection with the water and to function as a water buffer.

Fig. 9 own illustration (group work)
 Fig. 10 own illustration (group work)

PUBLIC AND GREEN SPACES

GREEN SPACES



Figure 11: map of the public space

The Hafencity is full of public squares and parks of different urban character. Generally, most of the squares like the *Marco Polo* or *Magellan Terraces* are designed to step down towards the water, which means that they will flood partly from time to time but on the other hand bring the public spaces closer to the water. The floating platforms in

e.g. the *Sandtorhafen* add to this by providing a pedestrian connection right on top of the water. The parks provide some green spaces and playgrounds for children and at the same time form a link between the neighbourhoods. The spaces towards the water are more urban and invite to sit down and relax while the park areas suggest activities.



Figure 12: Swimming platform in Sandtorhafen



Figure 13: Marco Polo Terraces

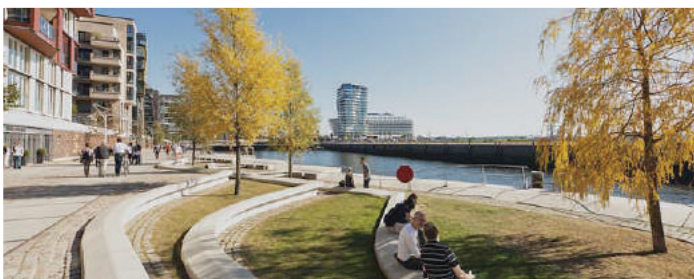


Figure 14: Dalmankaitreppen



Figure 15: Square close to the Elbphilharmonie concert hall

Fig. 12 <https://www.mimoo.eu/projects/Germany/Hamburg/Harbour%20Cube/>

Fig. 13 <http://www.mirallestaglabue.com/project/marco-polo-terrassen-hafencity-public-spaces/>

Fig. 14 https://hamburgfotos.de/hamburg_hafencity_neu/pages/bz00585.htm

Fig. 15 <https://www.hafencity.com/de/konzepte/stadt-der-plaetze-parks-und-promenaden.html>

DIVERSITY WITHIN THE NEIGHBOURHOODS

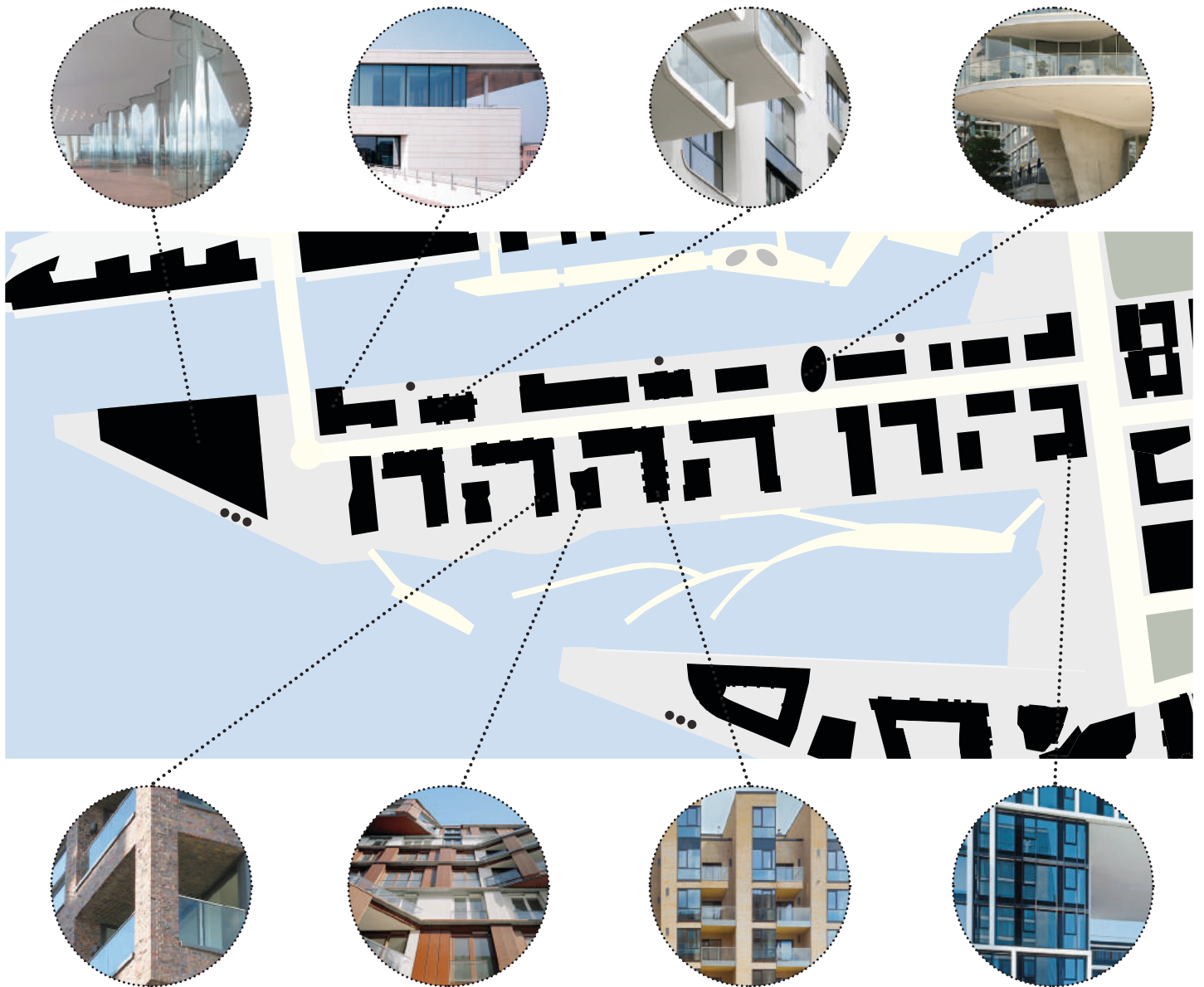


Figure 16: materials within one neighbourhood

Each neighbourhood has its own name and identity in HafenCity. This identity creates diverse characters in the neighbourhoods because each one has a large range of buildings functionally and concerning the material. In a dynamic way the building volumes are composed by sol-

ids and voids. Each volume then has its own appearance through materials and textures. This was deliberately chosen, because a large number of project developers and architects were involved in the process.

Fig. 16 own illustration (group work)

Photo 16.1 <https://iwan.com/portfolio/elbphilharmonie-hamburg-herzog-de-meuron/>

Photo 16.2 http://www.meurer-architekten.com/?portfolio_page=head-office-garbe-group-hamburg

Photo 16.3 <https://mapio.net/pic/p-10627322/>

Photo 16.4 <http://www.architectural-photographer.eu/wordpress/wp-content/>

Photo 16.5

<uploads/2012/08/oval2.jpg>

<http://www.buildingbutler.com/bd/APB-Biesert,-Wilkens/Hamburg/Kaiserkai-47/4944>

Photo 16.6

<https://www.area-arch.it/en/bf21-vanmeer/>

Photo 16.7

<http://www.hgesch.de/commissioned-works/architecture/overview/>

Photo 16.8

<http://www.tchobanvoss.de/projekt.php?id=74&lang=EN>

FORM AND FUNCTION

The urban structure revives the tradition of the block with an internal courtyard, which recalls the building density of the nearby historic city centre of Hamburg. The design intent is to make a lively urban addition that draws the main lines of growth and scale from the historical city. Through ingenious techniques of connection, the various urbanists and architects working on this project are able to comprise of different forms of blocks and shapes by making variations and combinations of the same basic form. HafenCity blends in with the cubature and building height of Hamburg's existing downtown instead of dominating the cityscape as a modern, vertical city. Only a few buildings, placed in scenic and significant positions, will form higher points. These will be part of the new points of

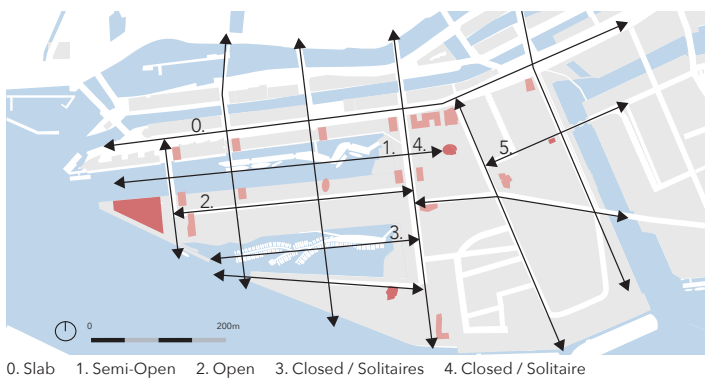


Figure 17: Map showing axes

Sandtorkai makes an instant distinction from the original slab warehouses of the *Speicherstadt* by changing the urban fabric to semi-open buildings. The interrupted structure also keeps an "open" character in the otherwise enclosed street. This is also enhanced further to the South with the open blocks making up a bigger fabric. The inner street on this peninsula keeps an open view to the water-side and to the neighbouring districts.

Between the peninsulas a scale difference can be recognised of the open spaces between the buildings. From North to South buildings are scaled up and irregular forms indicate a more commercial and public function. While the inner areas are defined by their roads and the height of

reference within the urban profile. This method leaves the icons of the city with their original relevance while providing some orientation points in a dense area.

In this typology research the focus is drawn to the already built environment in the West of the HafenCity. The water-side areas have more open and semi-open blocks, while the other neighbourhoods are dominated by enclosed blocks that are more street oriented.

The axes in HafenCity correspond to the building types with extended heights on the crossroads to enhance the views in the area. The high-rises are situated free-standing on the top of the dock through the *Elbphilharmonie*, and to a lesser extend in more spacious areas as points of recognition.



Figure 18: Map showing type-zones, accents and highlights

the buildings, the waterside renders these buildings much smaller to its site.

The *Graasbrook* and *Überseequartier* areas are defined by a more urban and enclosed character, combining living, working and commercial functions. Thus the area's buildings scale up in width, focusing mainly on the closed block. There is a high density that fits the gathering of mixed functions and its urban context, as opposed to the spacious and open character of the watersides.

The buildings are much bigger creating an urban character through form rather than height. They make incisions above the plinth which creates semi-private spaces above ground.

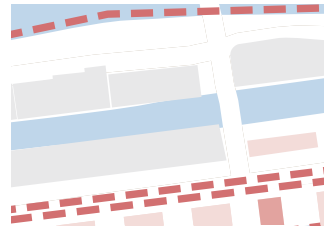
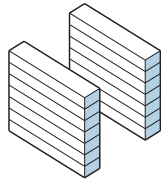
Fig. 17 own illustration (group work)
 Fig. 18 own illustration (group work)

TYOLOGY

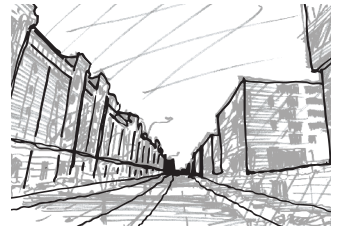
0. SPEICHERSTADT



SLAB



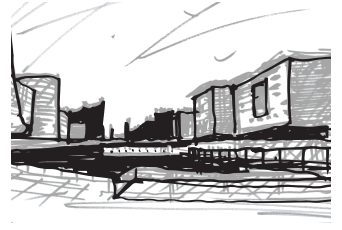
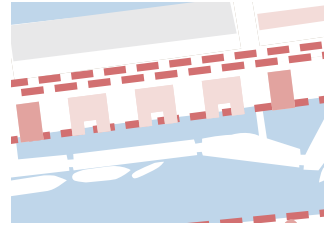
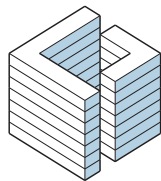
PENINSULA



1. SANDTORKAI



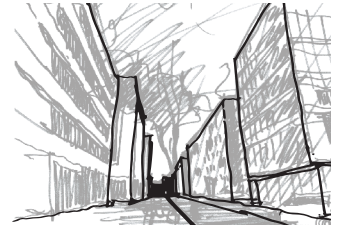
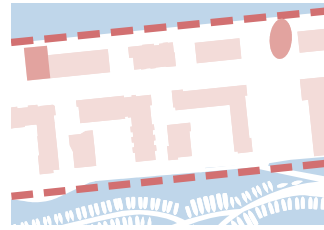
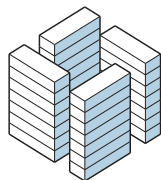
SEMI-OPEN



2. DALMANNKAI



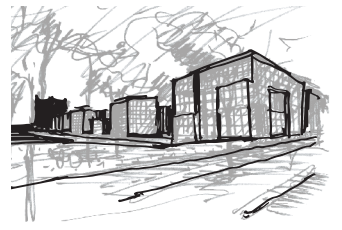
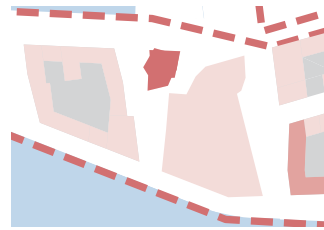
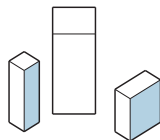
OPEN



3. STRANDKAI



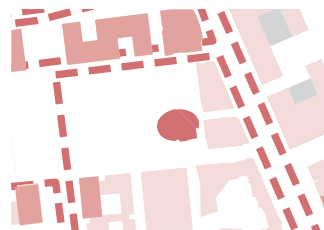
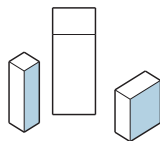
SOLITARY (CLOSED)



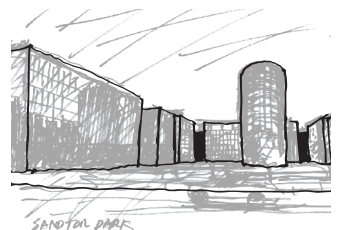
4. GRAASBROOK



SOLITARY CLOSED



CITY



5. MAGDEBURG



CLOSED (SOLITARY)

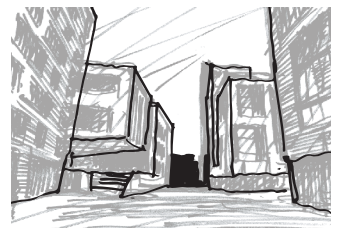
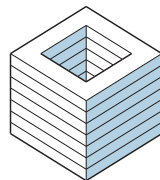


Figure 19: Typology Matrix

Fig. 19 own illustration (group work)

URBAN DESIGN PROPOSAL

Daphne Visser, Miriam Walther, Christine Lie



ANALYSIS OF THE URBAN FRAMEWORK

HIGHWAY RING AND MAIN TRAIN ROUTES

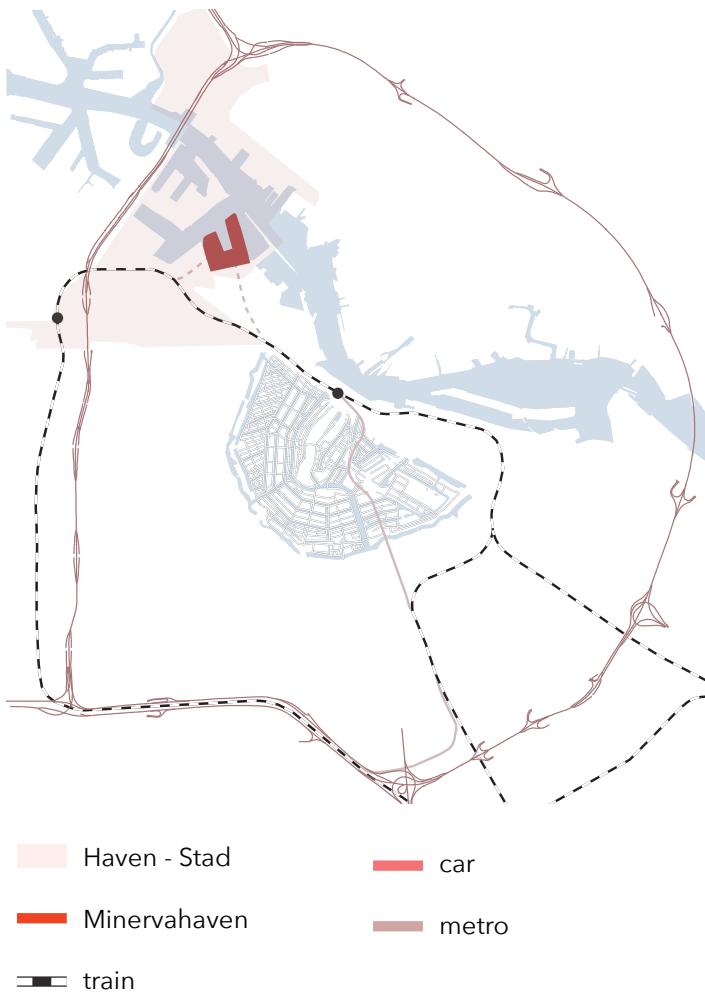


Fig. 1: Scheme - Collective connects working and living

The plan area "Minervahaven" is part of the newly to be transformed area Havenstad. The city of Amsterdam is planning to transform former harbour areas into work and residential areas. The surface area is huge and therefore plays an important role for the development of the city. It can be compared to the Hafencity development in Hamburg as analysed before. Havenstad touches the North-West end of the canal ring and is mainly situated within the big highway ring that surrounds the city. Therefore, it has a strategic position.

