

AORTA

A NEW INCLUSIVE CENTER FOR AMSTERDAM OVERAMSTEL

SJOERD BOOMARS

CP

COMPLEX PROJECTS
AMS_MID_CITY

PREFACE

The Chair of Complex Projects (CP) targets all scales of the architectural thinking, details, building, city, and region. Expanding the knowledge about design and dense urban areas development, broadens the mind and thinking of future architects.

Complex Projects investigates settlements around the world that are ambiguous in their development and embedded in the process of globalization. Students and teachers are encouraged to look critically at their surroundings; to gather, organize, and question the complex forces that ultimately manifest themselves into our built environment. In Complex Projects we are interested in the study of different urban conditions; core or peripheral, dynamic or stagnant, traditional or without history, anonymous or famous; these are the contemporary postmodern realities we must confront as a profession.

The contemporary architect today must learn to operate within many different scales and cultural context and to see the world through many lenses: as a planner, organizer, politician, economist, philosopher, strategist, humanitarian, and visionary. The complexity of these parameters converges more into a philosophy of design which in turn enables students to unpack virtually any set of design constraints and begin to make sense of the world around them.

- Complex Projects Methodology

AORTA

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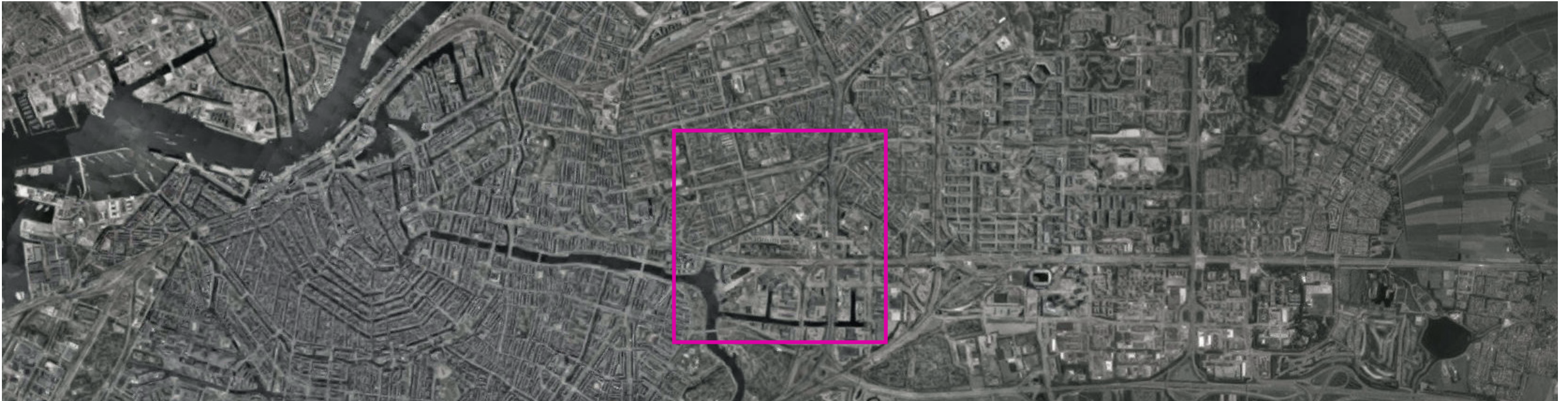
THE ASSIGNMENT

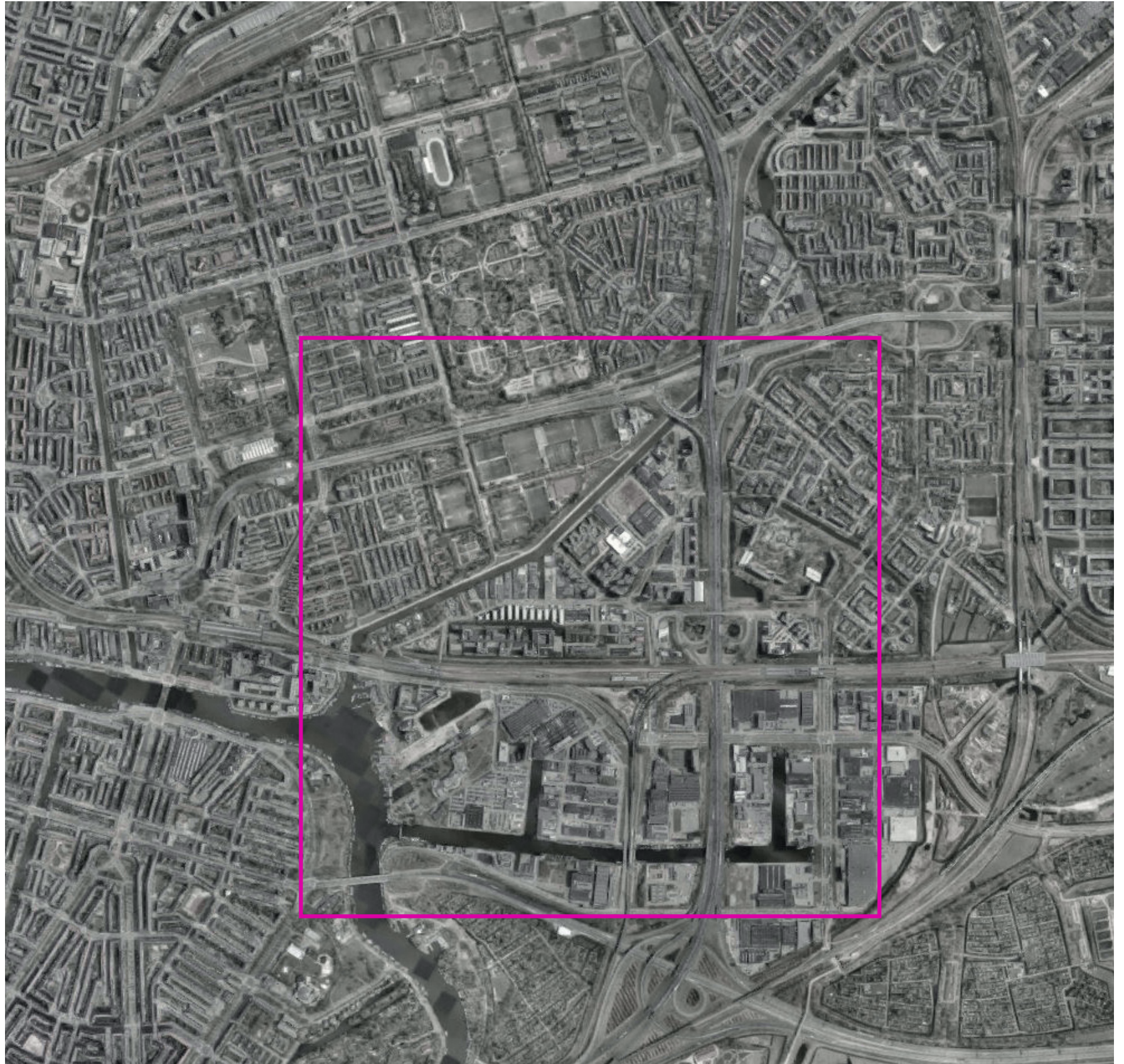
The assignment for this graduation studio is developing a vision for the Amsterdam in 2050. For the entire studio there is a strip along the East metro line cut in three different pieces. Every project group worked on another site. This project is situated in the Amstel area, which is in the middle of the strip, the so-called mid-city. In the vision developed after extensive research by the Amstel project group, there are two clear main themes to find. These themes are the productive identity of the site and densification.

The Amstel area has always been a productive location. From agricultural functions in the 17th century, to industrialization and gas plants in the 19th century, industry and storage in the 20th century and now it is time to develop this further. For 2050 the focus will be on creative industry.

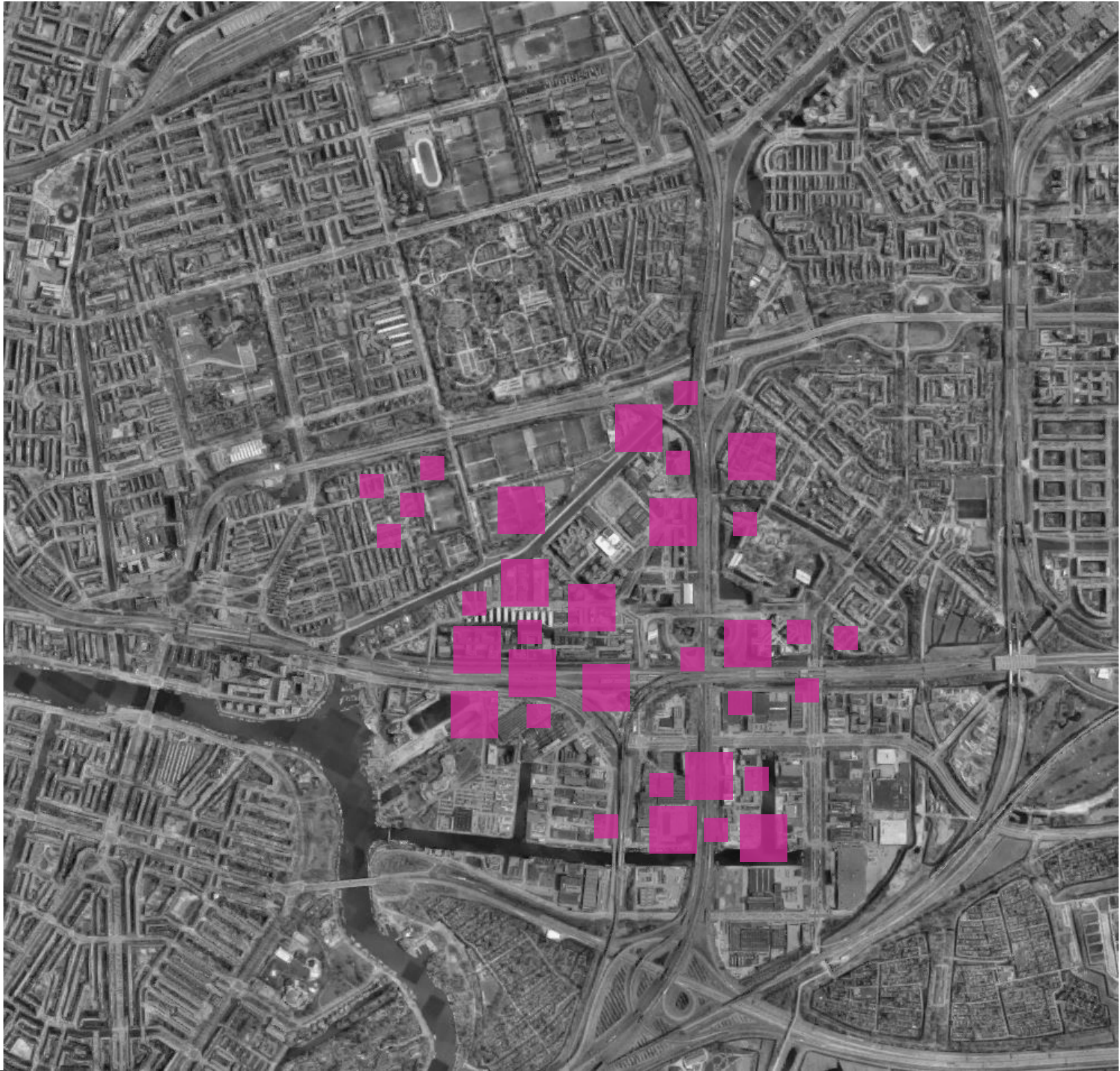
Like cities all around the world, Amsterdam is growing rapidly. Every year 10.000 new inhabitants move in, but there is hardly any space left to build. The Amstel area is one of the only locations left in the city where it is possible to develop new housing on large scale. Just for 2030, there are 22.000 new dwellings planned at the site. This trend will most likely continue until 2050, so densification is needed.



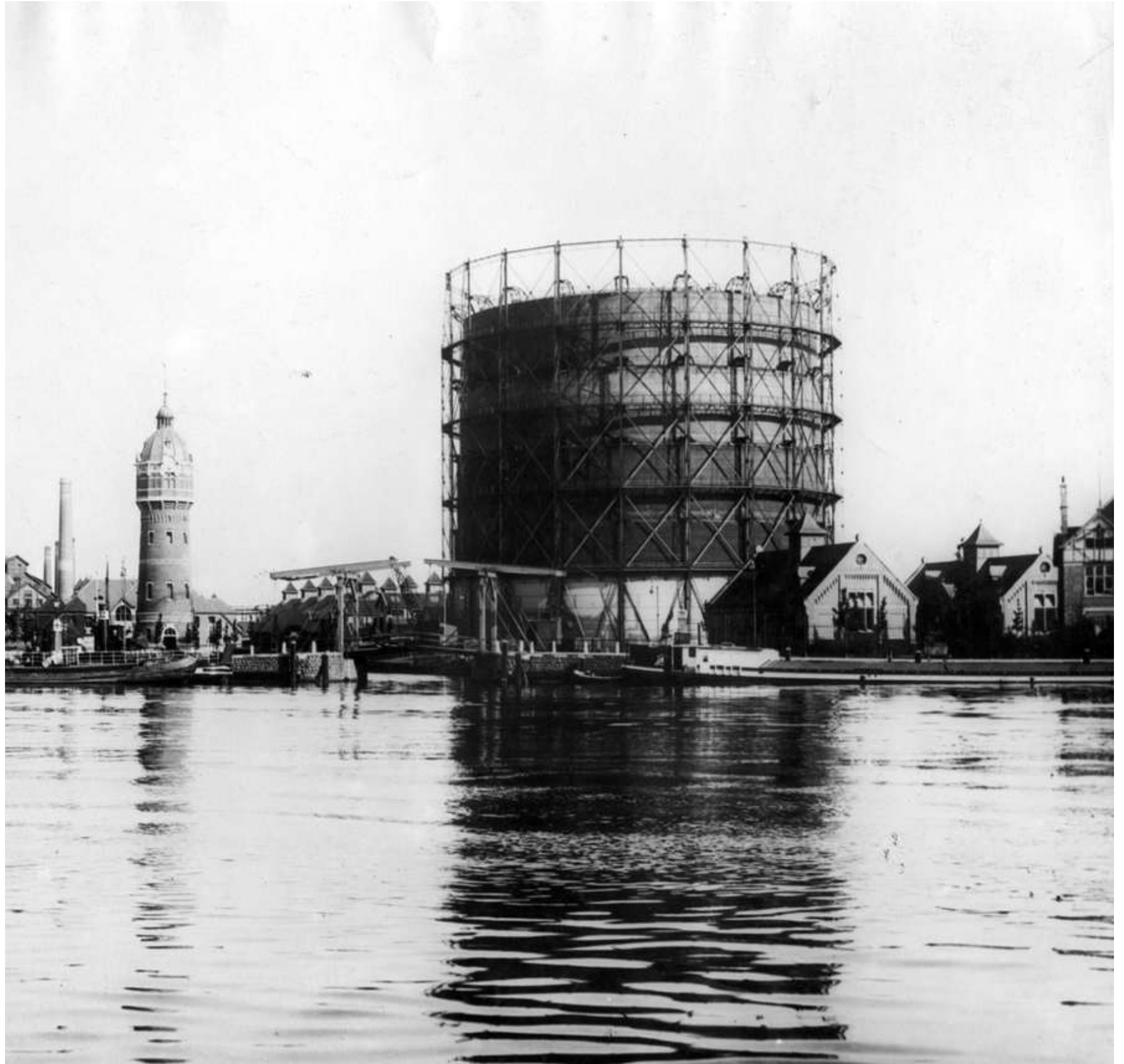




KEYPOINTS VISION:
DENSIFICATION



KEYPOINTS VISION:
PRODUCTIVE
IDENTITY



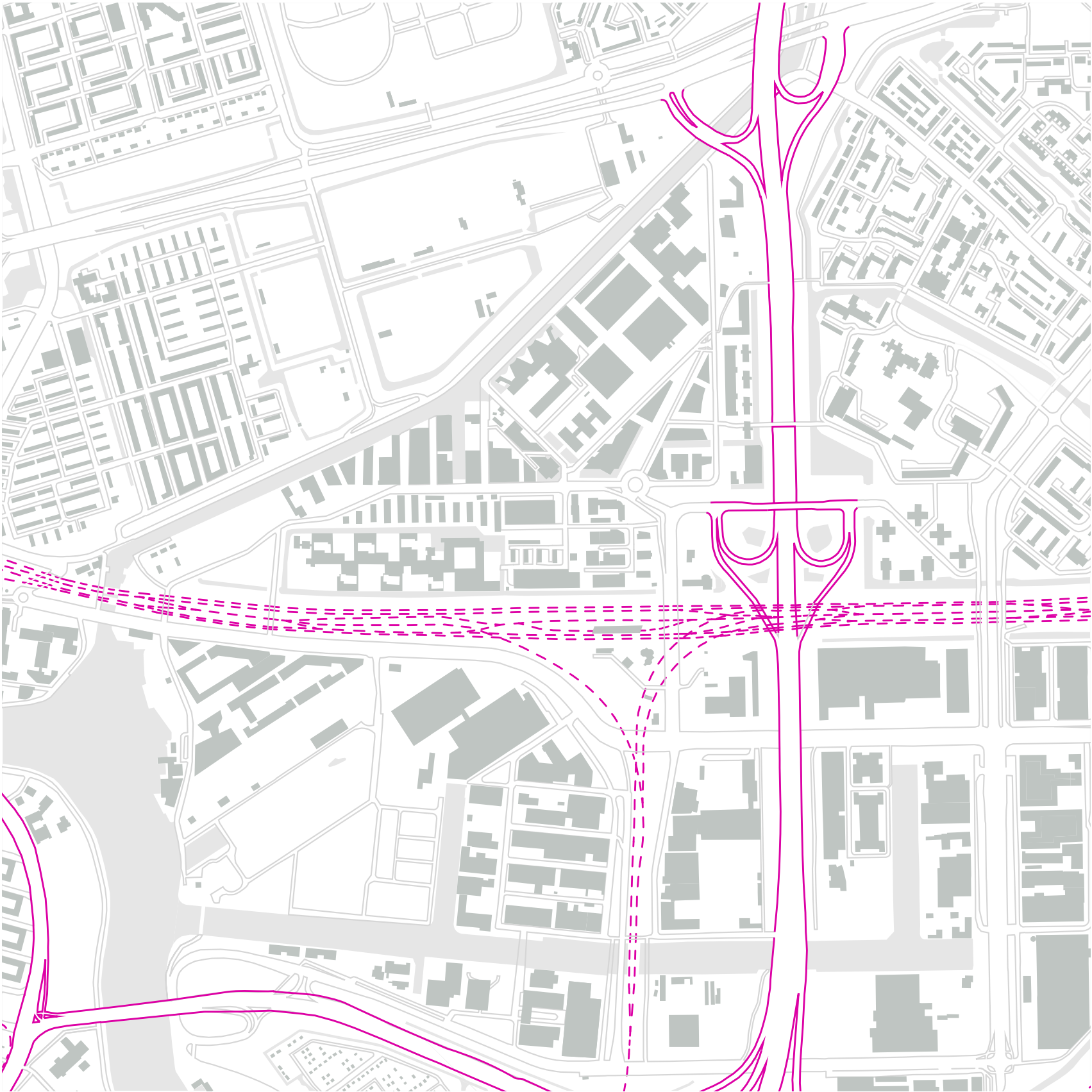
SITE INTRODUCTION

In order to be able to reach the stated vision, it is necessary to understand what the strong points, problems, trends and developments now at the site are. This will be done through analysis in maps, photographs and diagrams. At this moment the site is in rapid development. The last decades it used to be a rough edge of the city, with as main function large commercial services, storage space and industry. Besides these functions there is a large (now abandoned) prison on site.

However, the last years a large shift to a more residential area was noticable. The last five years new towers were build and according to visions by the municipality and developers this will increase the coming decades. So when developing a vision about 2050 for this site, it is important to take the current plans in mind.

Besides the shift in function the area is dominated by another factor; a very clear focus on large infrastructure. With two highways, three metro stations, train tracks and regional roads, it is undoubtly a very important entrance point to the city of Amsterdam. All this infrastructure causes the site to be very well connected with all the other parts of the city and on national scale.

