MICROPRODUCTION HABITAT
GRADUATION PROJECT

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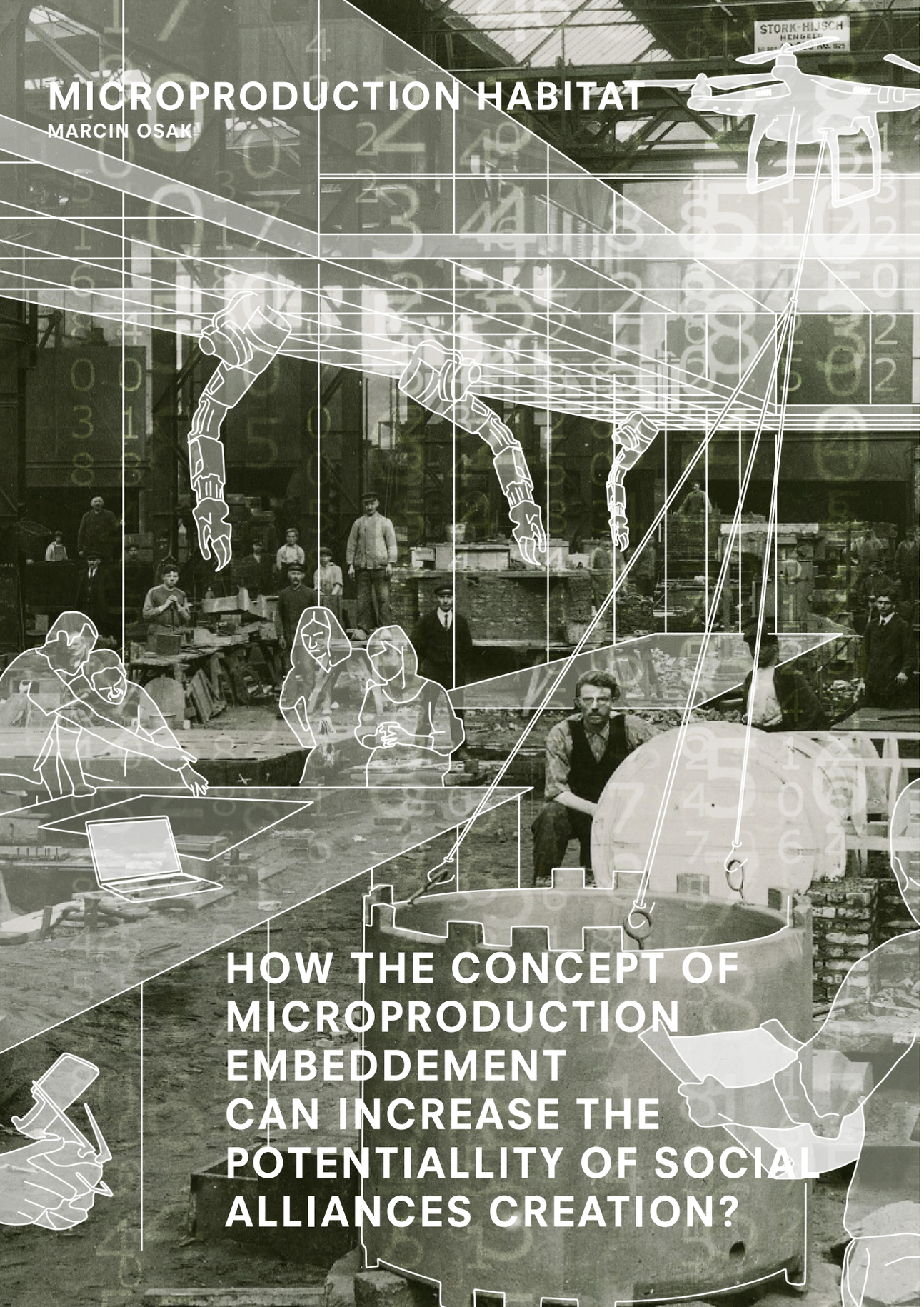


HOW THE CONCEPT OF MICROPRODUCTION EMBEDDEMENT CAN INCREASE THE POTENTIALLITY OF SOCIAL ALLIANCES CREATION?

ABSTRACT

KEYWORDS: MICROPRODUCTION, ADDITIVE PRINTING, 3D PRINTER, URBAN ENVIRONMENT, SOCIAL ENTERPRENEURIALISM, MANUFACTURING, REINDUSTRIALIZATION, MICRO-ENTERPRISES, CRAFTMANSHIP, CRAFTS.

In recent years, microproduction has been gaining more and more attention. Microproduction is form of contemporary craftmanship which is focused on the local production and global connectivity. Changing consumer trends and the emergence of new technologies, in particular additive manufacturing, are starting to shape the new production economy based on mass individualisation, locality and decentralization of manufacturing. Reaserch conducted on the ongoing changes in production paradigms shows that it can have a positive impact on the environmental and social aspects. Because of it's limitted scope and size and it's non-invasive character, microproduction can now be embedded in urban environments. However, the conducted analyzes focus on economic and political aspects, without regulating the spatial aspects of the microproduction paradigms. It is relevant to understand the spatial conditions of microproduction embeddement concept, because it's quality will have the huge impact on the potential social, economical and spatial benefits of microproduction. The purpose of this article is to answer the questions about the conditions of microproduction embeddement. What are the urban conditions associated with microproduction? Which programs can be associated with microproduction? What are most relevant design aspects?

In order to clarify the design and spatial aspects of embedment of microproduction in urban areas, a typological survey of precedents has to be made, as well consider additional programs that can potentially increase the efficiency of microproduction.

This survey will inform the urban designers and managers in conscious dealing with embedding of microproduction in central and residential urban areas. In this case, the general knowledge will be applied to the city of Rotterdam.

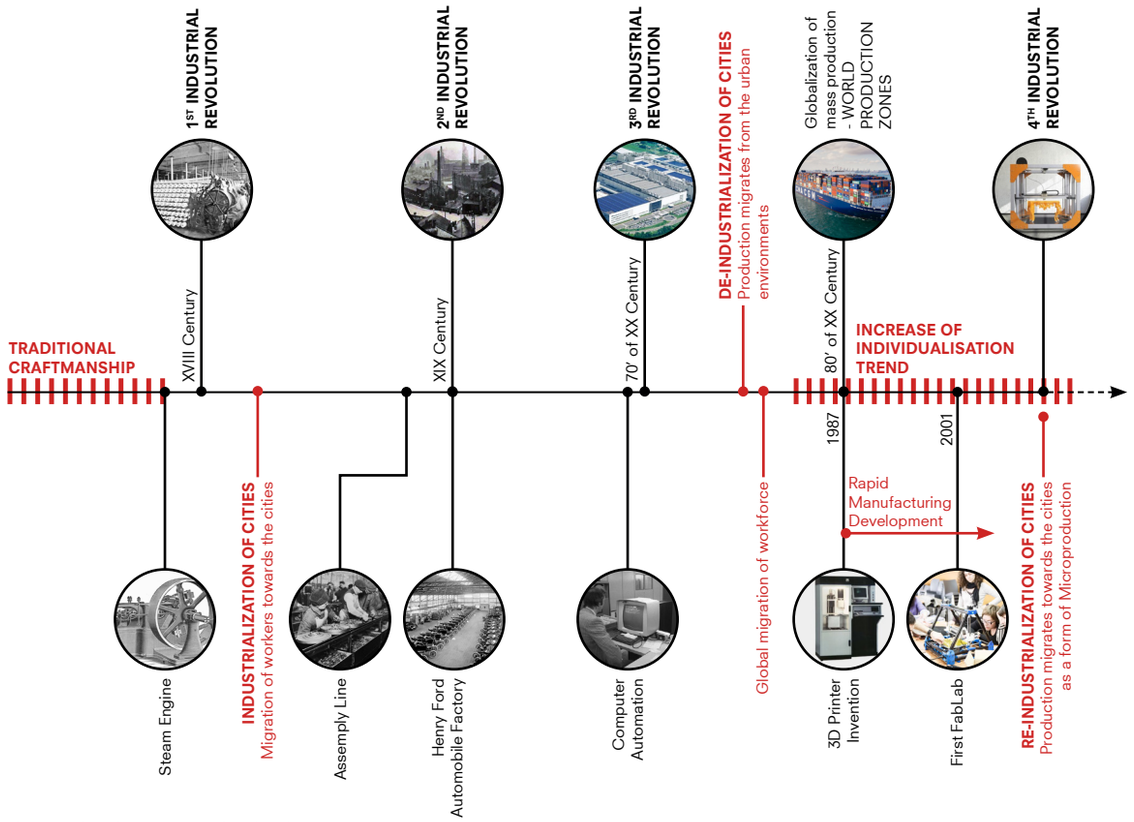


Fig. 1-1 Migration of production timeline

Migration of production

Over the centuries, production has been one of the main factors shaping urban environments. Artisan workshops have characterized the appearance of cities for centuries. The products were made locally and the craftsmen were responsible for the entire process of production. With the development of technology, craftsmen were replaced by factories, which, due to their nuisance, had to migrate outside urban areas. Eventually, in the mid-twentieth century, production became globalized, separating the manufacturing process which led to mass standarisation (Megens et al. 2013).

1. According to the book of Chris Anderson (left), there is a start of changes in production paradigms caused by possibilities of digital fabrication. This is called the New Industrial Revolution.

Microproduction emmergence

In recent years, more and more attention has been attracted to the discussion of changing the production paradigms. The words 'customization' and 're-industrialization' are becoming more and more popular. The factor which merges them together is the concept of microproduction. Microproduction as a form of contemporary cratmanship, is based on local scale production but taking an advantage of global connectivity. Several factors influenced the increase in the popularity of microproduction. The real milestone was the digitalization of production - especially the development of additive printing. The epitome of this transformation was the invention of the SLA-1 in 1987 - the first 3D printer that could print a single copy of any digital model at a low cost and relatively fast. This breakthrough technology started to respond to the growing need for individualization, giving rise to mass customization era (Dellot, Warden and Hill 2018). Moreover, another factor contributing to the popularization of micro-production is the increase in social entrepreneurship (Chaaban 2020). This is why microproduction, by many, is considered as a new industrial revolution, democratizing the production process - "It is the shift from current world of consumers to a society of producers, where everyone has the ability to produce." (Stoutjesdijk 2013, p.22). Fabrication Laboratories (FabLabs) have become a new element of the revolution. Their ideology of a shared space for making, initiated in 2001 by Gershenfeld, is to enable everyone to design and fabricate. (Buš 2019). However, the democratization of production is not the only aspect of the revolution. The crucial one is collectiveness, merging the society of producers by network of knowledge - "Today, micro-factories can make everything you can imagine. The collective of a million thinkers is about to be unleashed on the global market, as ideas go straight into production." (Anderson 2012, p.225).

Spatial and architectural respond

Microproduction has attracted a lot of attention from policy makers. An example is the organization of the 2014 Makers 'Fair by Barack Obama titled "Today's DIY Is Tomorrow's' Made In America '' to popularize the economy based on contemporary craftsmanship. Research on microproduction shows its multidimensional social and economical potential. Moreover, due to local scope, microproduction has a non-invasive character, therefeore it can be placed in urban environments. In this way, cities have a chance to restore local entrepreneurship from the past (Dellot, Warden and Hill 2018). As a result, many cities, such as Rotterdam, are changing their spatial policies, enabling re-industrialisation of cities through microproduction.