INFRASTRUCTURE - BICYCLE NETWORK

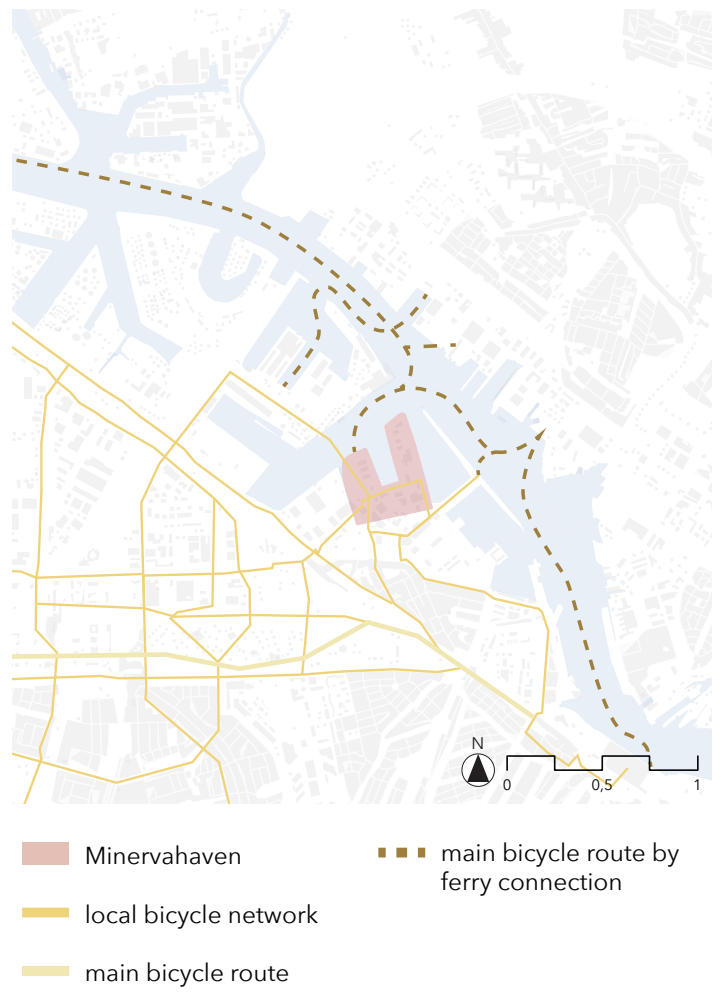
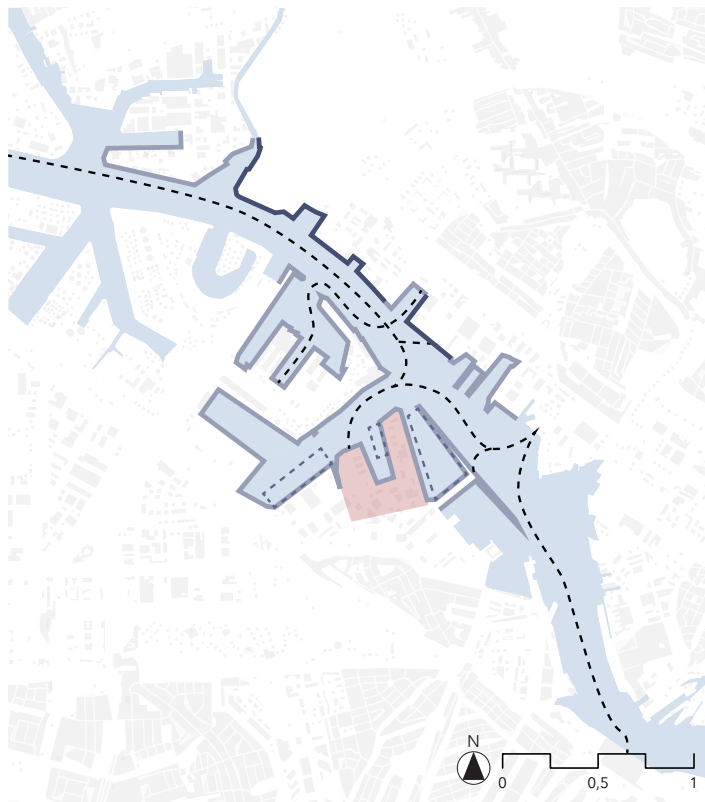


Fig. 2: Scheme - Collective connects working and living

Havenstad's identity is dominated by the former harbour basins. The water is also an important factor for bicycle routes as ferry connections towards the North are frequently used. The bicycle network connects the big train stations Amsterdam Centraal and Amsterdam Sloterdijk through Havenstad. With a new pedestrian and bicycle bridge and a ferry point, Minervahaven is situated at an important junction of bicycle routes.

ANALYSIS OF THE URBAN FRAMEWORK

WATER PROGRAMME

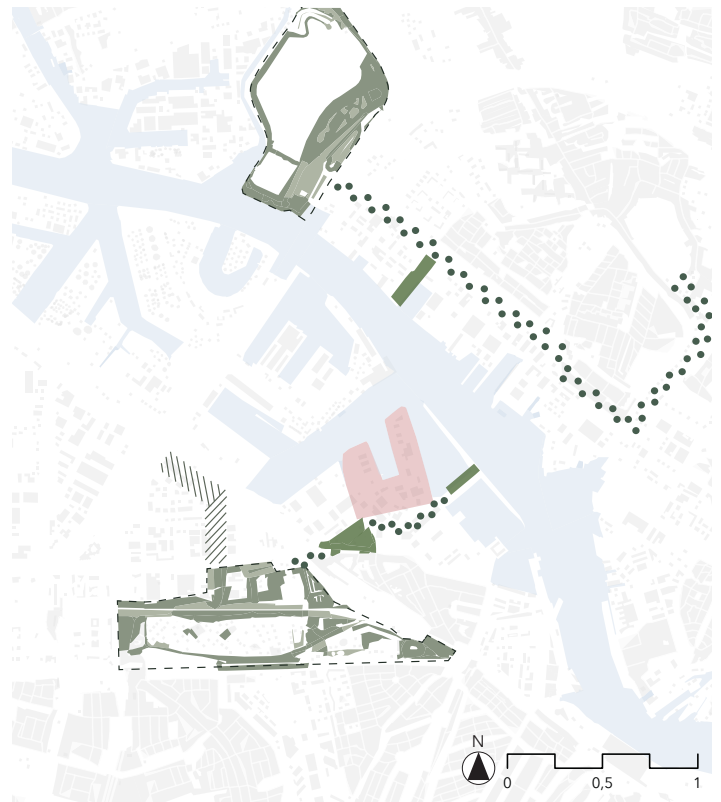


- Minervahaven
- private embankment
- nautical programme
- ferry connection
- public embankment

Fig. 3: Scheme - Collective connects working and living

The former harbour basins create a big surface of waterfront. They can be private or public in Havenstad. The plan area is completely suggested to have a public waterfront and some nautical programmes like a private boat harbour.

GREEN SPACE



- Minervahaven
- sports park
- city park
- green corridor
- neighbourhood park

Fig. 4: Scheme - Collective connects working and living

Starting with the existing Westerpark on the edge towards the canal ring, a green corridor is suggested to connect green spaces on both sides of the river. Minervahaven is passed by the green corridor but the area itself is dominated by its huge water surfaces, lacking additional green spaces.

QUALITIES & NUMBERS

CHANCES AND QUALITIES

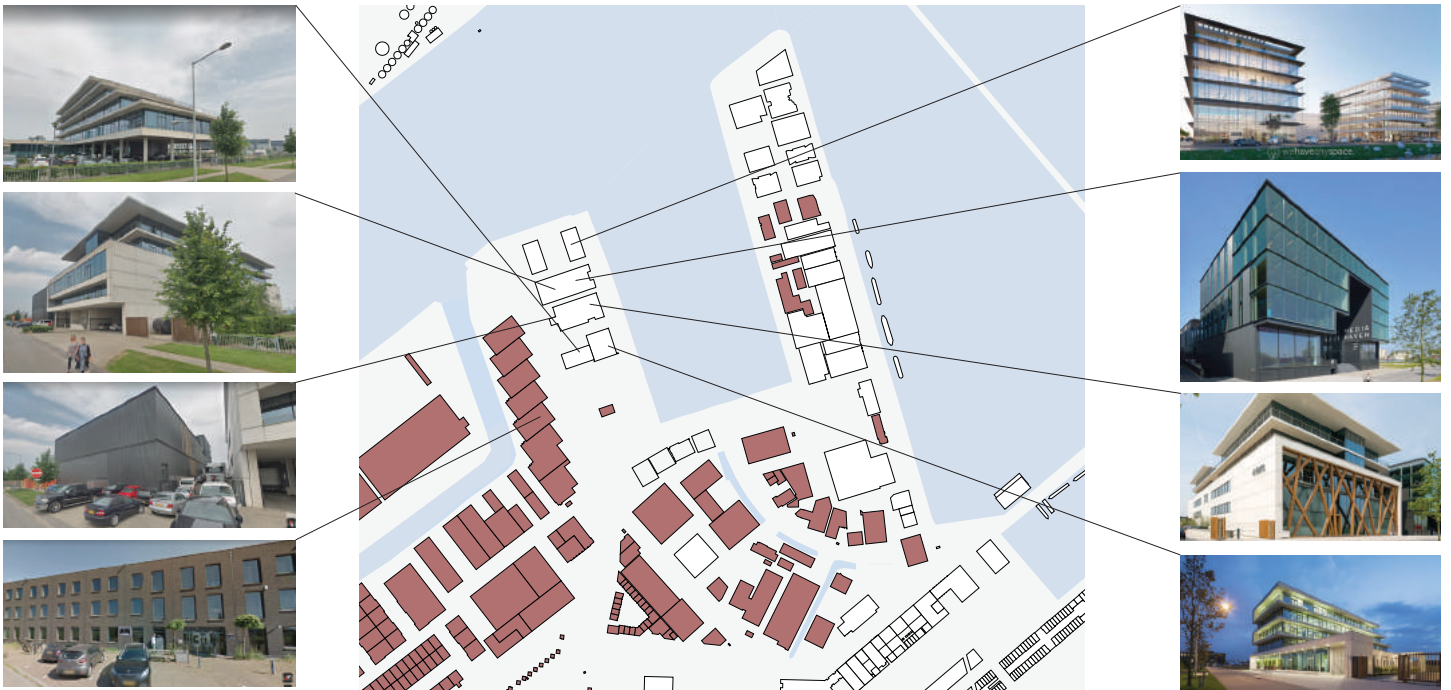


Fig. 5: Buildings to keep (white) temporarily and buildings to tear down (red)

STRATEGY FOR MINERVAHAVEN



SLOW TRANSFORMATION

Within the coming 20-30 years the individual existing buildings will transform from mainly office buildings to mainly housing.

OLD AND NEW

The focus lies on Moermanskade where some of the new existing buildings are kept for now with an aim of transformation in the far future.

ENTIRELY NEW

Except of the Amsterdam Theatre, this area is going to transform into a very dense living area within the existing grid of the streets.

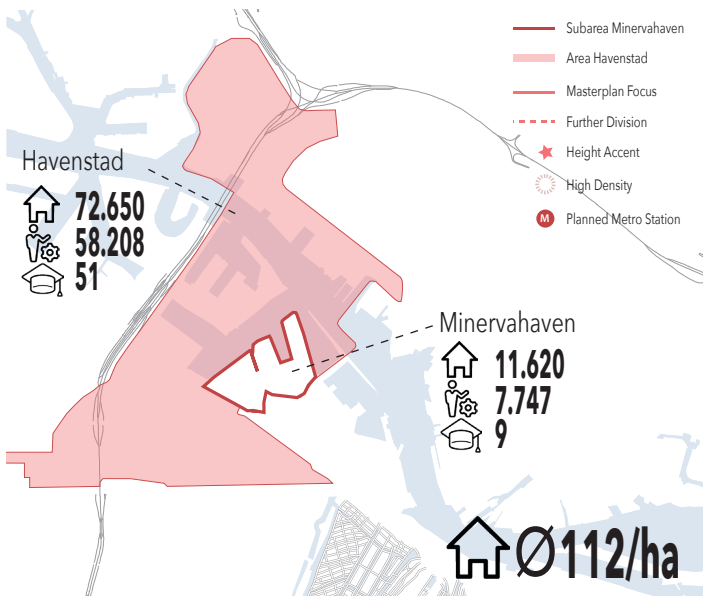
Fig. 5: Scheme - Collective connects working

Fig. 5 Pictures on the left: Google Maps. (2018). *Moermanskade*. Retrieved 22-10-2018 from <https://www.google.de/maps/> Pictures on the right: Senl. (2018). *Moermansk 300*. Retrieved from <https://senl.nl/projecten/moermansk-300/> V8architects. (2018). *Mediahaven Amsterdam*. Retrieved from

<https://v8architects.nl/project/mediahaven/Architectuur>. (2018). *Buren bij het IJ*. Retrieved from <https://www.architectuur.nl/project/buren-ij/> DANDNA. (2018). *Let's talk*. Retrieved from <http://dandna.nl/en/dna-contact-form/>

QUALITIES & NUMBERS

HAVENSTAD



In order to determine the number of dwellings required in the plan area, the ambitions of the municipality in their vision for Havenstad from 2017 are closely considered. Minervahaven is suggested to have a higher density within Havenstad, requiring an average of 200 dwellings per acre.

The focus in this design lies on the section Moermanskkade which is divided into three sub-areas where different densities are created in order to reach the city's ambitious average of 200 dwellings per acre required. With a growing population and use of space, this density is necessary for the Amsterdam of the future.