CURRENT STATE SITE



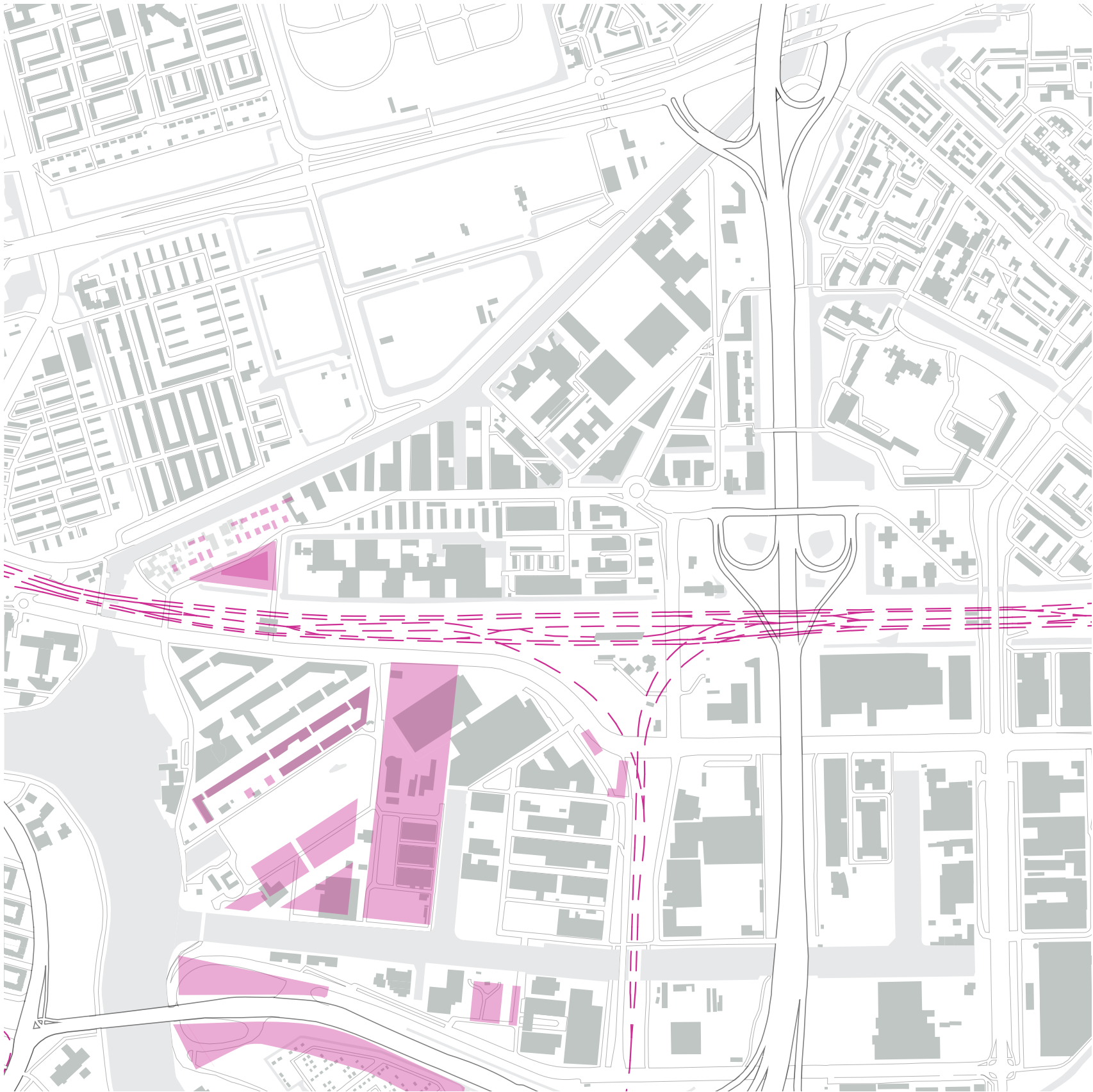


FORMER EDGE OF THE CITY



FORMER EDGE OF THE CITY

CURRENT DEVELOPMENTS





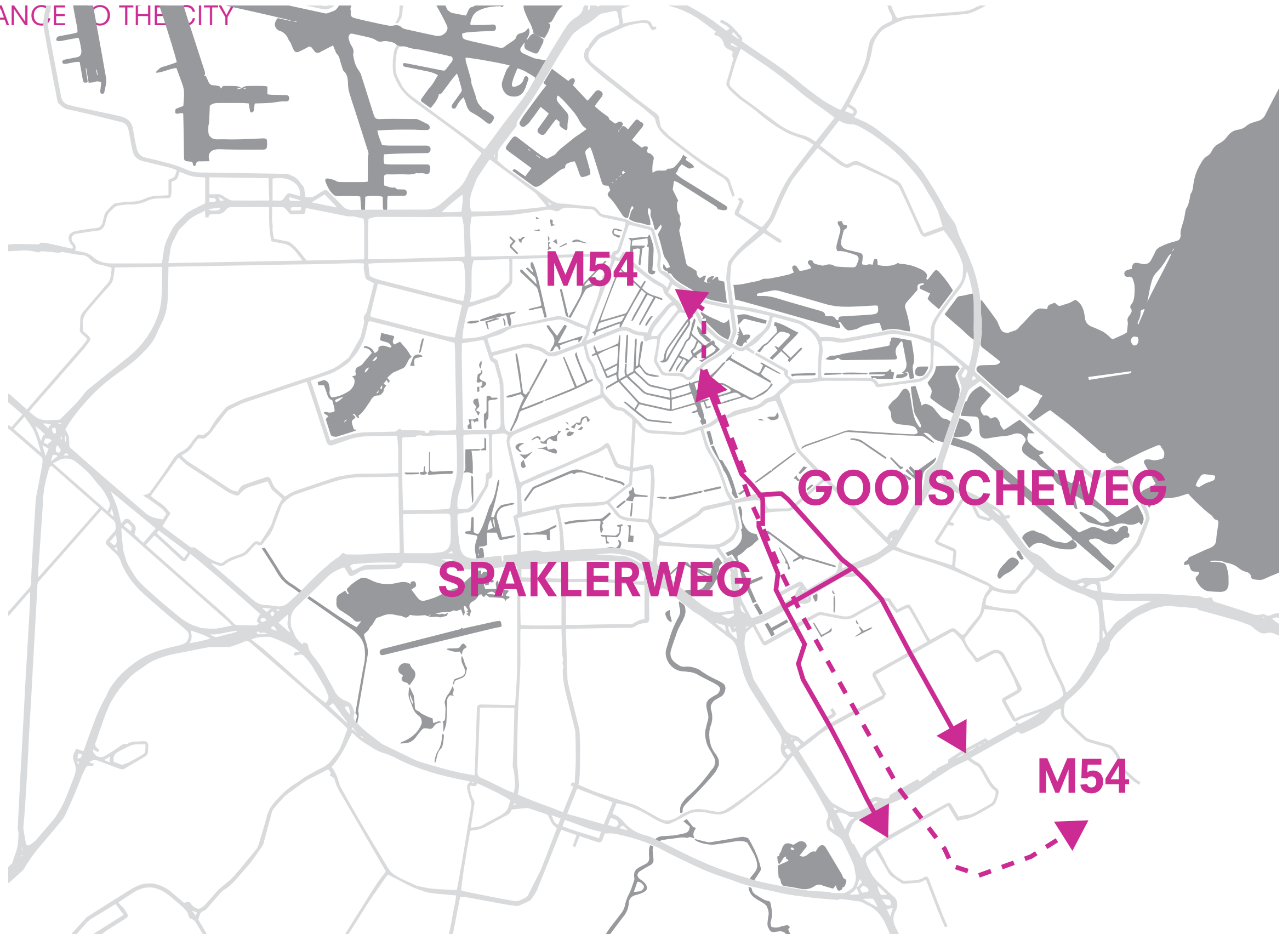




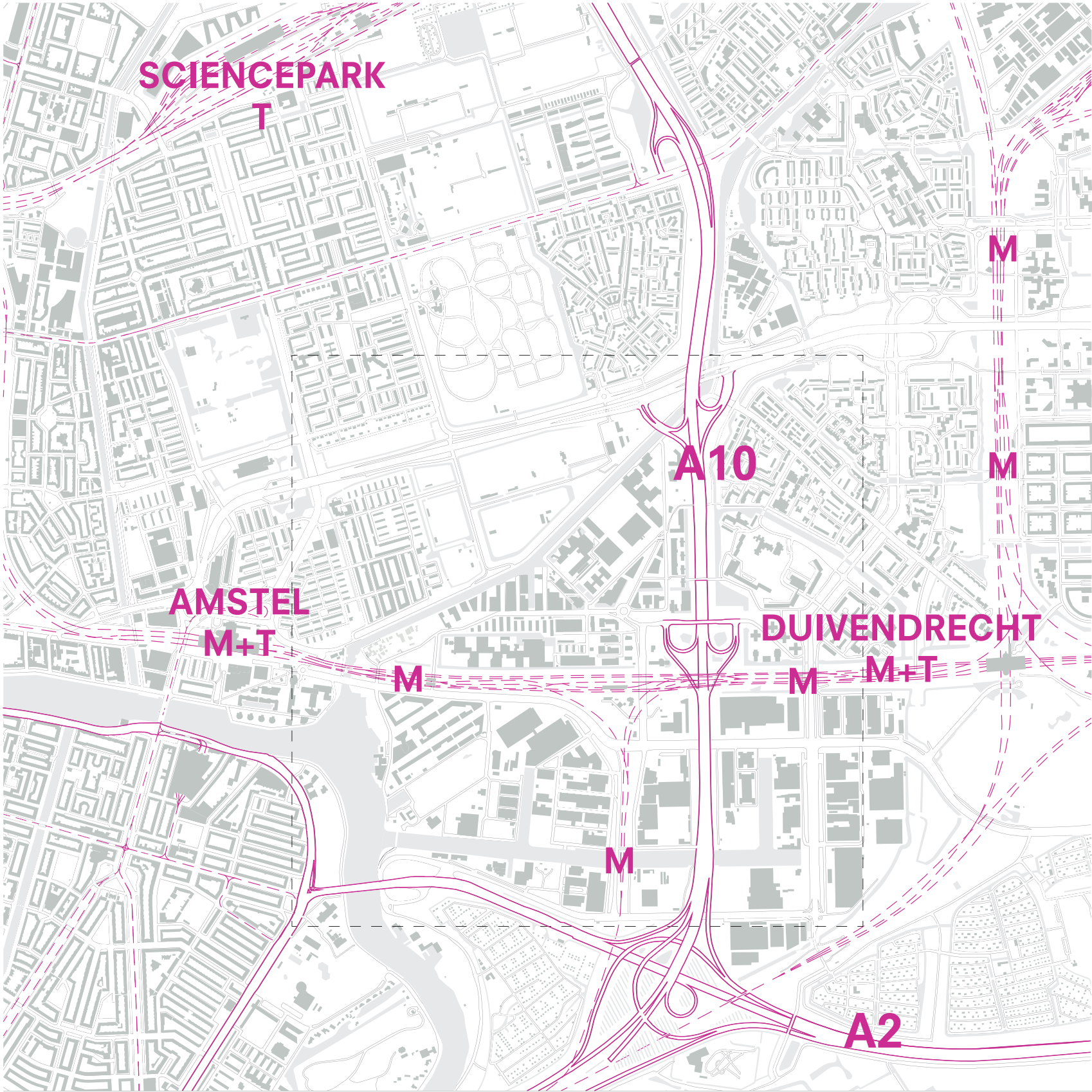




ENTRANCE TO THE CITY



PRESENT INFRASTRUCTURE



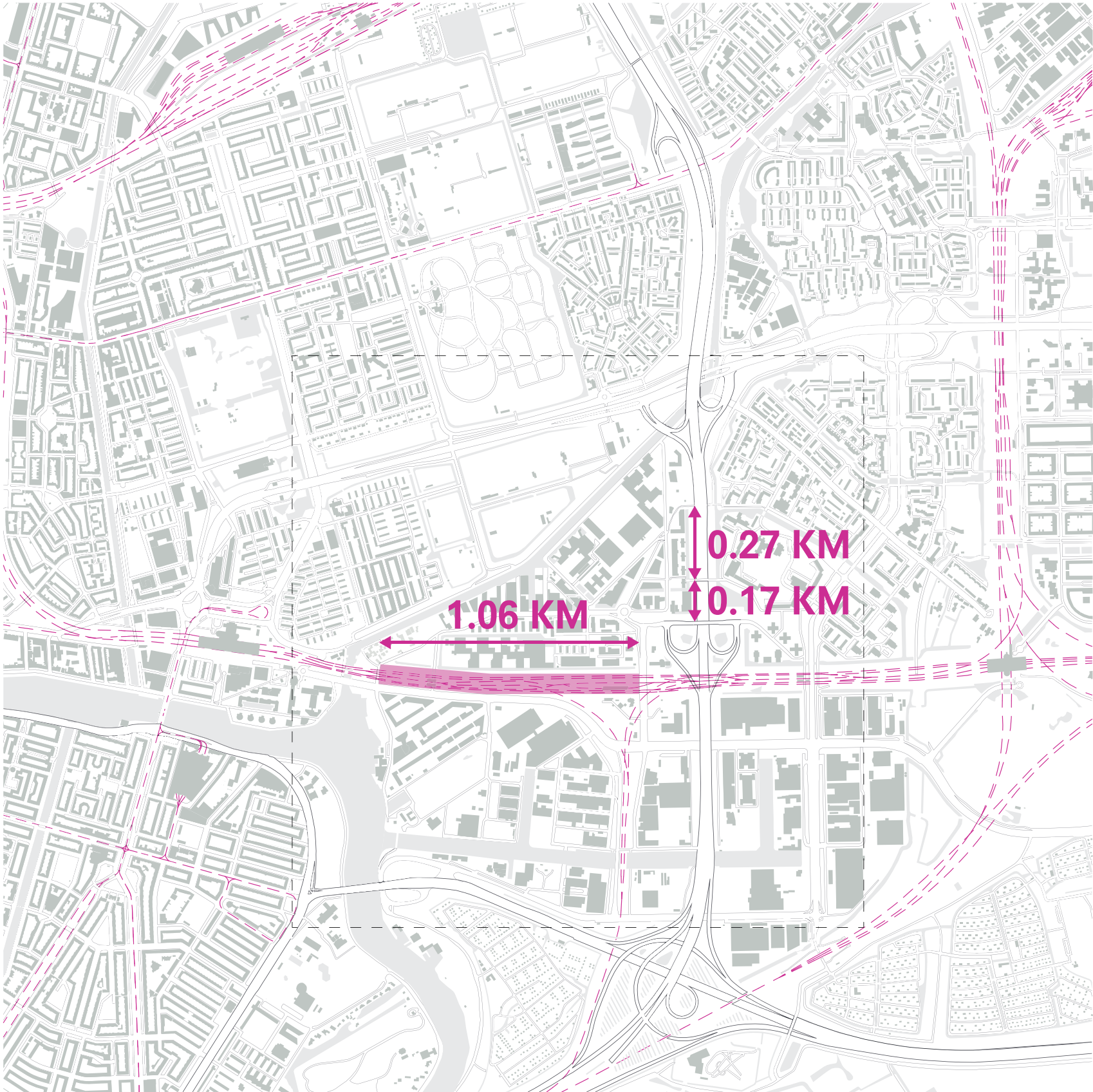
THE BARRIER

The present large scale infrastructure causes the site to be well connected to the rest of the city. However, on a smaller scale it has a negative impact on the livability on site. The combination of metro and train tracks for example are a barrier of more than a kilometer where one can not pass under or over it. Especially with the projected increase in density on site, it could result in a badly connected neighborhood.

The lack of these connections would have great effects on the attractiveness of the site. When walking and cycling is not possible because of the long detours, residents would think twice before moving there. These barriers also have effect on the health of people. Multiple studies showed that continuous noise causes stress, an increase of heart diseases and sleeplessness.

Besides the infrastructure barriers there are also some natural barriers. These play a big role on the location as well. It causes the different “islands” to have little connection and mixing. Because of this, there is an obvious difference between the demographics on both sides of the water.

DISTANCE WITHOUT PASSAGE





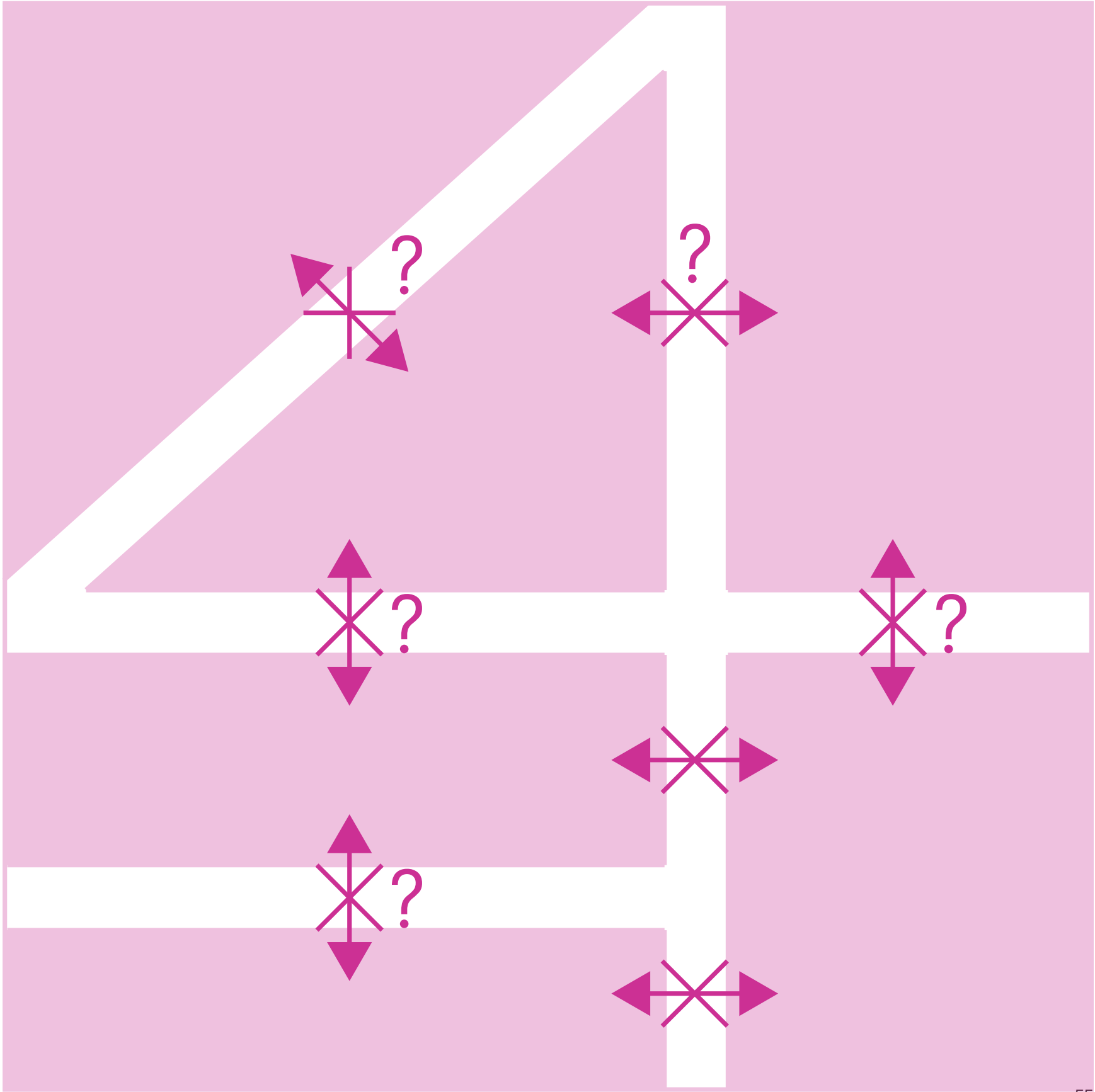
PROBLEM STATEMENT

FRAGMENTED ISLANDS



PROBLEM STATEMENT

LACK OF CONNECTIONS
AND UNCLEAR HIERARCHY IN
BETWEEN



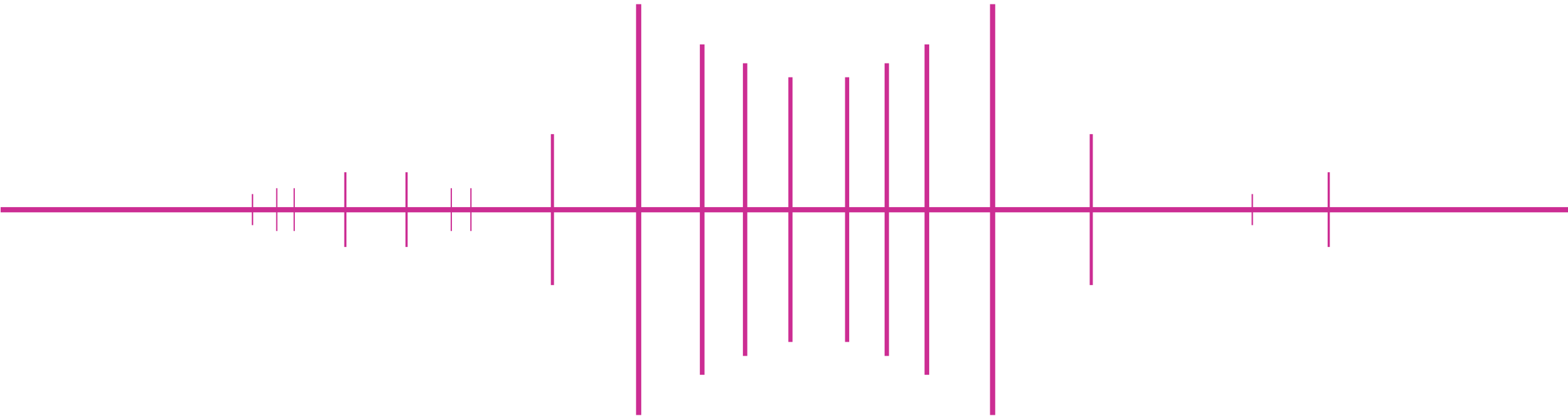
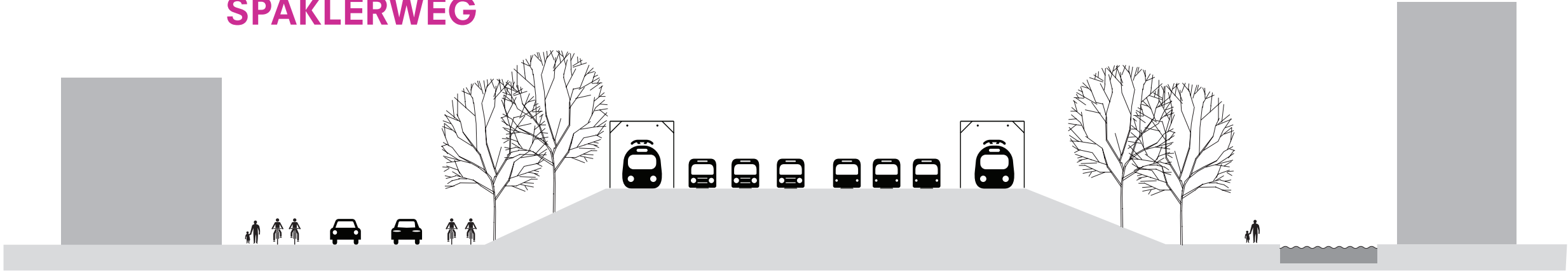


POSSIBLE UNEQUAL DEVELOPMENT

NEGATIVE EFFECTS ON ATTRACTIVENESS
OF THE LOCATION

NUISANCE FOR LOCAL MOBILITY

SPAKLERWEG



METROS PER HOUR



65



55



40



20



55

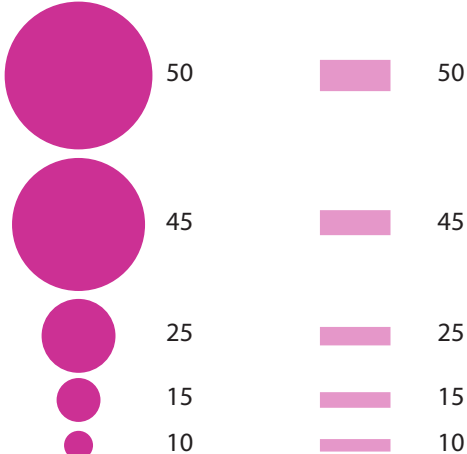
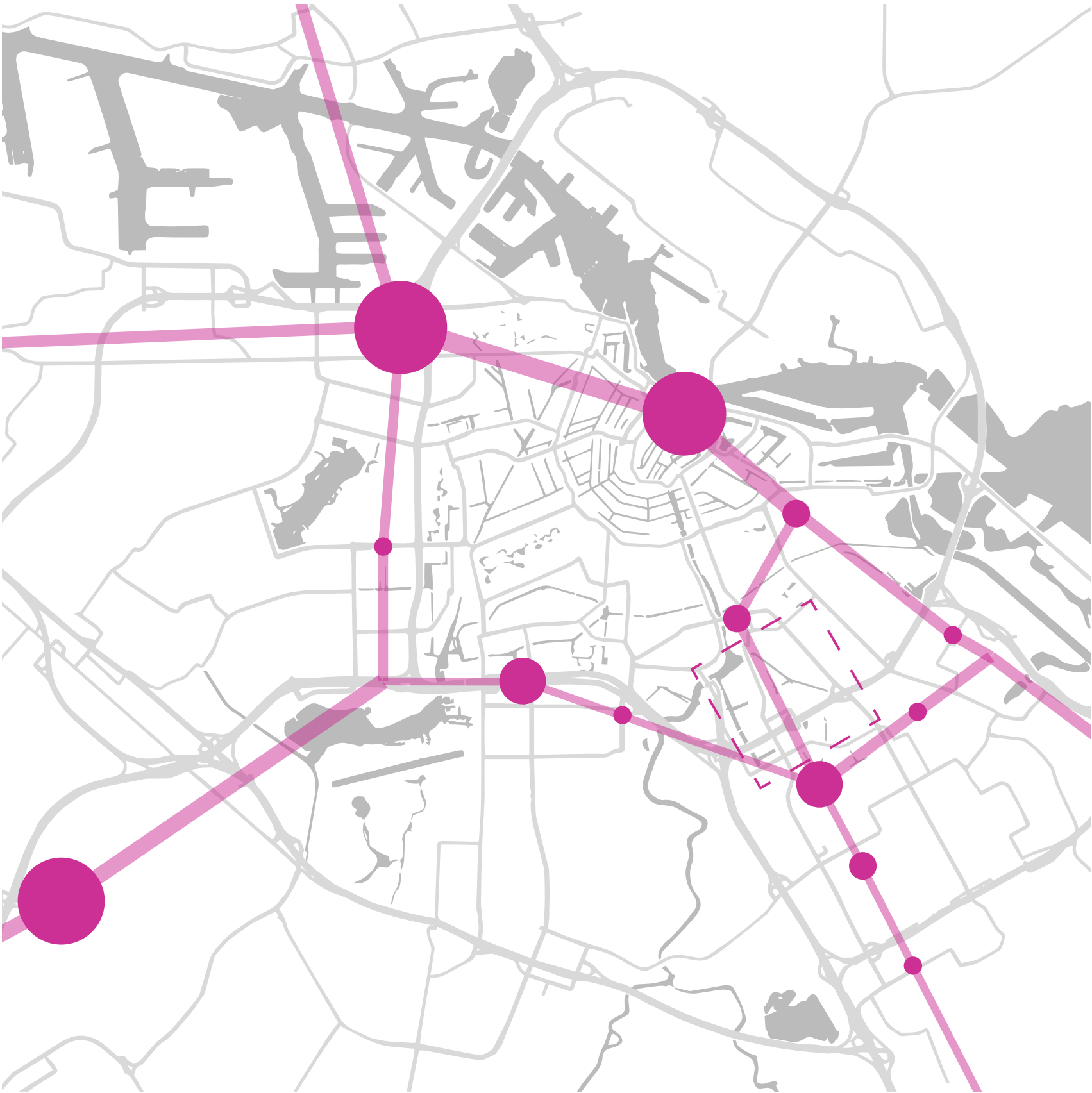


40

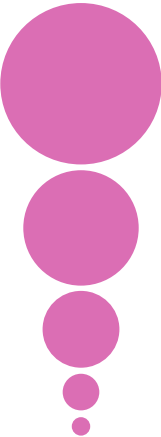
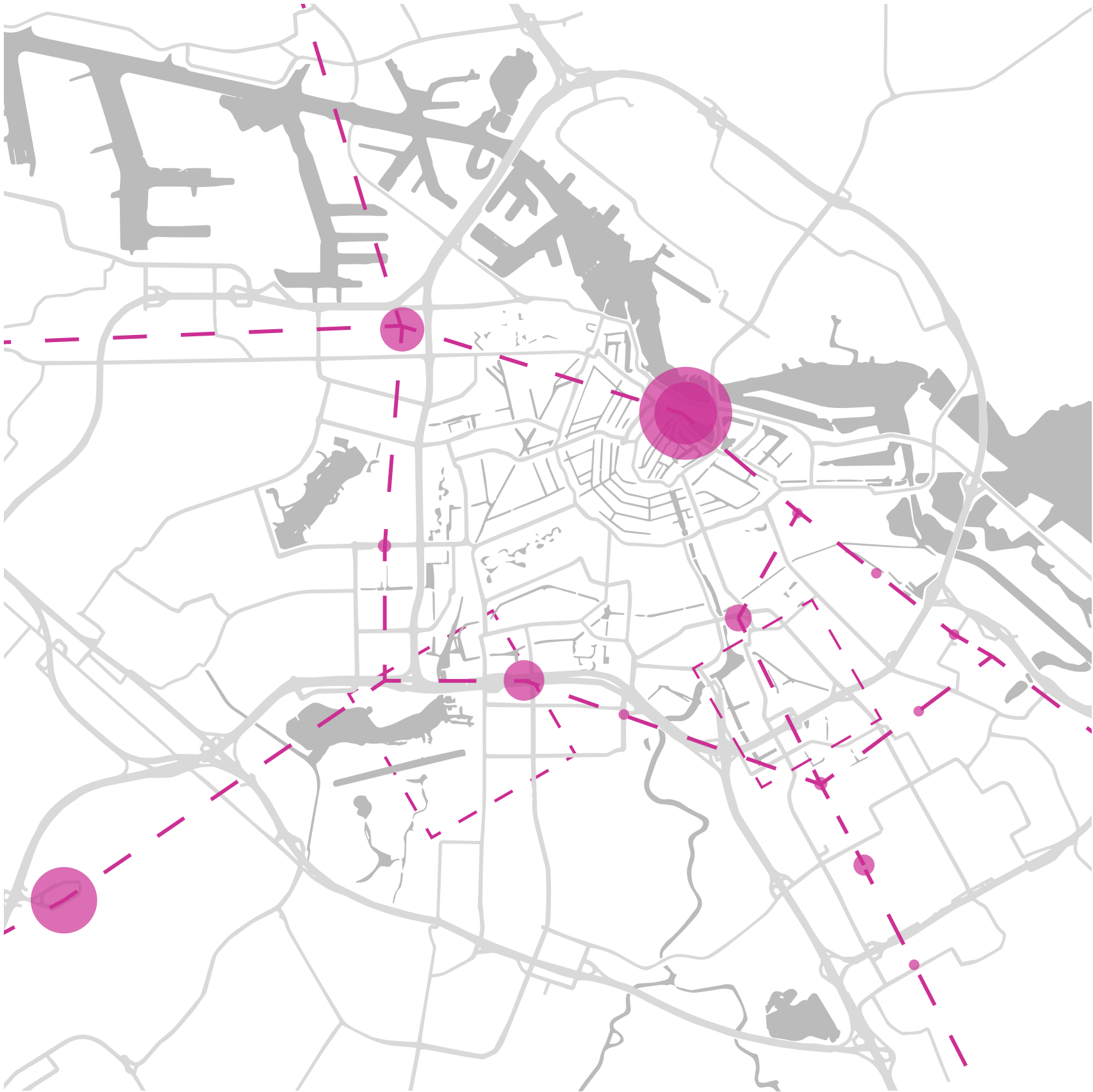


20

TRAINS PER HOUR



PASSENGERS PER DAY



- 100.000
- 70.000
- 50.000
- 25.000
- <10.000

NOISE POLLUTION
TRAINS AND METROS



- 70+ dB
- 65-70 dB
- 60-65 dB
- 55-60 dB

NOISE CONSEQUENCES

Quieting Down Could Save Billions in Heart Disease Costs

June 20, 2015 | 107,276 views



The image shows a snippet of a Metro newspaper article. At the top is the 'metro' logo in white on a green background. Below the logo is a green navigation bar with white text links: 'ALLES', 'BINNENLAND', 'BUITENLAND', 'SHOWBIZZ', 'KOFFIEPAUZE', and 'EXTRA'. The main headline is 'Slapen in de tuin door geluidsoverlast trainen' in large, bold, black font. Below the headline, in smaller text, it says '5 april 2016 om 16:15 door Jennifer Schoorlemmer'.