427 000 000
annual growth of enterpreneurs worldwide

100 000 000
starups opening each year

Data from: Inmind.com
as of the date: 15.09.2020

In the meantime, experiments and buildings hosting microproduction are becoming increasingly popular in cities: open workshops (ADX, Portland), start-ups (Start-up Village, Amsterdam), co-working offices (New Lab, New York), creative centers and others. Most of them empowers the idea of collectiveness by their open spatial structure and shared equippment. As a result, approximately 100,000,000 small, creative and collaborative businesses are emmerging every year around the world ("How Many Startups Are There In The World? (Infographic)" 2020). Also, microproduction is a growing strategy in the processes of redevelopment of obsoleted areas. The productive status of post-industrial facilities is a good chance to re-activate it by bottom-up activism (Factory Full of Life, Dabrowa Gornicza).

Fig. 1-2 Open workshop, ADX Portland
Communal production space.
Image: portland.aiga.org

Fig. 1-3 Startup Village, Amsterdam
In the inner courtyard, there is a community space, giving an emphasis to the collectiveness of users.
urbannext.net

“We miss ‘infrastructure’ which makes it possible for makers to be understood as producers”

Holman, 2015

Problem statement

Besides the big expectation, critical voices can be heard, doubting that innovative craftmanship can actually mean a revolution. Despite microproduction is well analised in socio-economical terms, the research defining its spatial role and characteristics is still missing. As Will Holman notes, for microproduction to be successful, a typology must be created that meets all its needs - “Until now there is a big potential, but it is not yet there, because we miss ‘infrastructure’ which makes it possible for makers to be understood as producers” (2015). Additionally, perceiving microproduction only in terms of workhsops is too narrow. This will not allow producets to be seen as enterpreneurs, and will not become a manifestation of the growing trend of collectivism as a business model.

Therefore, to design the new microproduction typology it is relevant to understand what should be it’s role in the city and how it refers to the society? Which urban and architectural conditions should it meet? What functional program should be connected with microproduction and how? Finally, how to design it to increase the potentiallity of social alliances creation?

Social alliances

As already mentioned, enclosing microproduction solely to the production function cannot be successful. Hermetization would lead to a dead end, creating just another cluster of producers. This is inconsistent with the idea of democratizing production, in which people with different skills should actively participate. Moreover, according to Holman, individual makers are not able to compete with global producers (2015). For this reason, micro-production must be viewed through the prism of cooperation, interaction and business partnership. To achieve this, microproduction has to represent the diversity of parties.

An interesting example of this approach is the Poblenou district in Barcelona. Poblenou is one of the examples of FabCities that try to implement the idea of circularity and inclusiveness, stating that local production and interaction are the driving factors (Diez 2020). It includes not only innovative technology production spaces. The presence of a second-hand market in the central point of the district is a sign that handcraft and 'traditional' non-technology-based craftsmanship gain importance as well. This results in widening the range of potential users.

Furthermore, due to the fact that the production facilities are spread evenly over the district, it prevents the clustering of microproduction. Moreover, the district is equipped with many smaller, communal spaces, such as Hort Indigant Community Garden or LAKA Restaurant, which serve as places of interaction and creates closer relationships between makers/residents. It reflects the global knowledge network on a local scale and stimulates creation of social alliances. The alliances, ideologically lead to the emmergence of micro-enterprises. Therefore, district is equipped not only with workshops. There are spaces like Media-ICT, which are to help local entepreneurs to turn their collaborative ideas into enterprises.

Therefore, this is the first example which sitmulates both factors, social enterpreneurship (economy) and making. This combination is crucial in order to stop microproduction from being perceived only as a temporary trend. Enabling makers to become profit-oriented prevents them from being viewed only as hobbysts, and the possibility of co-working lets them to be comepetitive on the market.

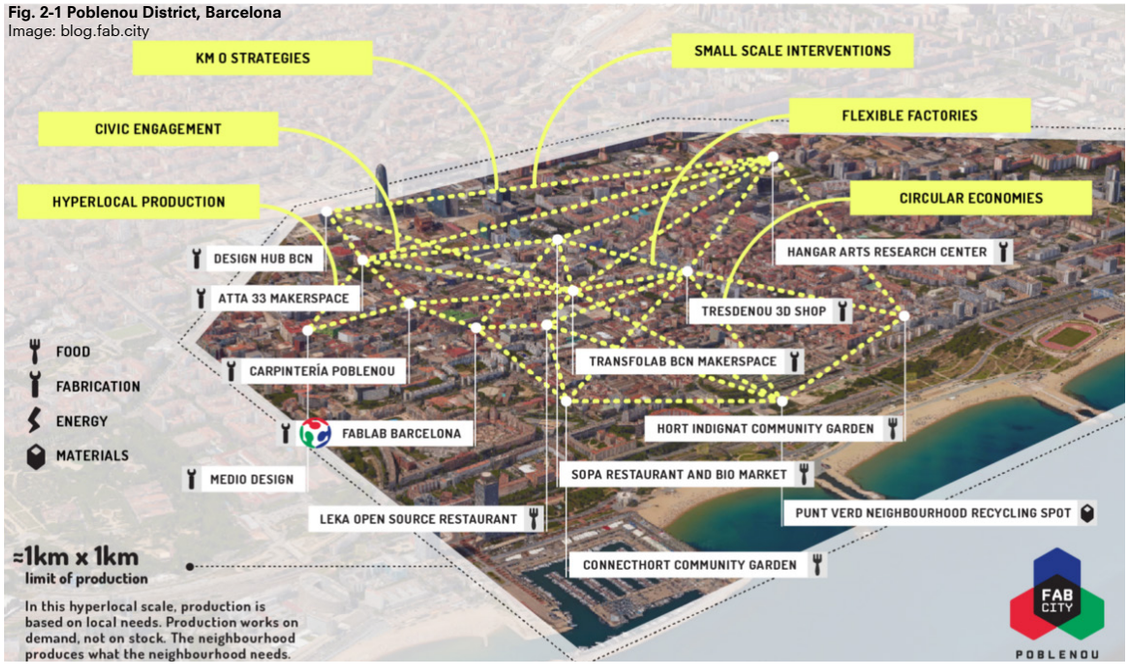
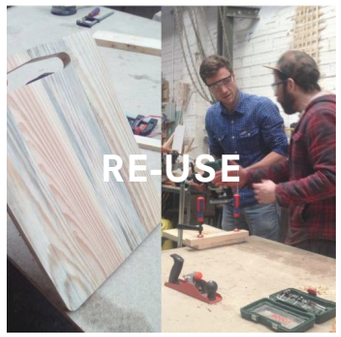
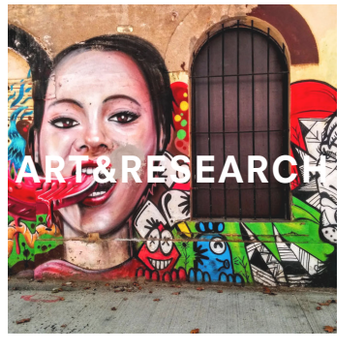


Fig. 2-1 Poblenou District, Barcelona
Image: blog.fab.city

POBLENOU FUNCTIONAL PROGRAM - 1x1km

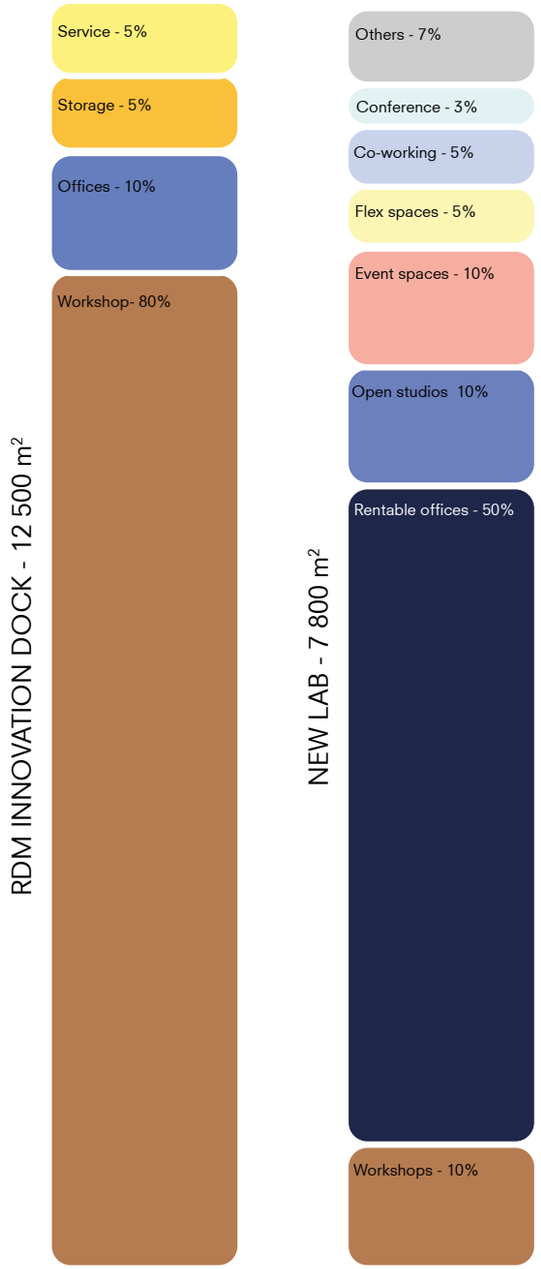




Program:

a) program base

The example of Poblenou shows that cooperation and collaboration are the basis of microproduction development. What is more, it has to be reflecting the the diversity of functions to be successfull. Therefore, it is worth taking a closer look at the programmatic characteristics. New Lab in New York is an excellent example to analyze. The reduction of the workshop space to only 10% of the total area shows that manufacturing is only a small part of microproduction. On the other hand, 80% of the facility's area is office and event spaces. They include open-space office, flex spaces, conference rooms, coworking areas, hotdesk offices and rentable private studios for enabling establishing businesses. Completely opposite spatial ratio is represented by RDM Rotterdam. In Rotterdam, it is the workshop space that takes up 80% of the total area of the facility, while office space only 10%. These differences are caused by differences in the characteristics of the end user of these buildings. RDM Rotterdam is aimed especially at larger entrepreneurs and companies that want to work on technological innovations through cooperation. The average New Lab user is different, joining the collaboration as an individual or as a small group. As a result, the NewLab functional program is better than the RDM program for microproduction and micro-enterprise development. The shared spaces of New Lab by supporting the collaborative model of work, lead to the empowerment of the individuals.



2. Program benchmarking of RDM Rotterdam and New Lab in New York. Both facilities are dedicated for innovative design based on digital fabrication. However, the differences in their typical users affects the program bar.

b) dwellings

One of the assumptions of microproduction is the democratization of production. Therefore, in addition to coworking and communal spaces, its typology should include a factor that will ensure the diversity of users. This idea was implemented in the Makers' Maze project - EUROPAN 15 winner, which topic was focusing on 'productive cities'. For this purpose, the authors of the project combined

Fig. 2-2 I.D.E.A. functional crossovers
The crossover of different functions enables supports interactive co-inspiration and tightens the relations between inhabitants
Image: ideadistrictsd.com

the manufacturing functions with the residential one. However, contrary to known typologies from the 1960s, the apartments and workshops are not directly linked. The apartments do not contain individual spaces intended for work. They have been replaced by communal ones - in line with the idea of collectivism.