Fig. 6: Numbers of dwellings, work spaces and schools in Havenstad

MINERVAHAVEN

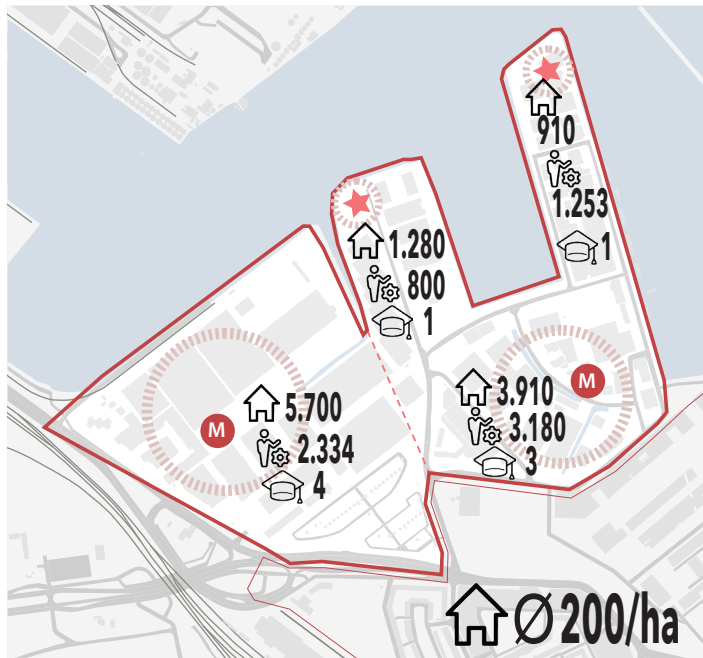


Fig. 7: Numbers of dwellings, work spaces and schools in Minervahaven

MOERMANSKKADE

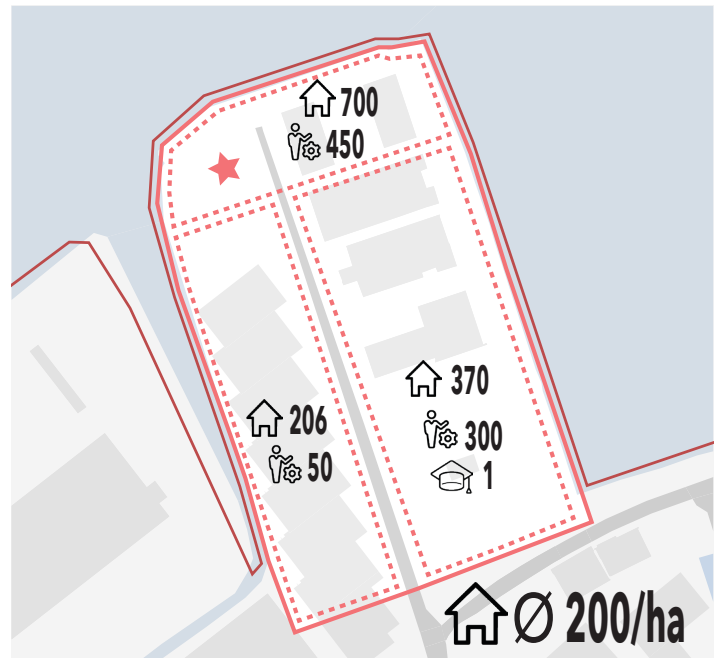


Fig. 8: Numbers of dwellings, work spaces & schools in Moermanskkade

URBAN DESIGN CONCEPT

A PUBLIC WATERFRONT

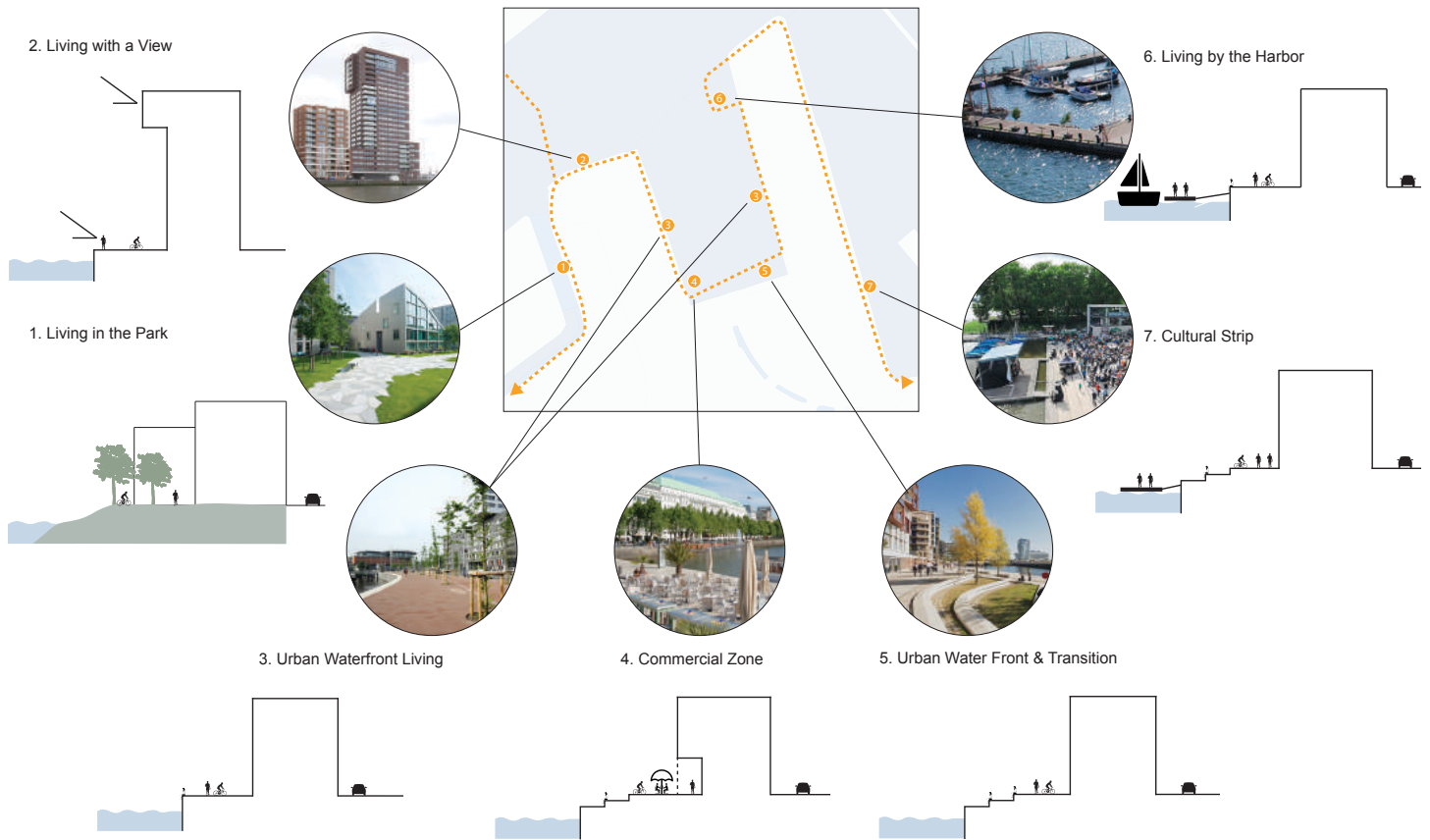


Fig. 9: The waterfront determines the identities of the subareas

The main concept is determined by the waterfront. It gains its identity through a public walking and cycling route which runs along the whole waterfront, connecting main bicycle routes in the area. Cycling along the route, different atmospheres of waterfronts can be experienced which determines the subareas. This evolves from the depth of the view (see Fig. X) and existing infrastructure. On Moermanskkade three subareas are formed: Living in the Park next to the canal, Living with a view on the head of the pier and Waterfront Living on the long edge of the big harbour basin. The first one has the lowest density because of the more intimate relation to the opposite bank of the canal. The head of the pier is highlighted with high-rises that enhance the view where the visual connection to the

opposite gets lost due to the big distance. The third area is lower but has a very urban waterfront character, still keeping the visual connection to the thinner pier but forming a hard edge towards the water.

The canal left of Moermanskkade is suggested in the vision of the municipality and has been taken over for the urban design proposal. The street connection parallel to it is a logical consequence that has also been incorporated.

Fig. 9 references:

- 1 Lloydtoren, Rotterdam, The Netherlands
- 2 Funenpark, Amsterdam, The Netherlands
- 3 Westerdoksdijk, Amsterdam, The Netherlands
- 4 Restaurants at Binnenalster, Hamburg, Germany

- 5 Dalmannkaitreppen, Hamburg, Germany
- 6 Toronto Central Waterfront, Toronto, Canada
- 7 Aaseeterrassen, Münster, Germany

URBAN DESIGN CONCEPT

SUBAREAS



Fig. 10: The waterfront determines the identities of the subareas

INFRASTRUCTURE & PARKING



Fig. 11: Car, bicycle and ferry routes

MOERMANSKKADE

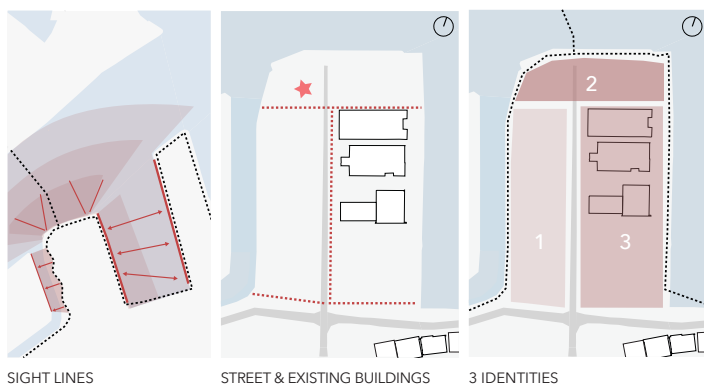


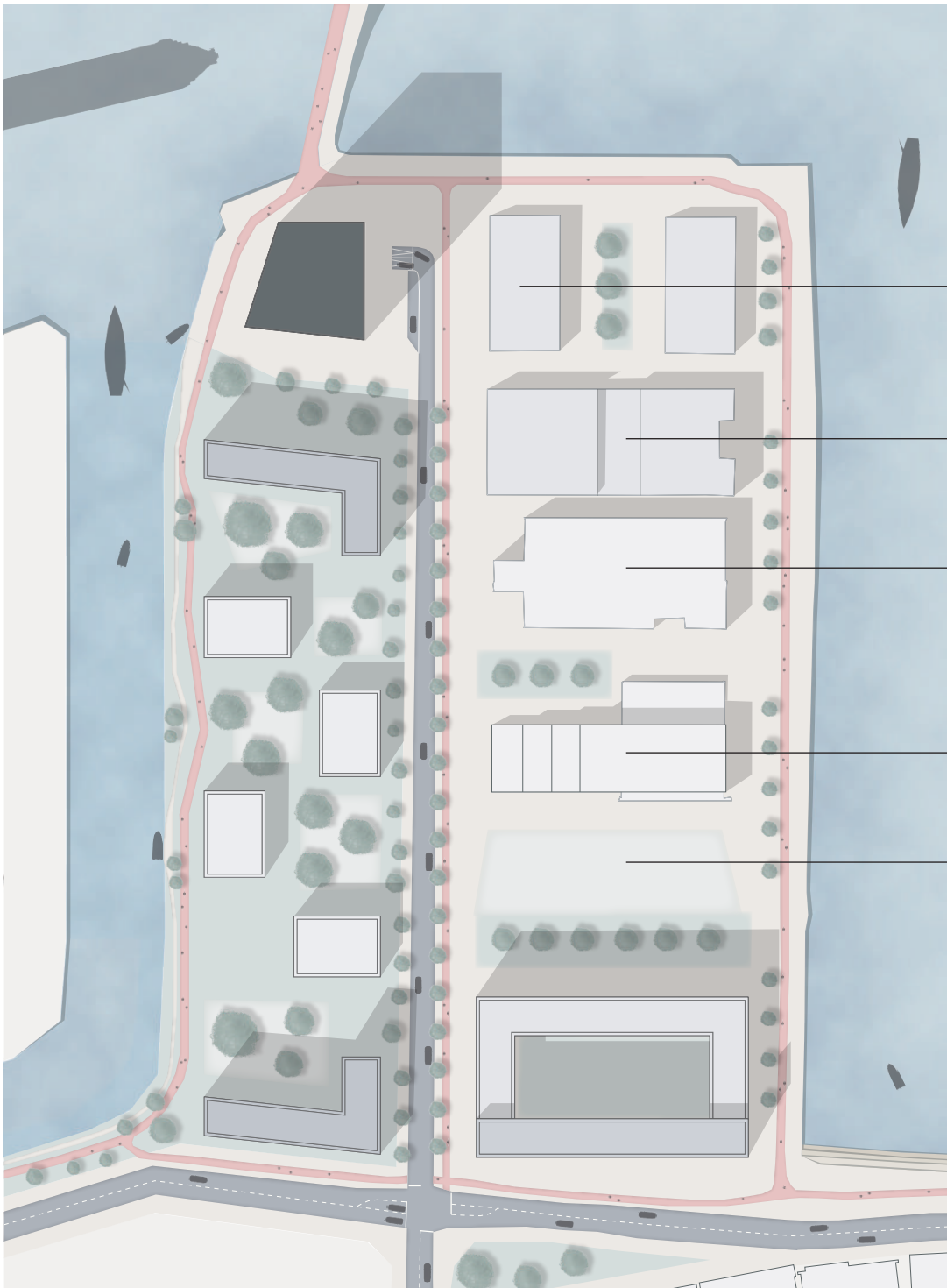
Fig. 12: Three identities on Moermansskade

In the city's vision, a very low parking index of only 0,2 cars per dwelling is sought for. Therefore, punctual underground parking garages are introduced on strategic places along a major car routes. The waterfront is mainly car free and dominated by the bicycle route. A new ferry connection and pedestrian bridge on the head of the Moermansskade prevent it from becoming a dead end. The metro station next to the existing theatre is an important addition to the public transportation network.

URBAN DESIGN PROPOSAL

MASTERPLAN PHASE 1

2025



office buildings

media studio

office building

temporary school

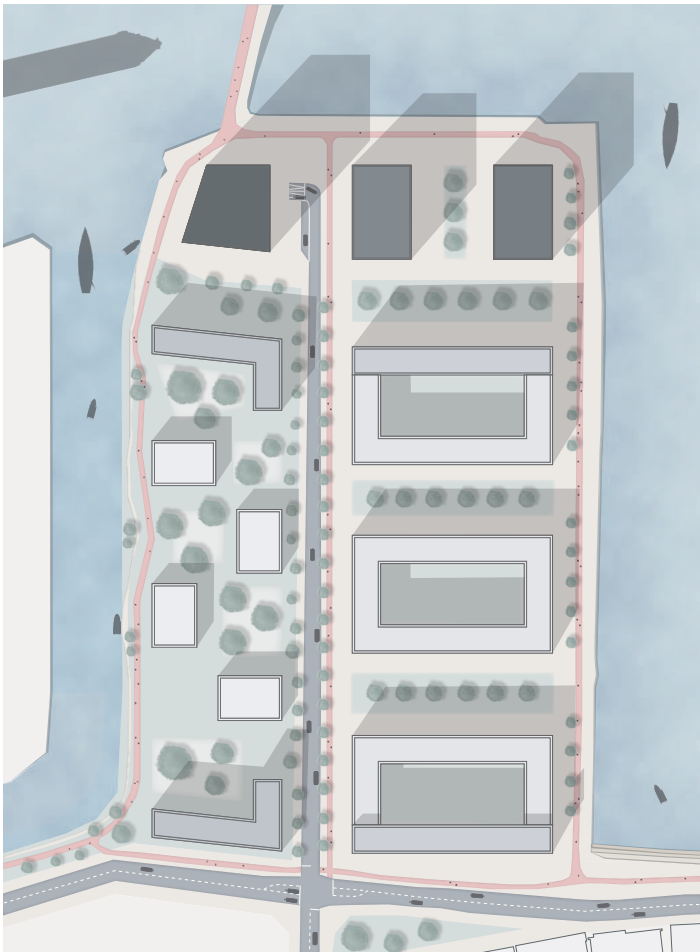
temporary sport park

the entire pier:

 96/ha

MASTERPLAN PHASE 2

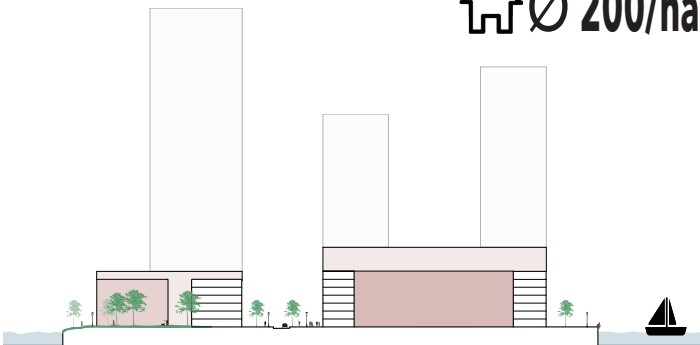
2040 THE MASTERPLAN IN TWO PHASES



The new buildings on the thinner pier opposite of Moermanskade are kept entirely and with their smaller sizes are suitable to be transformed to dwellings. On Moermanskade, four big volumes hosting office buildings, have been built recently but are not suitable to be transformed to dwellings. Therefore, a masterplan in two phases is suggested. The new existing buildings are kept for the coming 20-30 years and are going to be replaced by dwellings in a later phase in order to achieve the high density required for the future.

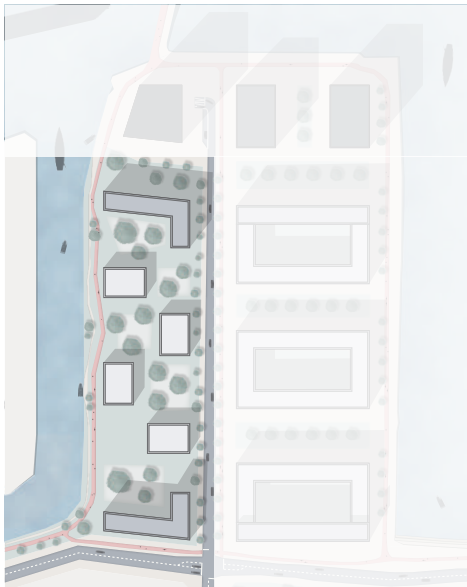
The only street on Moermanskade runs through the centre of the pier to keep the waterfront car free. The bicycle and walking route along the water run through all different sub-areas on the pier.

 Ø 200/ha



THE THREE SUBAREAS

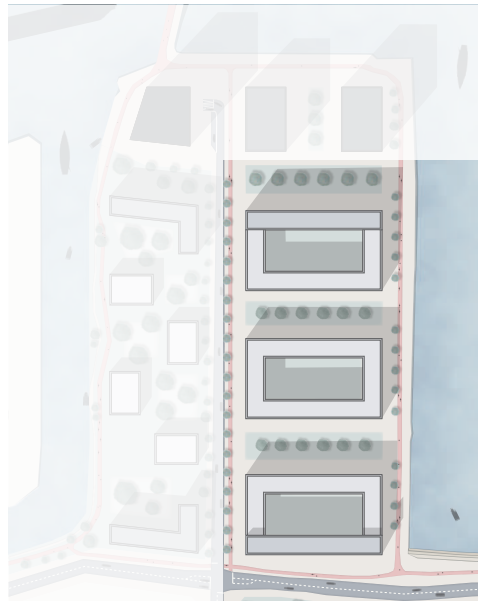
LIVING IN THE PARK



206
 50
 0

surface area:
 2,0 ha
 Ø dwellings/ha:
 103

WATERFRONT LIVING



370
 300
 1

surface area:
 2,9 ha
 Ø dwellings/ha:
 127



Fig. 13: Landlab: Funenpark, Amsterdam



Fig. 15: DZH: Grunobuurt Typhoon, Groningen



Fig. 14: Java-Eiland, Amsterdam

Section
(schematic)



Fig. 16: Maashaven Noordzijde, Rotterdam

Section
(schematic)

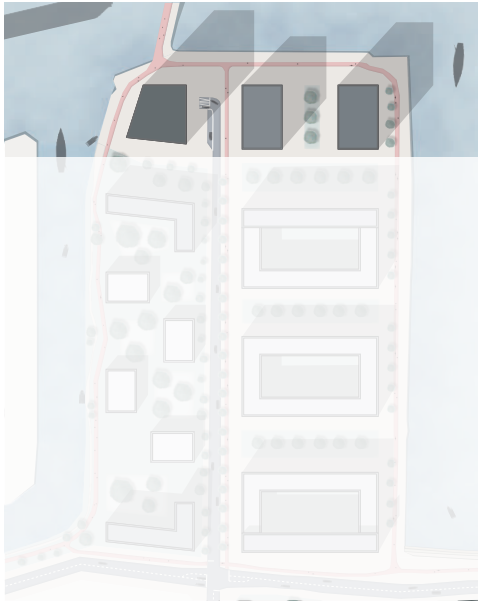


- Fig. 13 Landezine. (2011). *Funenpark*. Retrieved from <http://www.landezine.com/index.php/2013/02/funenpark-by-landlab/>
 Fig. 14 BNA (9-11-2018). *Java-Eiland, Amsterdam*. Retrieved from <https://www.bna.nl/java-eiland-amsterdam/>
 Fig. 15 De Zwarte Hond. (2015). *Typhoon*. Retrieved from

- <https://www.dezwartehond.nl/en/projecten/typhoon>
 Fig. 16 own photograph

THE THREE SUBAREAS

LIVING WITH A VIEW



surface area:
1,5 ha
Ø dwellings/ha:
466

LIVING IN THE PARK

The softer edge towards the canal and the informally placed building volumes create a park-like atmosphere. Whereas the bicycle path is mostly dominated by big open water surfaces, here the small canal and the park create a more intimate feeling. The dwellings in the centre are even ground-bound, directly in the park.