- 1. Loss of hearing and deafness:** Noise above the tolerable threshold is the leading cause for loss of hearing and deafness.
- 2. Cardiac disturbance:** Noise increase the risk of cardiac disturbance including coronary artery disease or ischemic heart disease (IHD).
- 3. Sleeplessness:** Noise may make people restless and tired. It may cause disrupted sleeping pattern or may keep people away from sound sleep. In the long-term, due to tiredness and lack of sleep, the immune system may get compromised.
- 4. Headache:** Human mind can tolerate sound only to a limited extent. Excess noise causes headache.
- 5. Stress, tension and aggressiveness:** Loud noises can be very stressful. Constant exposure to irritating sound may cause stress and tension. The behavior of people often becomes aggressive. Other than psychological imbalance, it causes physical illness such as increased blood pressure, cardiac disturbance and insomnia.
- 6. Irregular blood pressure:** For good health, it is very important to maintain normal pressure in the arteries both during the heartbeat and between the heartbeat. Noise may contribute to fluctuations in the levels of blood pressure.
- 7. Mental imbalance and nervous debility:** Mental illness is among the worst negative effects of noise pollution. People may find it difficult to cope with their normal routine life. Human mind cannot accept sound beyond a certain level. Excess sound may lead to mental imbalance and nervous disability.
- 8. Psychological imbalance:** It may also cause psychological imbalance.
- 9. Difficulty in talking:** Due to excessive noise, it becomes very difficult to talk on roads or inside malls.

REDIRECTING THE TRAIN

A possibility to make the redesign of this barrier more workable is by taking the train out of the profile. It could instead be redirected through the Duivendrecht station. This is a train station one kilometer south from the Amstel area. It has multiple directions in which the traveler can transfer. Besides the station is well connected to the metro system of Amsterdam, with a metro going to Amsterdam Centraal every five minutes and sufficient facilities. With the projected focus on public transport by the municipality this could even be more frequent. For the city center it would be a benefit as well, causing less nuisance there.

By redirecting the train there would be almost fifty meters gained along a strip of almost three kilometers, greatly improving the workability of the barrier. Because of this intervention it will be possible to create new connections and centers around the metro stations, corresponding with the group vision for 2050. In this vision, the metro stations will become the main entrance to the site. The densification will be mostly focused on these areas, causing it to become centers, so also the metro station itself will become a center of the site.

PROPOSED SOLUTION:
REDIRECT THROUGH
DUIVENDRECHT





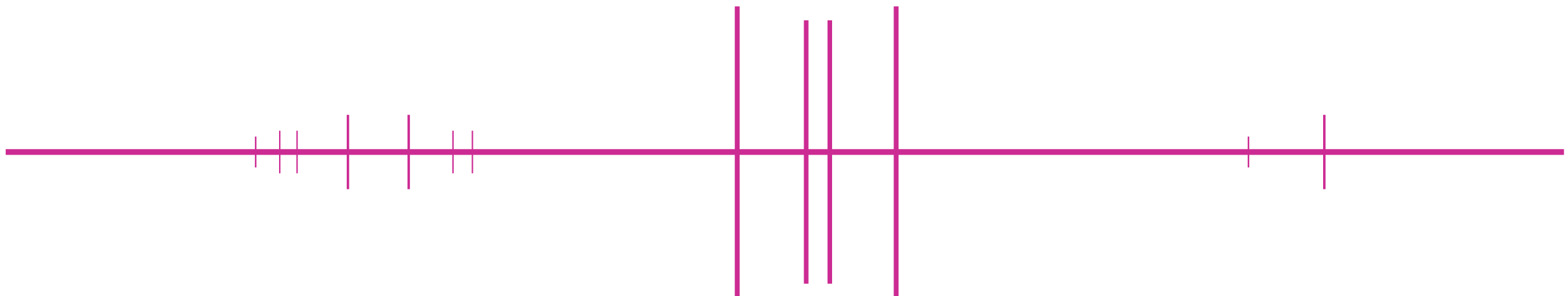
DUIVENDRECHT STATION

EVERY 5 MINUTES A METRO TO AMSTERDAM
CENTRAL STATION LEAVES

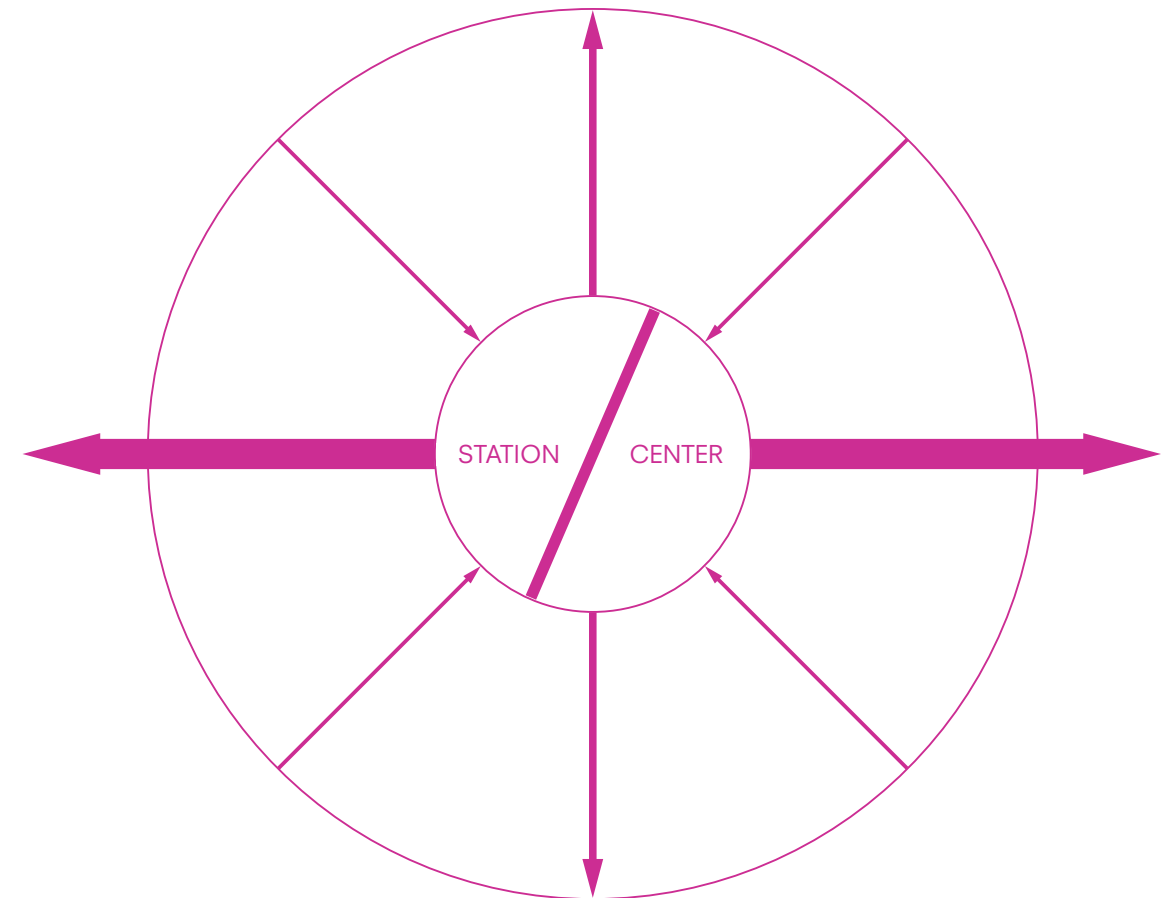
WITH NEW INVESTMENTS THIS COULD BE EVERY
TWO MINUTES

BY TRAIN THREE DIRECTIONS TO TRANSFER TO
GOOD TRANSFER FACILITIES TO THE METRO
SYSTEM OF AMSTERDAM

SPAKLERWEG



HOW CAN AN ARCHITECTURAL INTERVENTION
RESOLVE THE NEGATIVE EFFECTS OF THE
PRESENT BARRIERS AT AMSTEL?



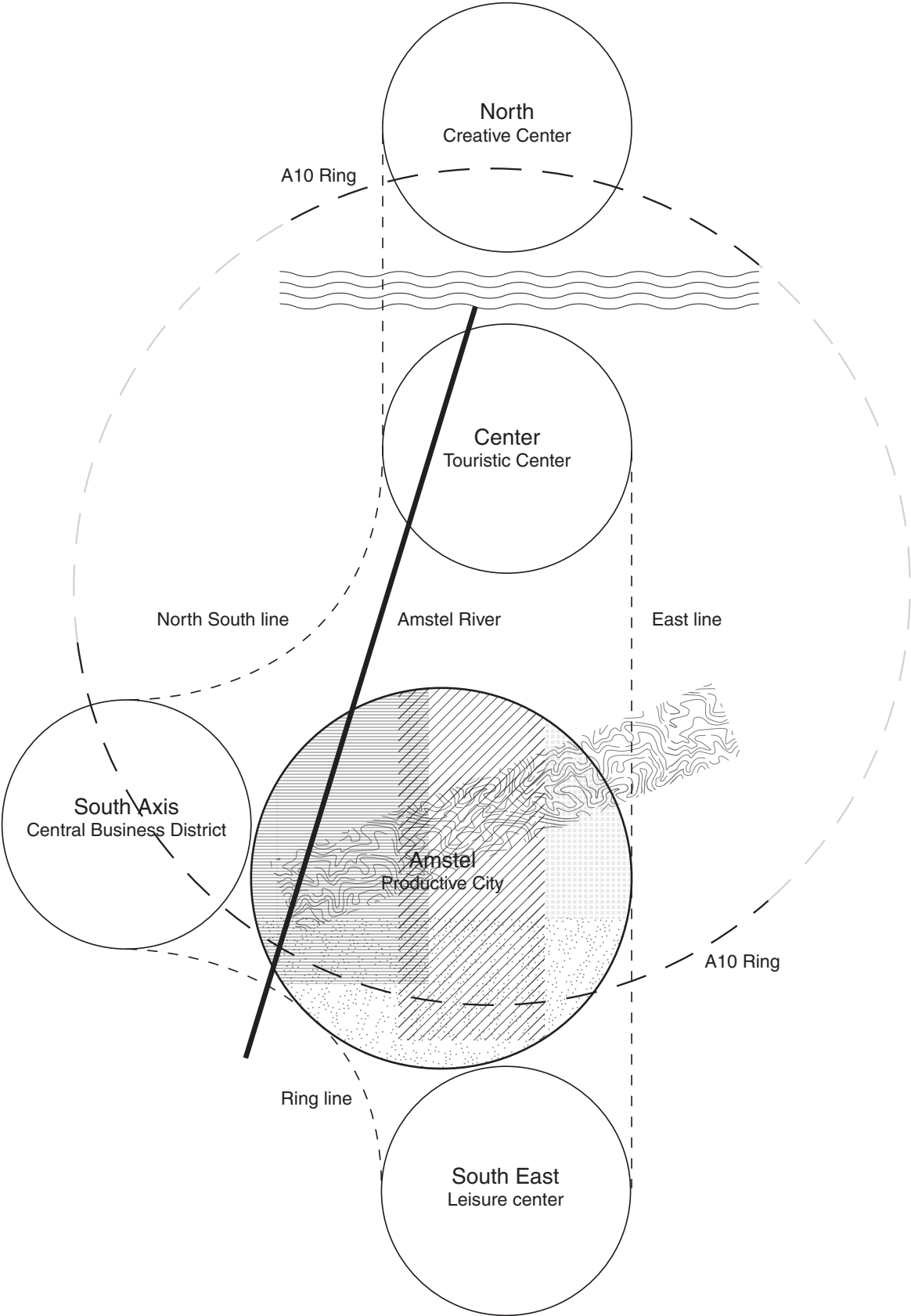
SITE VISION

AMSTEL AS PRODUCTIVE CITY

DENSIFICATION

STATIONS AS ENTRANCE TO SITE

-  Sport & Gardening
-  Housing, Commerce & Culture
-  Housing & Production
-  Housing & Business
-  Housing & Amenities

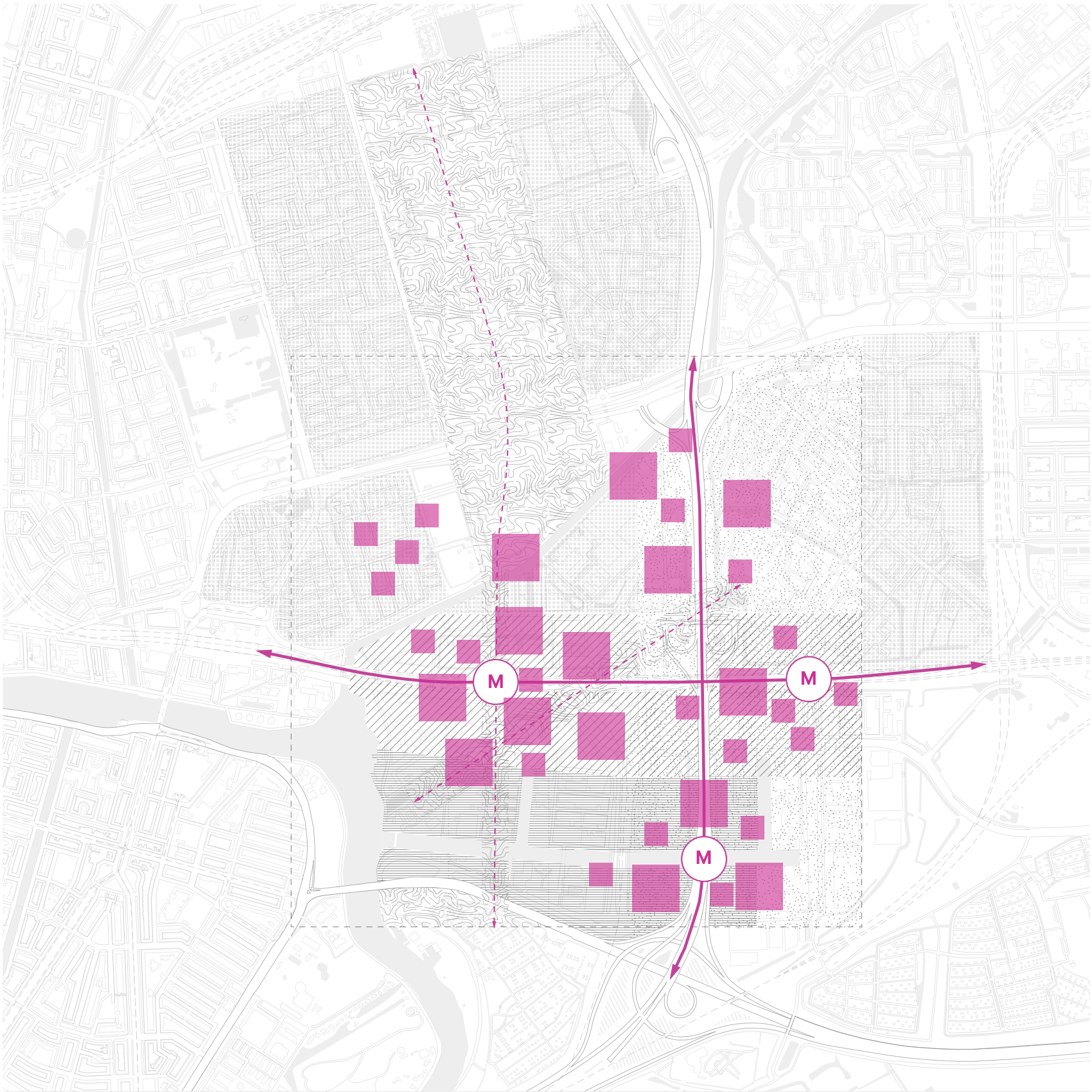


SITE VISION

AMSTEL AS PRODUCTIVE CITY

DENSIFICATION

STATIONS AS ENTRANCE TO SITE



SPAKLERWEG METRO STATION

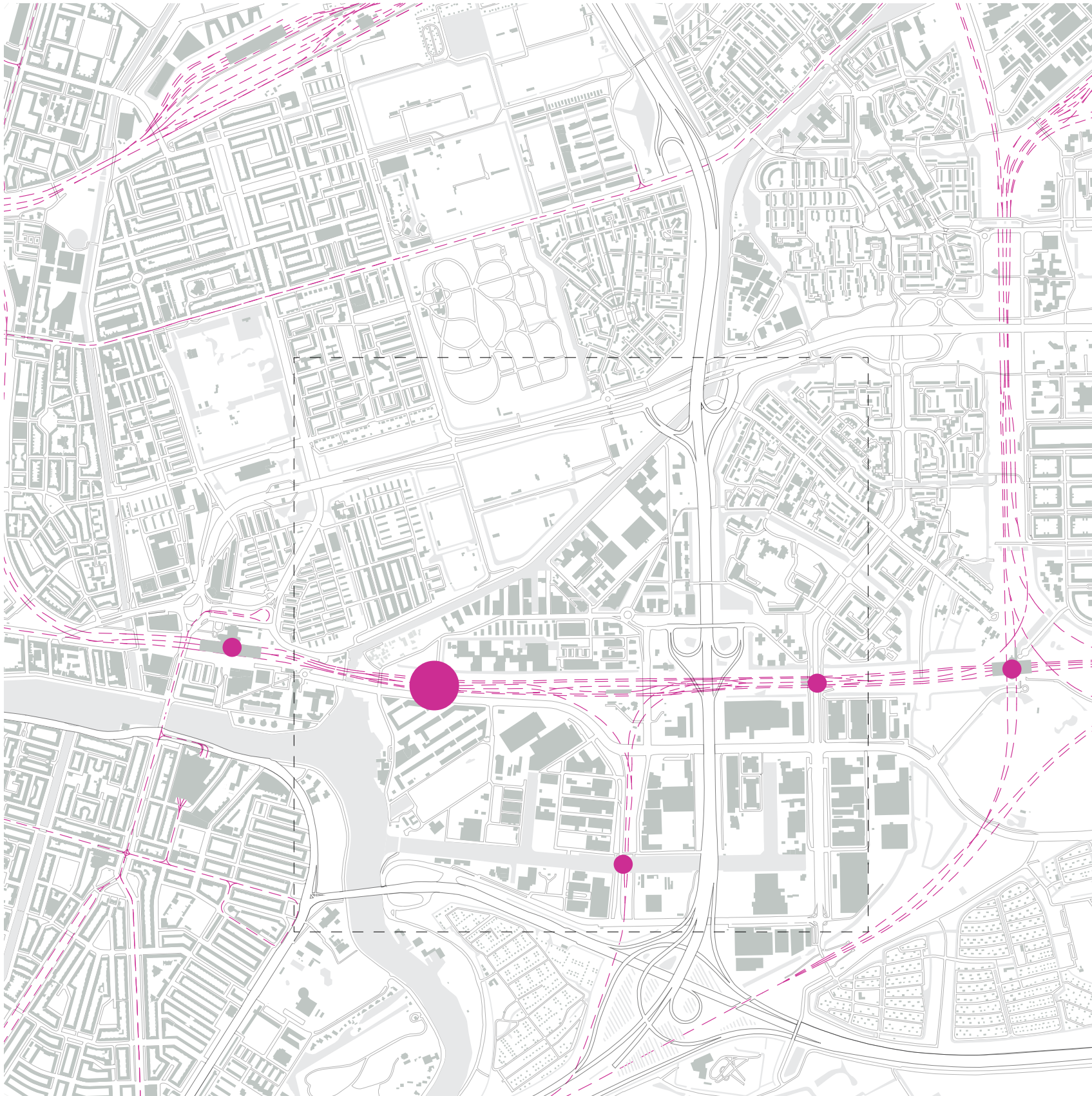
This project focuses on the Spaklerweg metro station. It is a station along the East metro line of Amsterdam, built in 1982. The station has two platforms and functions as a transfer hub between three different lines. Besides it is one of the few possibilities to underpass the barrier of the train and metro tracks, but a public transport chip card is required. With the projected vision, the station does not meet the requirements of a future proof station.

Proposed is to relocate the station 300 meter more south, due to several reasons. The distribution of metro stations would be more logical, ever since it now is extremely close to Amstel station and relatively far away from Van der Madeweg. Besides, it would be a more central location in the site, so it could be better reached by more people. Finally, it would correspond to the site vision for 2050. The new proposed station would be on the crossing of a newly made connection and the metro line, functioning as a center for the Amstel area.

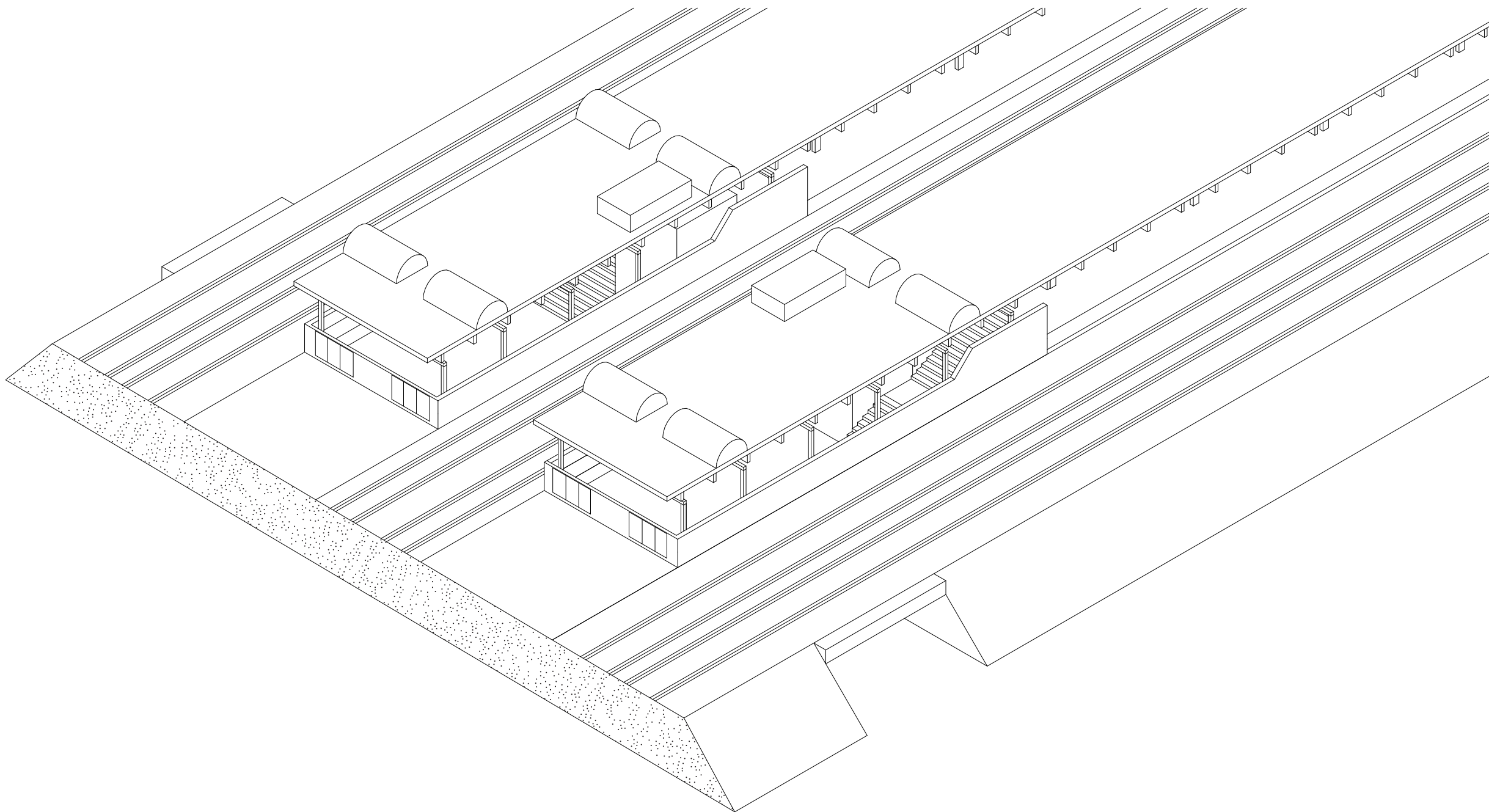
As a center it is necessary to be not just a station to quickly travel through but become a destination, so there is a need to combine it with another function. This new function has to be a collective, inviting, social hotspot and placemaker for the neighborhood. A library would be very well fitting. Considering there is only one town library on site now and keeping in mind the envisioned densification, there would be enough demand for a new library.