What's more, during the times when the number of self-employment increases, the trend locating work spaces in close proximity to apartments is becoming a marketing element of residential investments. One of such examples is the I.D.E.A. in San Diego or Factory Full of Life in Dabrowa Górnicza. Each of them is aimed at small entrepreneurs, offering a program that allows 'making' just in the place of living. In San Diego, the main emphasis is on the creation of microbusinesses and the collective stimulation of creativity through a multitude of shared spaces, gastronomy, central squares where people can stay in an inspiring group of creative people. On the other hand, Factory Full of Life is more suitable for local manufacturers through the offered workshops and event spaces. This trend is reflected in future-oriented spatial strategies for housing. For example, the urban planning conditions for the city of Rotterdam predict that until the close future, new residential developments will have to contain at least 30% of the space intended for work - 'Werken aan Huis', 'Aan huis gebonen beroen / bedrijf' (Meyer et al. 2018). This is an opportunity that should be used when implementing the concept of embedding microproduction in urban environments. Thanks to this, microproduction would become noticeable not only to the interested users, but also would build entrepreneurial awareness among all residents.

Fig. 2-3 House of Vans, London
Skatepark, Image: archdaily.com

Fig. 2-4 House of Vans, London
Pub, Image: archdaily.com

Fig. 2-5 House of Vans, London
Screen room, Image: archdaily.com

Fig. 2-6 House of Vans, London
Exhibition room, Image: archdaily.com

c) experiential retail

Another element that should enrich the functional program of microproduction is caused by changes in retail trends. As mentioned in the introduction, the possibilities of digital fabrication and digital manufacturing perfectly meet the growing need for product customization. However, mass customization is not the only change in the sector of retail. High competitiveness of online sales brings with it changes that transform physical stores into places where customer can either experience the product or take an active part in production process (Yao 2020).

An interesting study of this transformation is House of Vans in London. In this skate shoe manufacturer's shop, there is no space for buying the product. Instead, the store is equipped with 'laboratories' where everyone can personalize their pair of shoes. In addition, there is a skatepark, exhibition hall, bar or concert stage to allow visitors experiencing the subculture associated with the product. This approach has been called 'experiential retail'. It is characterized by the fact that sales spaces are reduced to a minimum in favour of the appearance of event or leisure spaces.

However, the greatest potential of these changes in terms of microproduction is visualized by Janne Kyattanen's idea. This Finnish designer created a digital collection of shoes. Now, anyone can download chosen shoe model in preferred size, customize the color, send it any nearby 3D printer, and pick up finished pair of shoes the next day. It is the idea similar to the artisanal work of a shoemaker from the past who, using foot measurements, was able to make a perfectly fitting shoe. Nowadays, with the advancement of digital manufacturing everyone is able to do that.

It is why microproduction cannot be seen only through the prism of workshops. Workshops should only be a factor sparkling and linking other functions, such as: co-working offices, start-ups, retail, exhibition and event spaces. Therefore, microproduction should be considered as continuation of the functional diversity of cities.

Fig. 2-7 CUBEX: showroom of Kyattanen's idea
As it is easy to notice, not only the product is exhibitited.
The same importance is given to the 3D printers.
Because of that, customers can have
the experience of production
Image: seosdigital.com

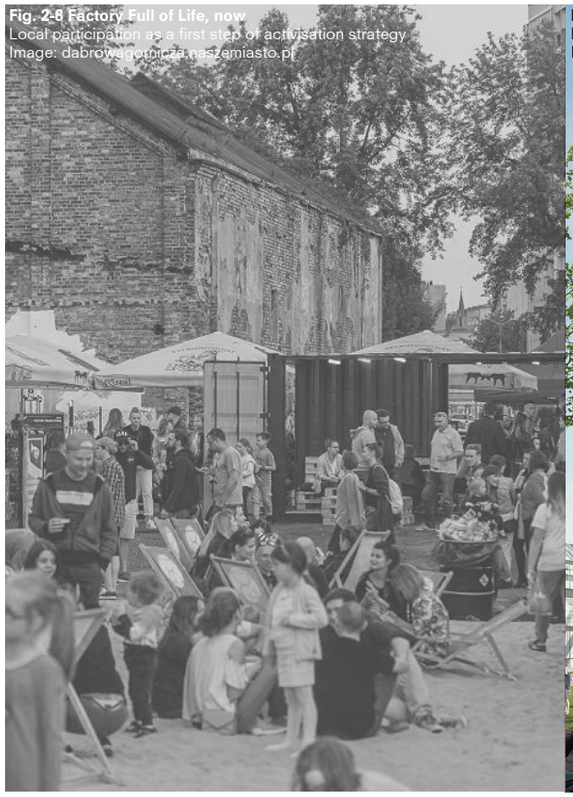


Fig. 2-8 Factory Full of Life, now
Local participation as a first step of activisation strategy
Image: dabrowagornicza.naszemiasto.pl

Fig. 2-9 Factory Full of Life, future
New identity of the place based on the industrial values of the past.
Image: analog-architecture.com

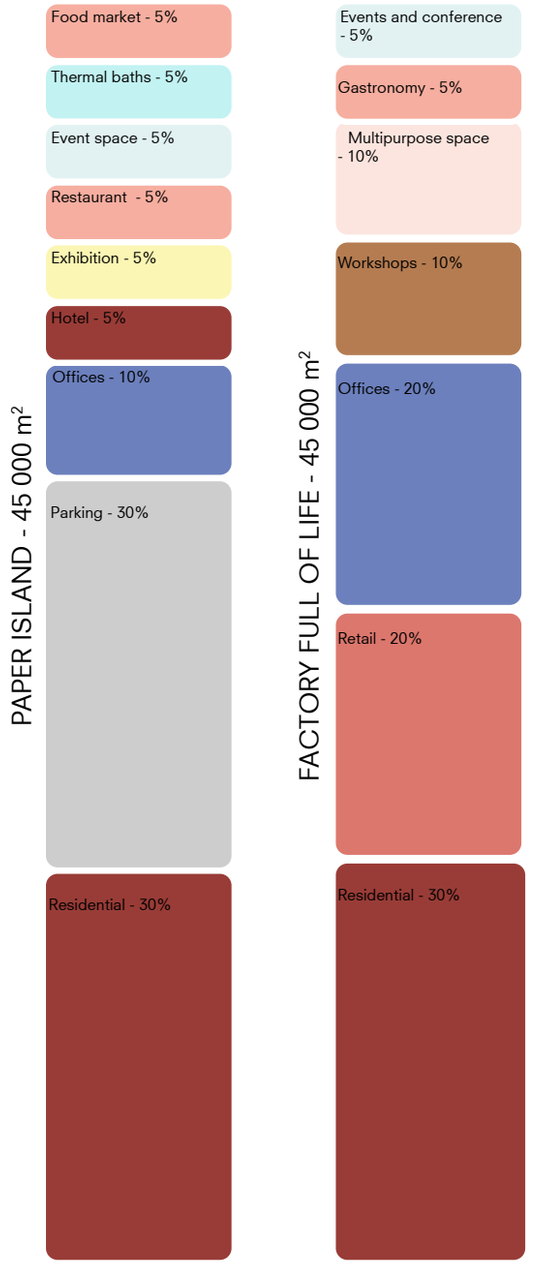
Fig. 2-10 Paper Island, now
Tourist attraction as a fisrt stage of activation strategy.
Image: alamy.com

Fig. 2-11 Paper Island, future
New identity of the place based created by participatory actions.
Image: designboom.com

Urban role

Microproduction, as a factor supporting local entrepreneurship and cultural activity, more and more often becomes an element of bottom-up activism of obsoleted areas. Most often, post-industrial facilities are used for this purpose, which lost their original function in the mid-twentieth century due to the process of cities de-industrialization. An example of this type of process is already mentioned Factory Full of Life in Dabrowa Gornicza in Poland. It was decided to use the sentiment of the place formerly accommodating machine tool factory, to gradually transform them into a modern factory of 'creative design work'. Another example of a similar nature is Paper Island in Copenhagen, located in old paper warehouses. Ultimately, each of the examples uses the strong identity of the place to increase the functional activity and attractiveness of the neighbourhood. However, in both cases it is a multi-stage process, buildng up a new identity by social participation and engagement in the process. As the first stage, they are used as venues for informal events such as concerts, art exhibitions, foodtruck festivals, and creative workshops. In this way, forgotten objects acquire new functional value, attracting and increasing number of interested recipients. Once the new value of the abandoned areas is stabilized, the next step is to formalize the function. In the case of Paper Island, these will be artistic and event spaces combined with functions supporting tourism. Factory Full of Life is closer to the ideology of micro-production, as it will be transformed into workshops, coworking and private offices, retail and event spaces.

Moreover, post-industrial objects are attractive to embed the concept of micro-production not only because of their past production status which can be used as branding. Their advantage is the spatial characteristics of production halls, the spacious interiors which are easily adaptable to new functions. Thus, the use of abandoned downtown factory facilities for micro-production purposes not only facilitates the process of settling it, but also contributes to the reactivation of problematic urban areas.



3. Program benchmarking of Paper Island and Factory Full of Life. Paper Island represents the case more suitable for artists and events. Microproduction represents the case suitable for makers. According to the new paradigms of microproduction and its functional diversity, the perfect program should be a mixture of both mentioned.

4. The worth mentioning aspect is their programmatic size. Both oscilaters around 45,000 square meters. This fact is a starting point for deciding the Microproduction Habitat area.

Architecture

The concept of collectivism should be supported not only by the wide offer of the functional program and the diversified range of users. Collectivism should be reflected in the architectural structure of the typology of microproduction. This idea was introduced in the New Lab building in New York. The spatial structure of this building is very similar to Herman Hertzberger's idea of multidimensional connectivity, which he applied in the Centraal Beheer Office project. The idea was to reduce the physical borders so that users remained in visual and voice contact. At New Lab, this idea has been developed a bit further as the walls have been kept to a minimum. Only those rooms that generate noise or require silence are separated. It resembles a typical open-space office, however, thanks to its greater functional range, New Lab is much more diverse than a typical open-space office. Thereby, two benefits were obtained. The first one is reflection of multidimensional character of activities taking place inside. The second allows one to observe what is happening around, which contributes to co-working and creation of alliances between its users.

Another way of spatial interpretation of collectivism was used in the design of Paper Island. In this project, it was decided to use the central square as an element merging the group of interiors - "Pavement pattern forms the basis for the island's visual complexion. These patterns will be projected upon the in-situ, concrete floor. Spanning across the entire island, the pattern will shamelessly spread itself underneath the buildings to create continuity between the inside and outside." ("Paper Island Copenhagen - Inside Outside" 2020)

Although the aspect of spatial connection is crucial, one should also look at the form of the new typology of microproduction. If the microproduction architecture is to be a manifestation of the new trend of the business model, then the form of the new typology of microproduction should strongly create its identity. Moreover, the fact that microproduction is to be embedded in an urbanized environments it is neccessary to rethink its visual attractiveness. As a confirmation of this statement, one can compare Ryhove Urban Factory located in the central part of Ghent to any factory in the outskirts of the cities. The well-defined character of Ghent's historic buildings is reflected in the Urban Factory design, while suburban factories are designed in generic shapes. This, has to be one of the factors considered during the design process.

However, if microproduction is to be located in abandoned post-industrial facilities as a modified continuation of their productive function, it should be a starting point for shaping the form of a new typology. Nonetheless, the form should not try to recapture the past but rather to be its development, representing future potential of microproduction. Moreover, microproduction, as a non-invasive process, should be one of the factors shaping the image of typology. Exposing microproduction would let it become a typical element of a street view – the same as it was with artisan workshops.