WATERFRONT LIVING

Three big building blocks give the hard edge towards the water an urban character and form a transition between the park and the high-rises on the head of the pier. While a connection to the water is aimed for, the bicycle route is not to be interrupted and the waterfront stays public.



Fig. 17: De Zwarte Hond: Lloydtoren, Rotterdam

LIVING WITH A VIEW

The high-rises at the head of the pier are from West to East 120, 80 and 100 m high. They accentuate the pier and give it a very urban character. With big open water surfaces a great view will be achieved.



Fig. 18: KCAP: The Red Apple, Rotterdam

Section
(schematic)

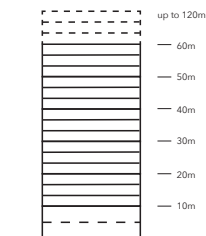
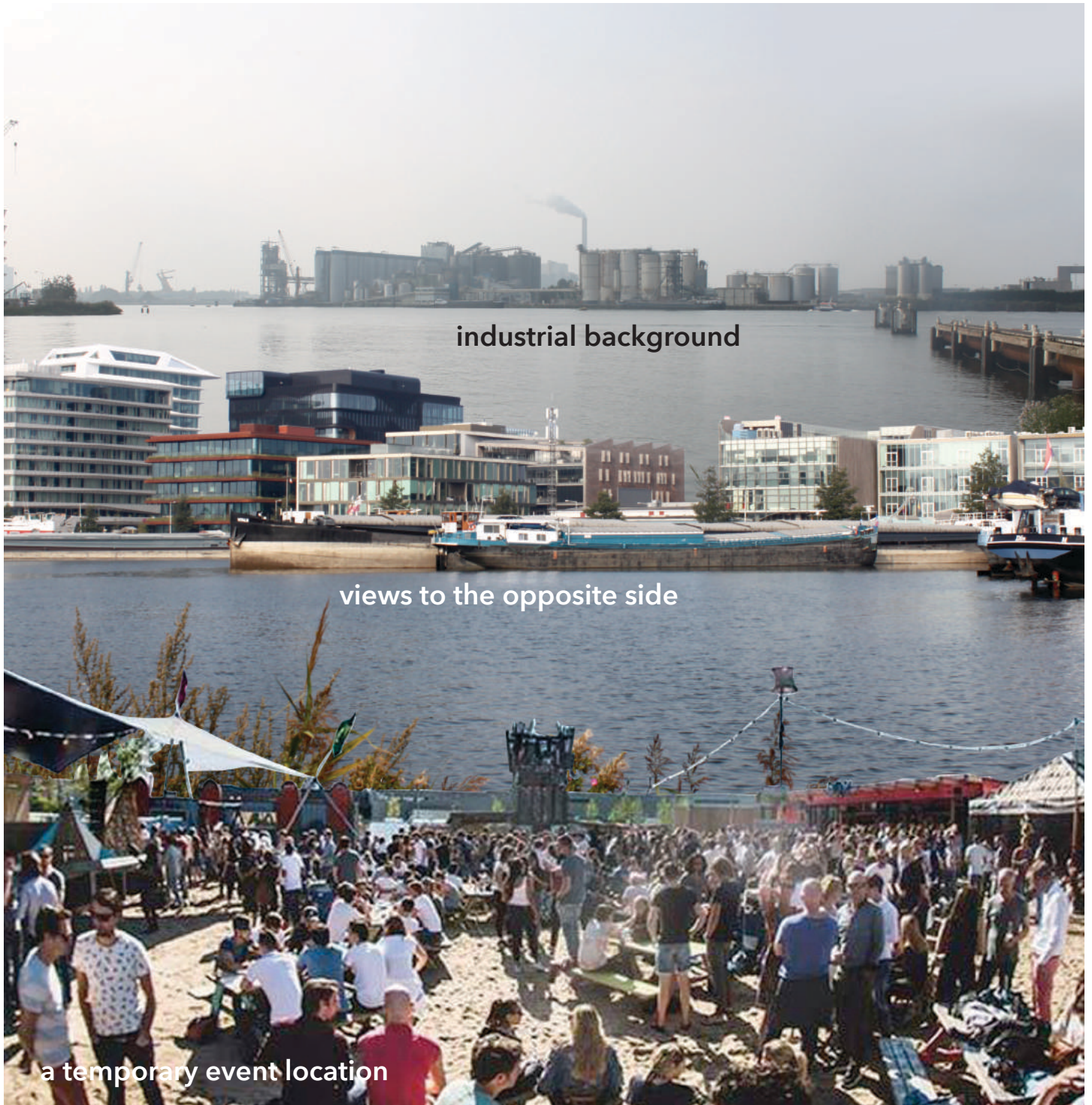


Fig. 17 Top010. (27-0-2011). *Lloydtoren*. Retrieved from <https://nieuws.top010.nl/lloydtoren.htm>

Fig. 18 KCAP. (2009). *The Red Apple*. Retrieved from https://www.kcap.eu/en/projects/v/the_red_apple/

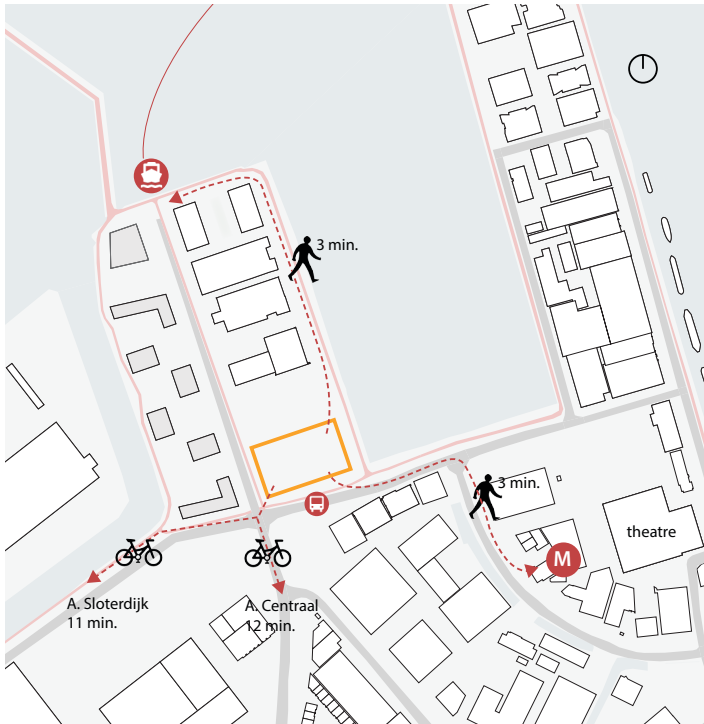
SITE ANALYSIS



Collage own work and pictures except the picture on the bottom:
Hello Amsterdam (2018). *Sushi Festival Amsterdam 2018*.
Retrieved 05-01-2019 from <https://www.helloamsterdam.nl/agenda/festival/sushi-festival-amsterdam-2018/>.

SITE ANALYSIS

THE SITE IN ITS CONTEXT

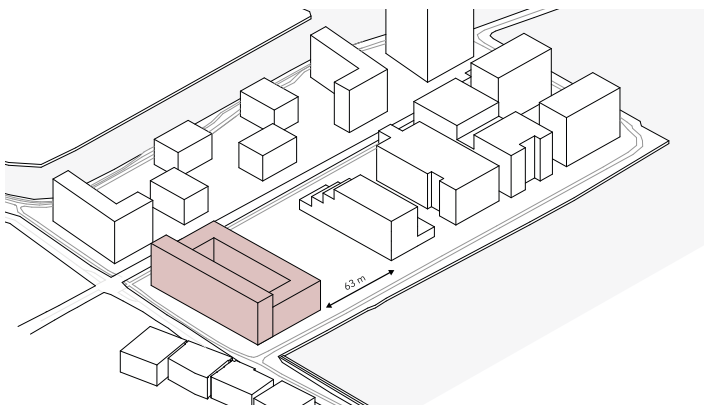


CHOICE OF THE SITE

The site has been chosen because of several strategic reasons. Firstly, it is situated along the urban waterfront of Minervahaven. On the other side, it is situated on a junction of the main street and the street entering Moerman-skade. Therefore, the building is both accessible from the waterfront and the street. This is particularly important for the making part of the building which needs to be seen easily by the public and for bigger deliveries of materials. Furthermore, on the entrance point of the pier, the bus stops directly in front of the building which forms an extension of the commercial centre of the neighbourhood. It is only a three minutes walking distance to both the Metro station in front of the theatre and the ferry point at the head of the pier.

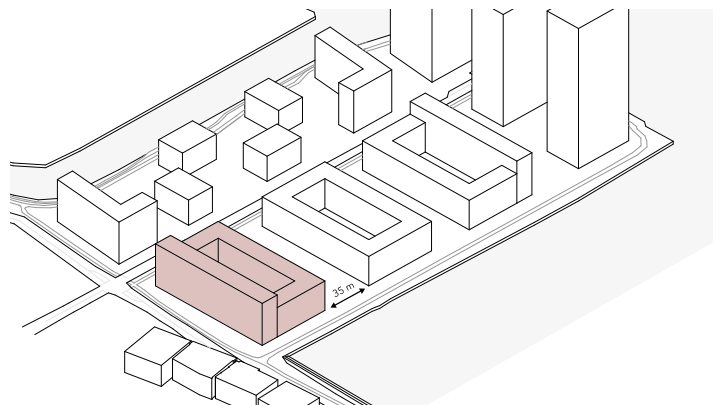
In addition to the bicycle route that runs along the waterfront, the site is reachable by bike from the train stations Amsterdam Centraal or Sloterdijk within 11-12 minutes.

BUILDING MASS & SURROUNDING 2025



In the first phase of the master plan, the neighbouring plot will remain empty with the existing building 63 m away. Temporarily, the park in between can be bigger.

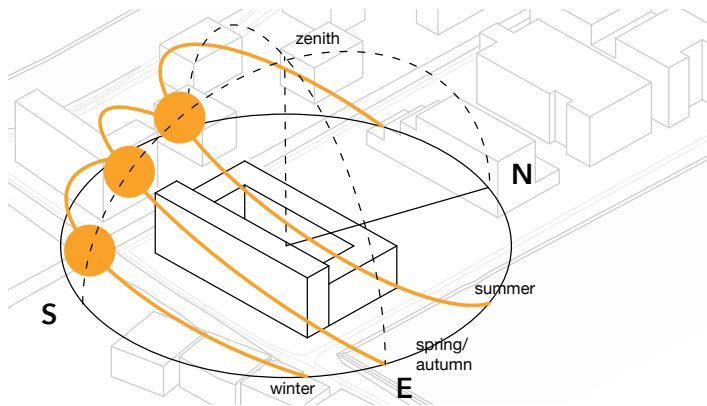
BUILDING MASS & SURROUNDING 2040



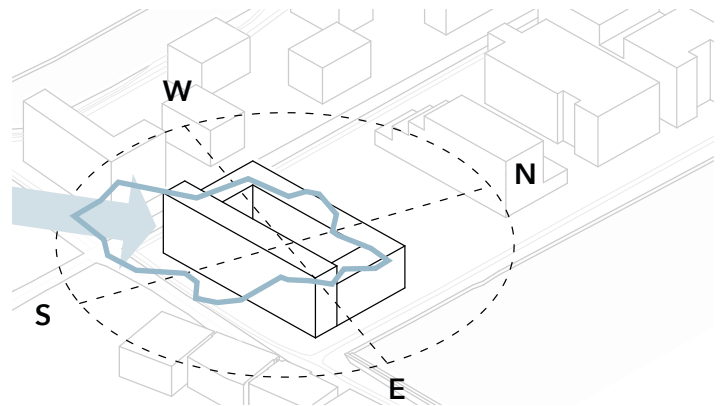
Only in 2040, the two neighbouring plots will be built on. Therefore, the first building in the row will make a starting statement for this side of the pier.

SITE ANALYSIS

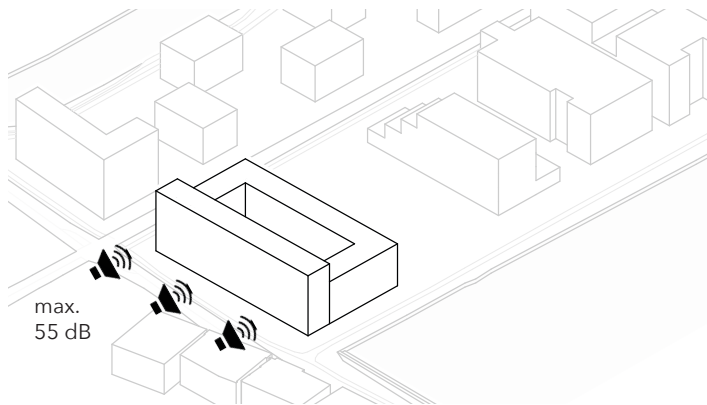
SUN PATH



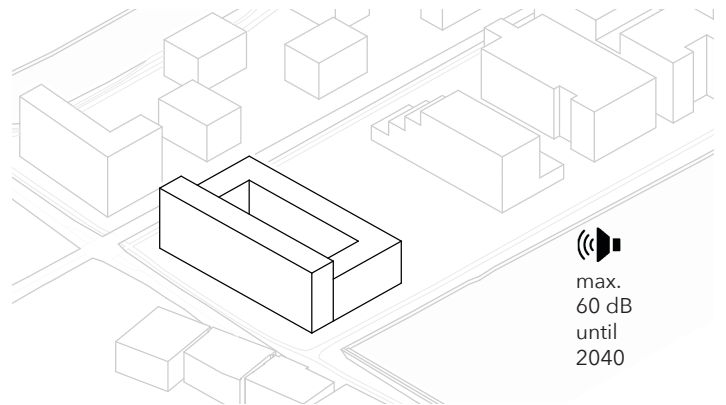
WINDS



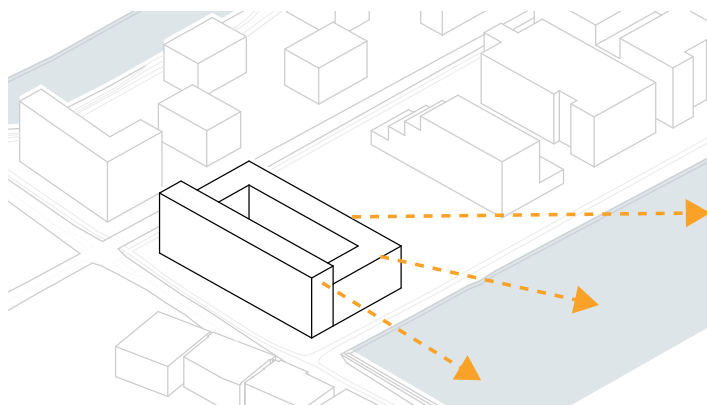
NOISE (STREET)



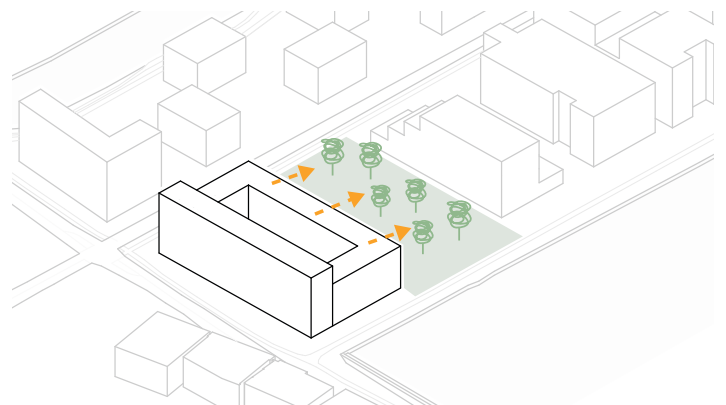
NOISE (INDUSTRY)



VIEW (WATER)



VIEW (PARK)



The long and short edges towards the streets are both facing the strongest sun and winds. There is no heavy traffic on the main street but it can get noisy. Occasionally, noi-

ses from the remaining harbour area can be heard but the causes will slowly disappear until 2040. On the North and East sides, the best views are facing the water and the park.

PLAN ANALYSIS



MARKET HALL ROTTERDAM

MVRDV, 2014

CHARACTERISTIC PICTURES



Fig. 1: Crowd waiting for opening hours



Fig. 2: View from hall into apartment



Fig. 3: View from apartment into market hall

FACTS AND FIGURES

PROGRAMME

100.000 m², 228 Apartments, 100 fresh produce stalls, food-related retail units, preparation and cooling space, supermarket, 1.200 parking spaces.