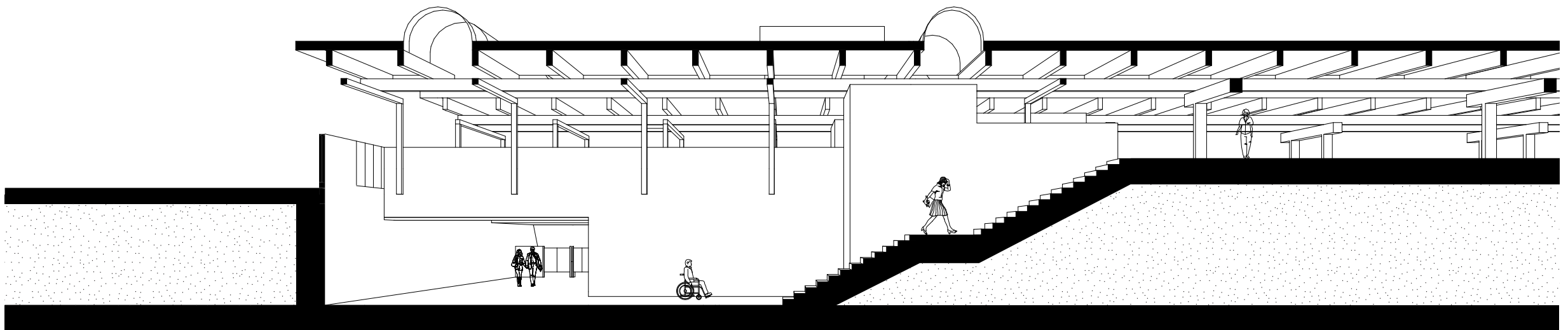
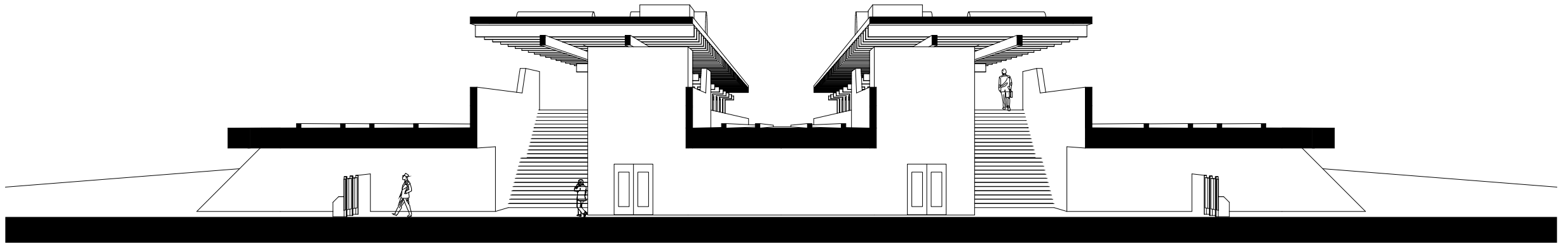


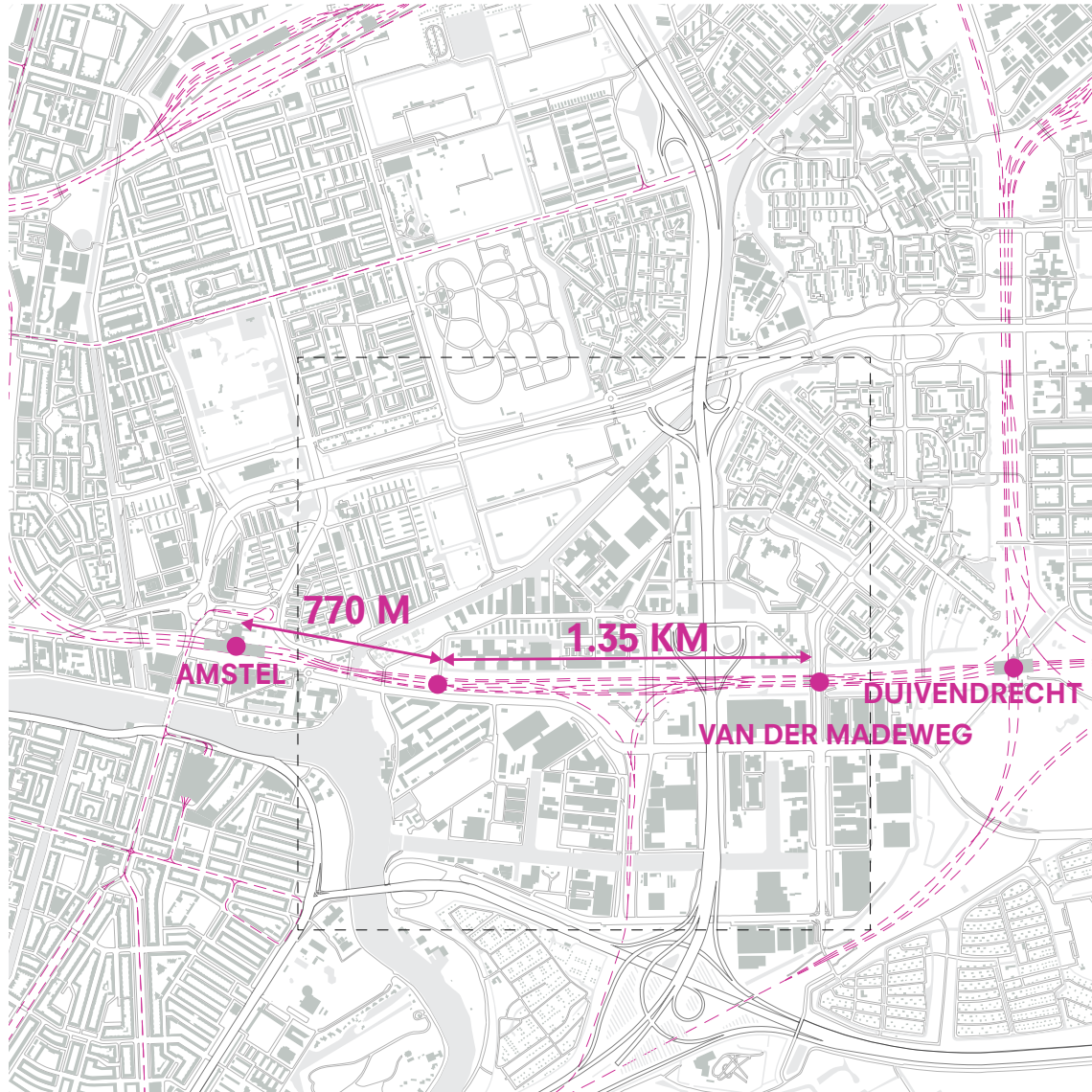




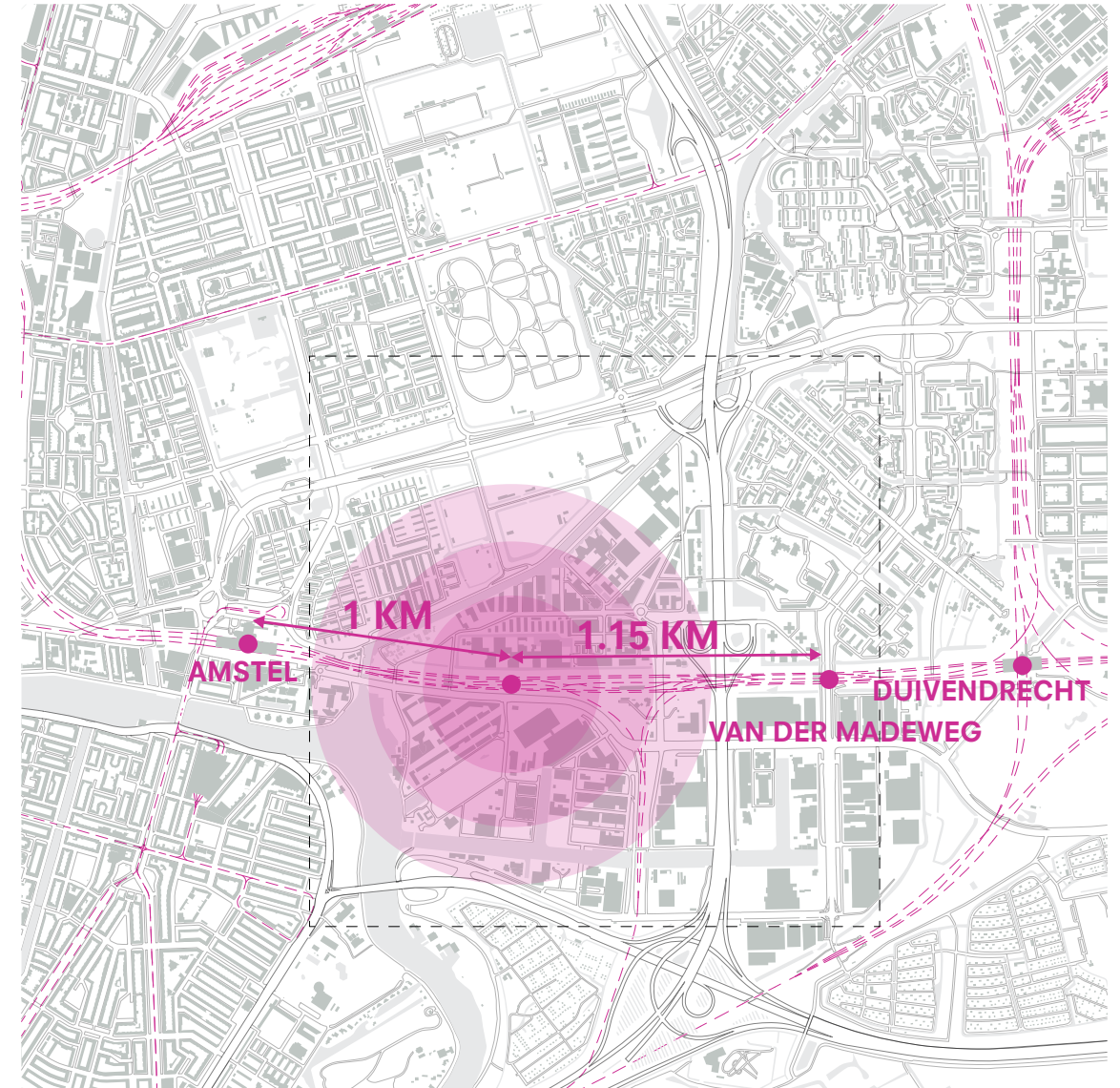
SPAKLERWEG STATION



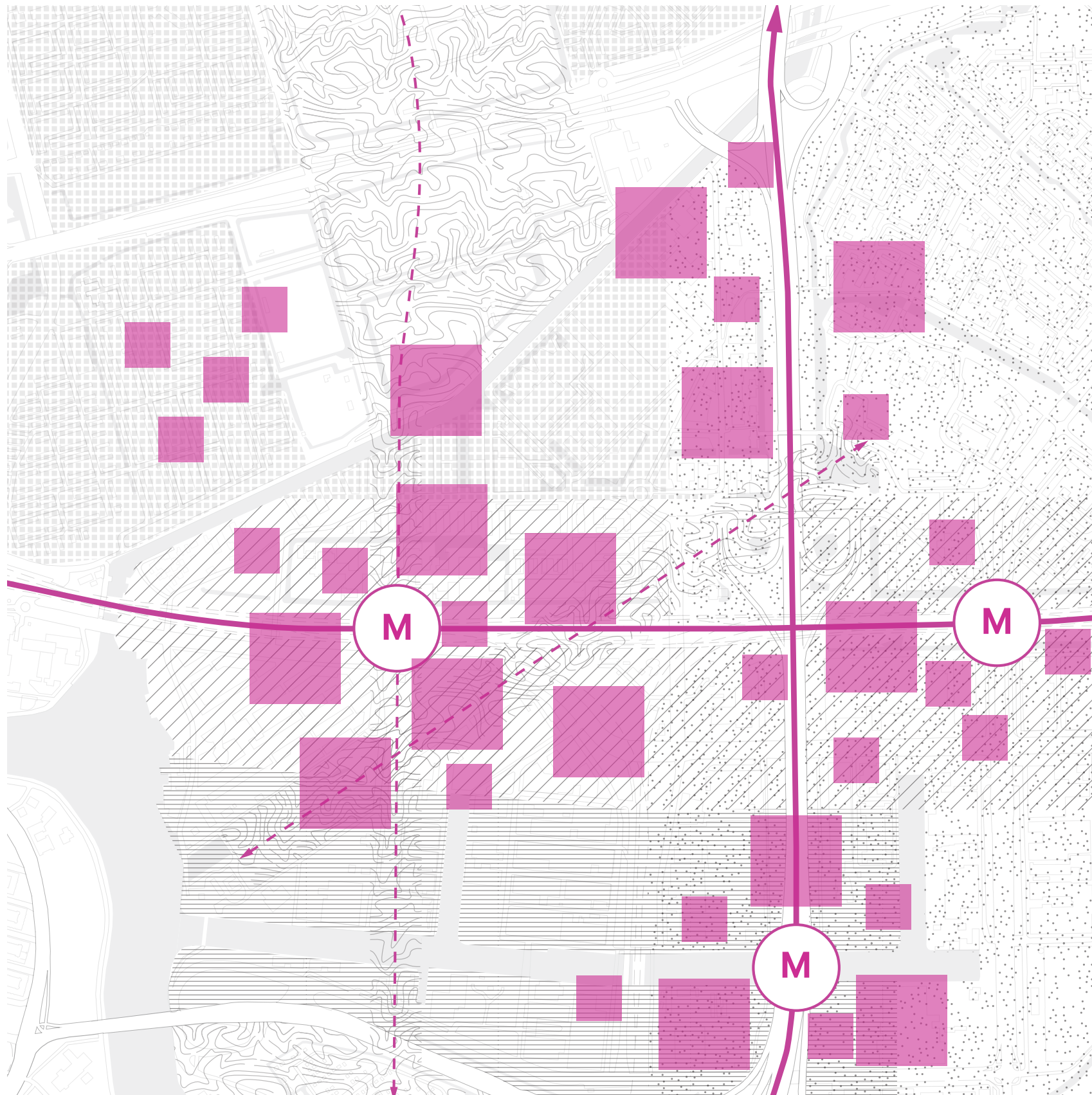




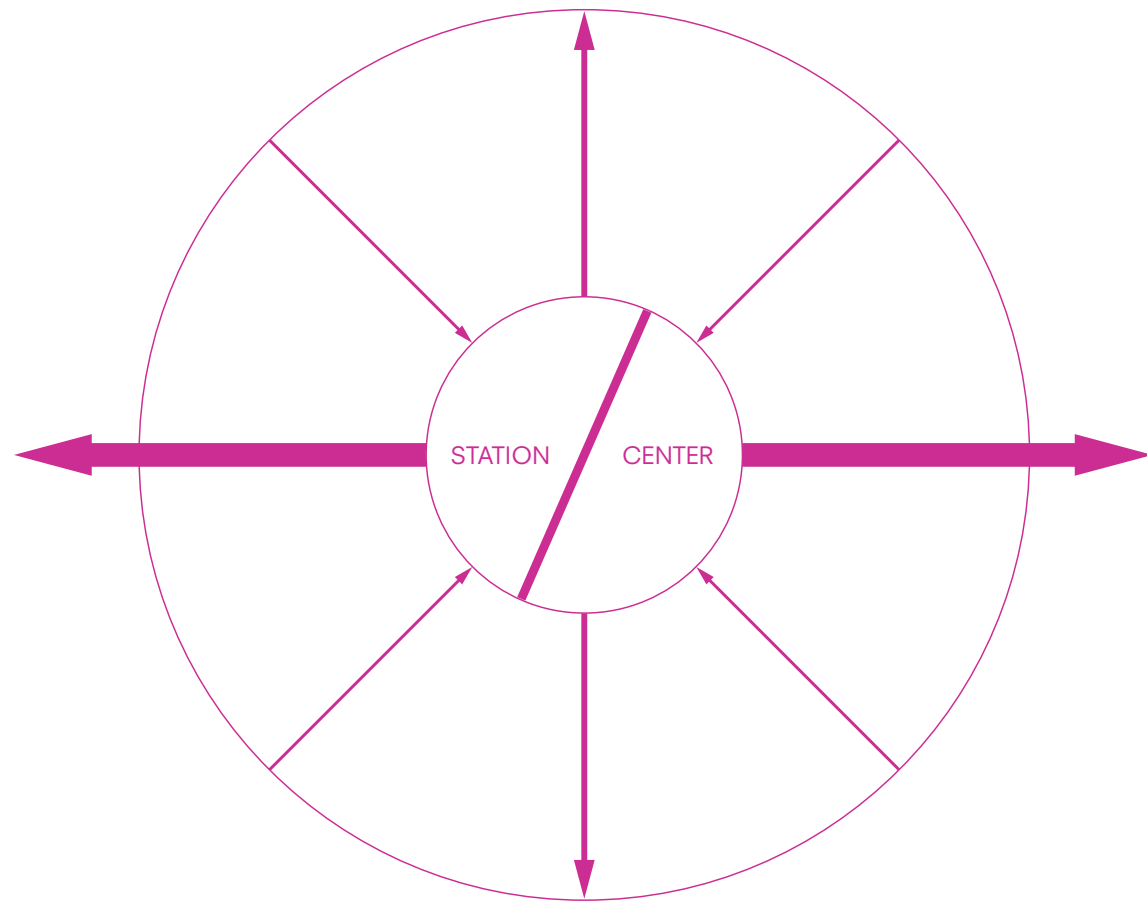
OLD LOCATION



NEW LOCATION:
BETTER DISTRIBUTION
MORE CENTRAL



LOCATION IN GROUP VISION

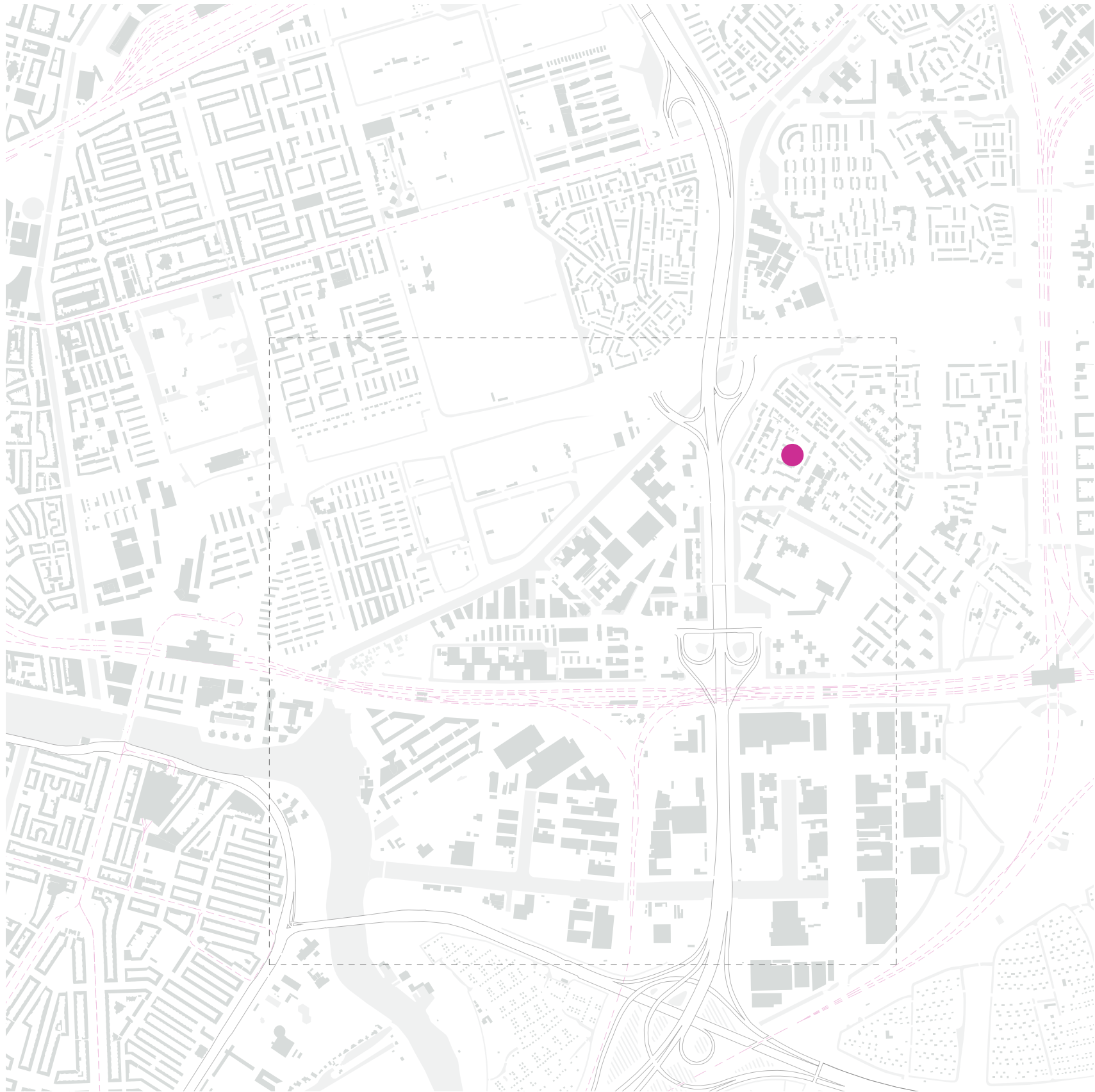


FUNCTION (?)

NEIGHBORHOOD SCALE
COLLECTIVITY
SOCIAL HOTSPOT
CENTER OF LOCATION
INVITING
PLACEMAKER







LIBRARY
ON SITE



80.000 NEW INHABITANTS?

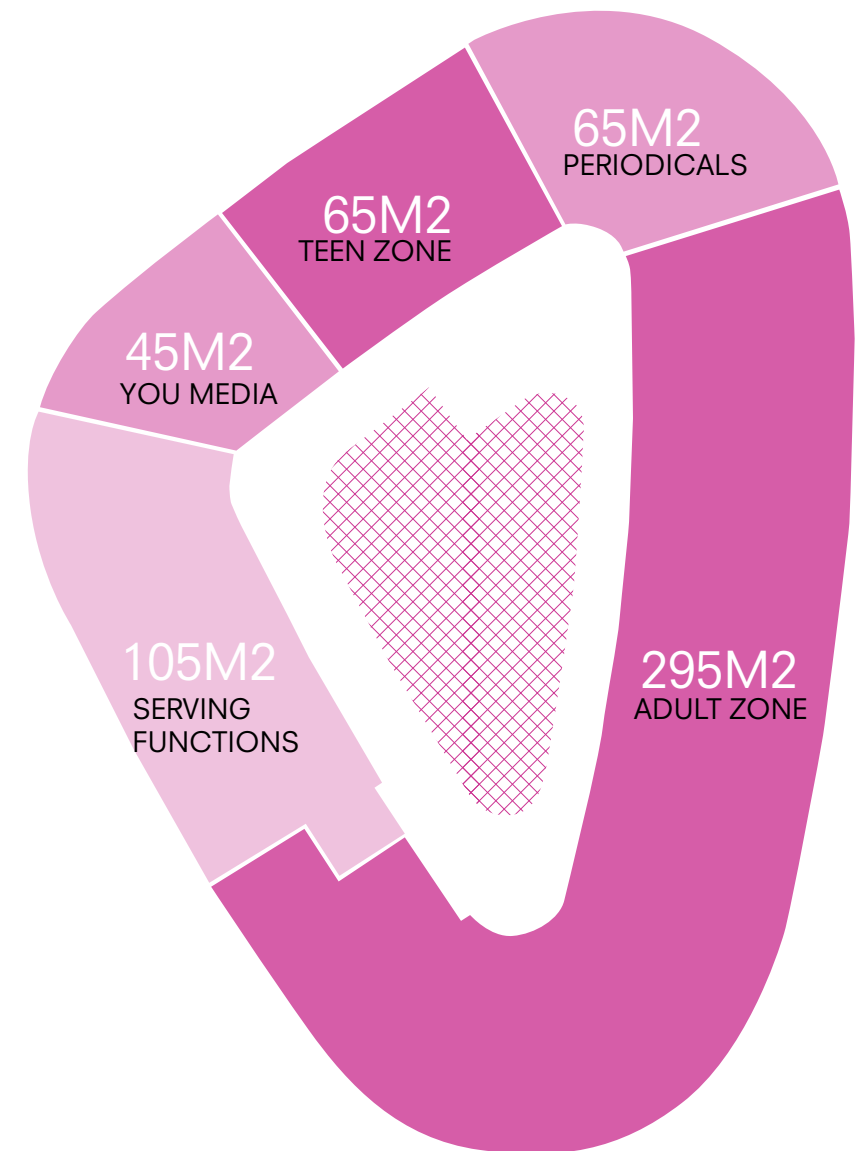
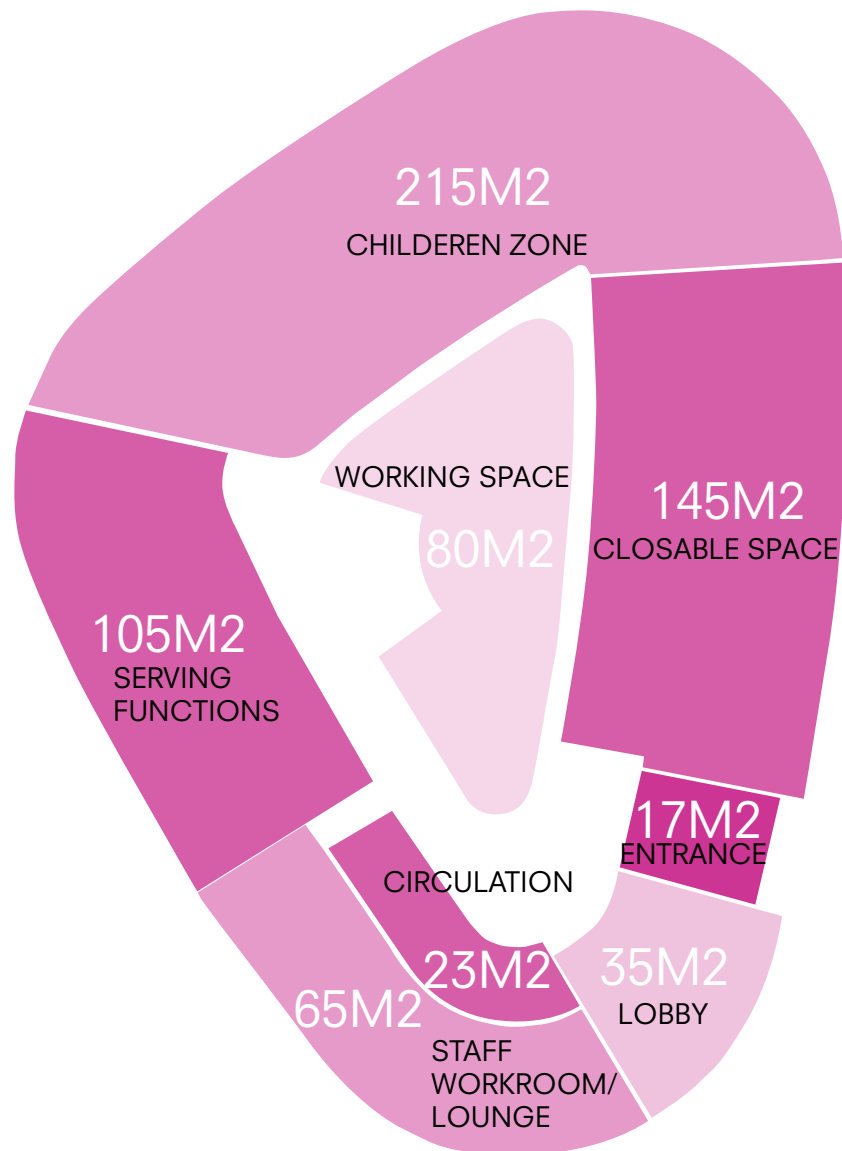
CASE STUDIES

To find out what the metro station and library of the future are, one first must know what the state of the art is. For libraries there are three different case studies done. The Chinatown branch library in Chicago by SOM because of its communal character. The IIT Campus Center by OMA because it functions as the center to an entire area. De Rozet by Neutelings Riedijk because of its extension to the public space and a “public route” spiraling through the entire building.