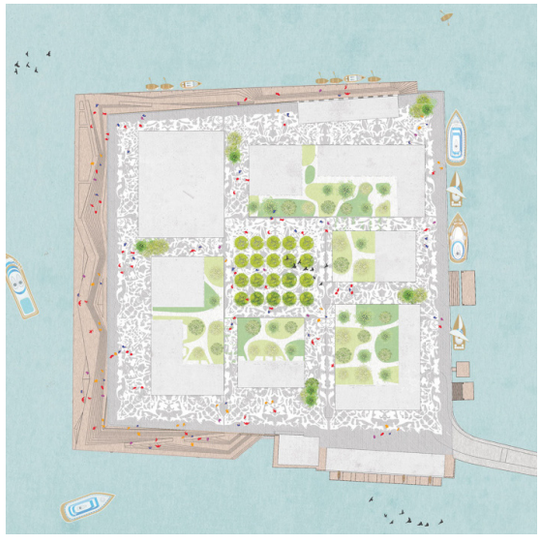
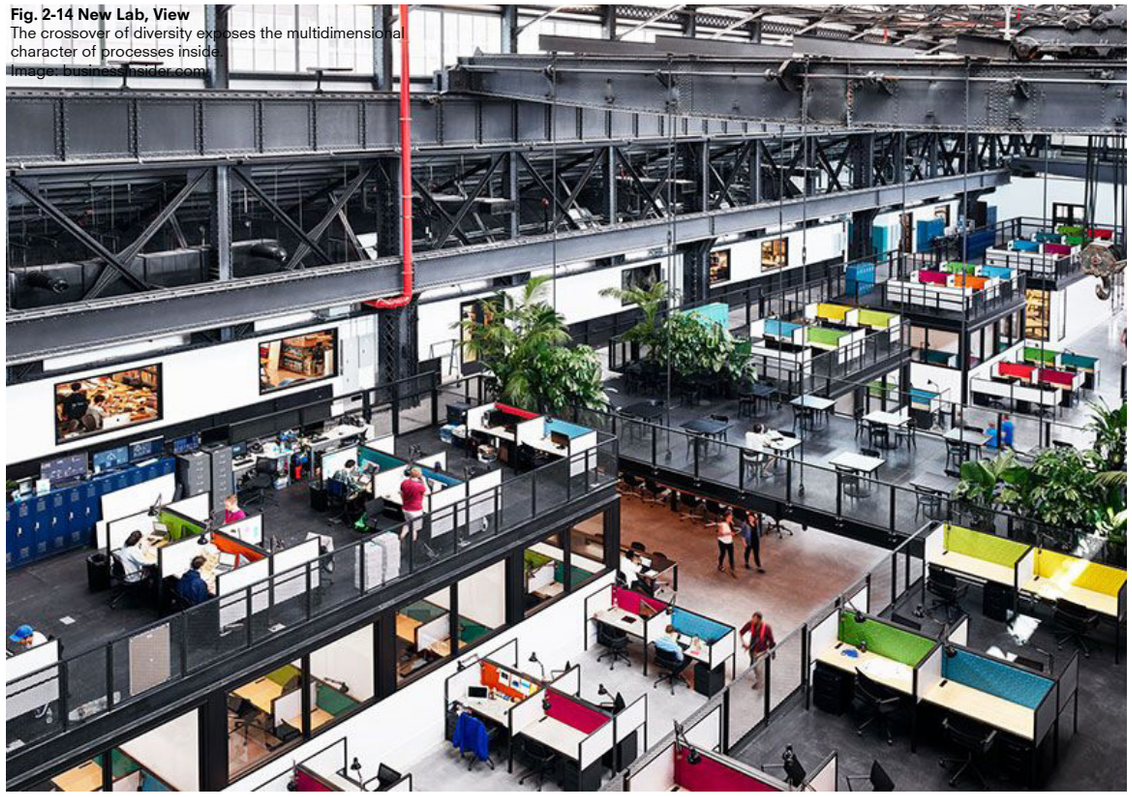


Fig. 2-12 Paper Island urban layout
Usage of the pavement design as a factor which connects distributed buildings
Image: insideoutside.nl

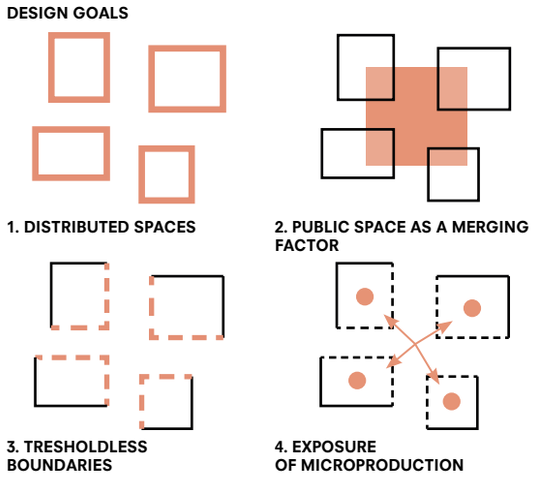
Fig. 2-13 New Lab, Section
Reduction of physical border as a concept supporting spatial collectiveness.
Image: marveldesigns.com

Fig. 2-14 New Lab, View
The crossover of diversity exposes the multidimensional character of processes inside.
Image: businessinsider.com



Microproduction typology

After analyzes, one can speculate on shaping the concept of microproduction typology and its embeddement in the urban environments. Based on the analysis of the Poblenou district, it is known that microproduction cannot be hermetized. In order to build awareness of microproduction as an integral part of the city, it must be a continuation of its multidimensional character. Thus, according to the FabCities concept, the typology of microproduction is not closed in one building, but is a set of distributed functions. For this reason, the public space gains importance, as it acts as the link of all elements, just like in Paper Island. Moreover, the boundary between the outside and the inside is crucial since it determines the strength of the manifestation of microproduction and its users as producers. Additionally, architecture should be an expression of collectivism and entrepreneurship. Only then will micro-entrepreneurs be able to compete with global producers. Another essential element is the functional crossover. Firstly, due to the ideology of the democratization of microproduction, it must be located in the immediate vicinity of the residential function, which was described on the example of Makers' Maze. Secondly, in order to strengthen the image of micro-producers as entrepreneurs, the workshop function of microproduction has to be only one of the parts of the program - as demonstrated by the example of NewLab. Co-working and start-up spaces are the ones, that enables them be profit-oriented. Additionally, changes in consumer trends make it possible to blur the line between producers and sellers. For this reason, workshops should be linked to retail. Furthermore, retail, due to the change in the sales characteristics described in the example of House of Vans, should be closely connected with exhibition and event spaces. And lastly, microproduction should be in close proximity to the areas of leisure and relaxation. Only then will there be a natural formation of relationships between users. A good example of such a combination is the I.D.E.A. in San Diego. By offerring residents a wide range of leisure, gastronomic and communal space, creates the platform for interactions. Moreover, the presence of recreational and cultural functions will result in microproduction as a meeting space in the urban environment.



Goals & Design questions

To achieve the perception of the new typology as an expression collectiveness and unity, the structure has to be tresholdess and more open comparing to the examined examples. An equally important factor is the exposure of microproduction as an element that binds various functions. The consequence of the idea of demecratizing production is the necessity to bring together different people. Therefore, the buildings have to represent and accomodate diversity by its form. The combination of these factors will result in an architecture supporting the formation of social alliances that meets the needs of new microproduction paradigms. Moreover, the potential of microproduction should be used as a factor positively influencing the attractiveness of the area.

However, there are some questions which have to be studied during design. How to get a sense of unity in buildings which are distributed? How to represent diversity in architectural form? How to use local circumstances to support embeddement of the microproduction?

Rotterdam:

a) localisation

The plot selected as testbed for embedding the concept of microproduction is located at the southern tip of the Feijenoord island in Rotterdam. The plot's surface is around 52,000 m2 and is delineated by Piekstraat Street to the west and Maas River to the east. Accordingly to the the South Rotterdam development strategy concept, the plot is located at the end of the west-east activation avenue, which starts in the vicinity of the Fenix I in Katendrecht. Currently, the plot is occupied by a complex of post-industrial facilities, which in the past served as production halls and the administration of the Fijenoord shipyard. The complex was built in 1920 and then expanded in the 1970s.

Fig. 3-1 Rotterdam Zuid development strategy
West-east activation alley. On the easter end of the alley, Microproduction Habitat plot is located (purple).