WORK-RELATED / PUBLIC FUNCTION

The building has become an icon in Rotterdam, it is known as the market hall.

VOLUME

Market hall inside (Public), Apartments wrapped around (private)

CIRCULATION

apartments: separate entrance from the long side of the block

public function: the market hall is entered from ground level on the short side of the block or from the parking garage underneath
-> paths of private and public do not cross

FLOOR PLANS

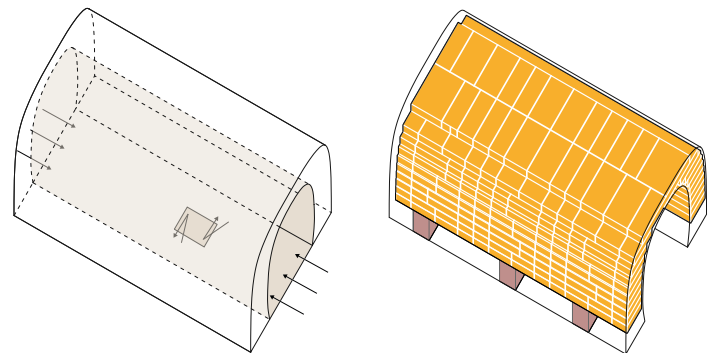
orientation: half of the apartments are double-sided with a view inside the market hall as well as outside, the other half is only oriented towards the outside

clientele: mostly luxurious apartments, penthouses on top

size: ranges from 80-300 m²

special: view into market hall (only some apartments), some have very long hallways

SPECIAL FEATURE



A new typology is invented by wrapping the market hall with dwellings that form a big void.

TAKEAWAYS

- Using the volume of the dwellings to form a void for the market creates a new typology.
- The interaction of public and private is limited due to separated entrances.
- It has developed into a major tourist attraction.

Facts and Figures:
MVRDV. (2014). *Market Hall*. Retrieved 21-11-2018 from <https://www.mvrddv.nl/projects/markethall>

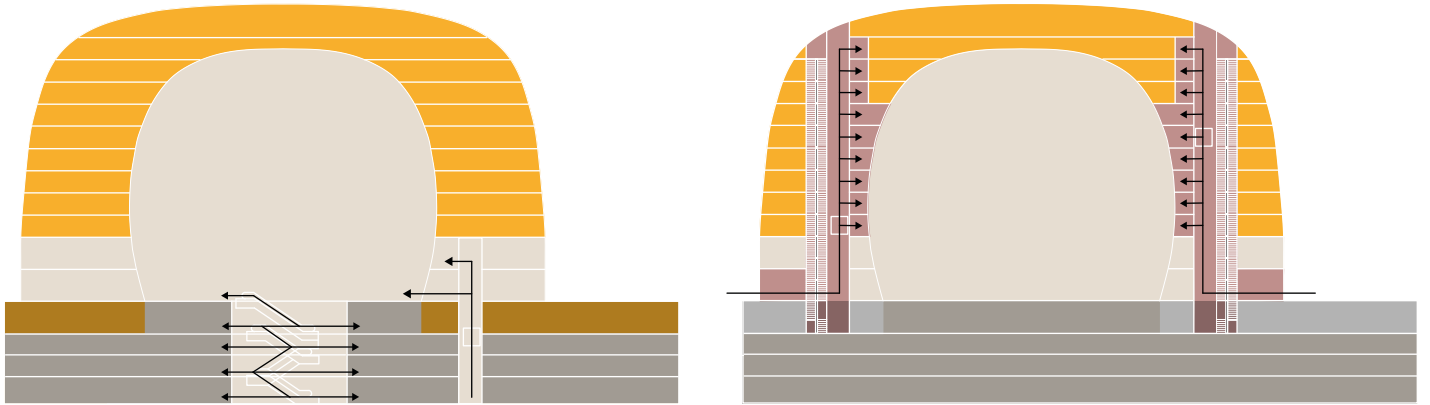
Fig. 1 own picture
Fig. 2 Designcurial. (2-12-2014). *MVRDV'S Markthal, Rotterdam - Building Study*. Retrieved 30-11-2018 from <http://www.designcurial.com/news/market-forces-4455805/>

MARKET HALL ROTTERDAM

MVRDV, 2014

CIRCULATION AND THE RELATION OF PUBLIC, COLLECTIVE AND PRIVATE SPACES

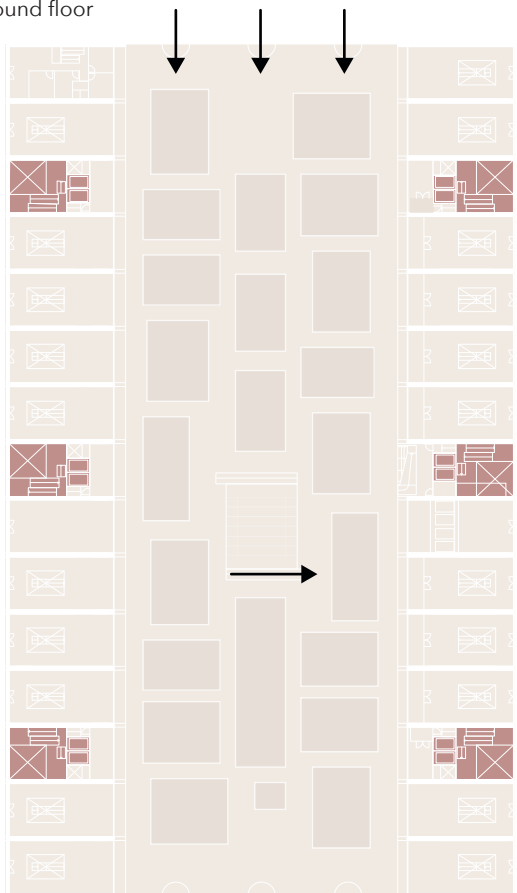
IN SECTION



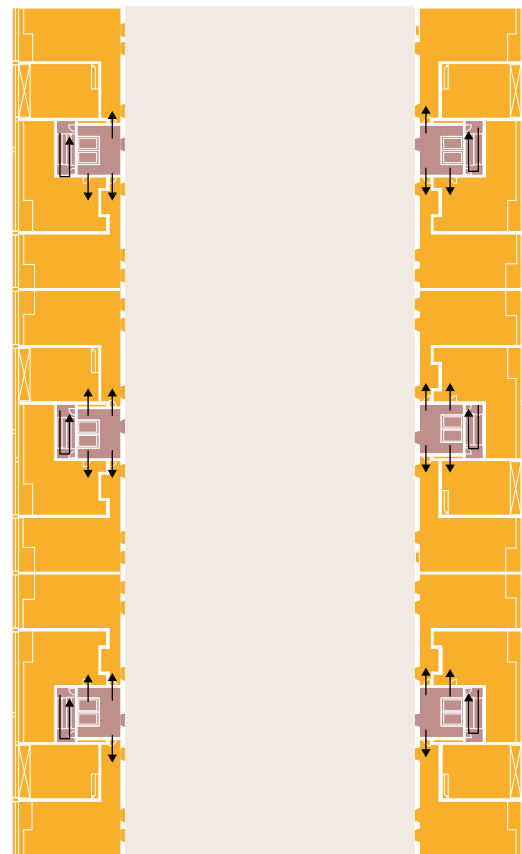
scale 1-1000

IN FLOOR PLAN

ground floor



typical dwelling level



Public
Collective
Private

scale 1-1000

Fig. 4: Schematic Sections and Floor Plans

Fig. 3 The New York Times (26-09-2014). *Fish, Fruit and a Bouquet are just downstairs*. Retrieved 24-11-2018 from <https://www.nytimes.com/2014/09/26/greathomesanddestinations/rotterdam-new-market-hall-to-include-apartments-food-stalls-and-restaurants.html>

Fig. 4 own schematic illustration of floor plans and sections, design by MVRDV, Rotterdam (2014).

FENIX LOTS ROTTERDAM

Mei Architecten, 2018

CHARACTERISTIC PICTURES

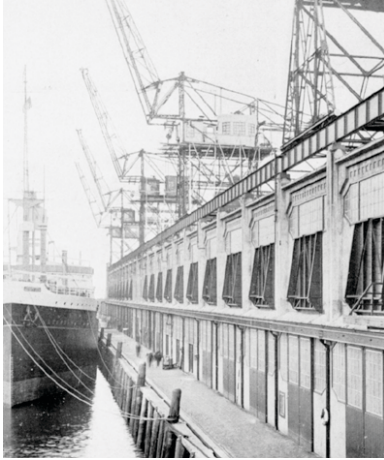


Fig. 5: The historic building



Fig. 6: The public entrance hall



Fig. 7: The collective courtyard

FACTS AND FIGURES

PROGRAMME

cultural and culinary facilities (ca. 8.500 m²)
225 parking places (ca. 9.000 m²)
212 loft apartments (ca. 23.000 m²)

WORK-RELATED / PUBLIC FUNCTION

The old warehouse hosts the public functions and with its prominent position next to the harbour and the Fenix Food Factory will automatically attract many people.

VOLUME

The old building is filled with the public functions, topped up with a courtyard structure which hosts the dwellings.

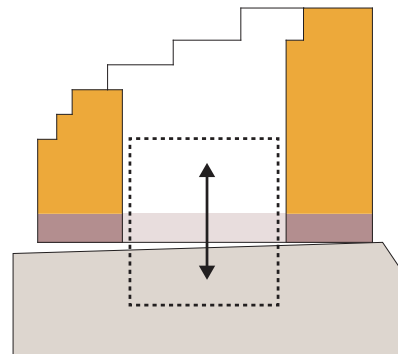
CIRCULATION

apartments: balconies towards the courtyard and further down through the public part
public function: downstairs, directly accessible from outside and central circulation
special: the collective courtyard is accessible to the residents and people that work in the Fenix Lots but not open for the public.

FLOOR PLANS

orientation: two-sided: water or street and courtyard
clientele: mostly luxurious apartments, (78 rented, 134 sold)
size: loft apartments, average size 108 m²
special: community concept

SPECIAL FEATURE



A collective courtyard exclusively for the community that consists of residents and employees at Fenix Lots

TAKEAWAYS

- The private dwellings are separate on top of the public plinth
- The elevated courtyard is collective and accessible for everyone who works or lives in the Fenix Lots

Facts and Figures:
Mei Architecten. (2018). *Fenix 1*. Retrieved 25-11-2018 from <https://mei-arch.eu/projecten-archieff/fenix-1/>
Interview with Robert Platje, Project Leader at Mei Architecten on 08-12-2018.

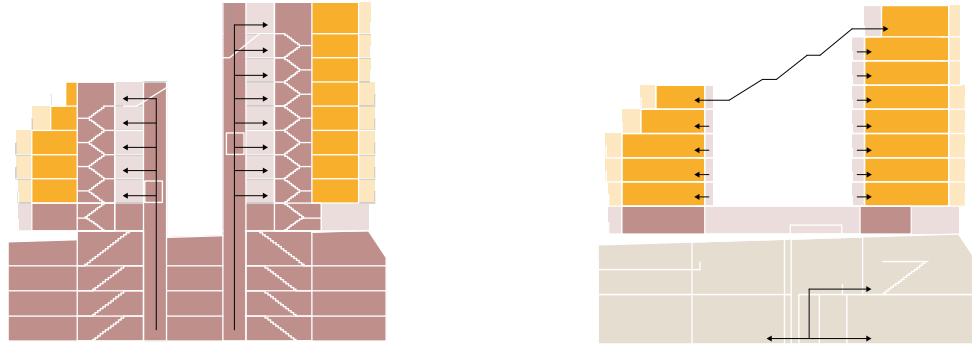
Fig. 5, 6 & 7
Mei Architecten. (2018). *Fenix 1*. Retrieved 25-11-2018 from <https://mei-arch.eu/projecten-archieff/fenix-1/>

FENIX LOTS ROTTERDAM

Mei Architecten, 2018

CIRCULATION AND THE RELATION OF PUBLIC, COLLECTIVE AND PRIVATE SPACES

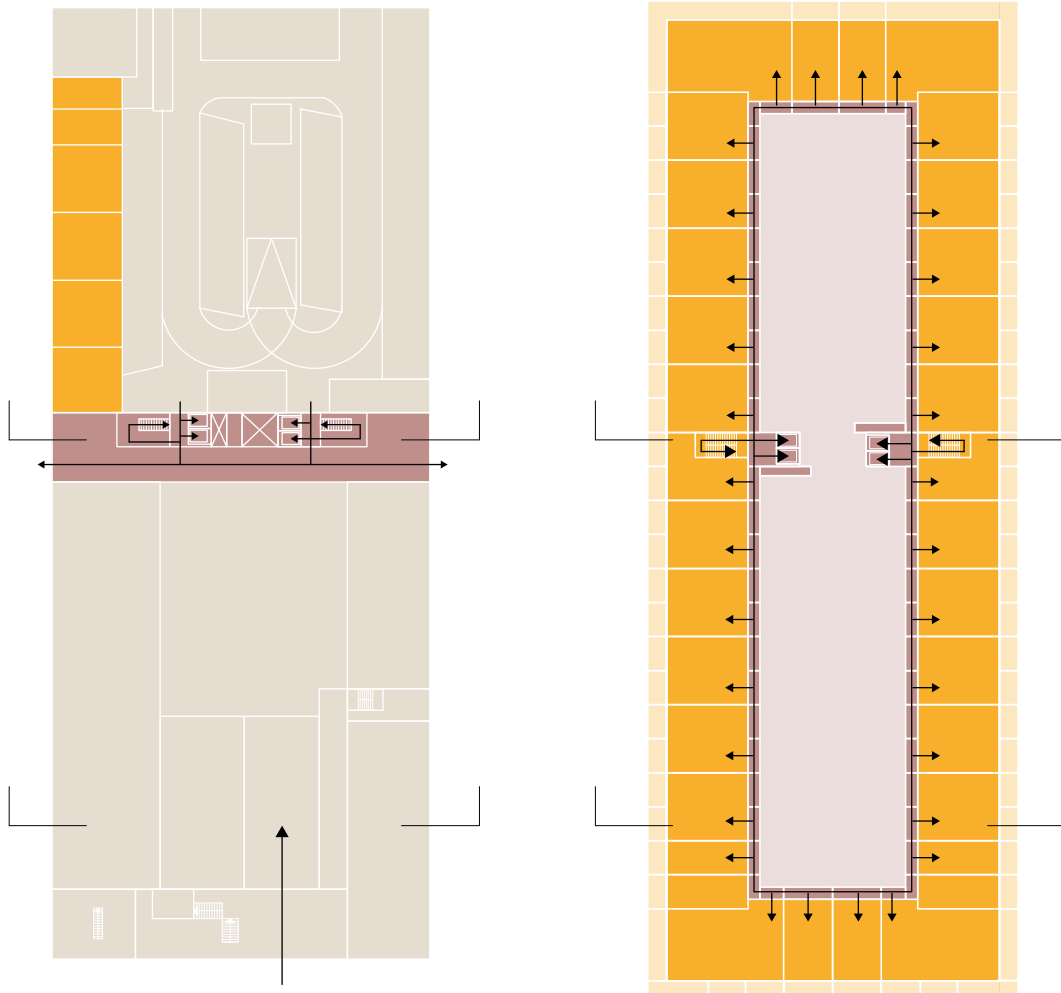
IN SECTION



scale 1-1000

IN FLOOR PLAN

ground floor



typical dwelling level

Public
Collective
Private

scale 1-1000

Fig. 8: Schematic Sections and Floor Plans

Fig. 8 own schematic illustration of floor plans and sections design by Mei Architecten, Rotterdam (2018).

CRCLR HOUSE BERLIN

Hütten und Paläste, 2016

CHARACTERISTIC PICTURES



Fig. 9: Sectional model showing the relation of the different functions



Fig. 10: Work spaces in the existing warehouse

FACTS AND FIGURES

PROGRAMME

Housing and Industry (CoWorking, Workshop, Ateliers, Living);
5980 m²

WORK-RELATED / PUBLIC FUNCTION

An old warehouse used for workshops and Co-working space is topped up with a housing programme.

VOLUME

Workshops and Co-working space (public), Apartments on top (private/collective)

CIRCULATION

apartments: one staircase through the public parts leads to balconies which are the entrances to the apartments
public function: Workshops entered directly from the ground floor
-> private has to go through the public part but the public does not get into the private

FLOOR PLANS

orientation short- and long-term living
clientele shared apartments of different sizes
size ranges from 50-260 m²
special all apartments have a shared roof terrace and collective rooms like a kitchen and a greenhouse

SPECIAL FEATURE



Workshops are placed on the ground floor and a Co-Working level separates the dwellings from the working

TAKEAWAYS

- The community connects working and living, collective spaces are accessible for everyone.
- Dwelling units are stacked with an efficient access system and the collective roof terrace hosts temporary apartments.