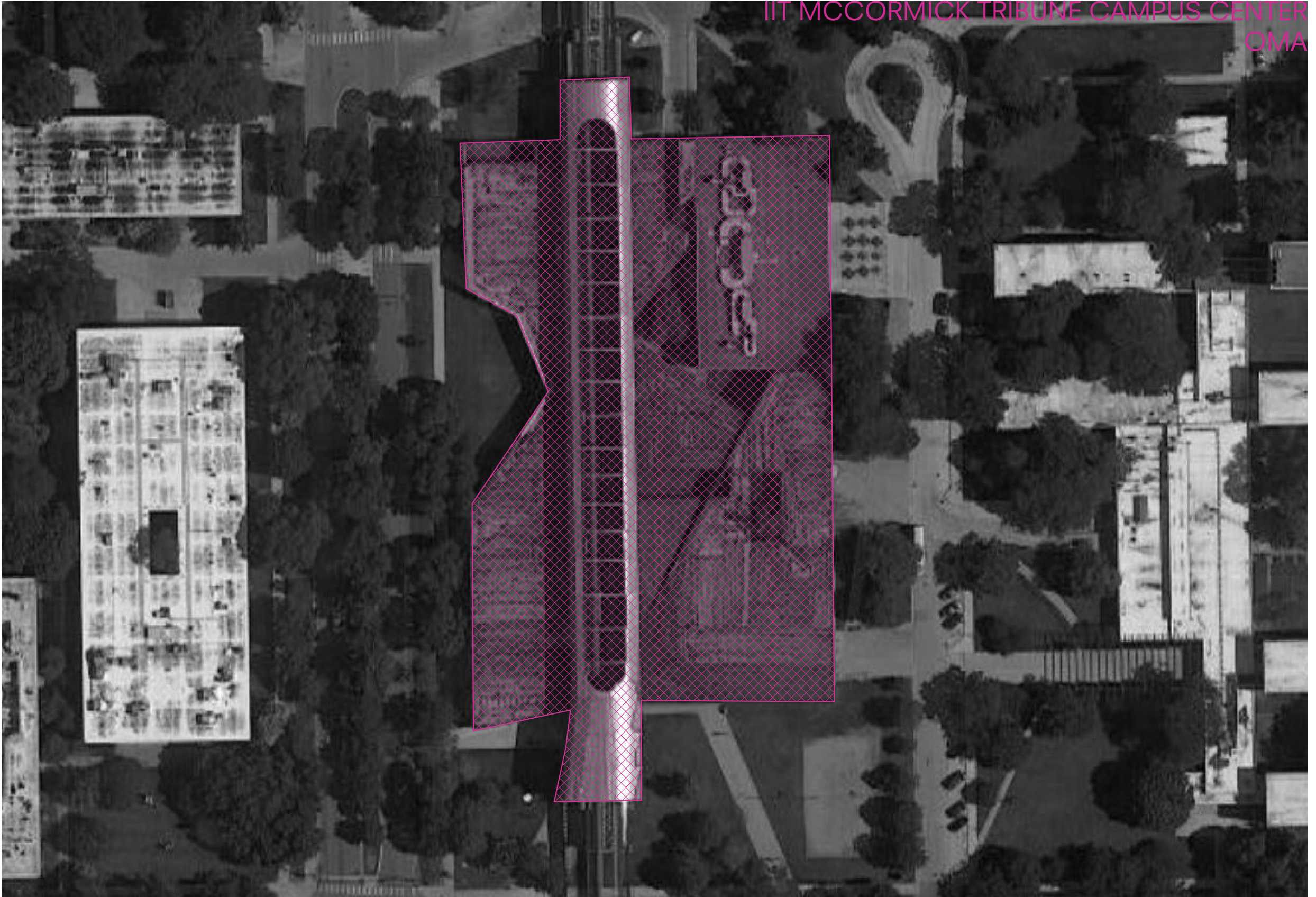
For metro stations the new Amsterdam Noord station by Benthem Crouwel is analyzed because it functions as an incubator to the area with commerce combined. Also the Nydalen metro station in Oslo by Kristin Jarmund is analyzed because of its function on neighborhood scale.

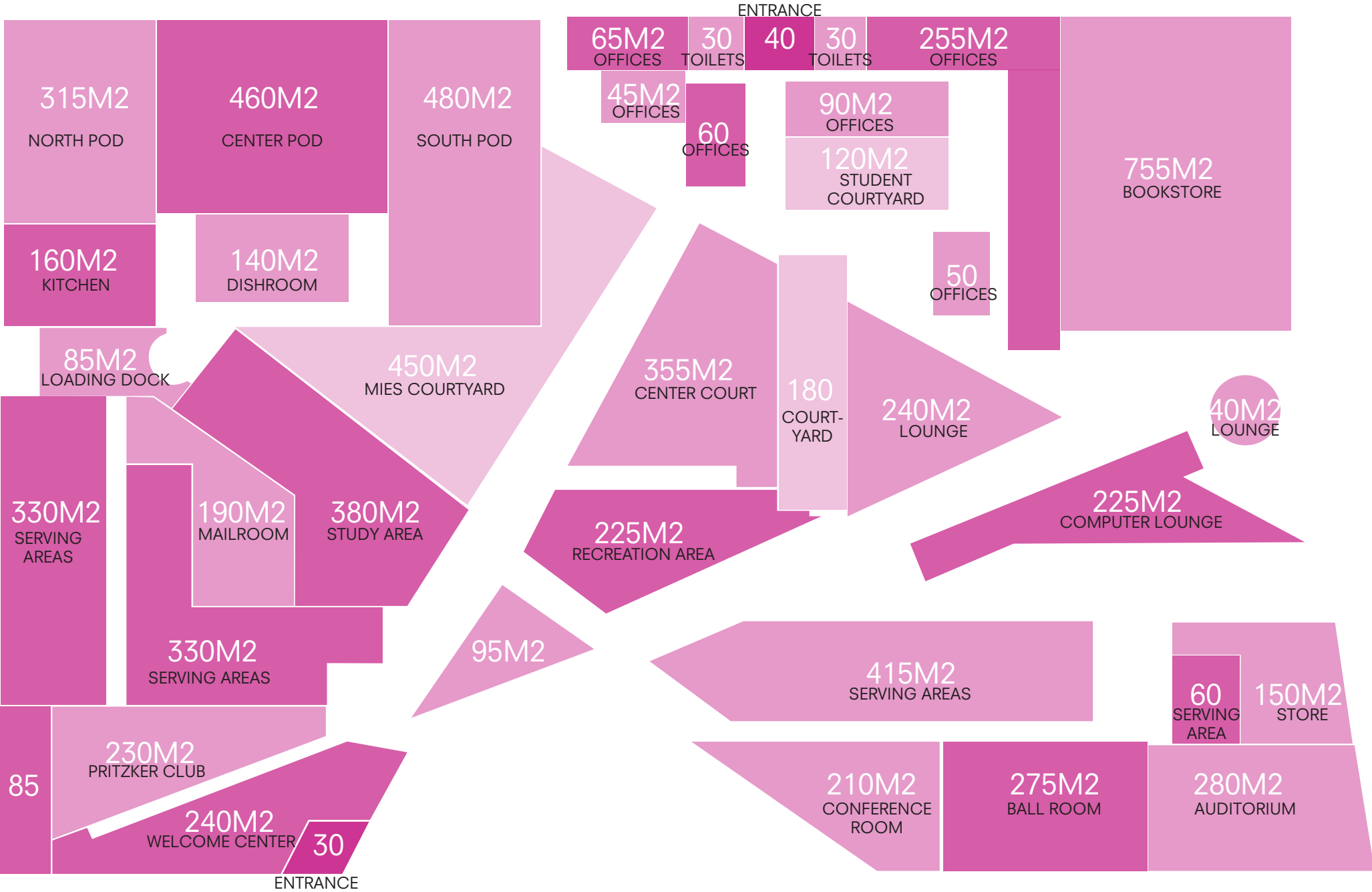
The analysis of these buildings result in a program translated to a scope of about 80.000 people. The total program would come down to a total of 22.000 square meters, almost equally divided between the station function and the library function.





TOTAL SQUARE METERS 16.000 CITIZENS:
1.400



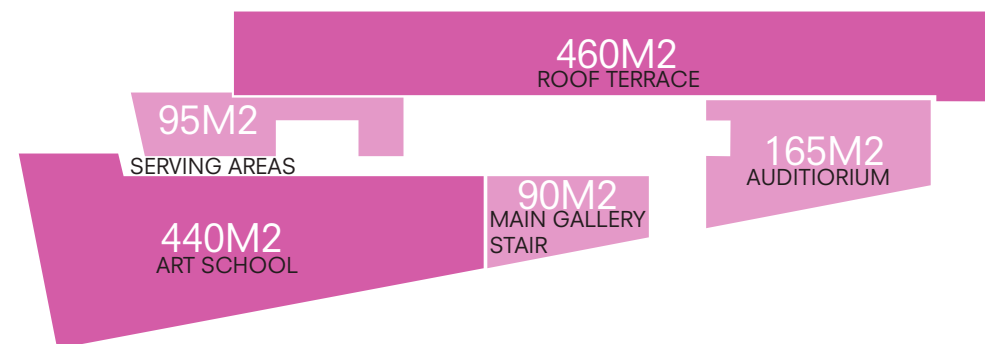
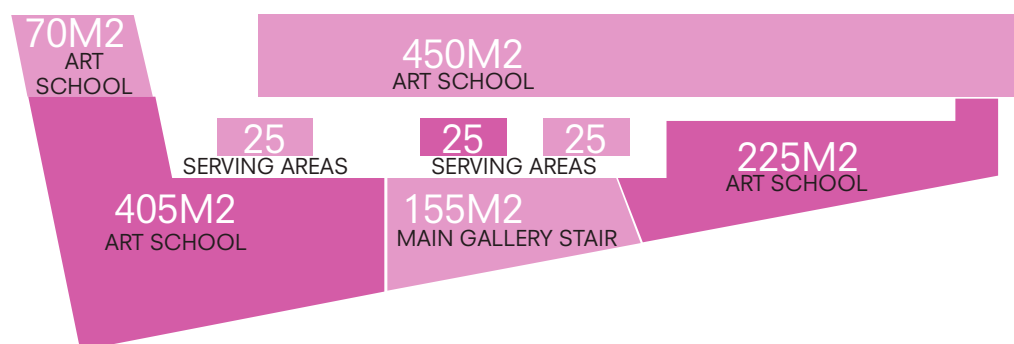
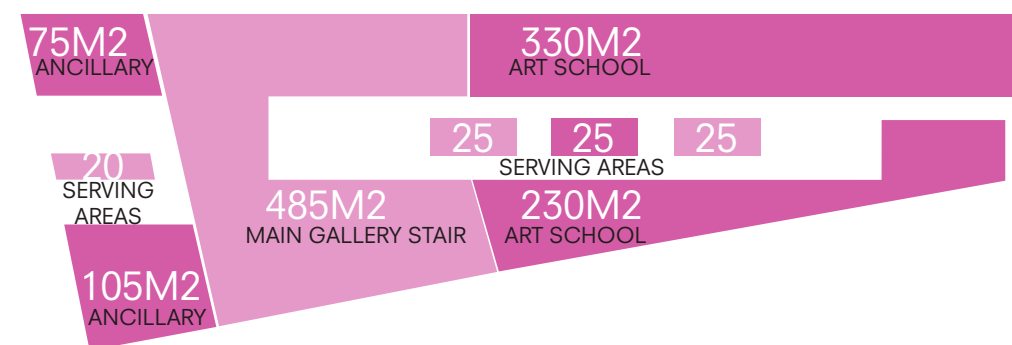
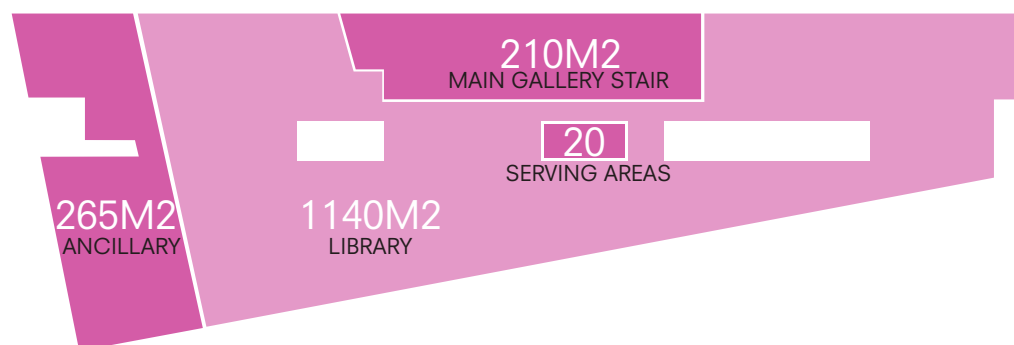
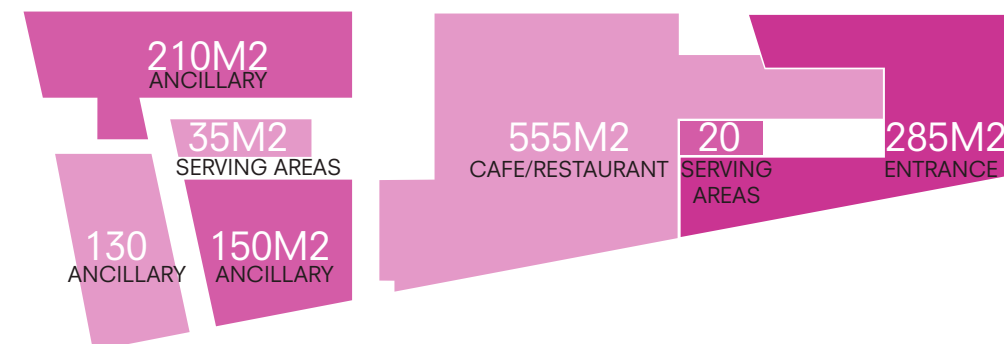
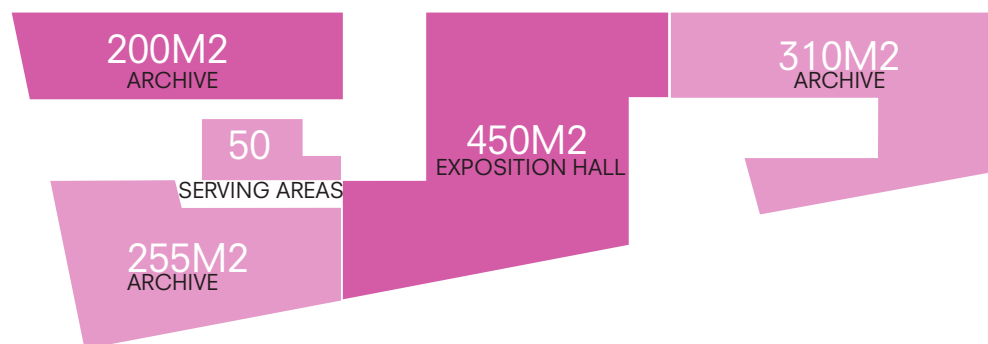


TOTAL SQUARE METERS FOR 8000 STUDENTS:
10.960



DE ROZET
NRA

PUBLIC ROUTE

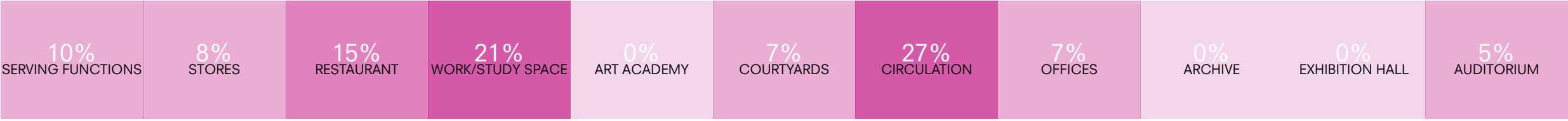


TOTAL SQUARE METERS FOR 90.000 CITIZENS:
12.000

CHICAGO LIBRARY SOM

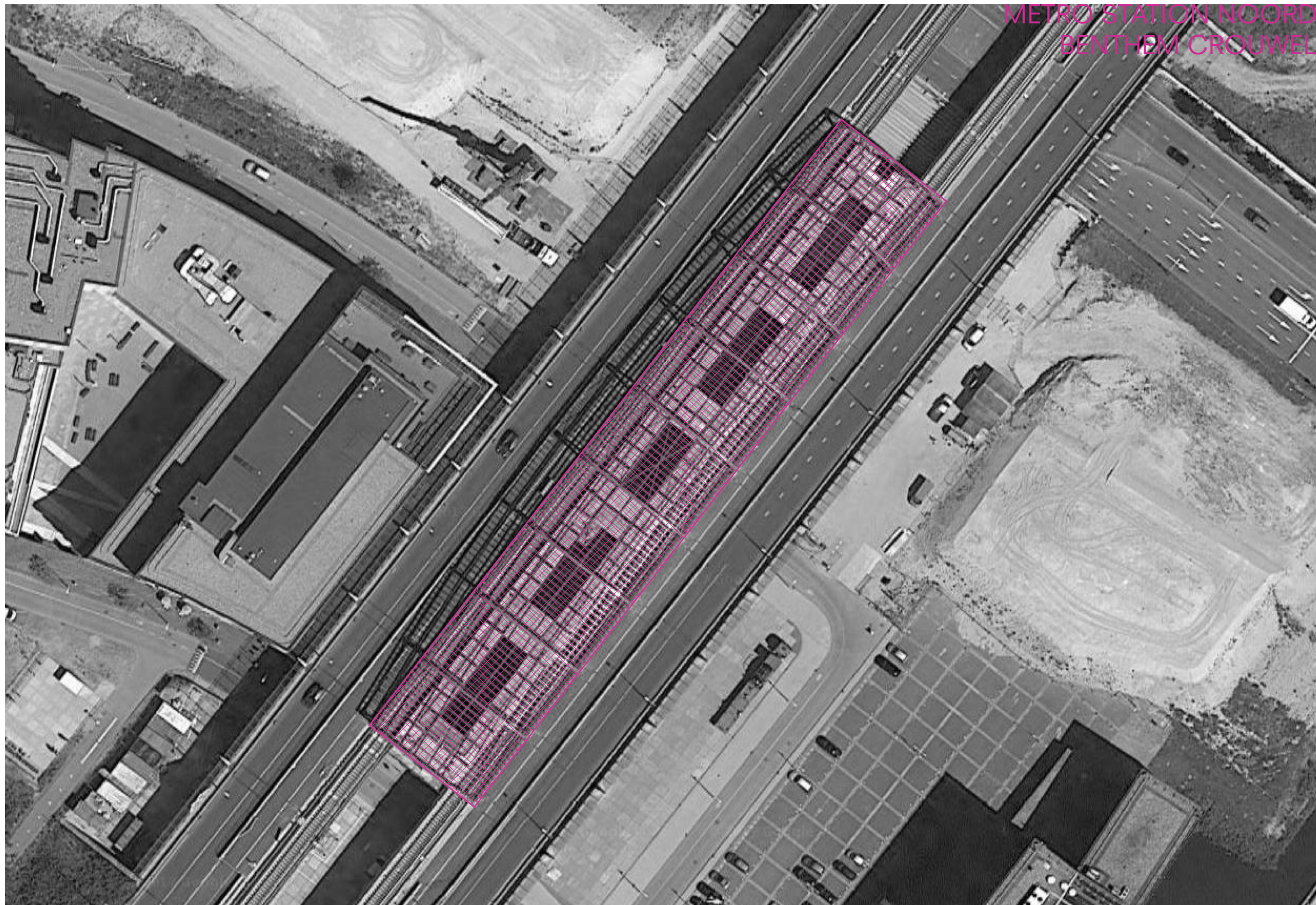


MTCC OMA



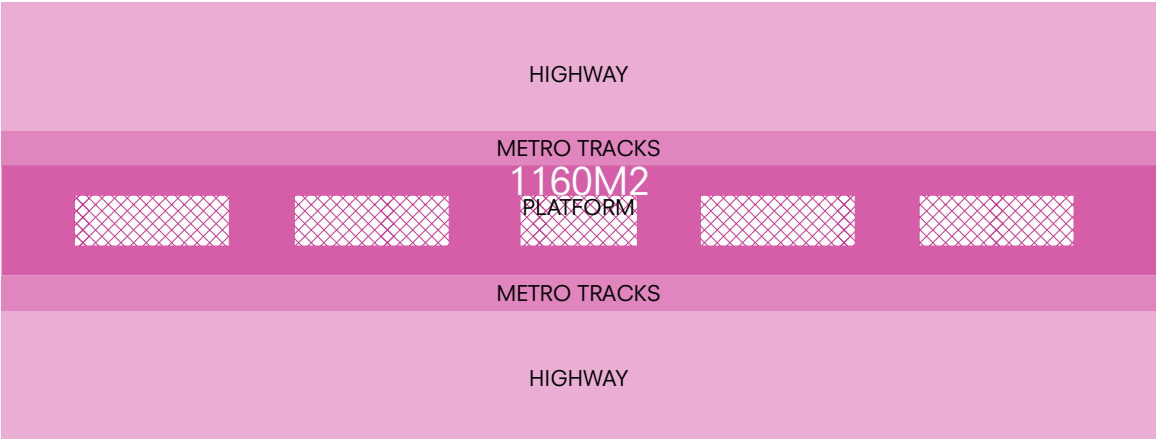
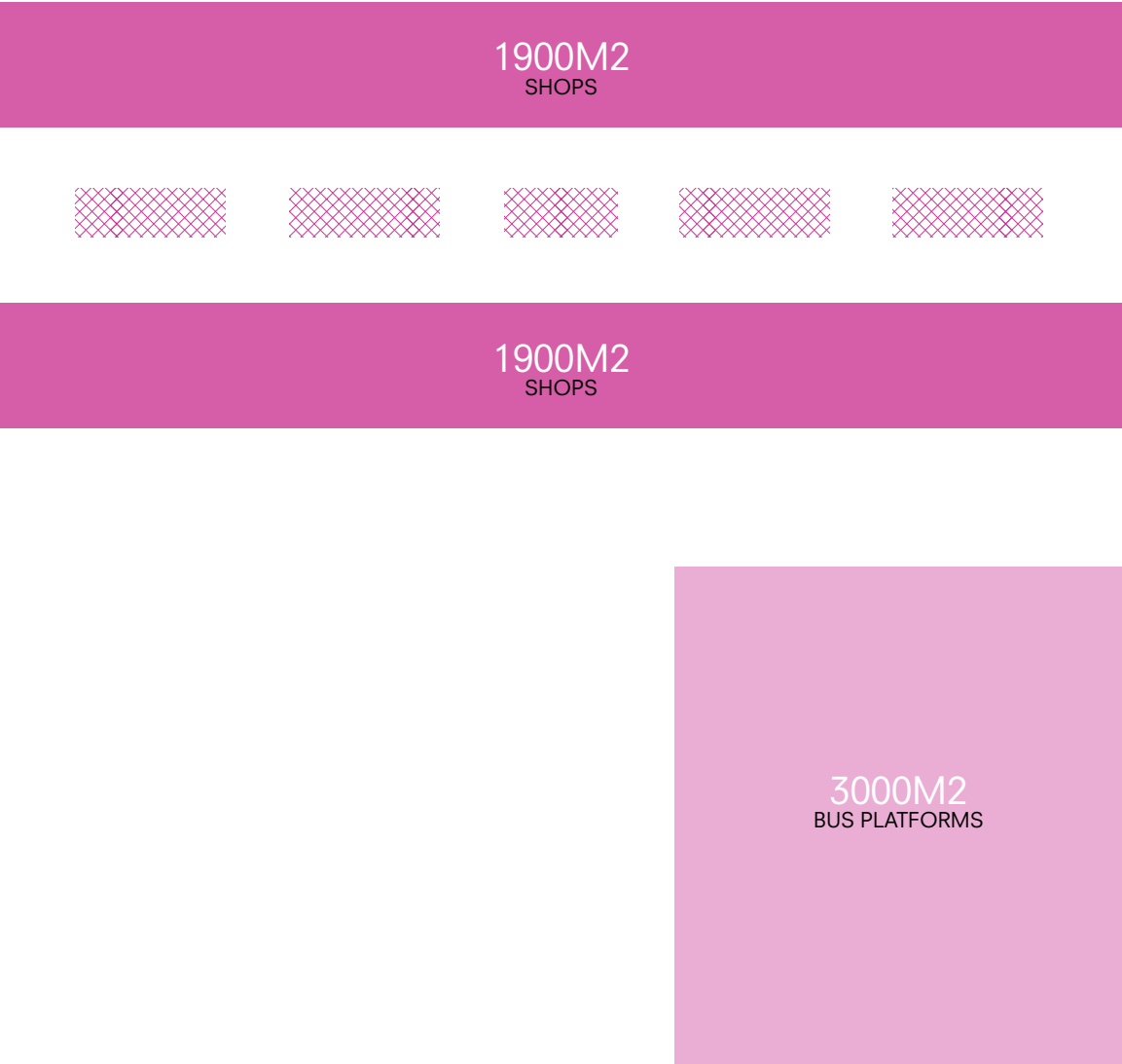
DE ROZET NRA