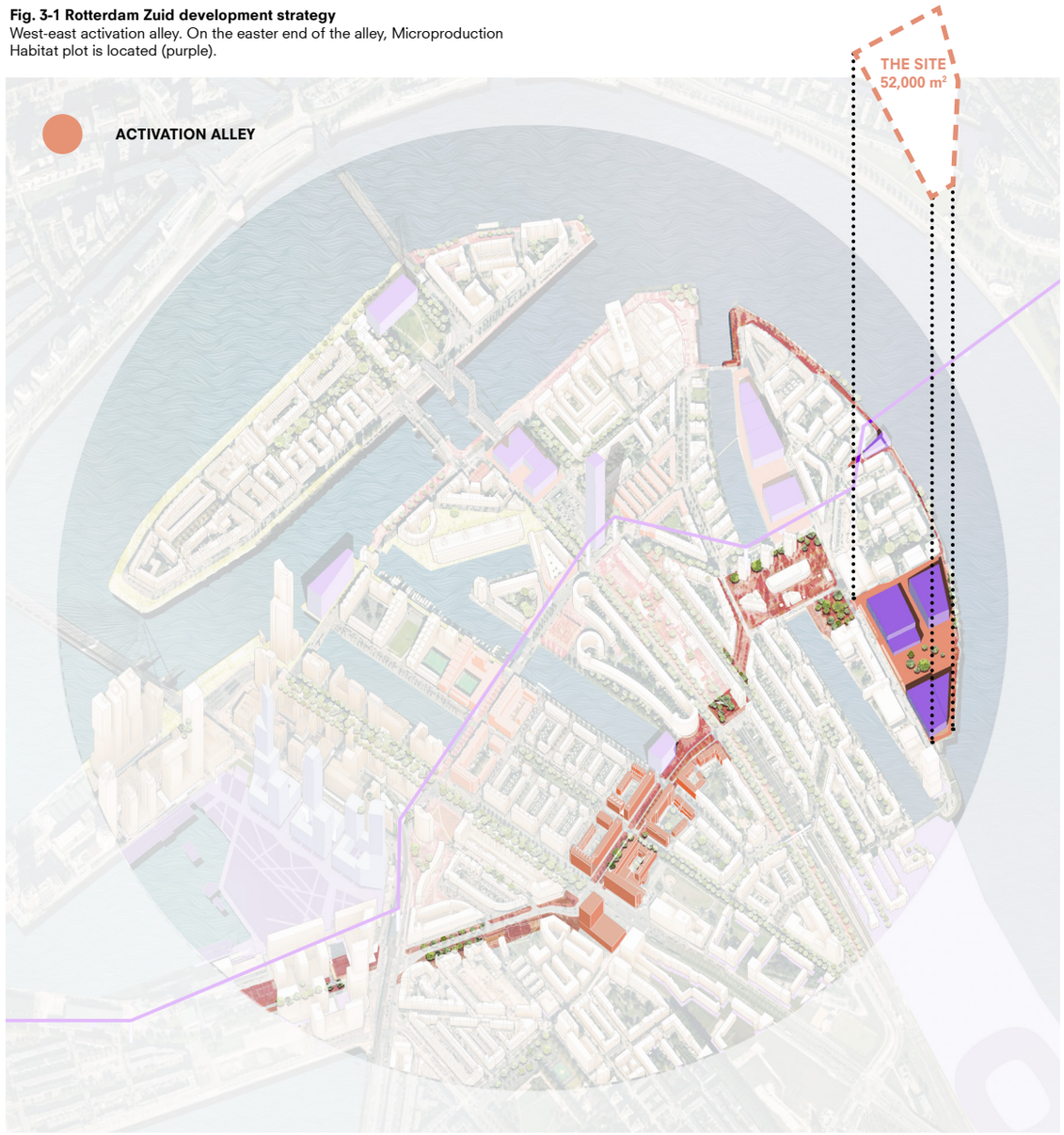
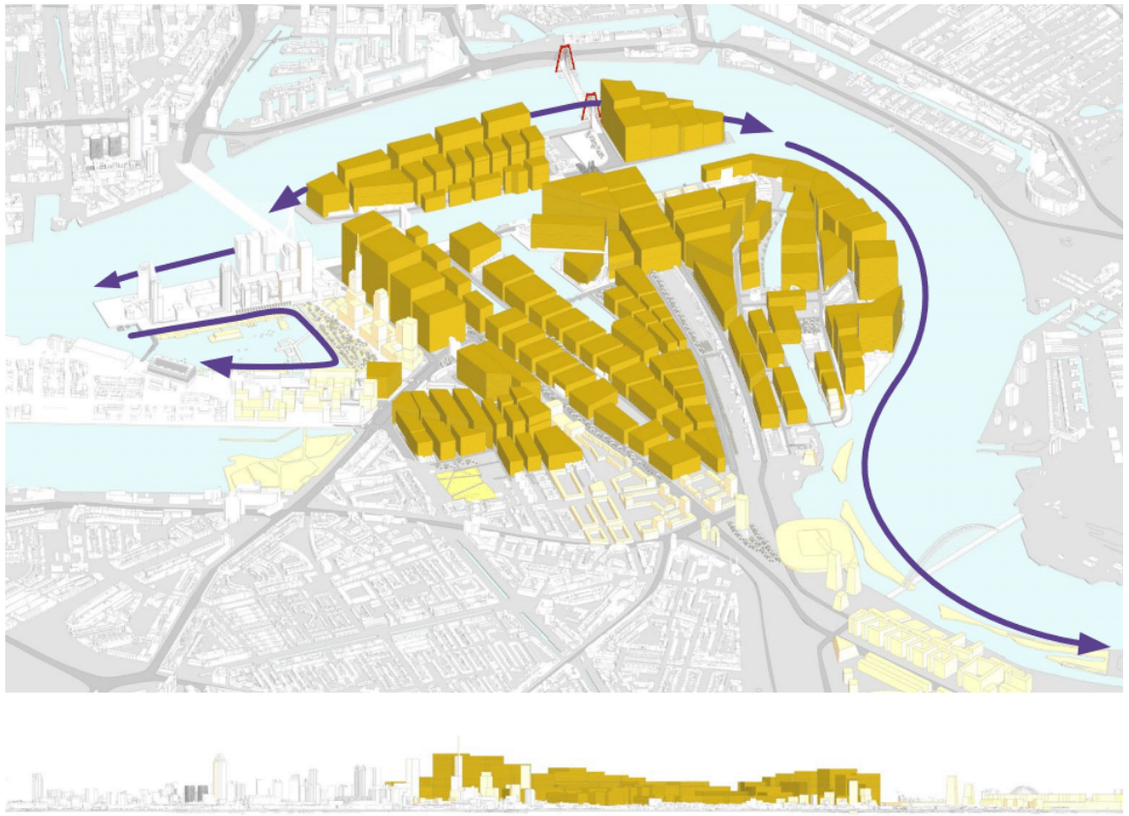


Fig. 3-2 Site conditions
Currently, the site is deprived of public functions. The goal is to activate the area by openning it up and increasing its transparency.

Fig. 3-2 Rotterdam Zuid development strategy, Heights of the buildings
In line with the city's policy of using waterfronts as landmarks, the sites located on the coasts are dedicated for 'tall' development.



Rotterdam:

b) program

The plot should accommodate a functional program of 50,000 m2. This number was estimated on the basis of a comparative analysis of the area of Factory Full of Life and Paper Island. The proportion of the program particles was decided on the basis of the variety of analyzed typographies (accessible in appendix). Then, the averaged result was adjusted to the factors specific to this part of Rotterdam. Responding to the needs, the space for workshops was increased. This is due to the presence of numerous foundations, such as Wijksatelier op Zuid, Rotterdamsche Confituur and JINC. Their ideology is based on the activation of local residents by using their manual skills. This creates a high demand for workshop and exhibition space. Due to the developing office character of the district, the initial office space is reduced, with the possibility of extending it as the entrepreneurial nature of the neighborhood develops. Due to the greater space demand for 'experiential retail' and the need for second-hand trade, the retail space is to constitute approximately 15% of the area. The functions complementing the microproduction and commercial program are the event, exhibition and gastronomic space - their size was adopted after analysing functional programs of the Fenix I, Paper Island and Factory Full of Life buildings. The residential function is to constitute a minimum of 30% of the area, with the possibility of expansion in order to increase the FSI factor in accordance with the tendencies of the neighborhood (maximum FSI = 3.5).

c) spatial strategy

The spatial concept of the plot development must meet several requirements. First, it is necessary to create a continuity of west-east activation. Secondly, the distribution of functions is to ensure the functional activation of Piekstraat and the Maas waterfront. The central point of the plot, from which all microproduction processes has to

5. Microproduction Habitat program bar. The decision was taken on the basis of Paper Island and Factory Full of Life. Later on, it was adjusted according to the characteristicts of the Rotterdam Zuid. All the changes and decision were supporte by typological analysis, which are accessible in appendix.

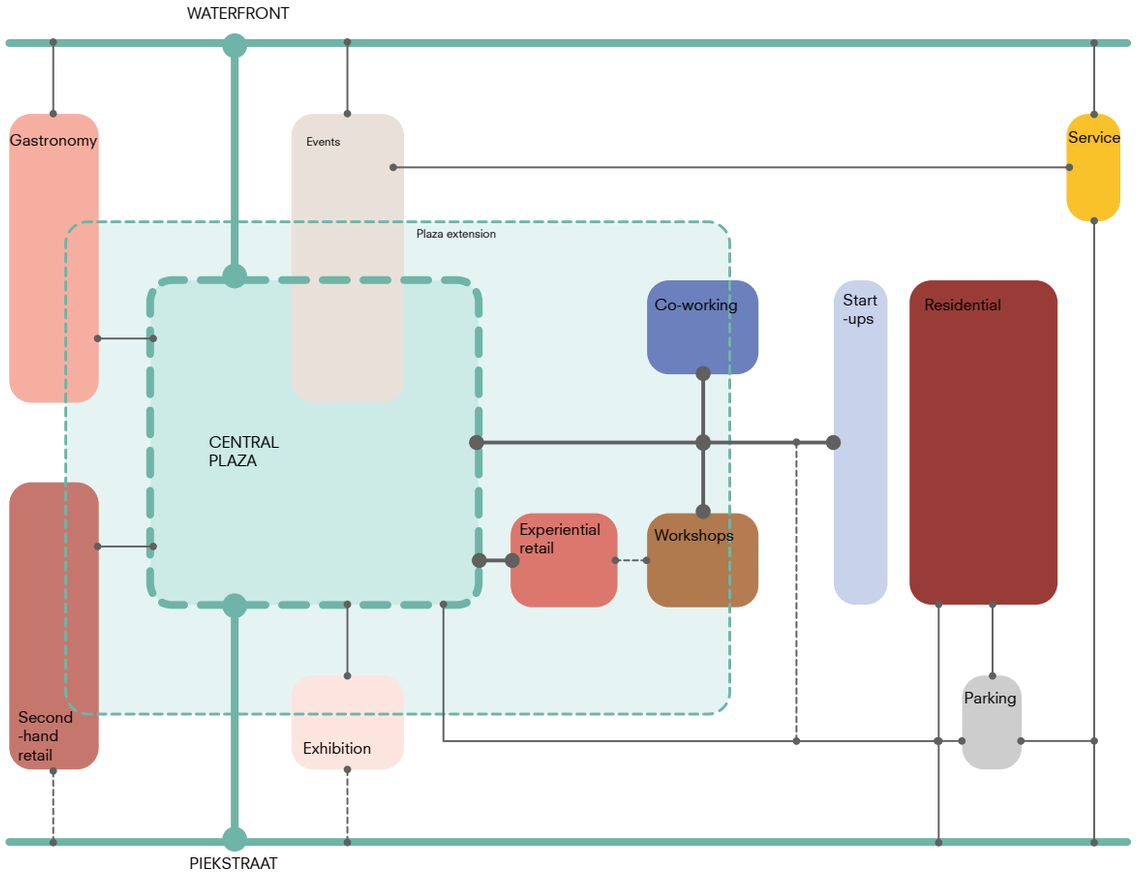
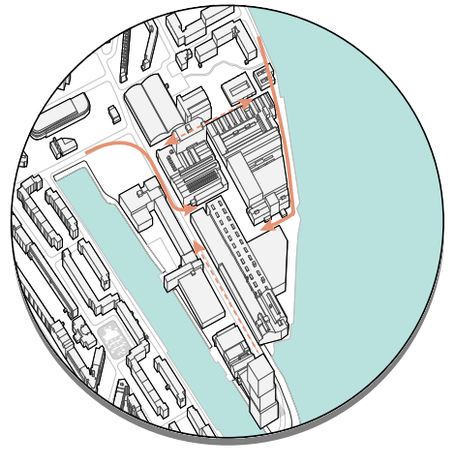


Image: Functional Scheme of the site

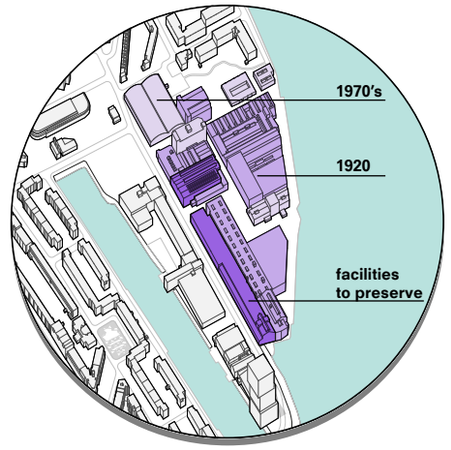
be visible, is to be a public square connecting the plot with the activation alley. The height of the buildings is also an important element. According to the height guidelines of Rotterdam Zuid development strategy, the tallest building on the plot should be 70 to 80 meters high. The last element is the need to develop an implementation strategy for each stage of the project in accordance with the method described in the paragraph 'Urban role'. Initially, the plot should be opened up and made available for bottom-up informal participatory initiatives. Then, the space should be organised, leaving only buildings of high architectural quality creating space for further developments. The last stage is the simultaneous formalization of the functions and construction of a residential units.