Facts and Figures:
Hütten und Paläste. (2018). *CRCLR House, 2016-*. Retrieved 15-11-2018 from <https://www.huettenundpalaeste.de/work/agora-wohnen-celab/>

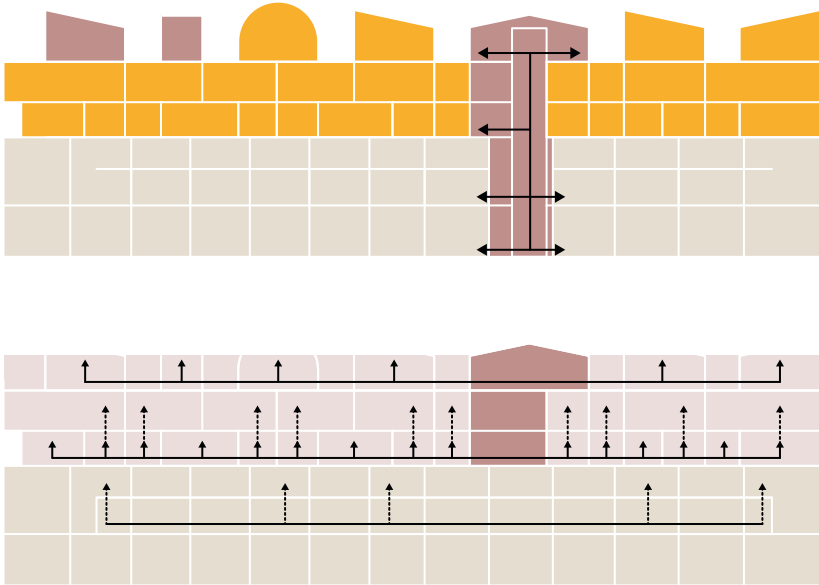
Fig. 9 Hütten und Paläste. (2018). *CRCLR House, 2016-*. Retrieved 15-11-2018 from <https://www.huettenundpalaeste.de/work/agora-wohnen-celab/>
Fig. 10 Baunetz. (05-10-2017). *European CoHousing Hub*. Retrieved 03-12-2018 from <https://www.baunetz.de/meldung>

CRCLR HOUSE BERLIN

Hütten und Paläste, 2016

CIRCULATION AND THE RELATION OF PUBLIC, COLLECTIVE AND PRIVATE SPACES

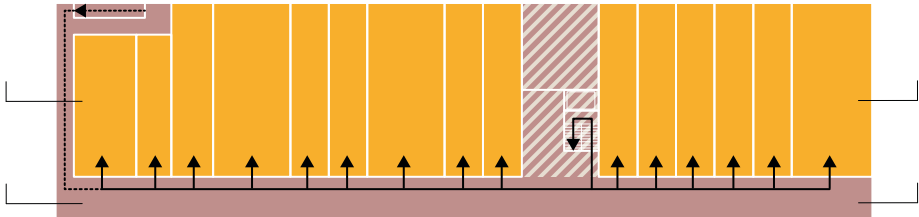
IN SECTION



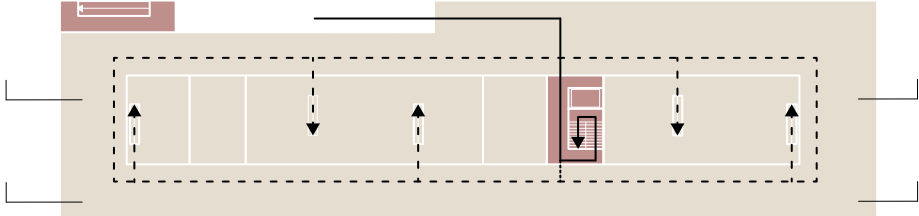
scale 1-750

IN FLOOR PLAN

lower dwelling level



ground floor +0,5



Public
Collective
Private

scale 1-750

Fig. 11: Schematic Sections and Floor Plans

gen/Meldungen-Konferenz_von_Experimentdays_in_Berlin_5194126.html
own schematic illustration of floor plans and sections
design by Hütten und Paläste, Berlin (2016).

ALLTAG BERLIN

Carpaneto Schöningh Architekten, 2018

CHARACTERISTIC PICTURES



Fig. 12: Building volume and public plinth



Fig. 13: Access to the apartments and collective rooms

FACTS AND FIGURES

PROGRAMME

Site: 3.200 m² / Building 3.750 m² / Temporary and shared Living: 1.990 m² / Industry 840 m²

WORK-RELATED / PUBLIC FUNCTION

Action rooms are placed next to the circulation, they have a very open facade so from outside it can be seen what is happening inside

VOLUME

Two blocks with a detached staircase and flexible "activity rooms" in between"

CIRCULATION

apartments: entrances from the staircase, activity rooms have to be passed on the way
collective: activity rooms on every second floor, to be designed further by the people living there

FLOOR PLANS

orientation one-sided or at the corner
clientele short-term living in shared apartments, focus on the collective spaces
size apartment sizes 27-100 m² + collective spaces ca. 40 m² per 3 units
special one flexible room in between two units to make one of them bigger / smaller

SPECIAL FEATURE

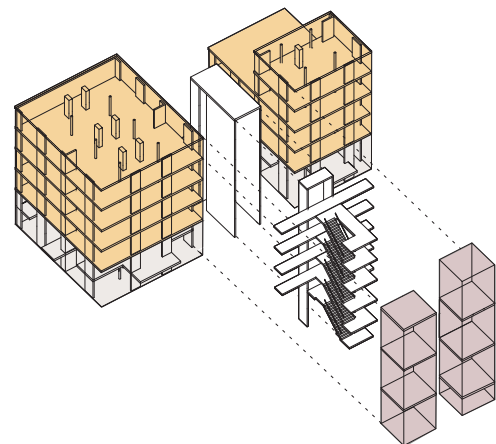


Fig. 14

"Activity rooms" to be designed by the residents next to the staircases so they have to be passed on the way to the apartments.

TAKEAWAYS

- Community: Shared apartments
- "Activity rooms" are passed on the way to the apartments
- A flexible room between two rooms can enlarge one of the two units

Facts and Figures:
Carpaneto-Schöningh Architekten. (07-2015). *Alltag: Unterkunft, Zukunft, Zusammenkunft*. Berlin, Germany, Stiftung Edith Marion.

Fig. 12 Carpaneto-Schöningh Architekten. (07-2015). *Alltag: Unterkunft, Zukunft, Zusammenkunft*. Berlin, Germany, Stiftung Edith Marion., p. 6.

Fig. 13 cf. 9, p. 8.

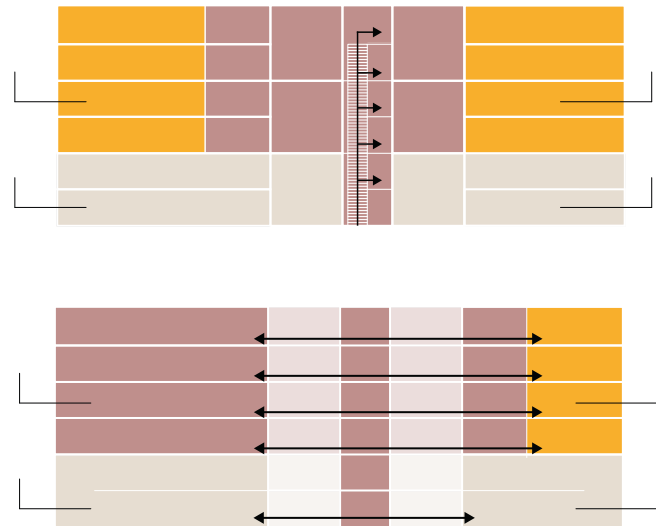
Fig. 14 cf. 9, p. 8.

ALLTAG BERLIN

Carpaneto Schöningh Architekten, 2018

CIRCULATION AND THE RELATION OF PUBLIC, COLLECTIVE AND PRIVATE SPACES

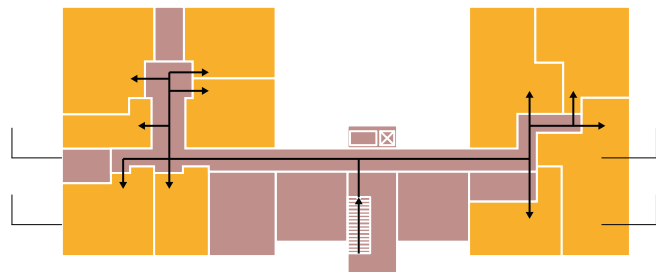
IN SECTION



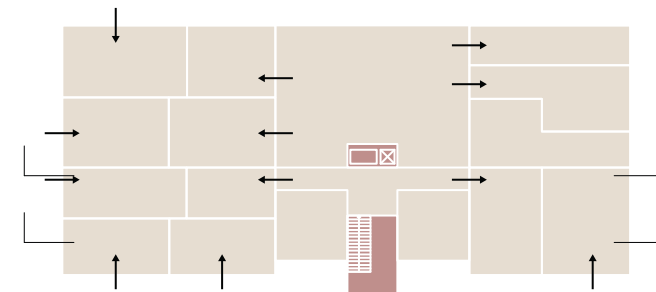
scale 1-750

IN FLOOR PLAN

typical dwelling level



ground floor



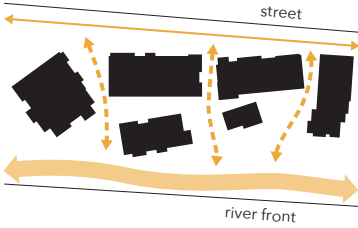

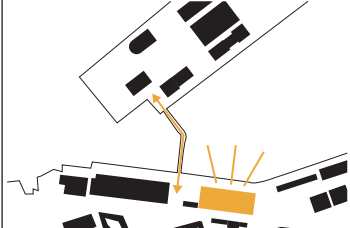

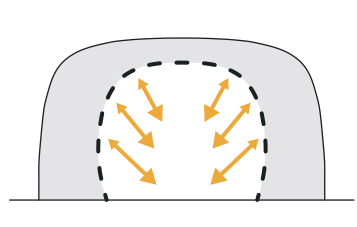

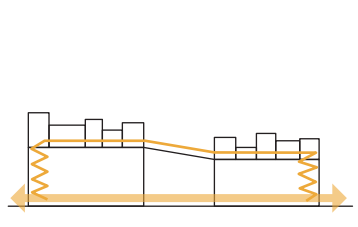
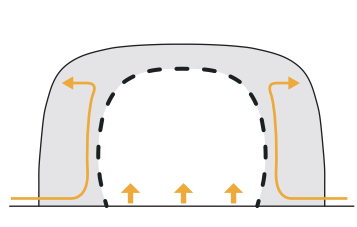
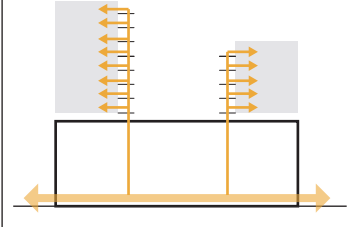
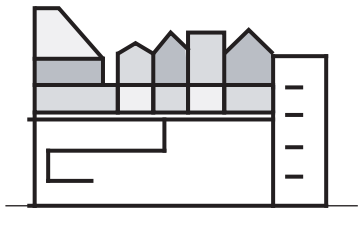
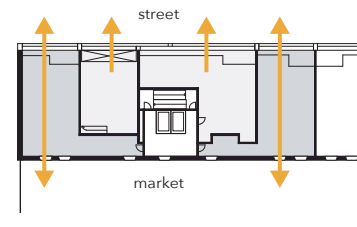
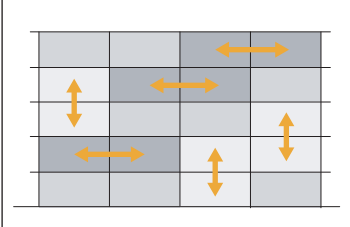
Public
Collective
Private

scale 1-750



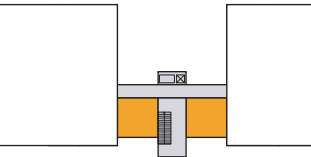
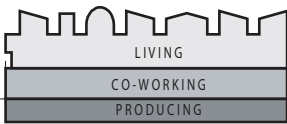
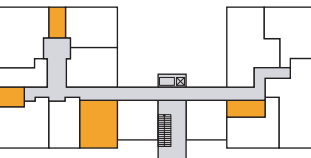
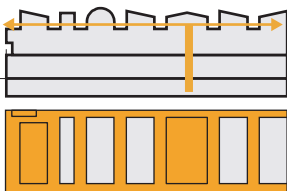
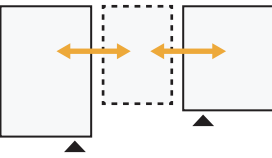
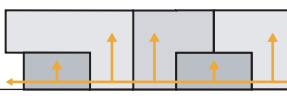
Fig. 15: Schematic Sections and Floor Plans

Fig. 15 own schematic illustration of floor plans and sections design by Carpaneto Schöningh Architekten, Berlin (2018).

PRINCIPLES TO TAKE AWAY

REFERENCE TOOLBOX	HOLZMARKT Berlin	MARKTHAL Rotterdam	FENIX LOTS Rotterdam
Public	 <p>Informally placed building blocks form a porous zone between street and river front</p>	 <p>Major attraction point and icon in the city</p>	 <p>View to the former harbour basin and tourist destination</p>
Relation Public & Private	 <p>Market Place</p>	 <p>Glimpses into dwellings from market place, views from dwellings to the market</p>	 <p>Public plinth, collective courtyard not accessible for the public</p>
Circulation	 <p>Public ground floor and outdoor space, secondary public route on a higher level</p>	 <p>Separate entrances for the private dwellings</p>	 <p>Galleries towards the courtyard, collective circulation starts in public passageway</p>
Private Units	 <p>"Halls and Huts": big multi-use "halls" and small "huts" on top</p>	 <p>Some dwellings are oriented only towards the street, some also have views into the market hall</p>	 <p>One grid which can expand to the sides or up/down</p>

PRINCIPLES TO TAKE AWAY

ALLTAG Berlin	CRCLR Berlin
 <p data-bbox="127 761 367 795">Work spaces downstairs</p>	 <p data-bbox="446 761 750 840">Community: Everything is interconnected, residents have to be close to the community</p>
 <p data-bbox="79 1086 414 1164">Collective space free to design for residents next to the central staircase</p>	 <p data-bbox="446 1086 750 1142">Stacked: Workshops, Co-working space and dwellings on top</p>
 <p data-bbox="79 1411 414 1489">Collective apartments, both blocks share one central stair case which passes the collective rooms</p>	 <p data-bbox="446 1411 750 1467">Collective roof terrace, everything is open for the community</p>
 <p data-bbox="111 1736 383 1792">Flexible room between two apartments to adjust the size</p>	 <p data-bbox="446 1736 750 1814">Maisonettes and one floor apartments accessible from only one floor</p>

CONCLUSIONS FROM THE ANALYSIS

On an urban level the brand-making iconic effect of the community can be taken into my own project. The Holzmarkt and the Markthal have become attraction points in the city. Fenix Lots and Holzmarkt carry on the community thought, while CRCLR and Alltag are mainly founded by it. On top of this, Fenix Lots and Holzmarkt activate the waterfront, while Holzmarkt even makes a connection from the street for the public unlike the neighbouring buildings.

Markthal and Holzmarkt use their overall volume to form a central market place for the public. In the other three buildings, the public function is situated downstairs but always connected through collective functions. Fenix Lots are most separated as the upper part beginning with the courtyard is only accessible for the (extended) community.

The Holzmarkt suggests a hierarchy of circulation routes for the "mass" outdoors and an elevated route for visitors with a direct purpose. In contrast to a separation of access routes like in the Markthal, the access to the private dwellings should start in the public part like in the Fenix Lots. Galleries towards the courtyard and staircases that become a central point where people meet on the way to their apartments can enhance the community feeling.

There are bigger volumes for the public functions in the Holzmarkt and smaller ones for the private functions on top. On the dwelling level all apartments should have views to the inside as well as the outside. A basic grid that can be expanded vertically as well as horizontally or a flexible room in between two units are systems to create bigger units. A clever system of interlocking units can be incorporated to save some galleries in the circulation.