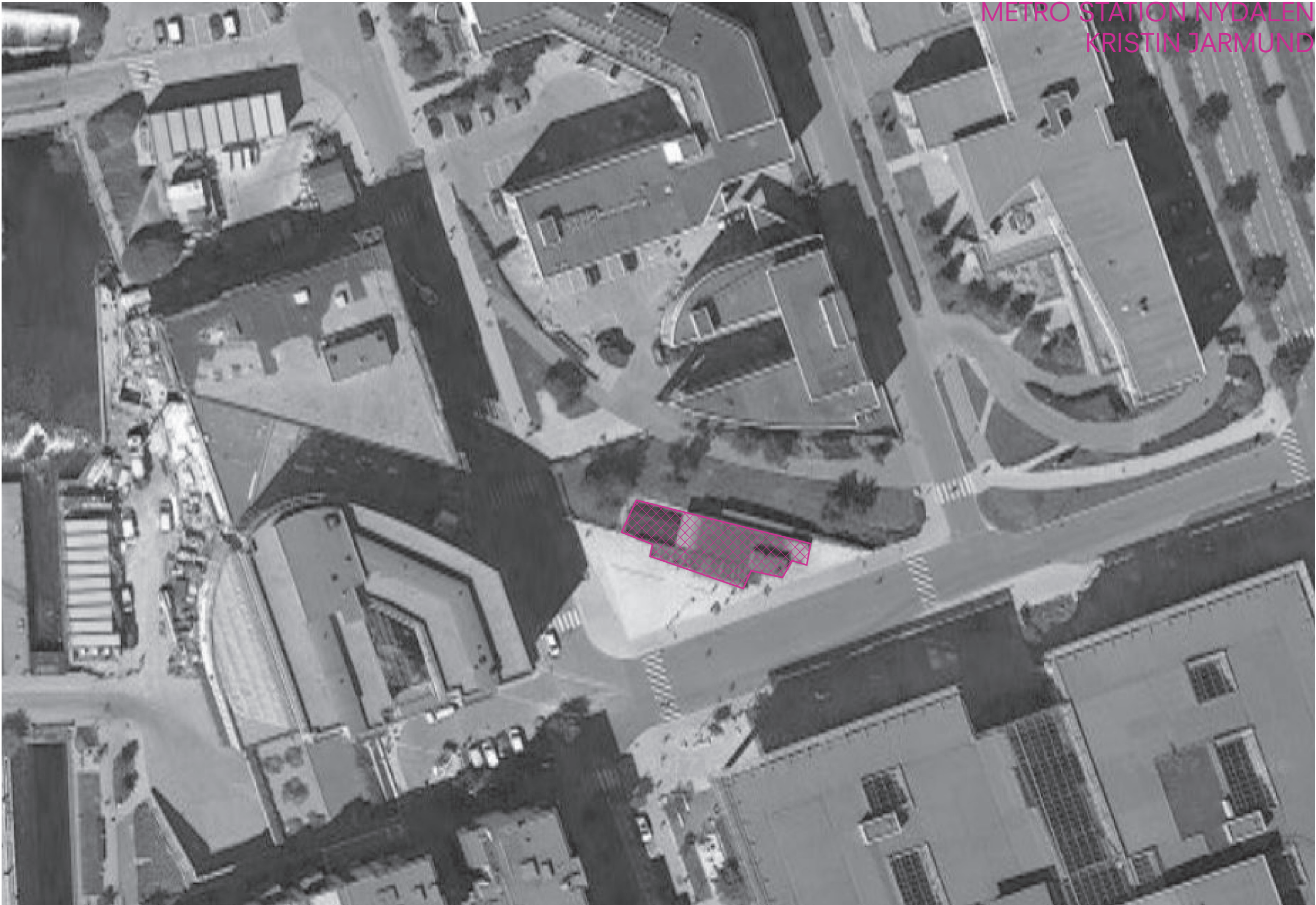


METRO STATION NOORD
BENTHEM CROUWEL

METRO STATION AS INCUBATOR

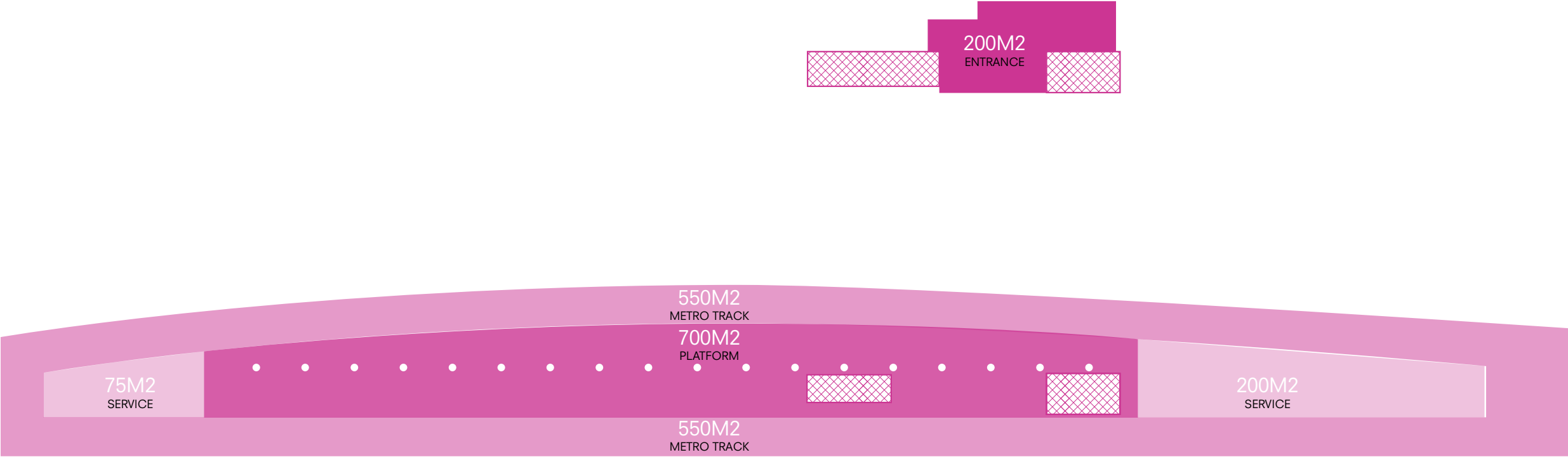


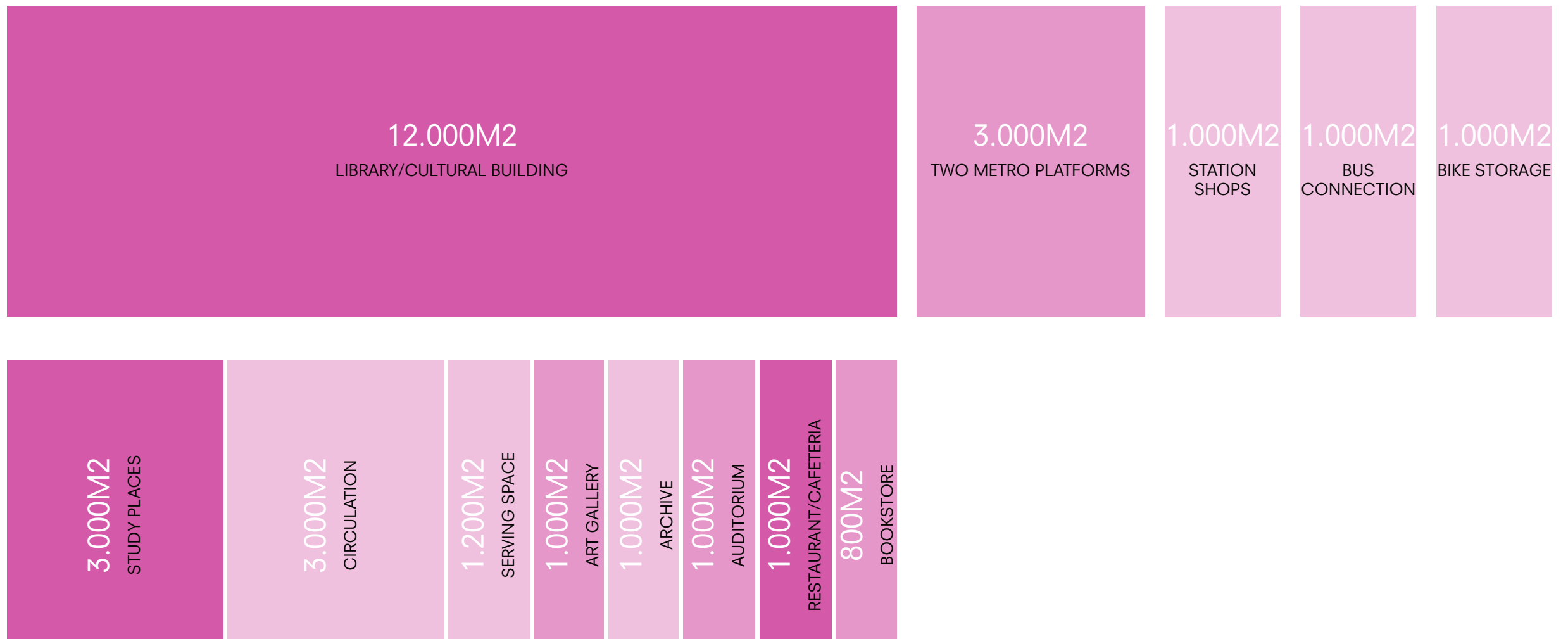
TOTAL SQUARE METERS:
8.000



METRO STATION NYDALEN
KRISTIN JARMUND

METRO STATION ON SMALLER SCALE





TOTAL SQUARE METERS FOR 80.000 CITIZENS:
22.000

PROGRAM IN 2050

The earlier stated program would be fitting for a metro station and library hybrid built in 2017. Both functions, however, are affected by some clear trends. These trends are necessary to integrate for a design in 2050.

Metro stations nowadays are largely closed off by gates when you need to get to the platforms. But in 2050 it is very well possible that these gates are obsolete because travel system will be automated by using tracking technologies or wearable chips. Besides the stations are increasingly combined with other functions like commerce but also culture. These shifts causes it to function as an extension to the public space instead of just a transport hub.

For libraries digitalization is a clear topic to take in mind. Functions like archives are hardly needed in new libraries. Instead the focus will be on creation and the expression of the individual. Makerspaces are an example of what is the future, enabling anyone to explore the production of culture.

In the program for the project this results in a focus on this creative aspect. With makerspaces to explore and stimulate the possibilities of ones creativity and expose this in an inspiring exposition space tightly connected to the metro platforms.

ACCESSIBILITY PUBLIC TRANSPORT IN 2050



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Sweden Trials NFC Implants for Public Transportation

[JP Buntinx](#) [June 20, 2017](#) [Crypto, News](#)



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There are quite a few improvements to be made where public transportation is concerned. Buying tickets with a mobile device and autonomous transportation vehicles are two major breakthroughs in recent years. Sweden is taking things one step further, by letting railway travelers check in by using an NFC chip embedded in their skin. This new test will raise a lot of eyebrows, that much is evident.

OBSTRUCTIONS OBSOLETE AS NEW TECHNOLOGIES EMERGE

RESEARCH QUESTION

HOW WILL METRO STATIONS FUNCTION IN
2050?

METRO STATIONS AS RELEVANT PUBLIC SPACE IN 2050

MONOFUNCTIONAL TRANSFER
HUB



COMMERCE
SMALL AND EASY ACCESSIBLE

INCREASING PEOPLE FLOWS
THE PRESSURE ON THE PUBLIC TRANSPORT SYSTEM IS
INCREASING IN EVERY CITY

SPACE FOR CULTURE
THERE IS A TREND OF INTEGRATING INSPIRING CULTURAL
ACTIVITIES IN STATIONS IN ORDER TO MAKE TRAVELING LESS
ONE DIMENSIONAL





HOW WILL LIBRARIES FUNCTION IN 2050?

COLLECTION



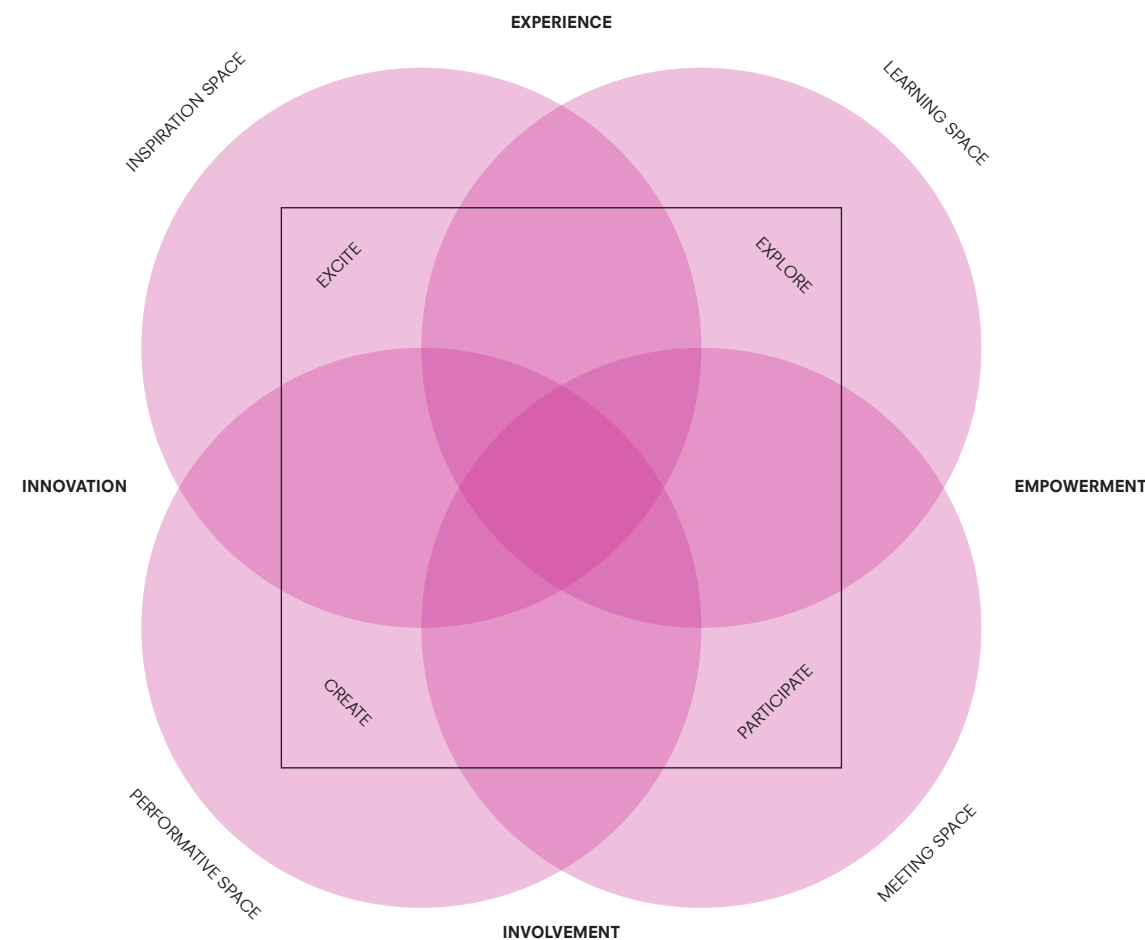
CREATION
EXPRESSION OF THE INDIVIDUAL

CULTURE 3.0
BORDER BETWEEN CULTURAL USERS AND PRODUCERS GETS
BLURRED, ANYONE HAS THE MEANS TO PRODUCE

MAKERSPACES
MAKING, LEARNING, EXPLORING BY DOING



...THE SECURITY OF THE FUTURE WELFARE AND PROGRESS DEPENDS ON A POPULATION THAT IS ABLE TO ACT IN A GLOBALIZED AND POST-INDUSTRIAL SOCIETY BY TURNING INFORMATION INTO KNOWLEDGE AND KNOWLEDGE INTO CREATIVITY AND, NOT LEAST, INTO INNOVATION.



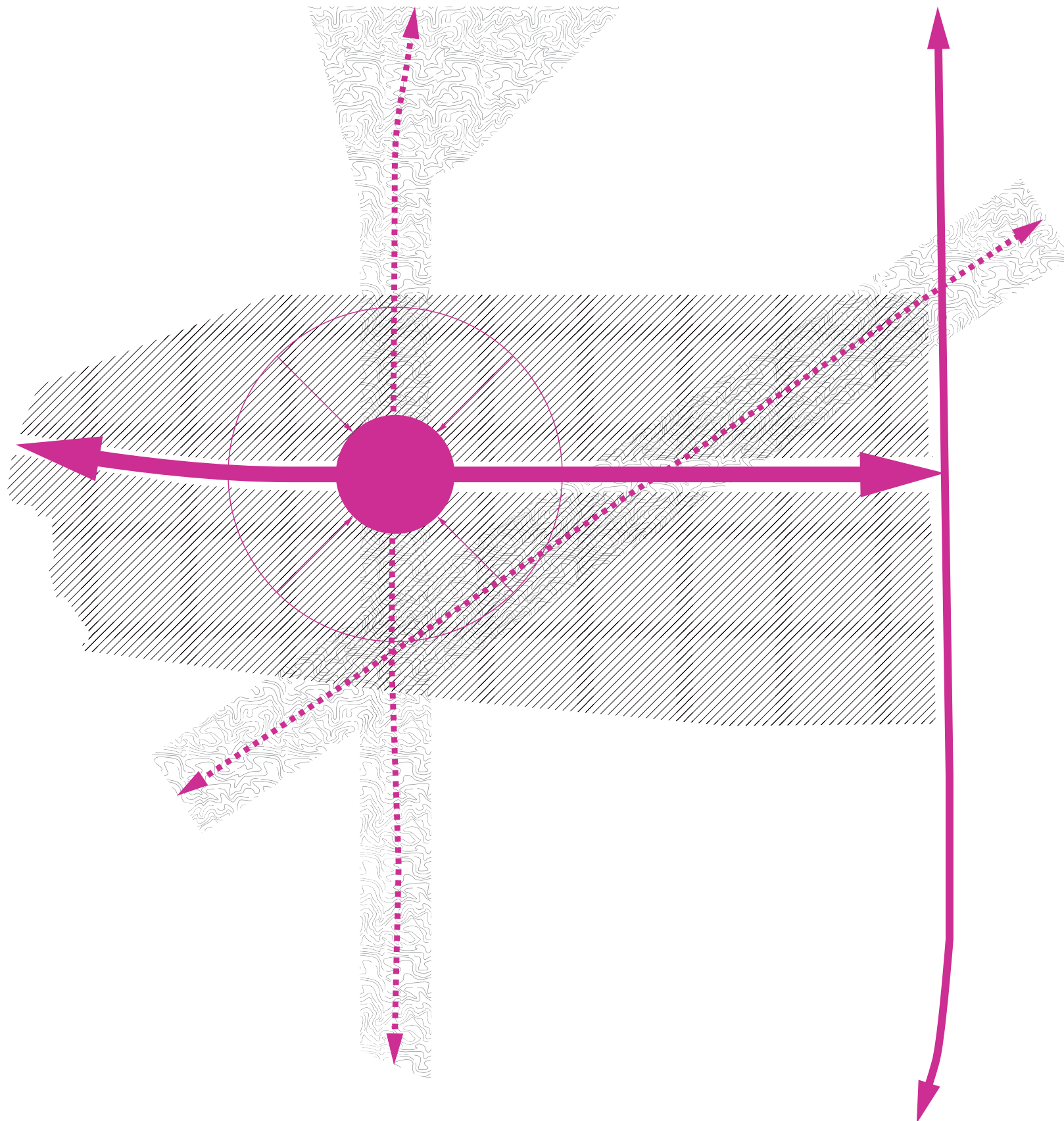


TOTAL SQUARE METERS FOR 80.000 CITIZENS:
22.000

DESIGN PRINCIPLES

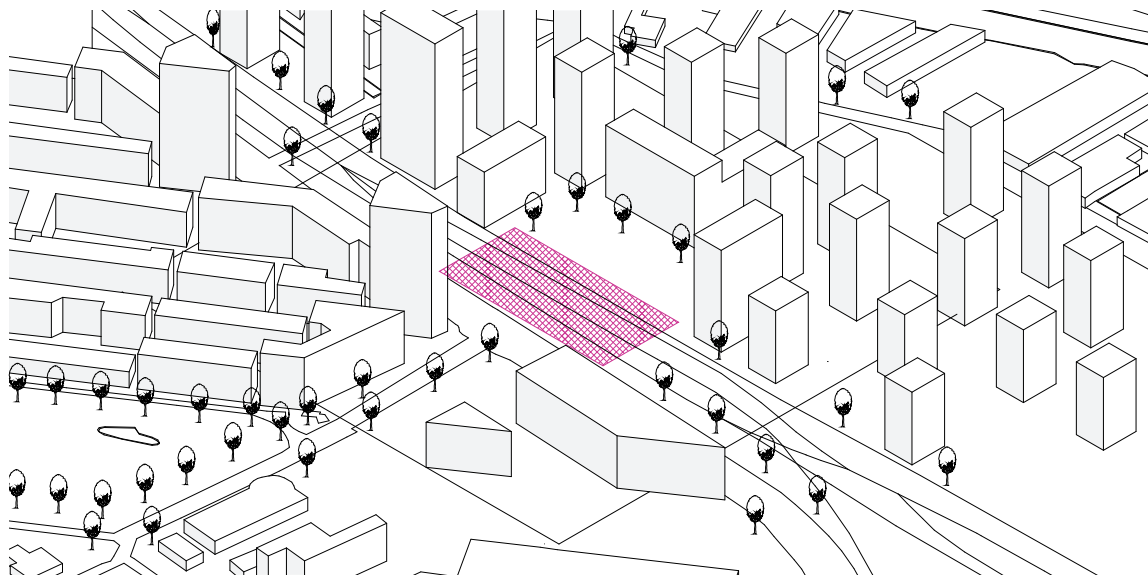
The final outcome of this research is a multi functional building situated on the crossing of two important connections in the site vision. In order to function as a true center to the site, the metro station is combined with a library as social platform. Due to its function it is important to design an inviting building which functions as an extension to the public space around it and thus should have an active groundlevel. As it is a center, it should be (partly) open during the entire day.

Taking in mind the relations of the program, multiple configurations are made. The configuration of a courtyard would be interesting to define the public space around, but there would be a too obvious distinction between the metro station part and the library. The axial variant emphasizes the crossing it is on top of, but still does not yet fully integrate both functions. The clustered configuration would be the most fitting variant to research further. It makes direct connections between the metro platforms and the library possible and still connects both sides of the tracks. With the public space continuing through the building, it would create a true new center to the Amsterdam Amstel area.