Site analysis and assets:

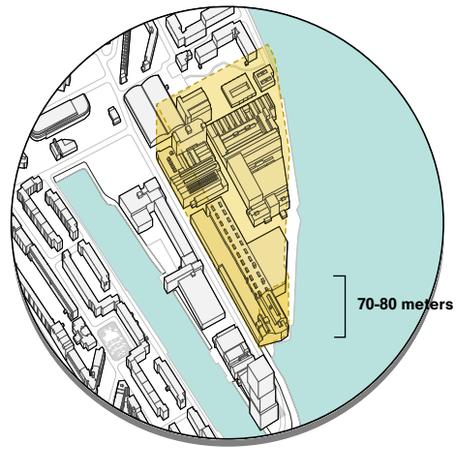
1. MAIN & SECONDARY FLOWS DISTRIBUTION



2. VALUE ASSESSMENT AND AGE OF FACILITIES



3. HEIGHT OF FUTURE DEVELOPMENTS



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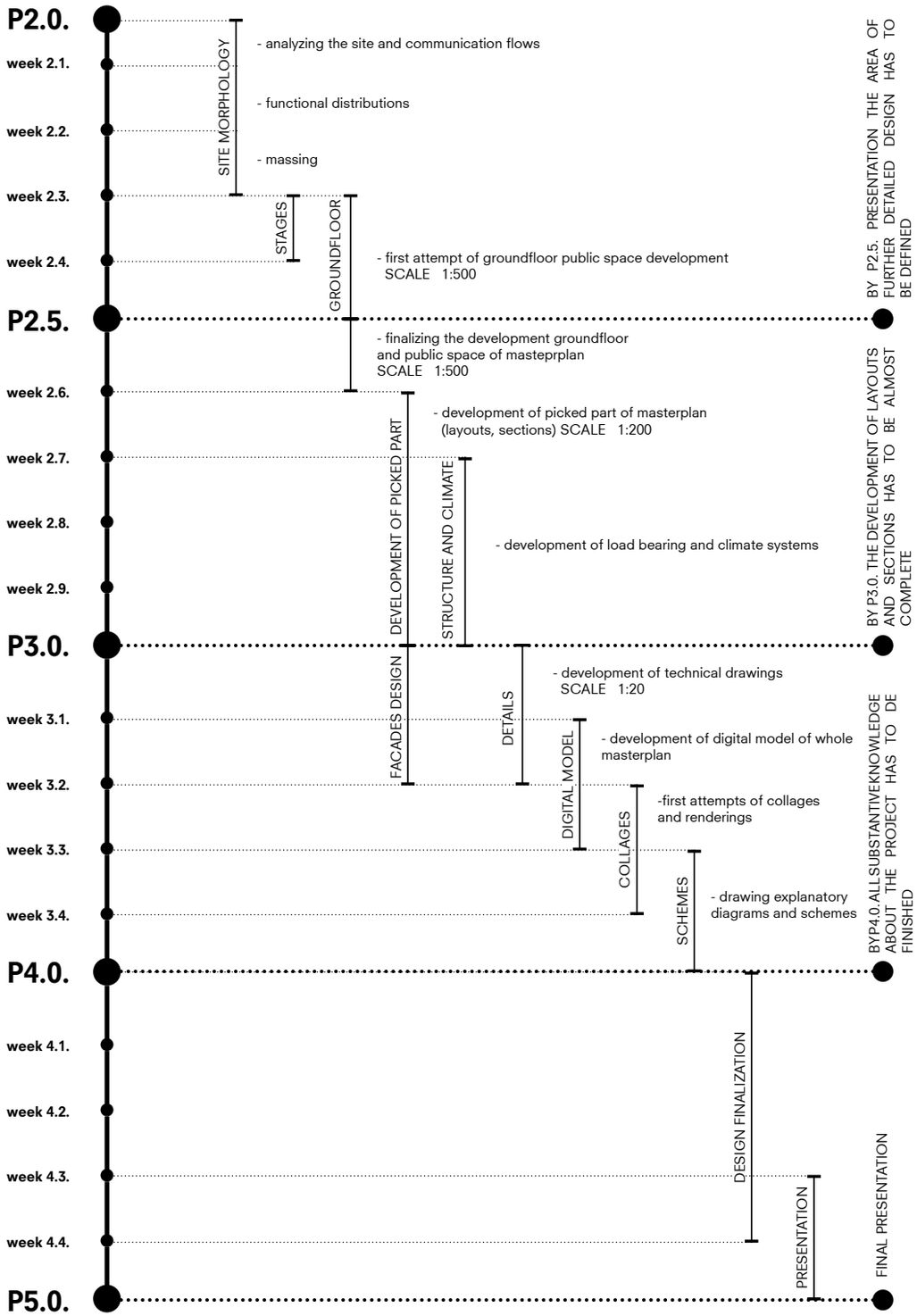
Plan of approach

The design process will be divided accordingly to the presentation moments. For the first five weeks, the project will focus on the urban scale of the building. The first three weeks are planned as the development of the plot morphology, studying communication flows, functions distribution and masses of the buildings. Then, when the plot masterplan is defined, it will be divided into stages of its implementation strategy. Last week before presentation P2.5. the first attempt to design the distribution of the ground floor in the scale 1: 500 is scheduled.

The next stage will be devoted to the more detailed development of a selected part of the project. Ultimately, it will include a workshop, office spaces and the immediate vicinity of the central square. The scale in which this part of the project will be presented is equal to 1:200. Additionally, the last three weeks before the P3.0 presentation are dedicated for the development of the structural and climatic system of the buildings. The purpose of this period is to develop floor layouts, sections and a preliminary facade concept.

The period between the presentation of P3.0. and P4.0. is dedicated for the completion of the facade design and development of the technical details. The technical details are planned to be executed in scale 1:20. In the meantime, the final digital model of the complex should be developed. When the model is done, it should serve for making the first collages and explanatory diagrams. Until P4.0. all all substantive knowledge of the project should be developed.

After the presentation of P4.0. graphic improvement of drawings and collages is planned. During this period, it is necessary to think about the coherence and graphic design of the presentation. Last week before the P5.0 presentation is scheduled for practicing presenting skills.



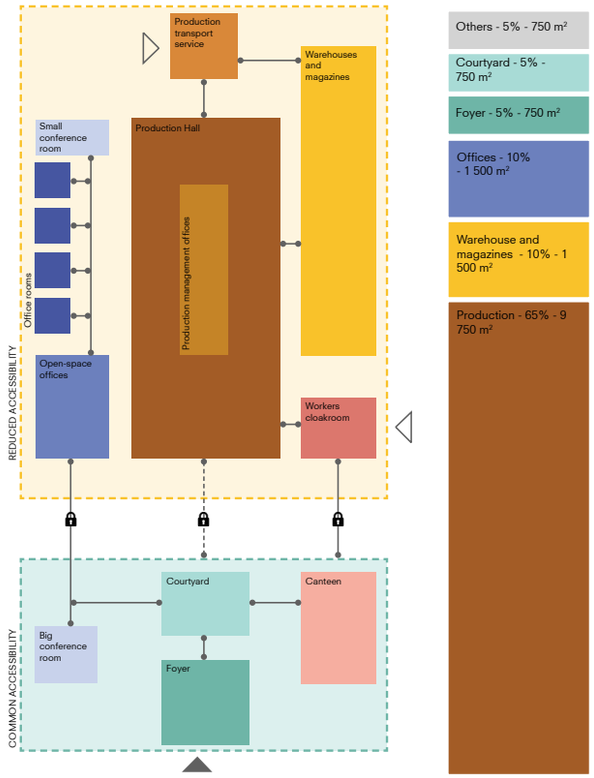
Factory in the Forest
TYPOLOGY: MANUFACTURING PLANT

Location:
Penang, Malaysia

Architect:
Design Unit Architects

Size:
15 000 m²

My interest:
The typical factory on the industrial suburbs of the city of Penang. However, it implies the importance of **entrance attractiveness** to impress the visitors.



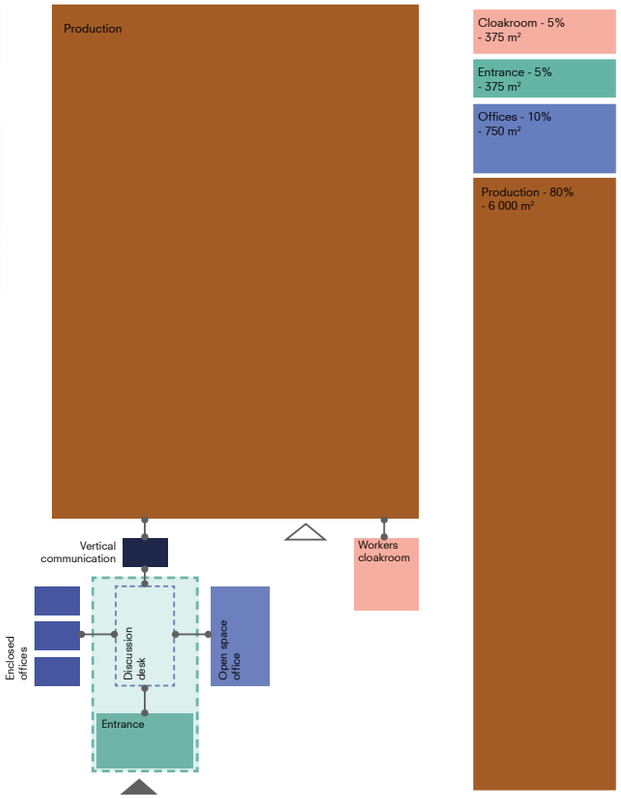
Cortes Metalurgicos Oviedo
TYPOLOGY: MANUFACTURING PLANT

Location:
Poligono San Cristobal, Valladolid

Architect:
Oscar M. Ares Alvarez

Size:
7 500 m²

My interest:
The factory is producing different types of mettalurgic equipment using high-tech. The **production space is maximized** on the site, making the factory as universal as possible.



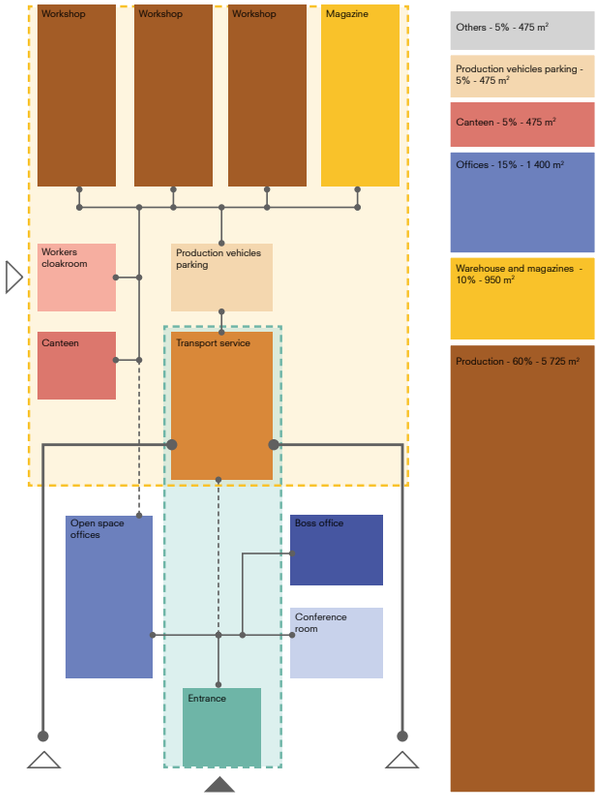
Ryhove Urban Factory
TYPOLOGY: MANUFACTURING PLANT

Location:
Ghent, Belgium

Architect:
TRANS architectuur

Size:
9 500 m²

My interest:
The factory located in the **urban environment**. Due to this fact, it implicates the **characteristics of the historical neighbourhood** by sloping roof.