CONCEPTUAL DESIGN

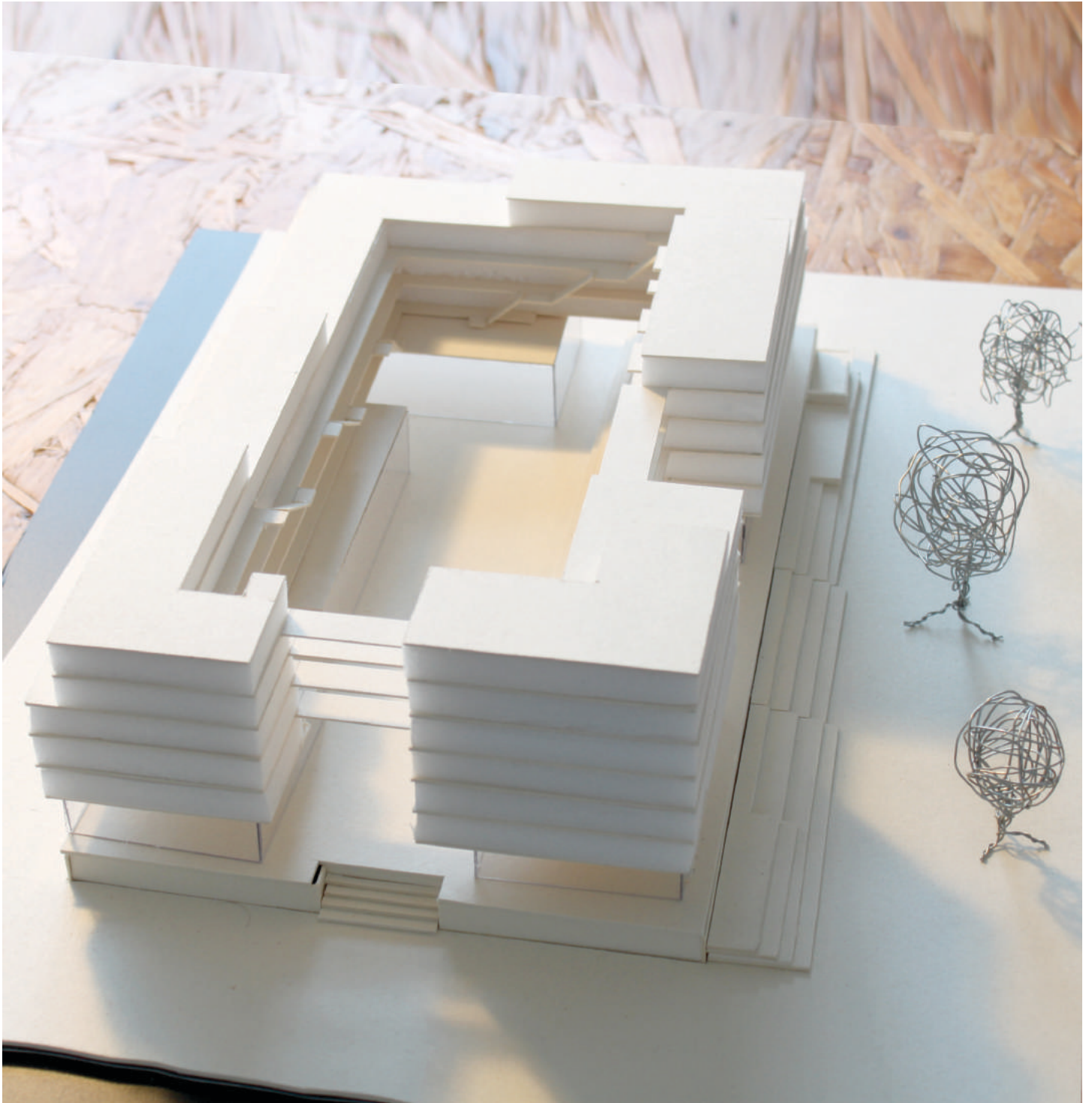


Photo of the conceptual model

BRIEF OF OWN PROJECT

"DIRTY" MAKING

Makerspace (Collective workshop with heavy machines)	
Spray room	
Wood workshop	
Ceramic workshop	
Metal workshop	
Soldering station	
CNC machine room	
3D-printing and laser-cutting	
Work areas	
Room for training courses	
Total surface area	ca. 1.200 m ²
Storage	ca. 250 m ²
Carsharing spaces for trucks for the makers	< 3 places
Bike stalling	
Service rooms	

MAKING + PUBLIC

Kitchen and common room for makerspace & community	
Small office for administration	ca. 60 m ²
Individual workshop units (including food crafts)	
Total surface area	ca. 1.800 m ²
Number of units	35-40
of which food crafts	> 5
Surface area varying from	9-120 m ²
Flexible co-working spaces, flexible to be used for public lectures or other small events	ca. 160 m ²
Meeting rooms	ca. 35 m ²
Sanitary and service rooms	
Outdoor spaces	
Elevated terraces for the restaurants	
Courtyard accessible for the public	

COLLECTIVE FUNCTIONS

A roof terrace for all people that work and/or live in the building and their guests

CIRCULATION

An open courtyard accessible for the public (from the street and the waterfront)

The private circulation should start from the courtyard in order to strengthen the community on an everyday basis

DWELLINGS

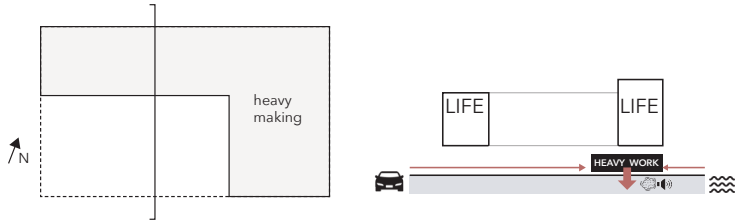
Regular apartments		
Total surface area		ca. 6.400 m ²
Number of dwellings		87
Single and double units 40-60 m ²		53
Corner apartments ca. 110 m ²		11
Maisonettes ca. 85-100 m ²		23
Shared apartments		
Total surface area		ca. 2.250 m ²
Number of dwellings		11
Number of rooms		55
Surface area of individual rooms		ca. 20 m ²

CONCEPTUAL DESIGN



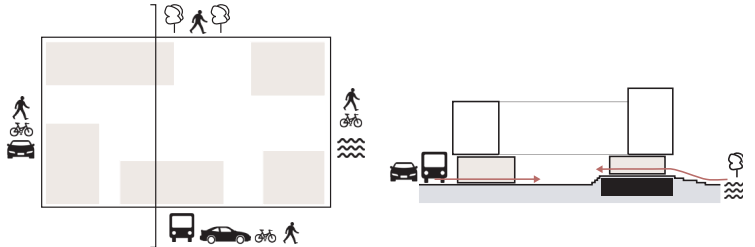
PUBLIC PLINTH

1. Heavy making half-way into the ground



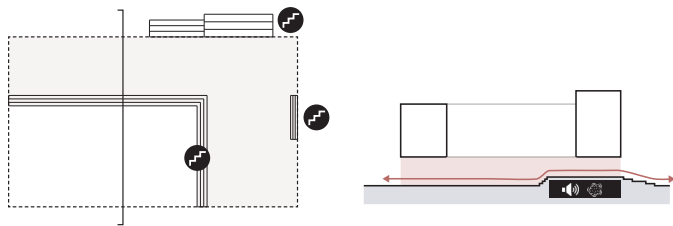
The public part is split into "loud and dirty" making and small workshop units with accessible public facilities on the ground floor. Heavy making is pushed half-way into the ground.

4. Street facing sides and water/park facing edges



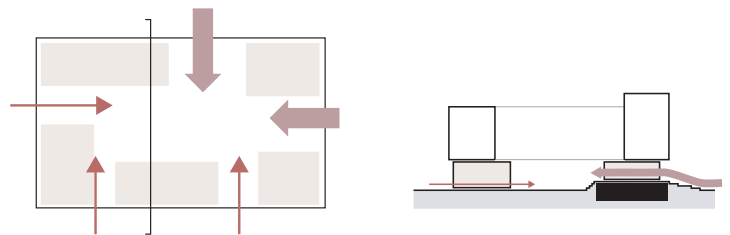
Two sides of the building face streets with public transport, car traffic, bike routes and pedestrians. The waterfront and park are leisure areas with bigger walking and bike routes.

2. Partly elevated public ground floor



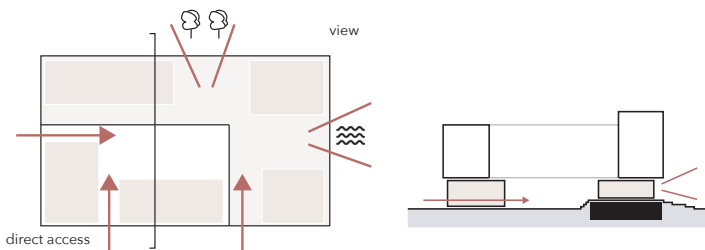
A public plinth for the visible making is created. It serves as an insulation layer between living and heavy making.

5. Accesses from all sides



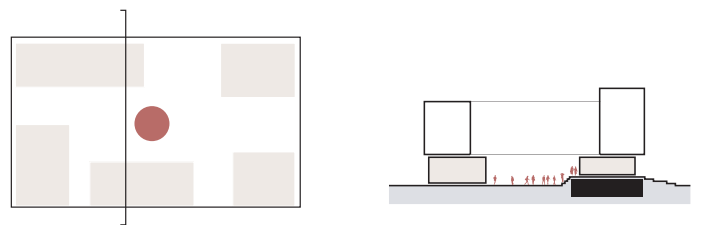
Informally placed volumes leave gaps that form gateways into the courtyard from all sides of the building.

3. Different height levels



The access from the street is at grade while there is an elevation towards the waterfront and the park which can be overcome with a few steps. Thereby, the terraces have a view towards water and park.

6. Central marketplace in the courtyard



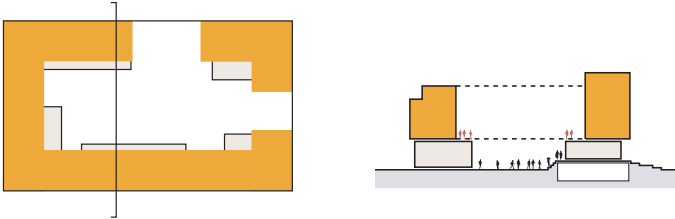
With accesses from all sides and the public (work-) shops, including consumption areas, a meeting point and marketplace is formed in the centre of the courtyard. It can be used for activities and events.

CONCEPTUAL DESIGN



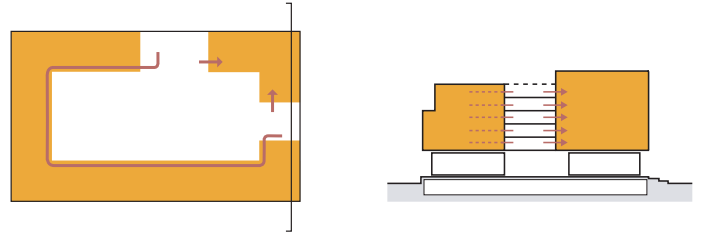
DWELLINGS

1. Collective Terraces



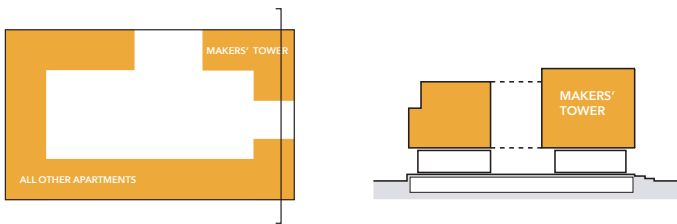
The dwellings are placed in a 12 m ring around the courtyard using the outer border of the plot. The roofs of the public plinth form terraces that are useable as an extended elevated courtyard for the community.

4. Gallery from the staircases



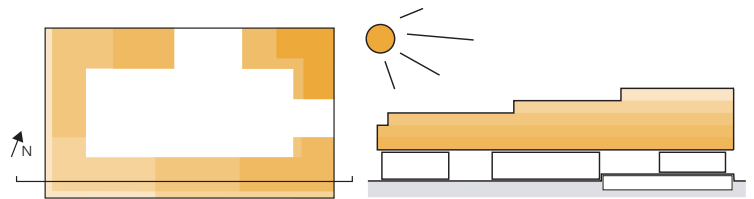
The apartment units are accessed from galleries that have their starting points at the two central staircases. The bigger shared apartments have direct accesses from the staircases.

2. Cuts in the big volume



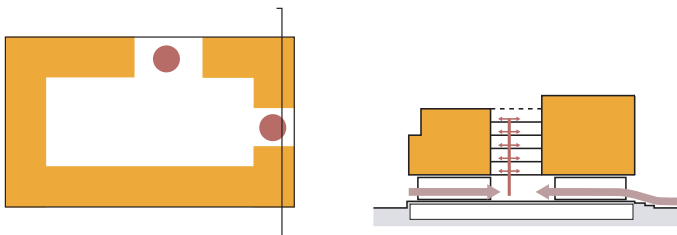
The big volume is cut towards the water and the park. Thereby, a tower on the corner is formed which hosts the shared makers' apartments. The bigger part hosts all other apartment units.

5. Stepping down towards the South



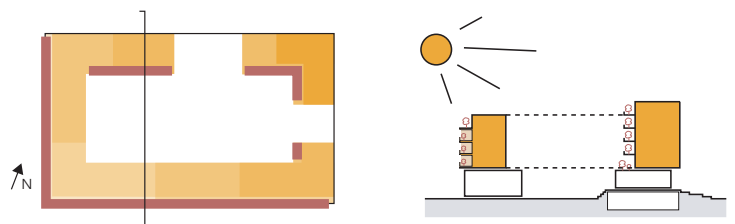
The volume hosting the apartments steps down towards the South-West to let sunlight into the courtyard and to optimize the sunlight for the dwellings.

3. Two central staircases



The cuts in the volume host the two main staircases. The staircases are accessed from the courtyard which ensures an interaction of the community with the public on a daily basis.

6. Private outdoor spaces on South and East facade



Terraces and loggias are placed on the South-West facades of the building. Most private outdoor spaces are placed on the outer South and West facades.

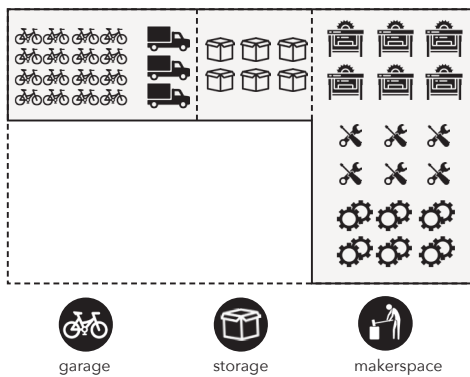
PUBLIC PLINTH

HEAVY MAKING UNDERNEATH

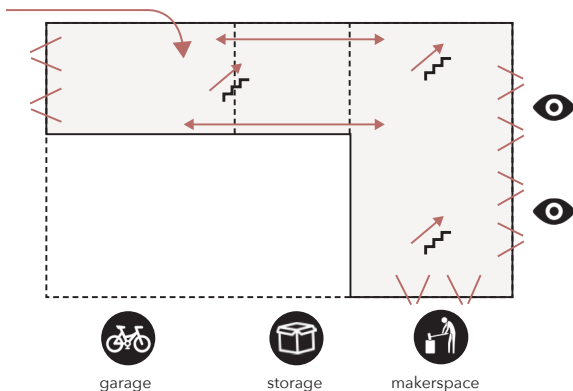
The volume of the shared workshop where the heavy making is taking place is not big enough to fill the whole plot. It is placed half-way into the ground in such a way that the public plinth continues on top of it. By leaving the South-West corner free and therefore on the same level as the street, people are attracted into the courtyard without any barrier.

The basement has a direct access from the street for a few small trucks based on a car-sharing system for the makers. Bike stalling and storage space is also placed and accessed from there. For pedestrians, stairs directly lead to the plinth. The makerspace has two direct connections into the public boxes above which form the main entrances.

Subdivision

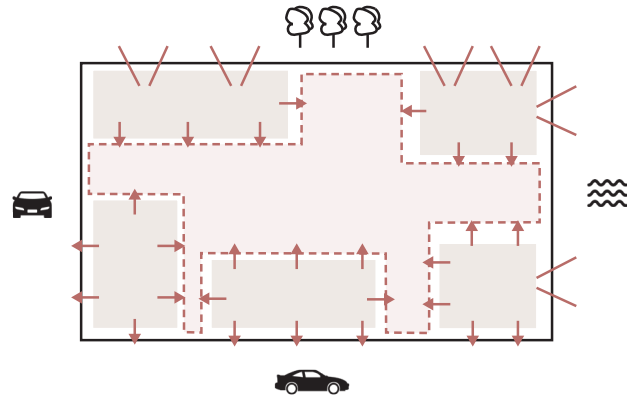


Accesses and connections



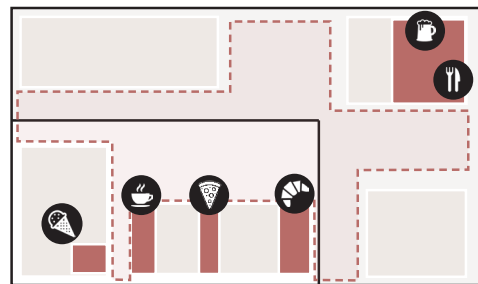
ACTIVATION OF THE COURTYARD

No hierarchy of directions



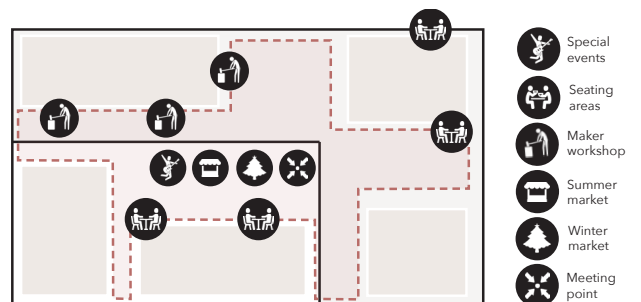
The workshop units face street and courtyard so that the route goes around and into the courtyard.

Food crafts in strategic places



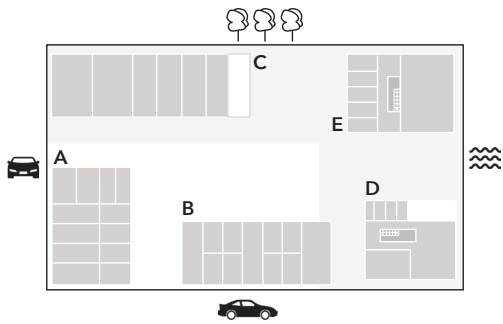
Food crafts with consumption areas placed at strategic points towards the street and courtyard and with water views.