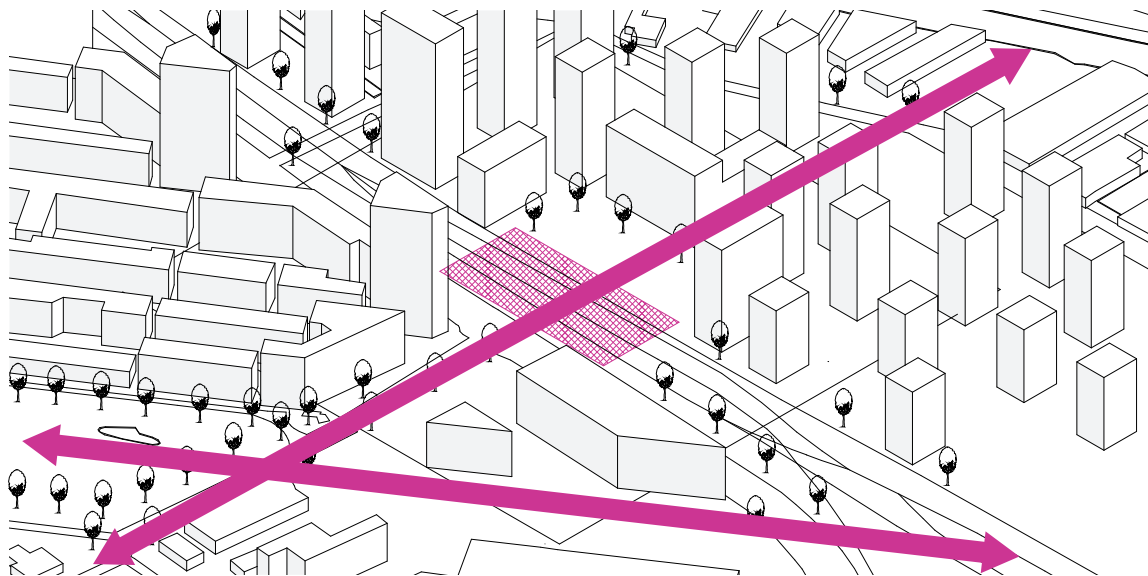


METRO STATION AS A CENTER

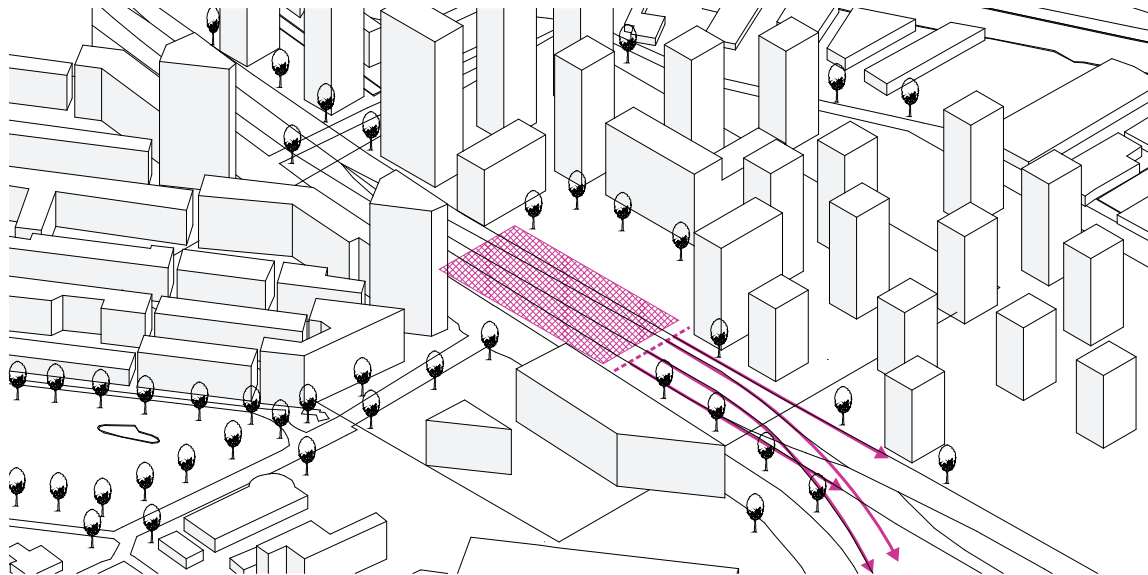
PROJECT LOCATION



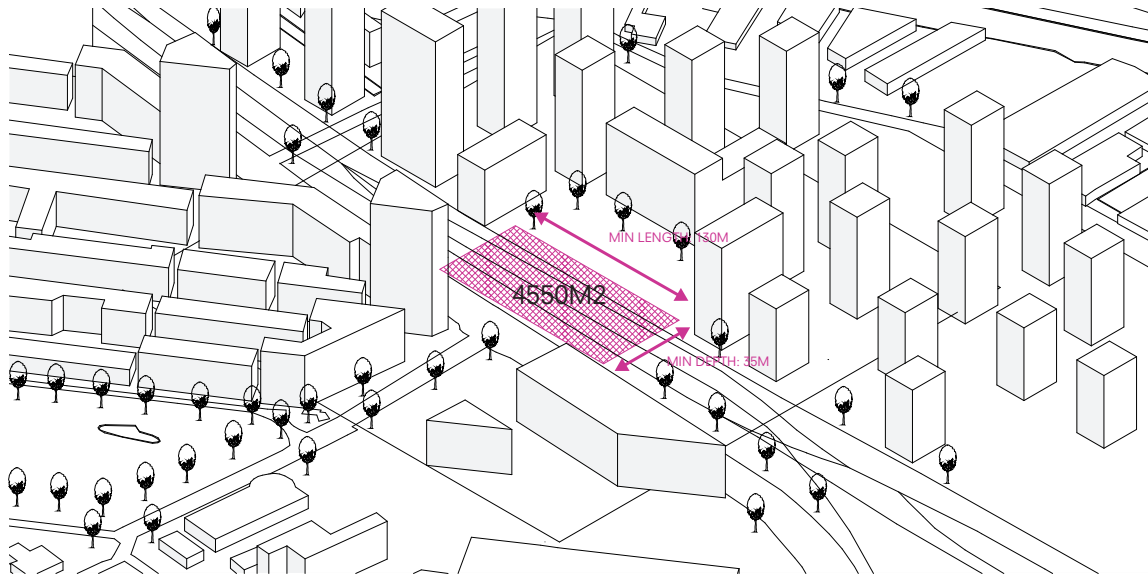
ACTIVITY ROUTE



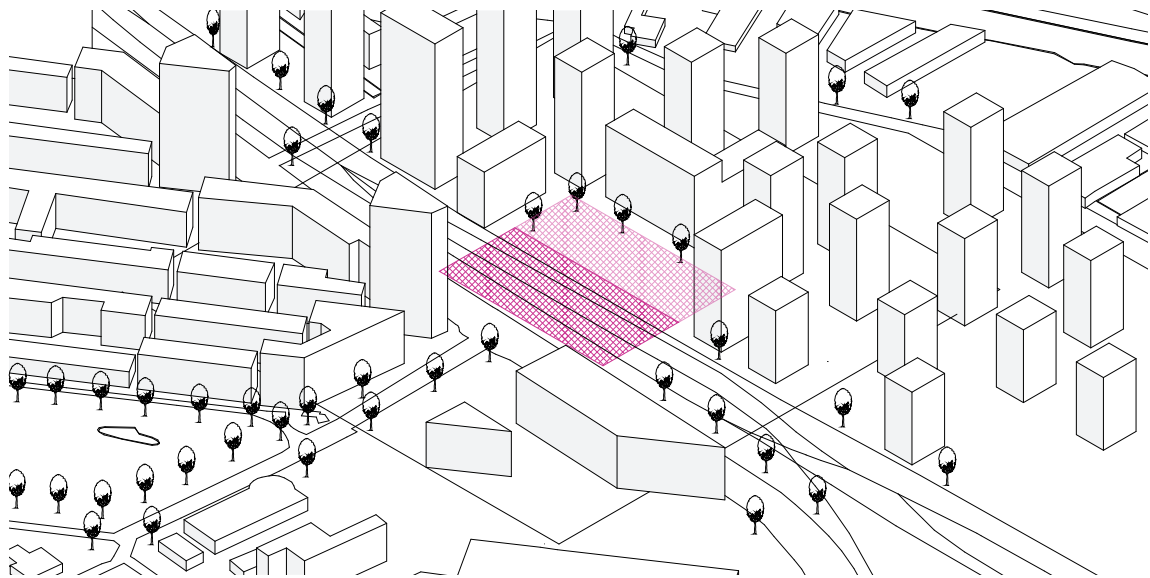
SPLITTING TRACKS



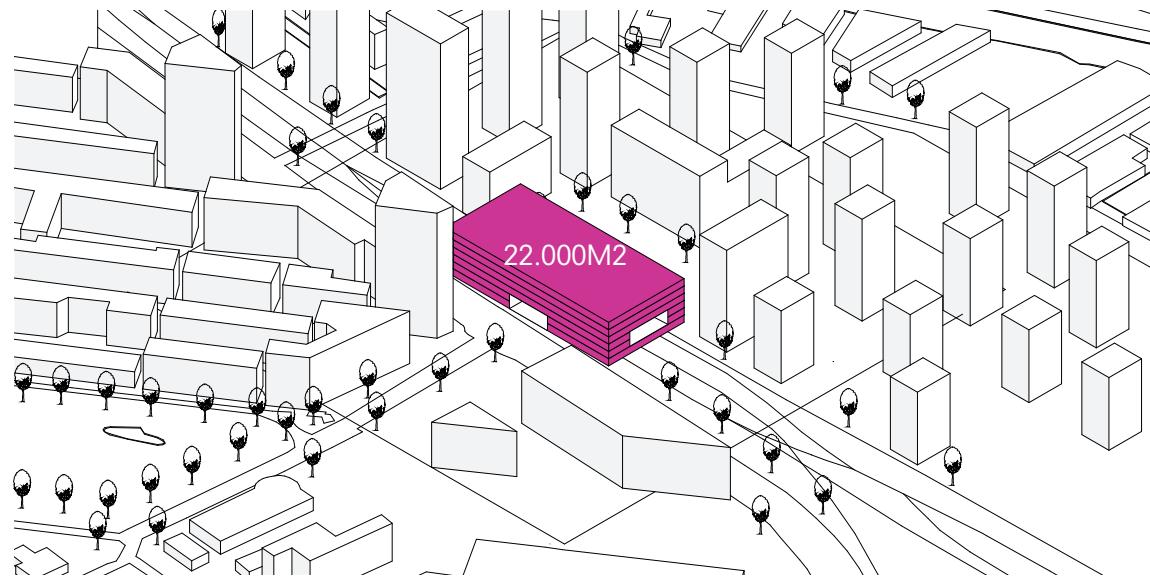
MINIMUM DISTANCES



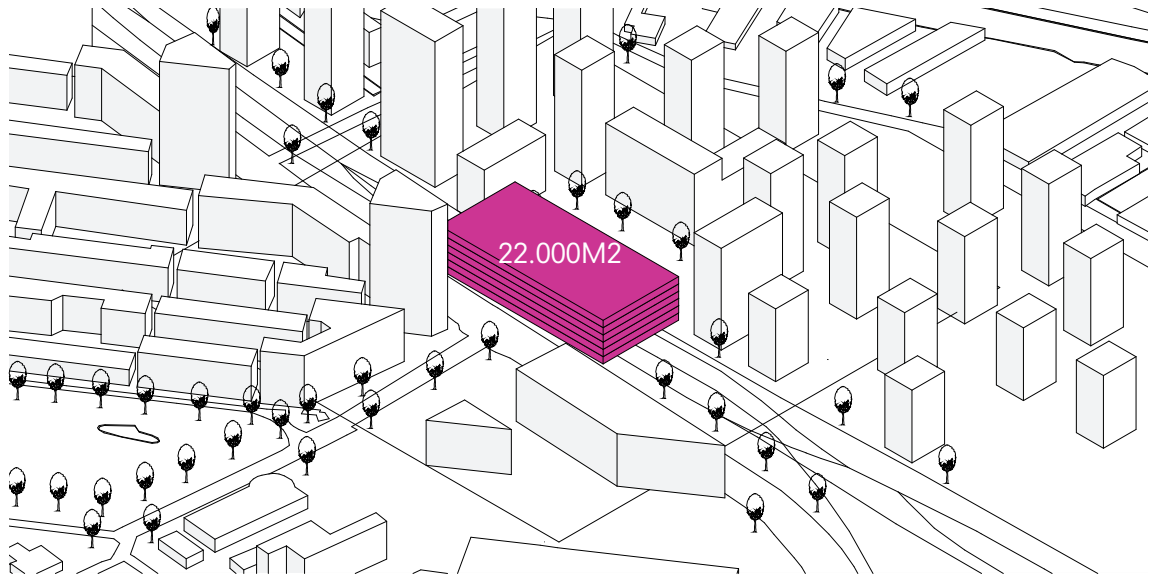
POSSIBLE SITE EXTENSION



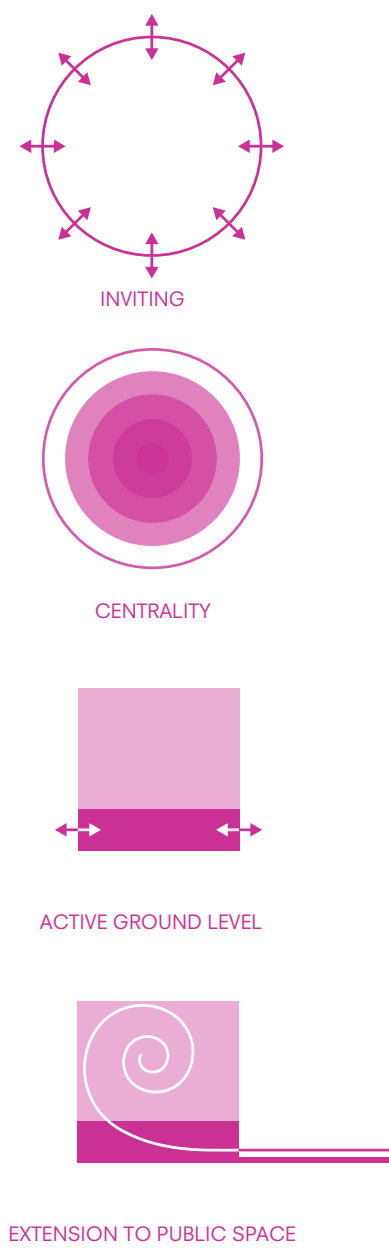
CARVE-OUTS OF ROUTES GOING THROUGH



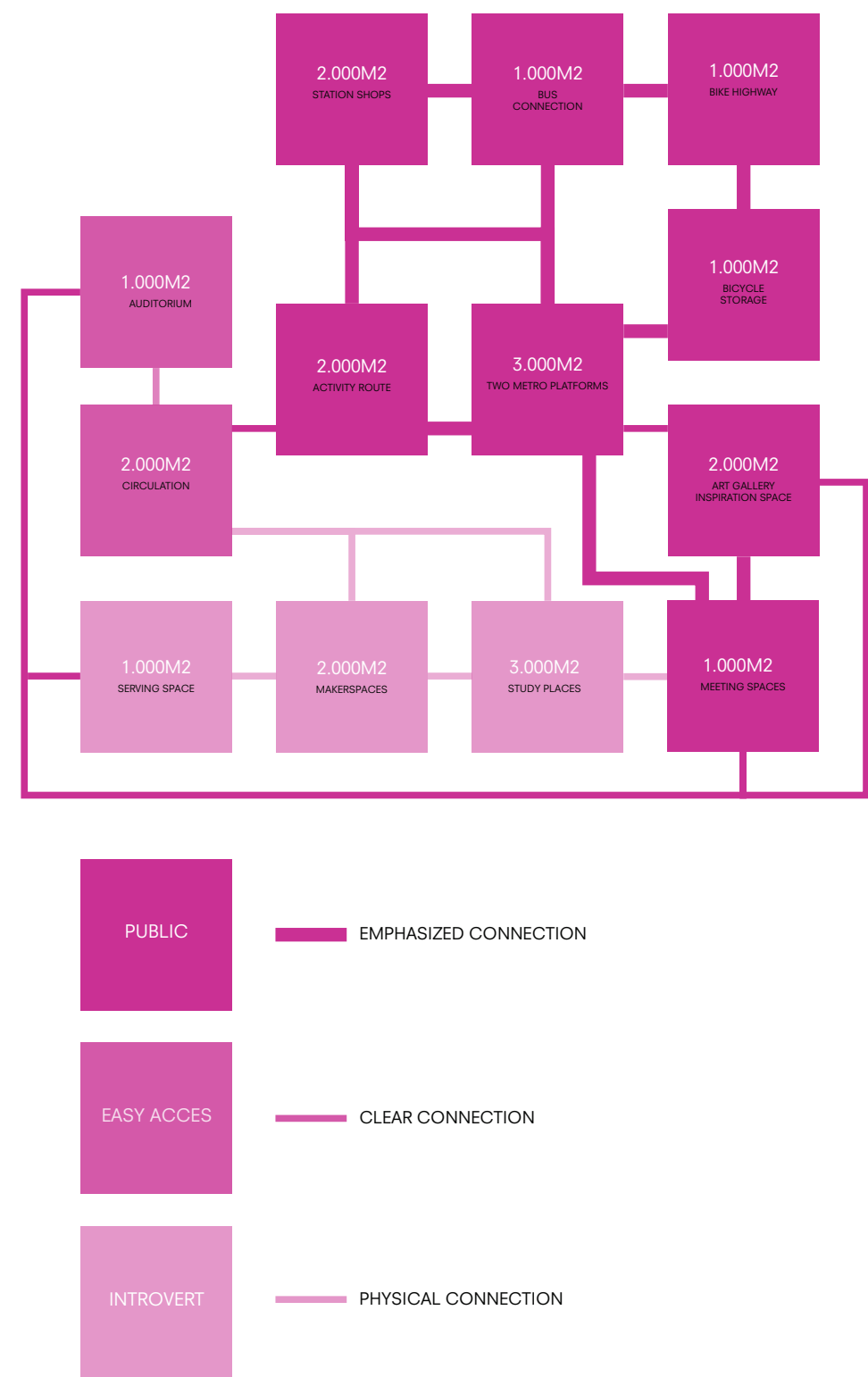
PROGRAM COMPARED TO FOOTPRINT



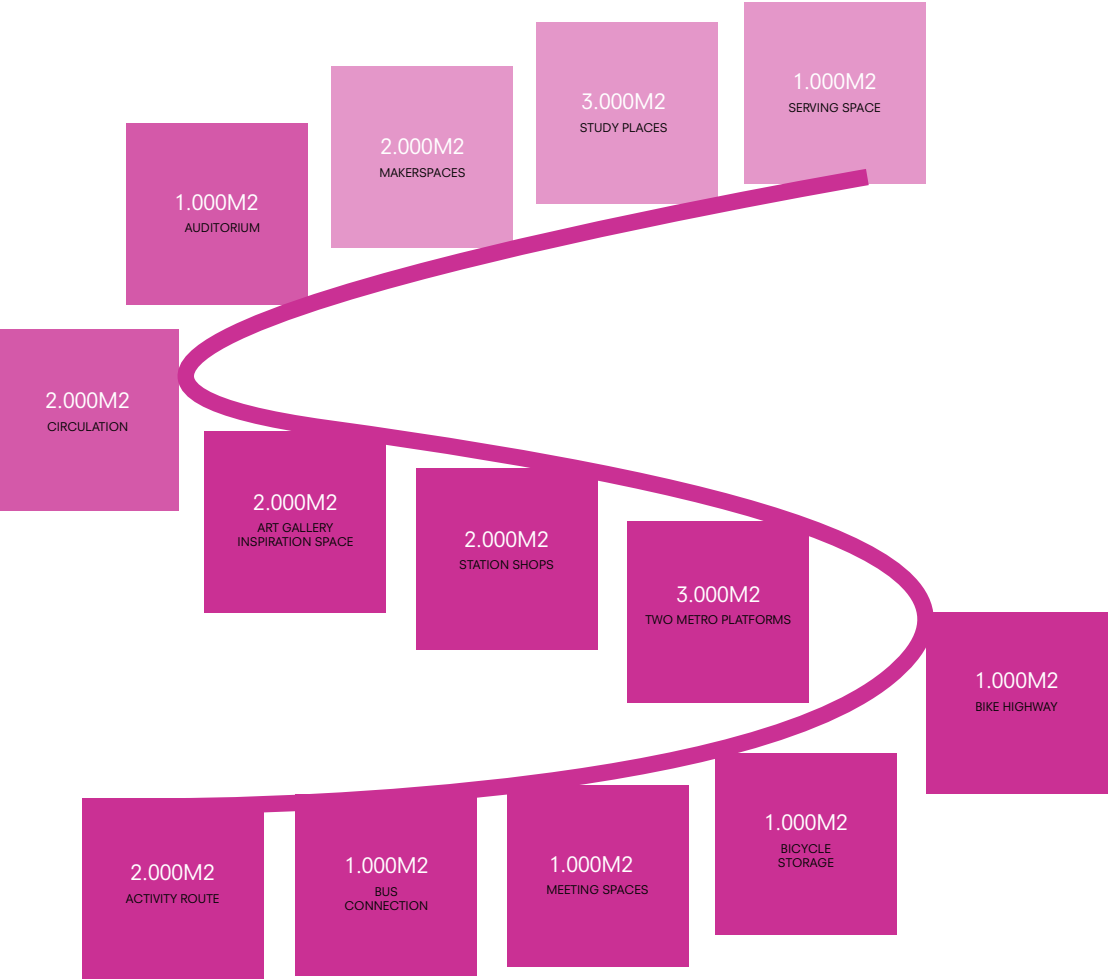
DESIGN CRITERIA



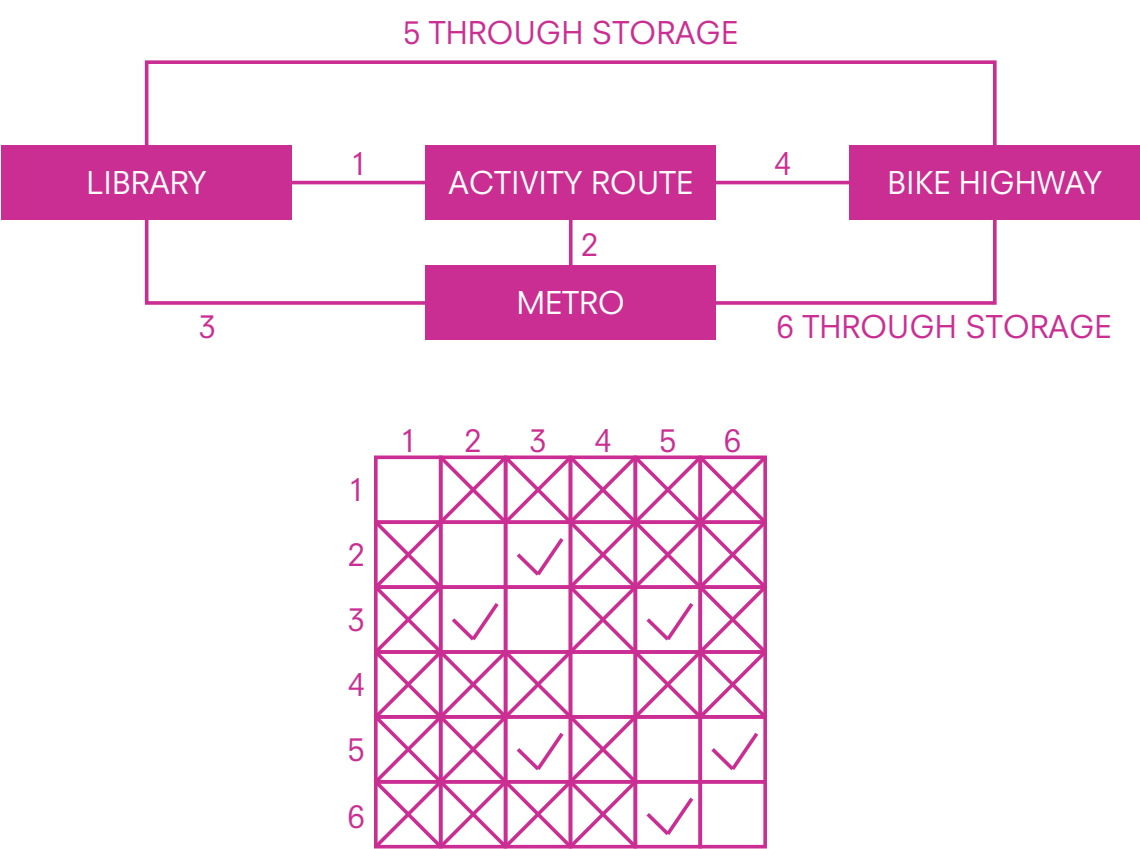
PROGRAM RELATIONS



PROGRAM CONFIGURATION



PEOPLE FLOWS



AORTA

A NEW INCLUSIVE CENTER FOR AMSTERDAM OVERAMSTEL

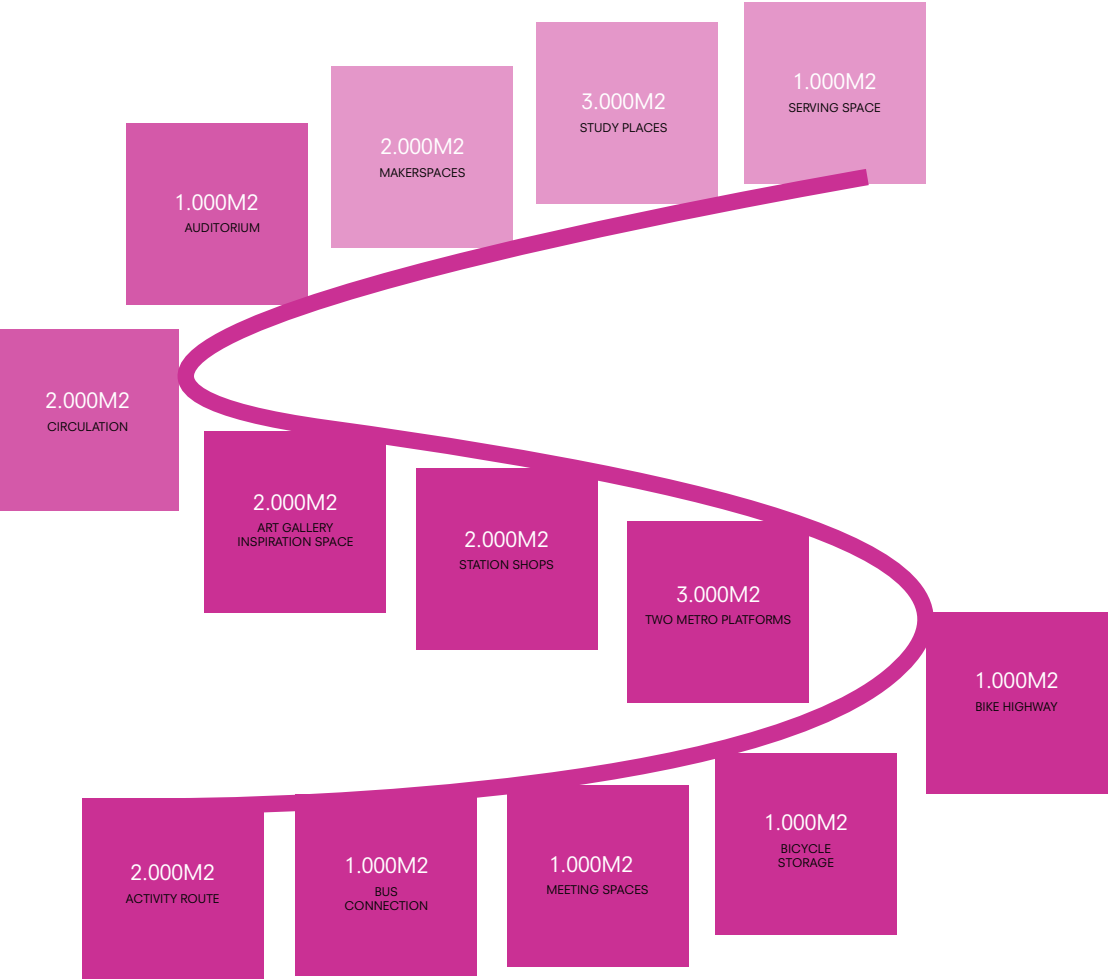


DESIGN PROPOSAL

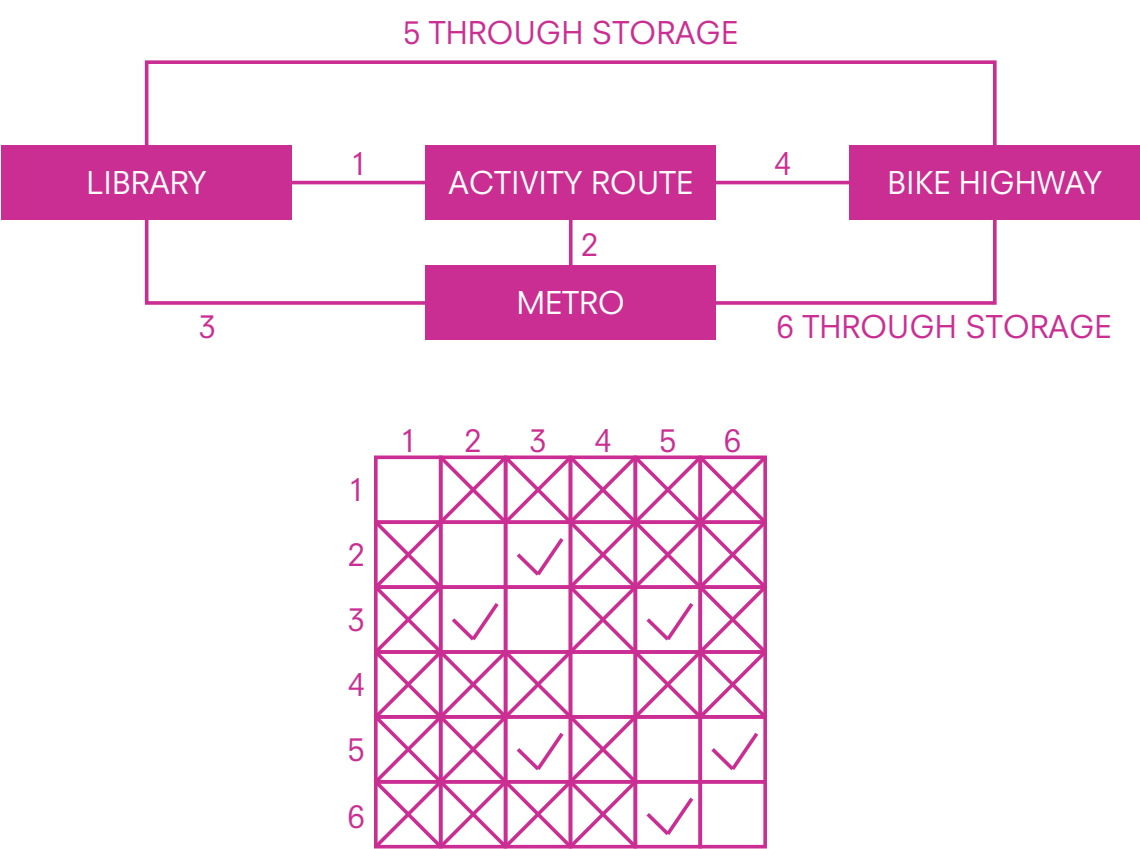
The research done before led to a design proposal for the site. In the coming half of the book this proposal will be elaborated on. The program is situated in such a way that there is a shift from very public at the groundfloor towards more introvert spaces above. At the same time also users of the building all have different demands from the building to meet. This is mapped and subsequently situated in such a way to integrate these wishes. The main form of the building is subtracted from both axes the building is on. In order to treat those equally, a square shape is chosen. A hole in the middle of this square is carved out to get its inner relations and visual connections. Eversince the building is lifted, a fluent connection between both sides of the metro tracks is created.