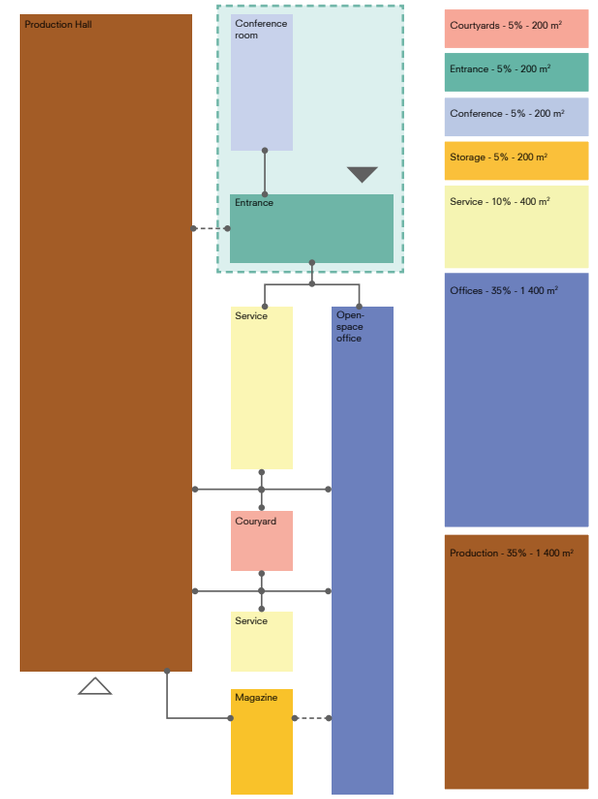
CEI 3
TYPOLOGY: MANUFACTURING PLANT

Location:
Yverdon-les-Bains,
Switzerland

Architect:
bauzeit architekten

Size:
4 000 m²

My interest:
The plant which is focusing on developing innovative technologies. It is interesting, that this fact causes the **reduction of 'making' space** in favour of offices/ laboratories.



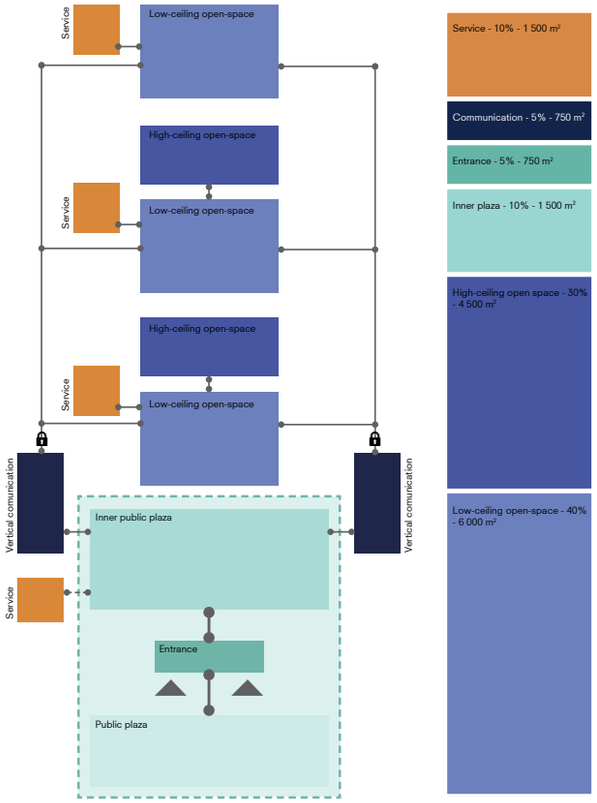
Media-ICT
TYPOLOGY: START-UP OFFICE

Location:
Barcelona, Spain

Architect:
Enric Ruiz Geli

Size:
15 000 m²

My interest:
Media ICT is a space dedicated for start-ups emmergence. The space is answering for variable needs of startups by reduction of inner construction and variations in **ceiling height**. The groundfloor is an extension of **urban planza** in order to organize **events and exhibitions**.



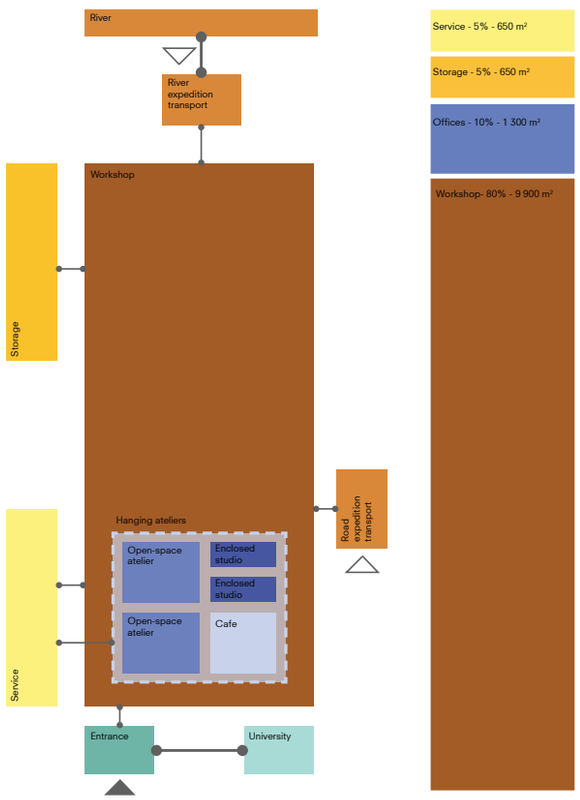
RDM R
TYPOLOGY: ATELIER/WORKSHOP

Location:
Rotterdam, the Netherlands

Architect:
Groosman
Spee Architecten

Size:
12 500 m²

My interest:
This is the famous example of maker space. The task for designers was mainly to design **the way of using the area**. Worth mentioning is the way of t**ransportation service by neighbouring river.**



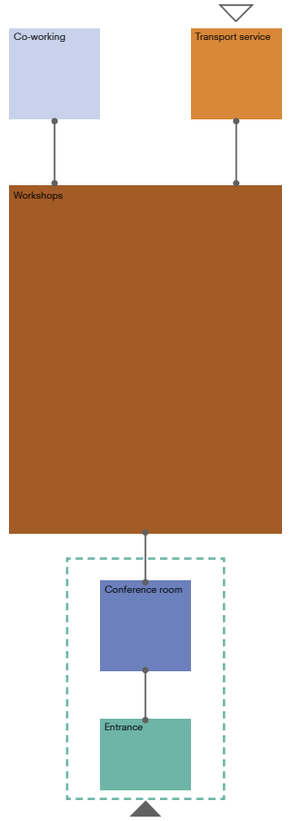
UTK FabLab
TYPOLOGY: ATELIER/WORKSHOP

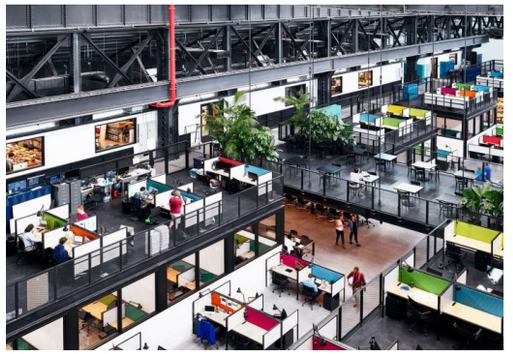
Location:
Tennessee, U.S.

Architect:
unknown

Size:
1 800 m²

My interest:
The **typical Fabrication Lab**, which consists of one big open-space to become as universal as possible. The 'learning' aspect is located next to the entrance as a way of **emphasizing the knowledge flow.**





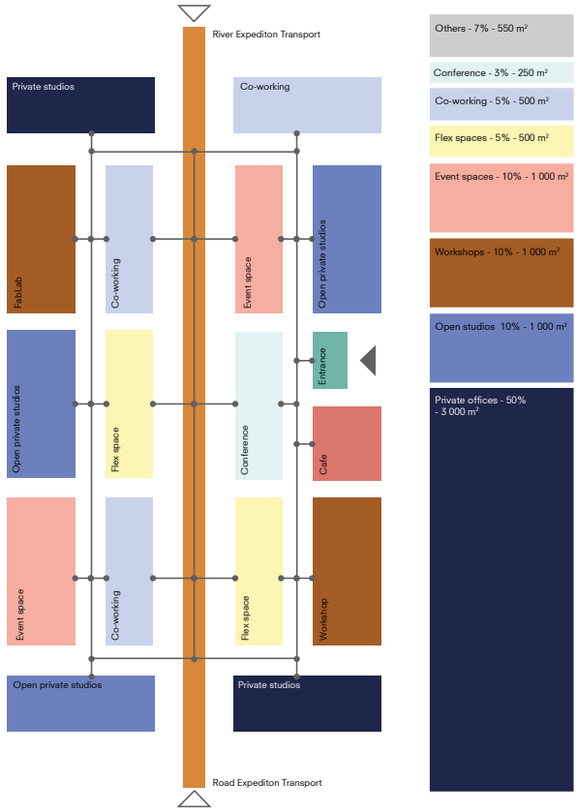
New Lab
TYPOLOGY: ATELIER/WORKSHOP

Location:
New York, U.S.

Architect:
Marvel Architects

Size:
7 800 m²

My interest:
The closest example of city microproduction. Here, the focus on production is reduced in favour of **co-working and multipurpose spaces**, which follows **sharing ideology** and **stimulate the alliances creation**.



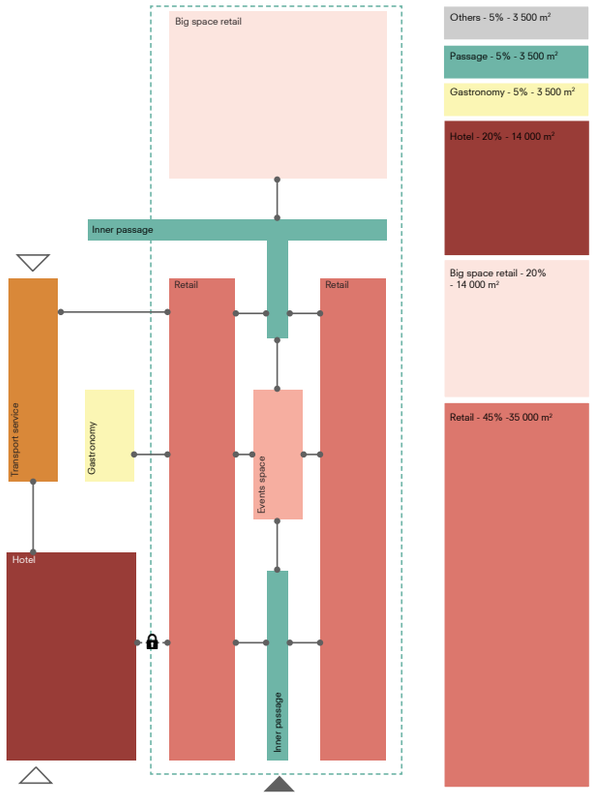
Galeria Dominikanska
TYPOLOGY: SHOPPING MALL

Location:
Wroclaw, Poland

Architect:
Edward Lach

Size:
70 000 m²

My interest:
The old-fashioned type of shopping mall. The inner **multi-storey atrial passage is a space of fashion events.**