Activities in the courtyard

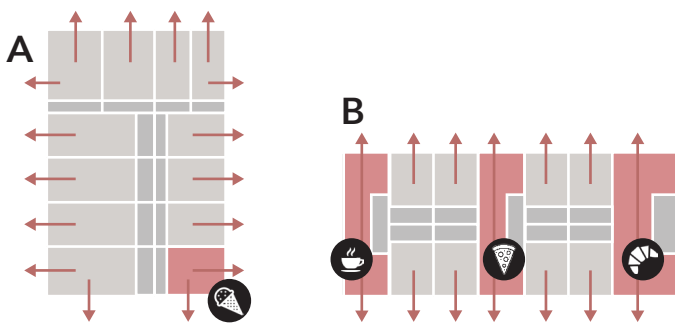


Cafés and restaurants have their seating areas in the courtyard. Temporarily, seasonal events are taking place like a maker's festival or a summer market.

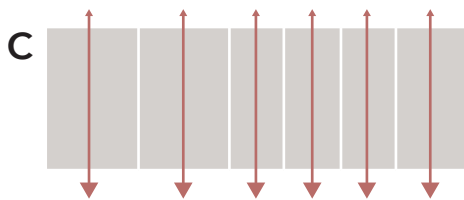
PUBLIC PLINTH



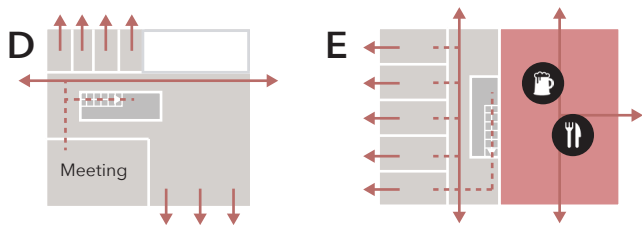
Floor Plan (schematic)



The two volumes that are directly accessible from the street host the smaller individual workshop units. The access is from both the street and the courtyard to make people experience the courtyard.



Volume C faces the park on one entire length which would be a disadvantage in comparison to the workshops next to the street. Therefore, it hosts bigger workshop units which are two-sided.

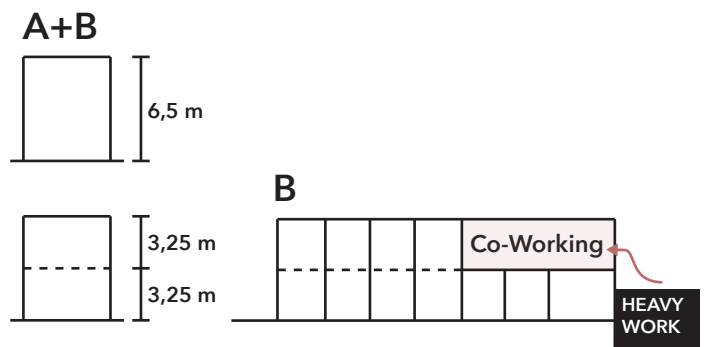


Volume E has in its elevated position the best water view and direct access to terraces on the elevated part. The rest of the volumes towards courtyard and street is filled with small individual workshop units.

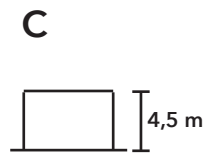
WORKSHOPS IN THE PUBLIC PLINTH

A vibrant maker's hub is essential for the project. Therefore, it is important, in which way the public plinth is subdivided into workshop space. Most importantly, all makers have to be seen by the public. The courtyard should be activated.

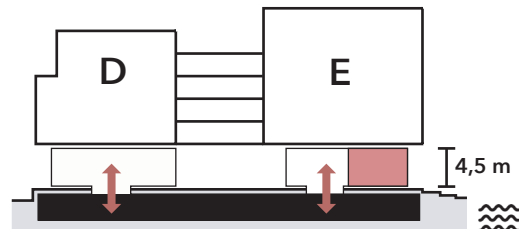
Section (schematic)



In section, those two volumes are 2 stories high. The individual workshop owner can decide whether he wants another level. In volume B, the upper level hosts a Co-Working space which can be directly accessed from the elevated part above the heavy making.



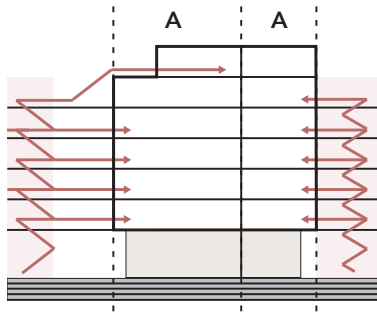
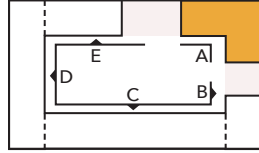
The volume stands on the elevated part of the block. Therefore, the ceiling height is 4m which is an advantage for the bigger workshop units.



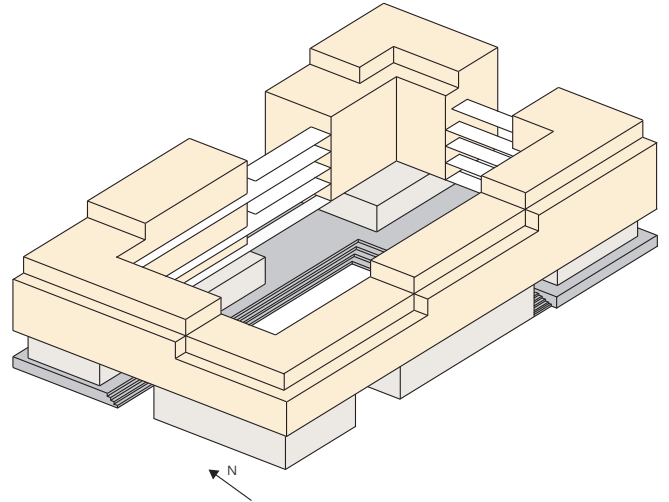
These units are used for finishing work and directly linked with the shared workshop underneath. These volumes also provide the main entrances to the makerspace.

VOLUME AND CIRCULATION

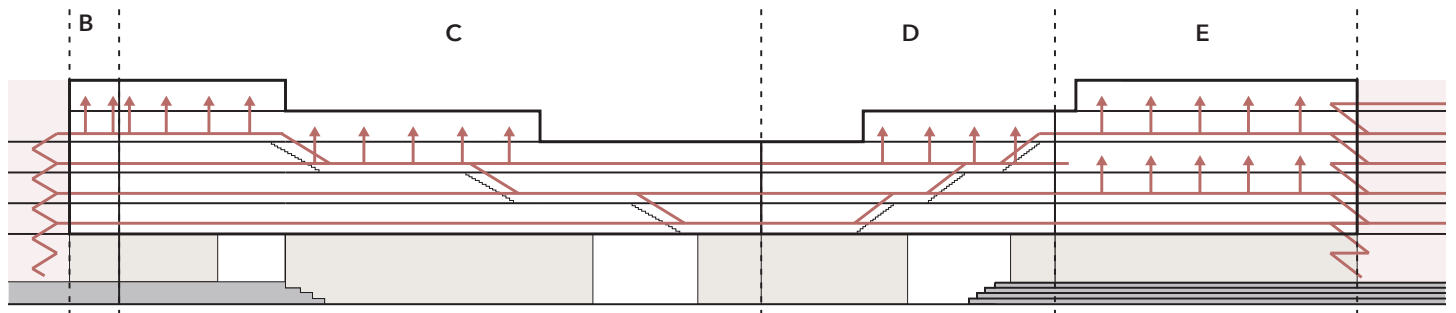
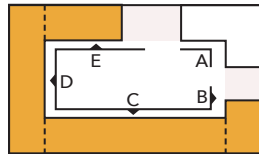
Shared apartments



Axonomy of the volume



Individual apartments



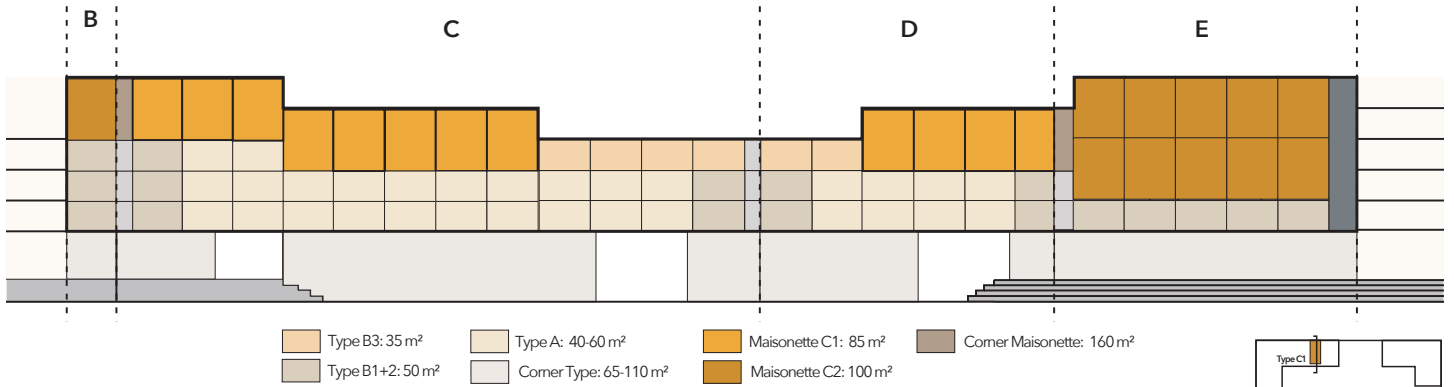
Shared apartments

The North-East tower is dedicated to the shared apartment. Each floor hosts two units which each have collective bathrooms, a kitchen and living room. In total there are 11 units containing about 55 individual rooms. The roof is used as a collective terrace with water views for the whole community.

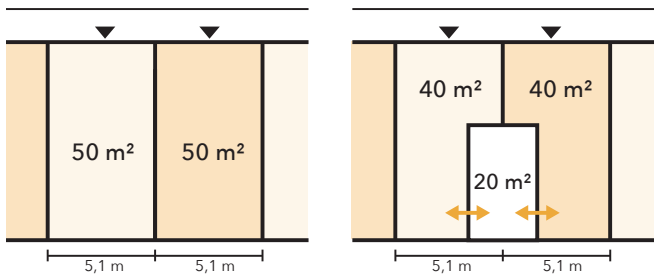
Individual apartments

The galleries as an access to the apartments are primarily reached through the two punctual staircases in the big openings of the volume. However, the galleries are interconnected to form short-cuts in between the galleries.

MAIN APARTMENT TYPES

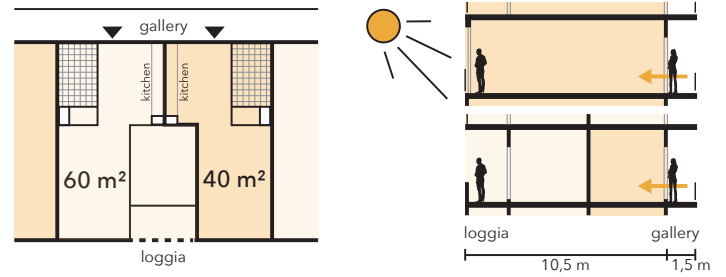


Principle of the flexible rooms



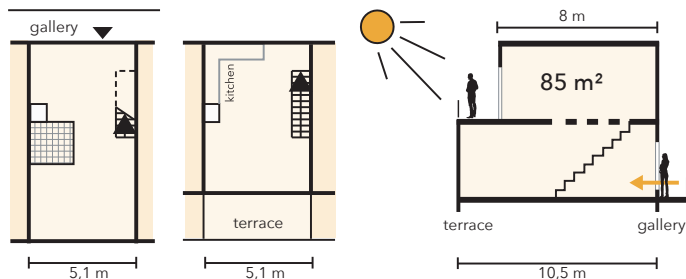
Most of the apartments are double or single units that take up one section in a grid of 5,1m and is about 50 m² in size. Two units next to each other embrace a room of 20 m² that can be attached to either of the units.

Type A Single / Double Units



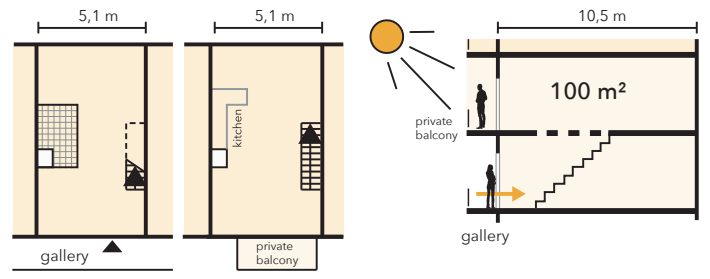
This type is situated on the lower living floors of the South and West facing facades. Therefore, loggias are placed on the outer facades while the gallery ensures the circulation from the courtyard side.

Type C1 Maisonette on South-West facing side



On the upper floors the volume steps back 2,5m to form terraces on the roof sides facing South/West. The maisonettes offer a bigger surface area for families.

Type C2 Maisonette on North-facing side



On the North-facing part of the building, private outdoor spaces need to face the courtyard to get enough sun. Therefore, the maisonettes have private balconies on the upper floor towards to South. The circulation is only on every second gallery.

SUMMARY

PROBLEM STATEMENT

The problem consists of several main statements. First, Amsterdam brands itself as a creative city. It is true that Amsterdam has one of the biggest creative industries in Europe. Yet, makers are only a marginal group of them and economically disadvantaged although their mentality fits the image that the city wants to create.

Also, since the industrial revolution, working and living has been separated and especially making was pushed out of the city centre. The structure of the city of today still uses the zoning system and making remains out of sight. In craftsmanship this is crucial because the process of making is an important factor for selling the products. This is one of the reasons why craftsmanship is not valued anymore and products are bought much cheaper from mass production outside of the country.

As a consequence, starting a making business is economically difficult. With the high prices of housing in cities like Amsterdam it is impossible for a single craftsman to open a business close to the city centre without any support.

Another aspect is the mentality of the younger generation that is changing towards a more flexible lifestyle where work and private life are more intertwined. The zoning concept of the city today is not adapted to the needs of the craft field, with their more complex work spaces.

RESEARCH QUESTIONS

Which spatial features can allow working and living to take place within one building?

What effect does a maker's hub have on the neighbourhood and the city?

How should public, collective and private parts of the building be related in order to make the making theme visible, to form a community and to support the makers' individual lifestyle?

Which functions can be clustered to take advantage of the synergies that form throughout the users?

What kind of spatial needs do the makers have for both their workspace as well as living space?

DESIGN ASSIGNMENT

The building block is a maker's hub for the whole neighbourhood. It is a building that hosts workshops for the makers and dwellings that they can live in. It should provide workshops for a third of the residents. The rest will support the community. Therefore, some collective and public functions within the building are required.

The ground floor level should be public and filled with the workshops that have to be seen easily from the street. The courtyard typology supports the open public ground floor and provides a marketplace in the heart of the building which invites to stay.

Individual workshop units are visible and accessible for the public. A shared workshop for the heavy and dirty making should be separated spatially from the dwellings. In order to activate the public ground floor, food crafts have restaurant or café spaces attached to provide a place to stay and consume products that have been made in the building. The plinth also needs to host Co-working space and event spaces.

The dwellings are on top of the public plinth. The circulation should run through the public part in order to involve the community on an everyday basis.

The apartment types have to consist of shared apartments for the makers starting their own business as well as different types of dwellings for more permanent living and other user groups. This includes single and double units as well as family apartments.

SUMMARY

Since the current neighbouring building is 65 m away from the plot and will be replaced by a new building within the coming 20-30 years, the design of the facade is quite free of the context. It should fit into the former industrial harbour context and make the making theme visible on all scales of the building.

RELEVANCE

Craftsmanship is part of the creative industry that makes a city attractive. In a world of mass production and mass marketing it can only survive when it is seen and valued. A maker's hub within a newly developed neighbourhood is the answer to provide a diverse mix of working and living that is already suggested by the municipality. Additionally, several small crafts businesses add more diversity to the district with an impact on the whole city. An already wide-spread concept is the makerspace, a collaborative workshop that exists in several forms of organization. The products become more visible and the united makers call the public's attention. Yet, the makerspaces are mostly not placed in residential areas and therefore still spatially separated from their clients. Bringing making into a residential district will take the next step towards a more integrated city planning.

Since zoning as the separation of functions on all levels has been practiced in city planning as well as on a building level, no common type for a combined work and life building has prevailed yet. Therefore, in this research it is investigated how making can be linked with dwelling on a building scale. The suggested building serves the needs of these two groups, and special emphasis has been placed to develop the makerspace concept further towards a structure which also attracts external customers. An example is the Holzmarkt project in Berlin which includes leisure areas and event spaces. In addition to this, the combination with dwelling sets out for an attractive community for both inter-

nal and external clients as well as the makers themselves. They live in an inspirational environment with like-minded people and therefore the place becomes alive.

In addition to the social relevance, there is an economical relevance for the makers. They are often one-man businesses that are starting up and need to keep their cost low. In a makerspace joint usage of equipment is part of this, and the building provides reasonable rents. In order to establish their business, the makers need to be close to their clients in the city centre. Thereby, they additionally bring a huge human capital into the city which attracts people to watch the process of making. The makers' building creates a brand which has a place-making effect: Making has to be seen!



Master Thesis | Research

DE WOON-MAKER

A Building for Makers: Workshop and Residence.

Miriam Walther
TU Delft