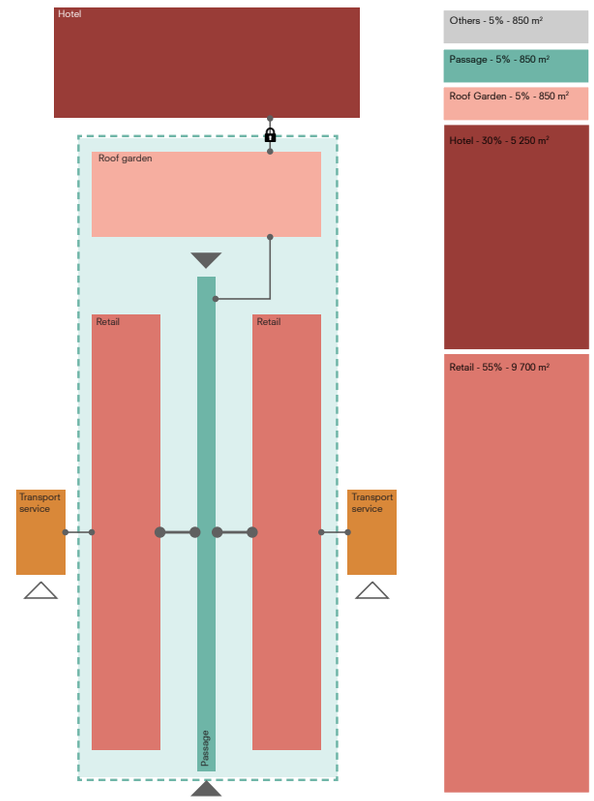
De Passage
TYPOLOGY: SHOPPING MALL

Location:
Den Haag, the Netherlands

Architect:
Bernard Tschumi Architects

Size:
17 500 m²

My interest:
Shopping mall as a immitiation of a normal street. The passage acts a function of a **street which can be used not only in order buying goods.**



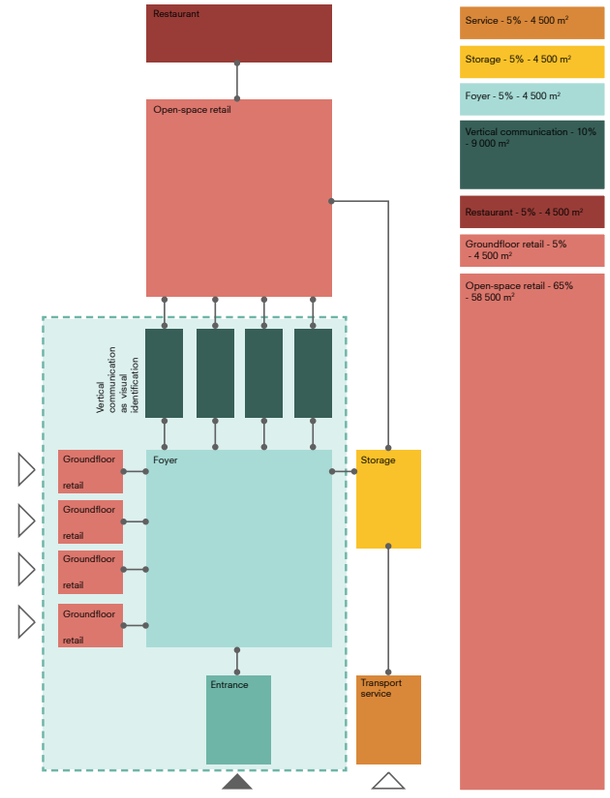
KaDeWe
TYPOLOGY: RETAILNMENT

Location:
Berlin, German

Architect:
OMA

Size:
90 000 m²

My interest:
This gallery, on the contrary to the previous one doesn't offer communicational functions. **It is an open-space retail area to get lost in retailnment.**



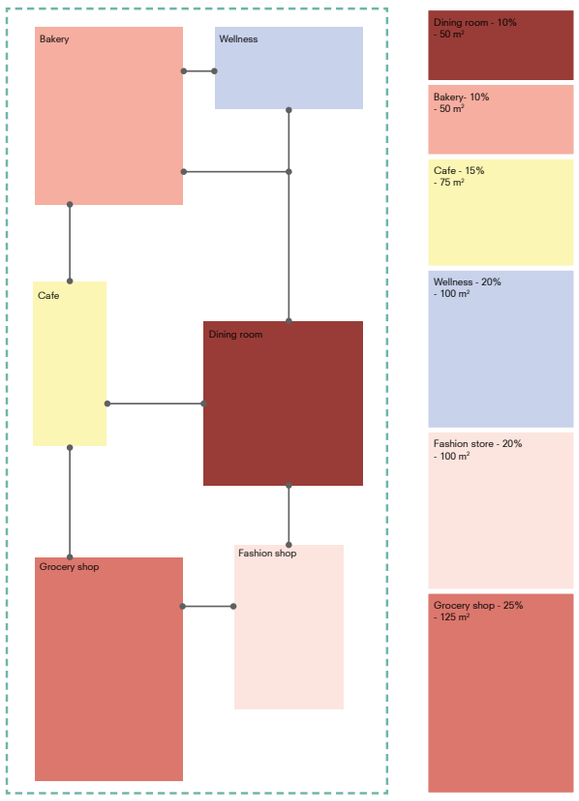
LightHouse Showroom
TYPOLOGY: EXPERIENCIAL RETAIL

Location:
Koln, Germany

Architect:
Oktalite

Size:
500 m²

My interest:
Even if it it the showroom of light producer, the light acts the secondary role. The showroom **immitiates the different scenes of ordinary life**, enlightened by the producer's lightning system.



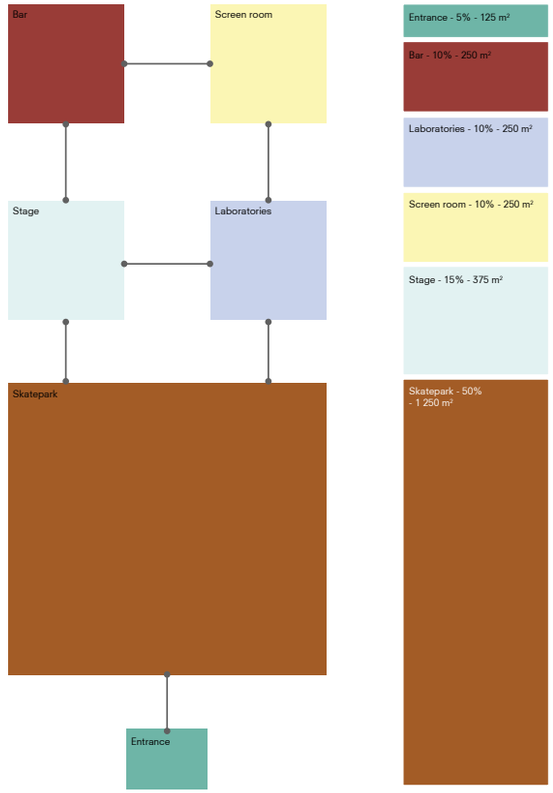
House of Vans
TYPOLOGY: EXPERIENCIAL RETAIL

Location:
London, UK

Architect:
Tim Greatrex

Size:
2 500 m^2

My interest:
The shop of a skate shoes. Inside there is no space dedicated for sale, but there is a **multitude of spaces connected with the subculture.** There is also **laboratory to customize ones shoes.**



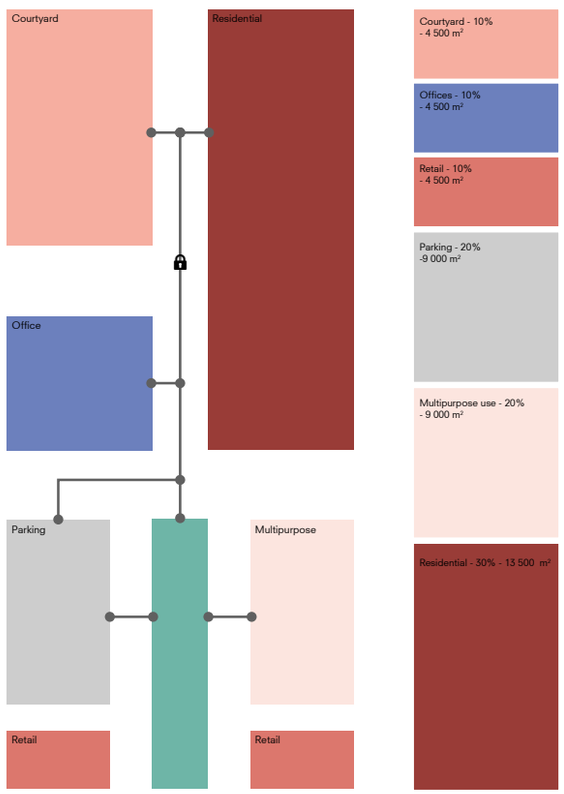
Fenix I
TYPOLOGY: LIVING+

Location:
Rotterdam, the Netherlands

Architect:
Mei Architects

Size:
45 000 m^2

My interest:
Fenix I is the the precedense of reactivation of Katendrecht in Rotterdam. The bottom part, which was opened first is dedicated for **any local form of activity and retail.**



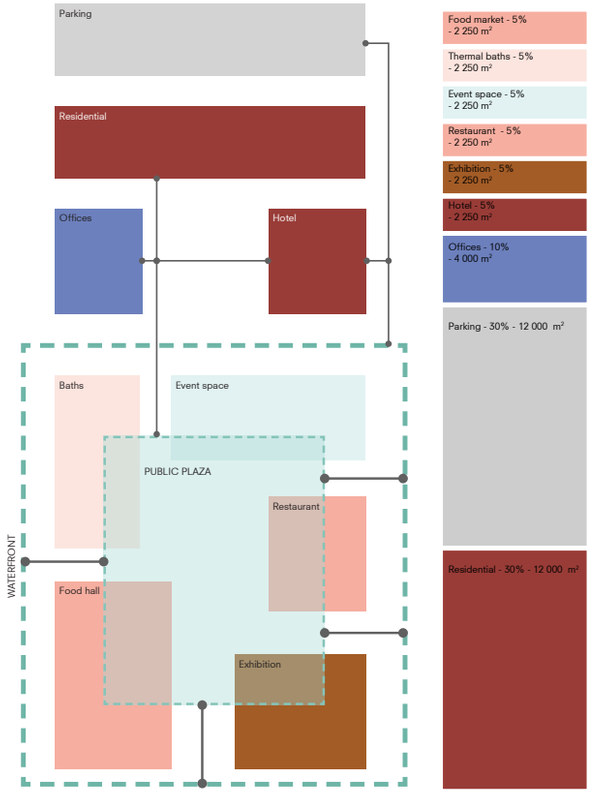
Paper Island
TYPOLOGY: LIVING+

Location:
Copenhagen, Danmark

Architect:
COBE

Size:
45 000 m^2

My interest:
Similar example as Fenix I. However, here the tasks of architects were **to design only a masterplan of staging** of the investition. The crucial importance is played by **central plaza and waterfront.**



Factory Full of Life
TYPOLOGY: LIVING+

Location:
Dabrowa Górnicza, Poland

Architect:
ANALOG

Size:
40 000 m^2

Key Description:
Another example of merging the local activity with living function. Here, architects left **undefined spaces** to be decided about their functional purpose in the future - **being flexible for unknown needs.**