PROGRAM CONFIGURATION

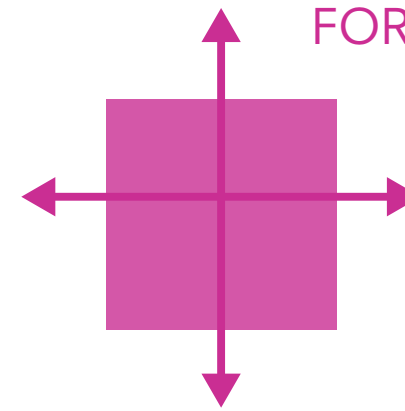


PEOPLE FLOWS

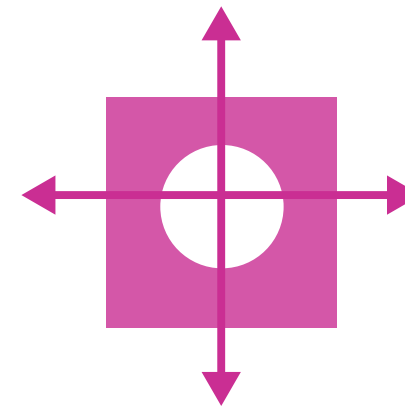




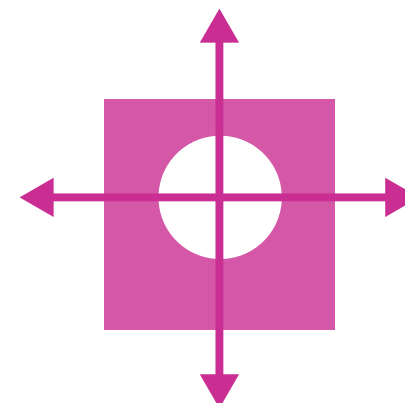
FORM EXPLANATION



EQUALITY FOR TWO
IMPORTANT AXIS



CIRCLE HOLE FOR EQUAL
DISTRIBUTED VIEWS

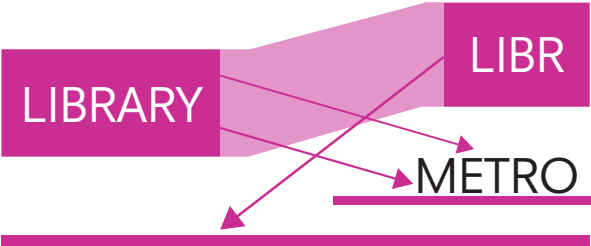


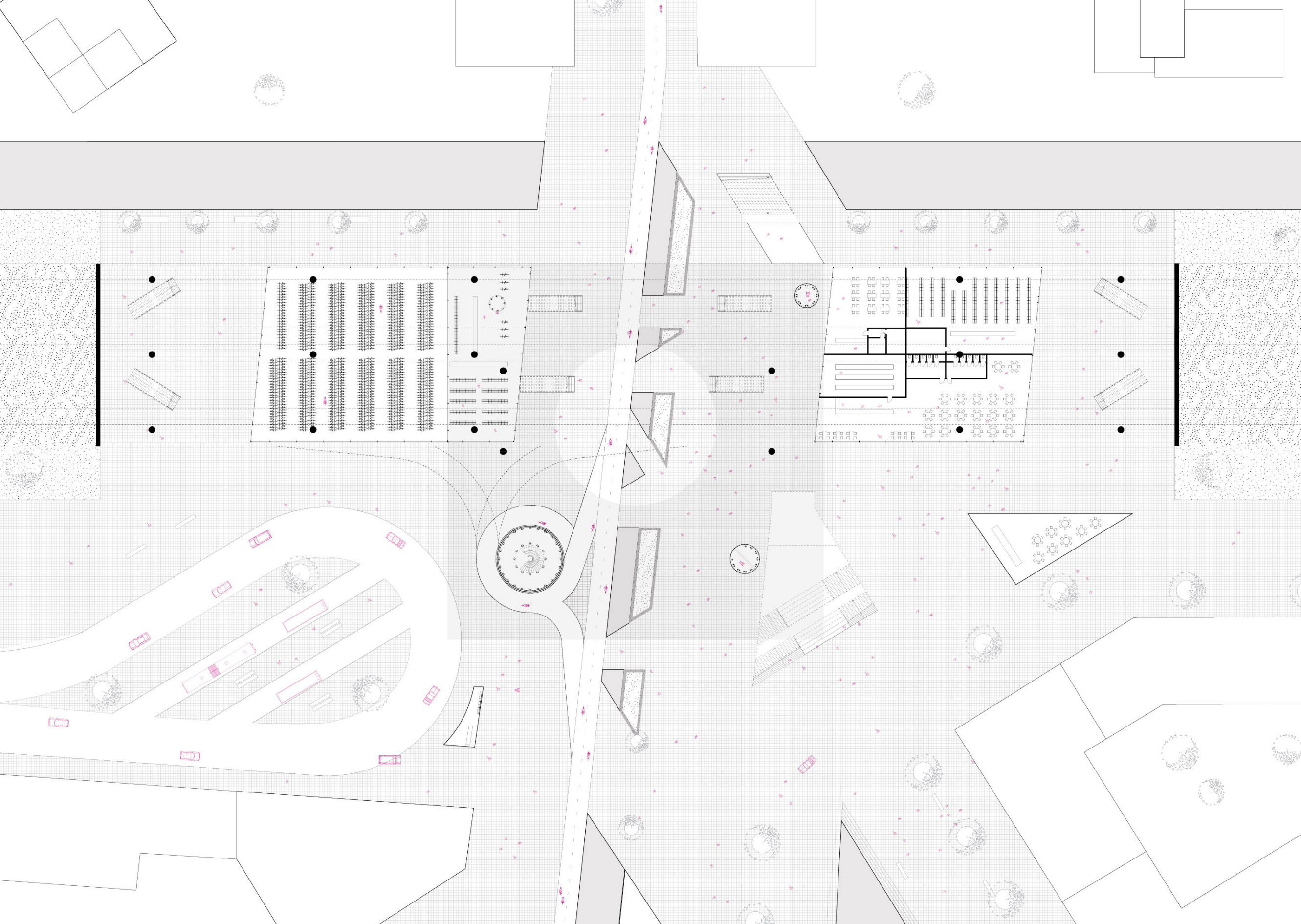
SLIGHT MOVE OF THE
HOLE TO EMPHASIZE THE
RELATION OF BOTH AXIS

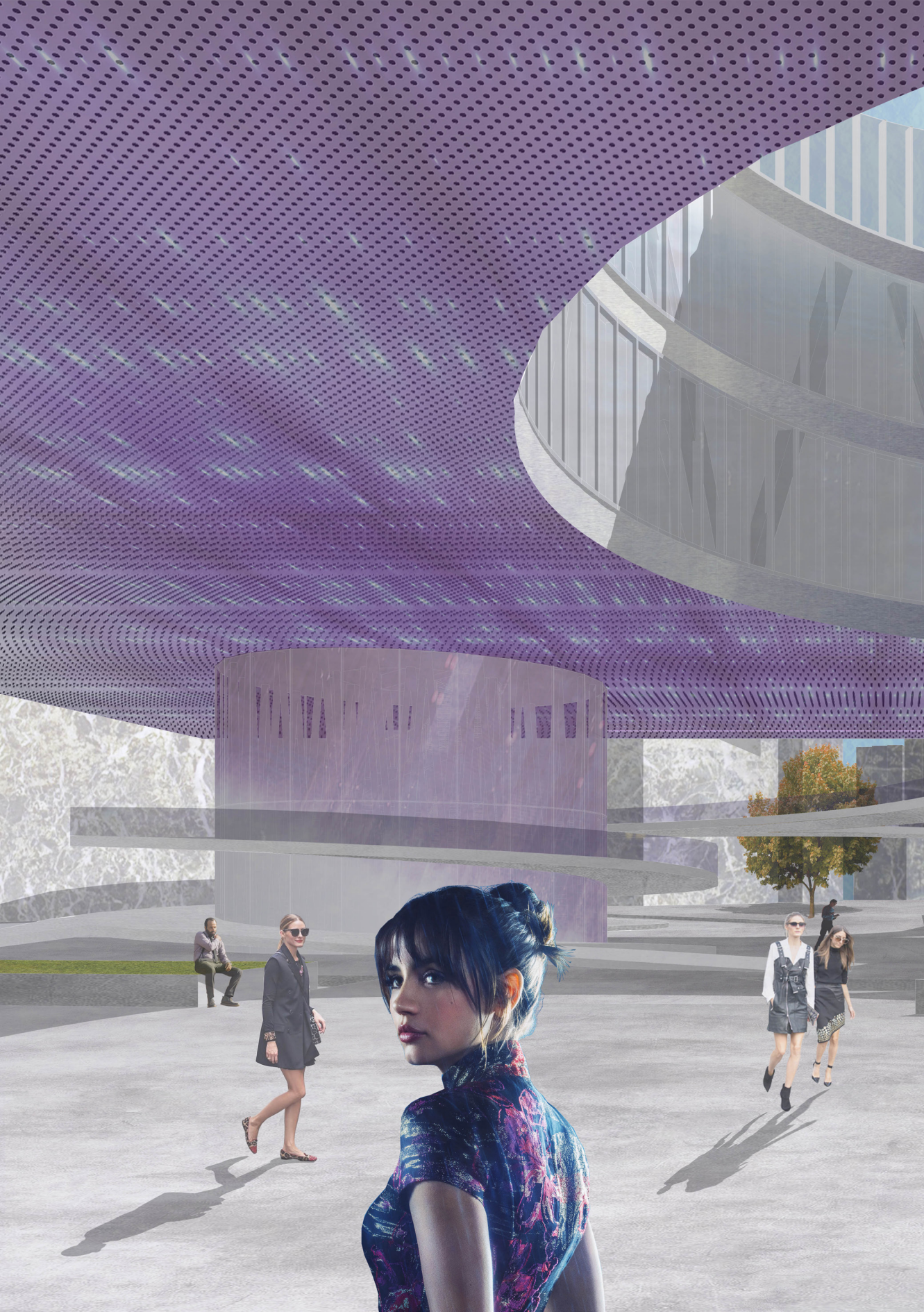
LIBRARY

LIBRARY
ACTIVITY ROUTE

INTROVERT
PUBLIC







PLAZA

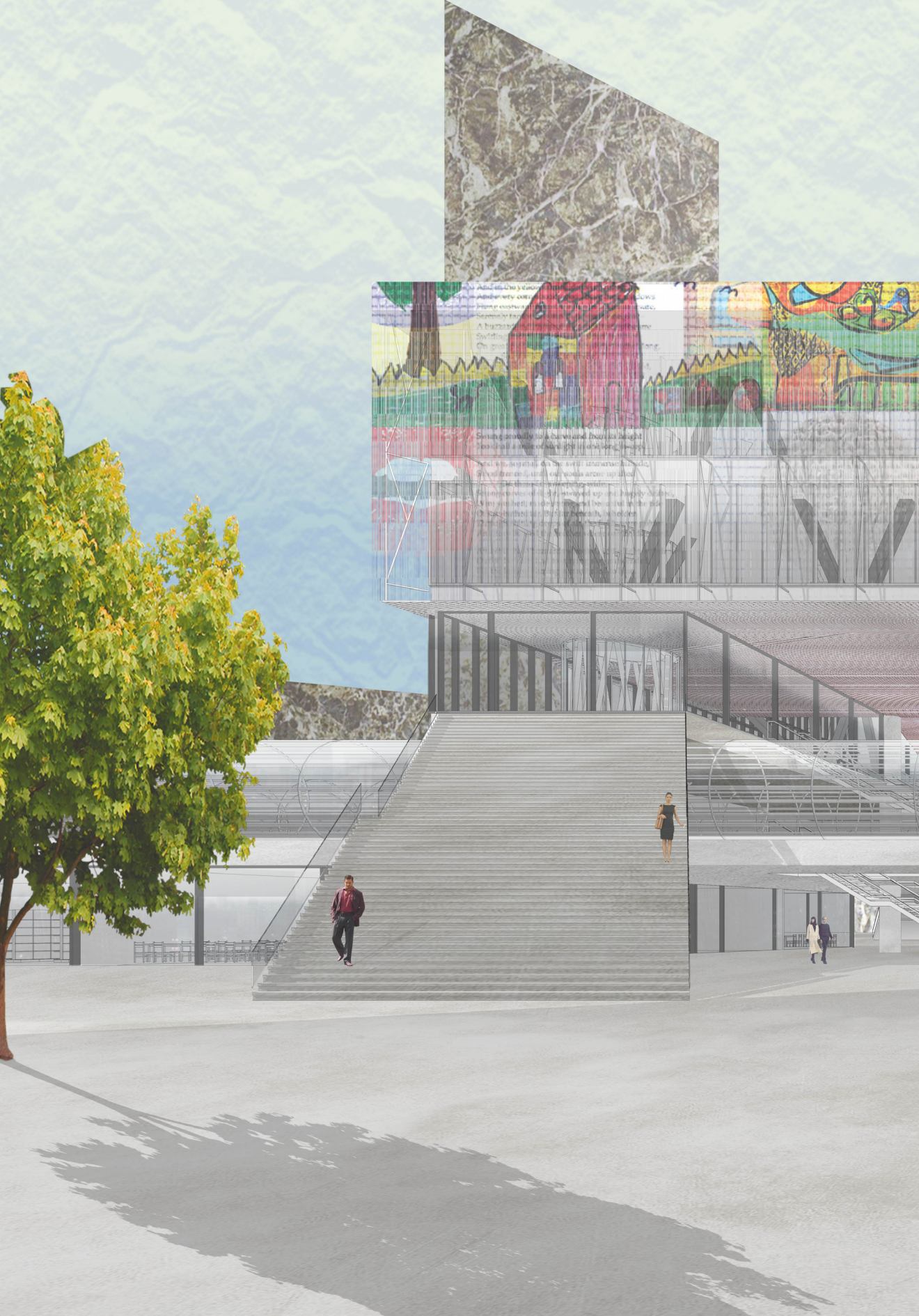
Underneath the building is a public plaza where all of the program meets. The bike highway spirals down from the elevated part next to the metro towards the groundlevel. At the same time a green connection, water and pedestrians meet here. The green areas are elevated in order to provide a calm and relaxing place to relax for passengers. Also shops are at this level in order to provide for the metro station. At the same time can be seen that the visual connection between the library above and both axes of metro and activity route below are actually there.

ENTRANCE PLAZA

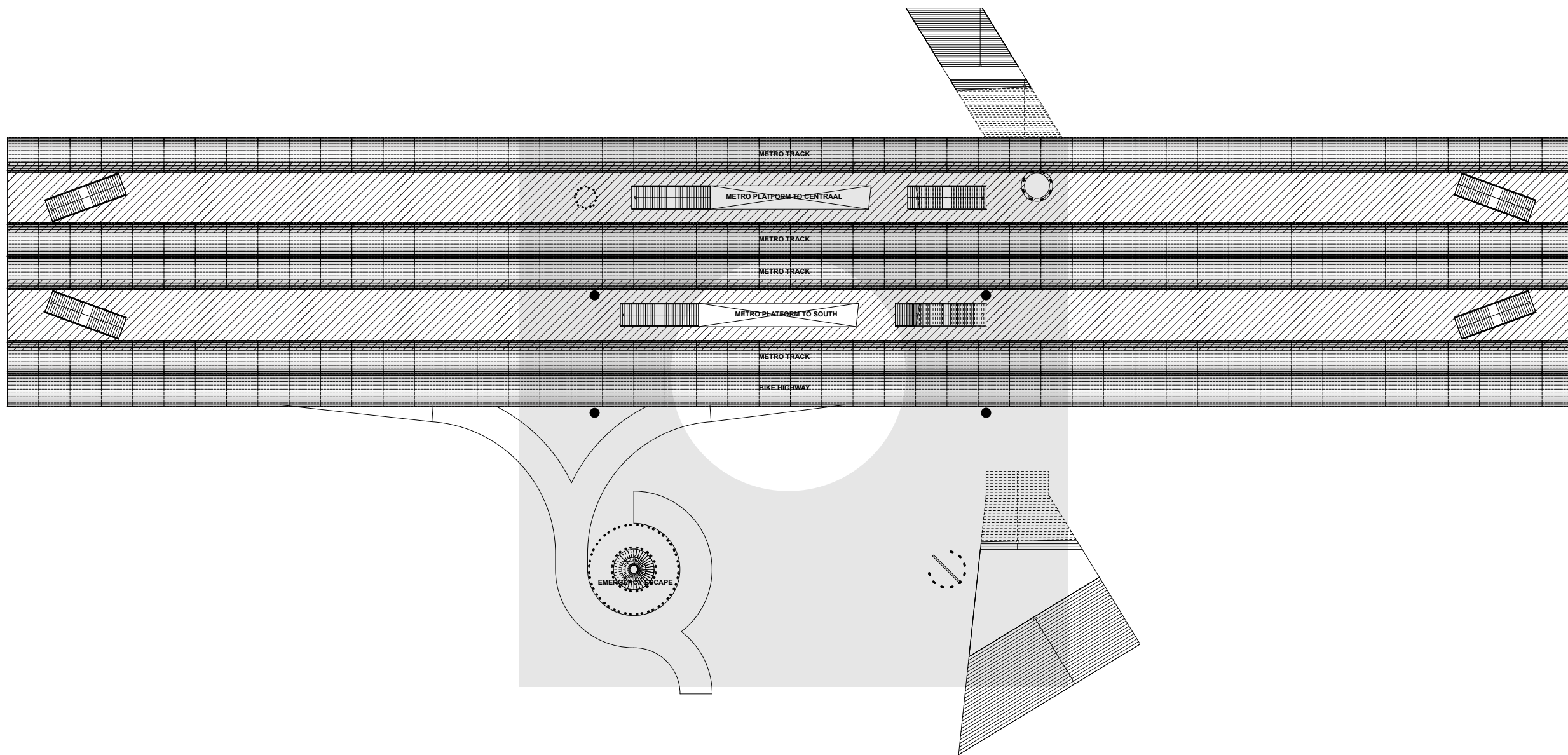


The entrance of the building on the activity route side has a large square in front with the purpose to pull people inside. The triangle shaped square points towards the entrance, gently pulling visitors inside. This triangle originates from the activity park it is situated next to. The green and water structure from there is continued from here, with the water going underneath the building and the green with a strip bow and focusing on the square. From the entrance which is a gently sloped visitors of the building have a nice view along the square and the activity park. Also the objects produced in the building can be expositioned here, creating a better feeling of what happens inside.

ENTRANCE BAJES

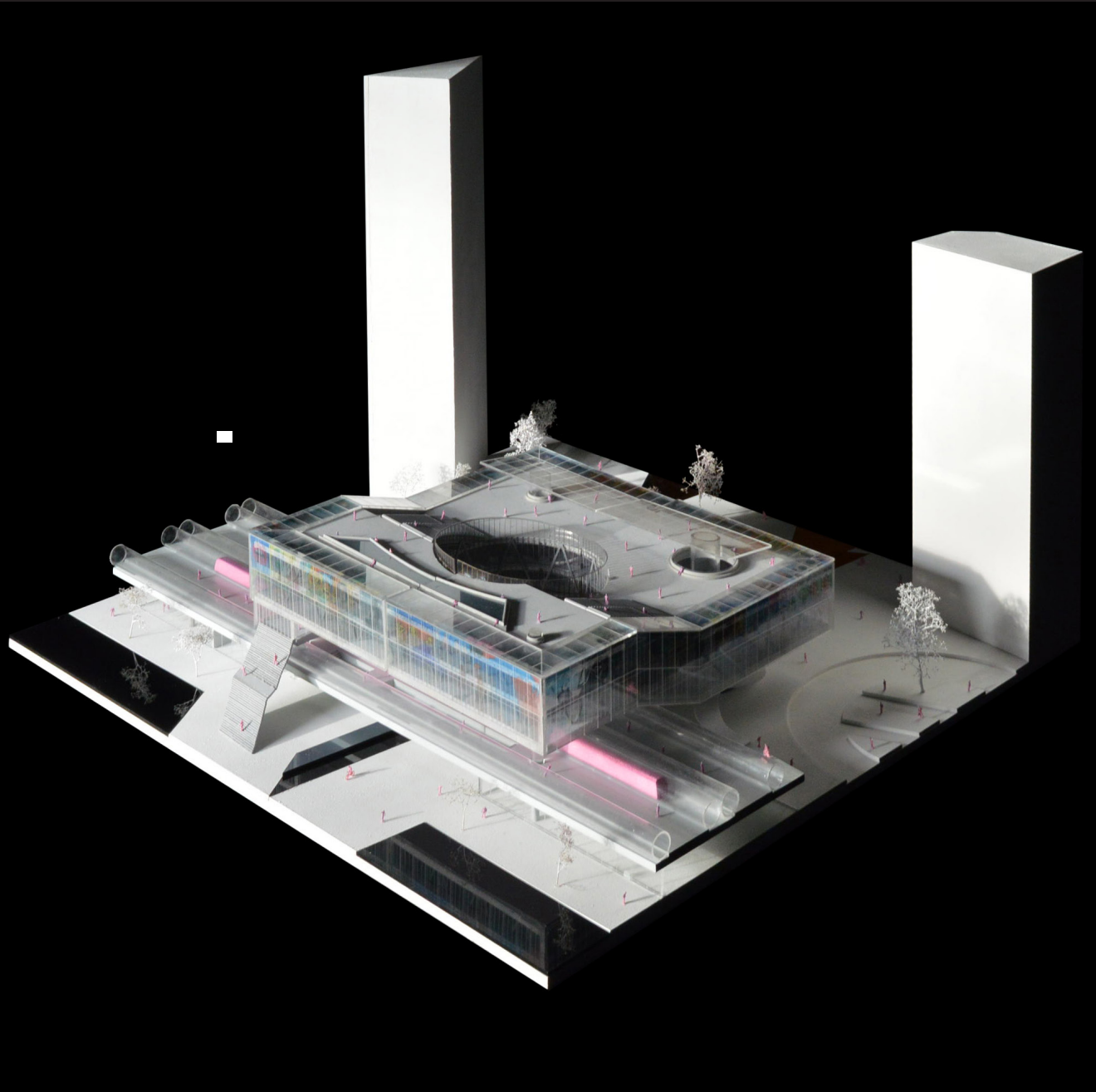


The other entrance of the library is more formal and efficient. This is due to the public space available there, but also the metro station which is situated at that side. This leads to a more simple stairway leading above the metro platforms, with a direct choice for the passengers of where to go. At the same time this is a direct entrance to the library itself.



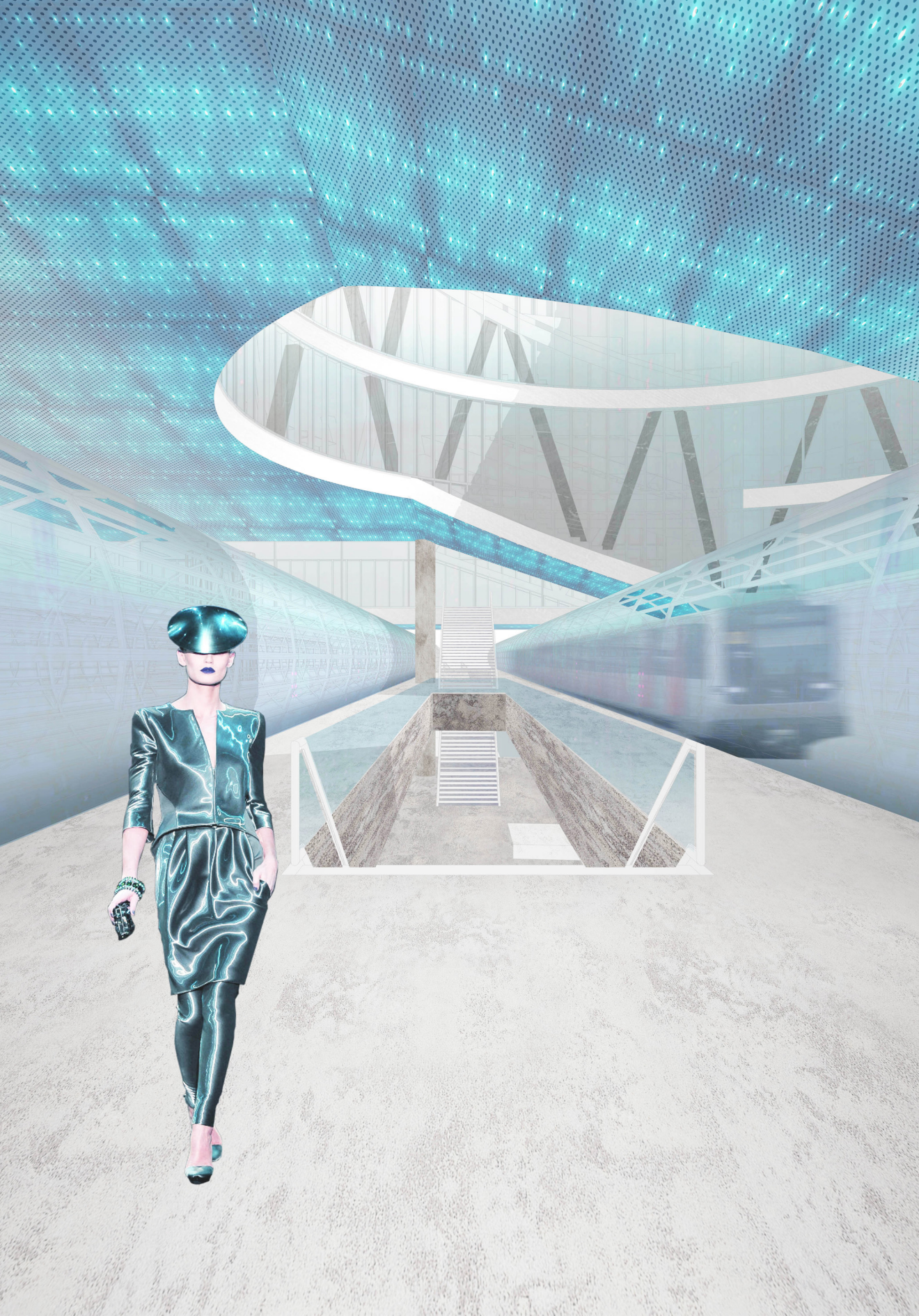
METRO PLATFORMS

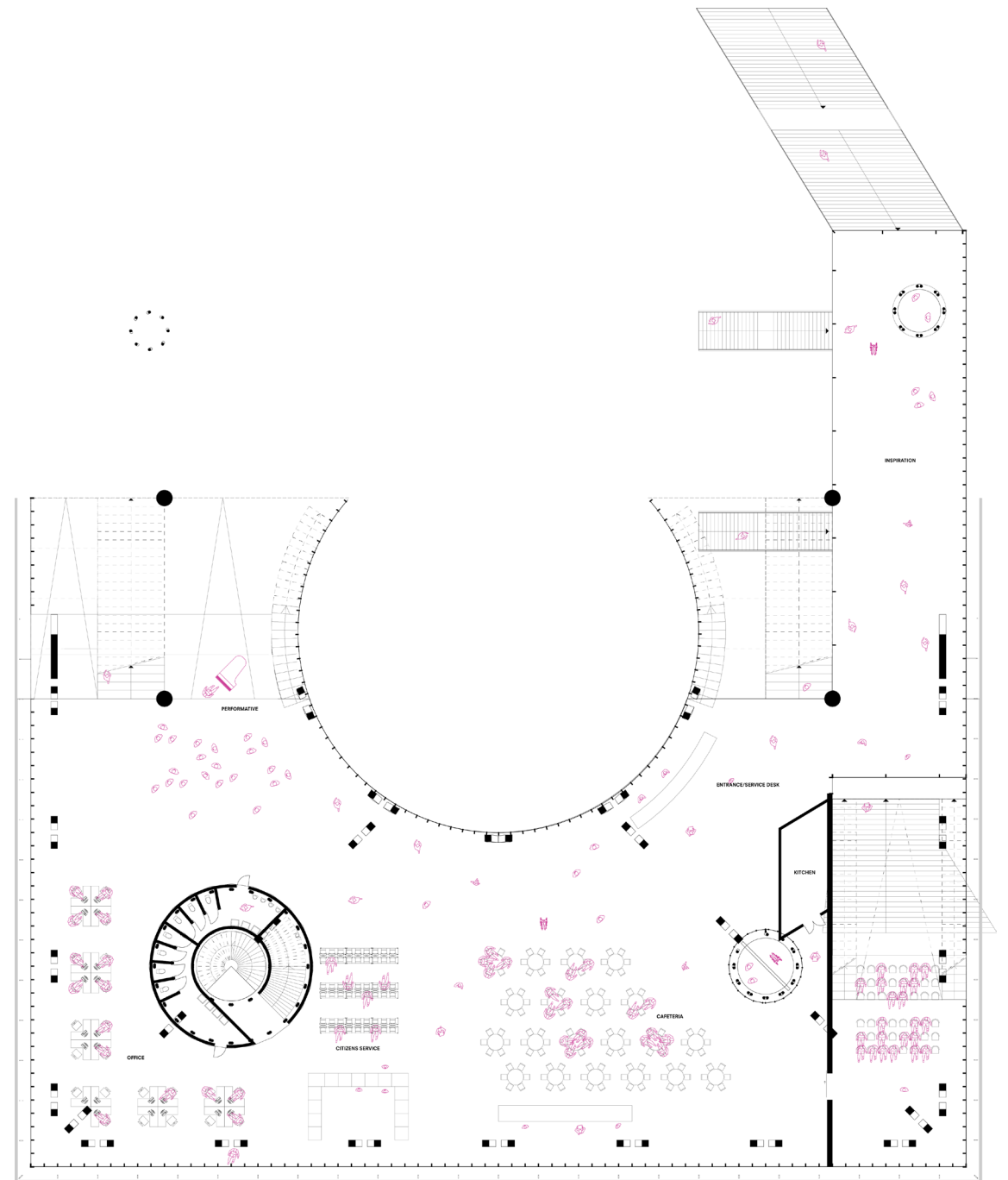
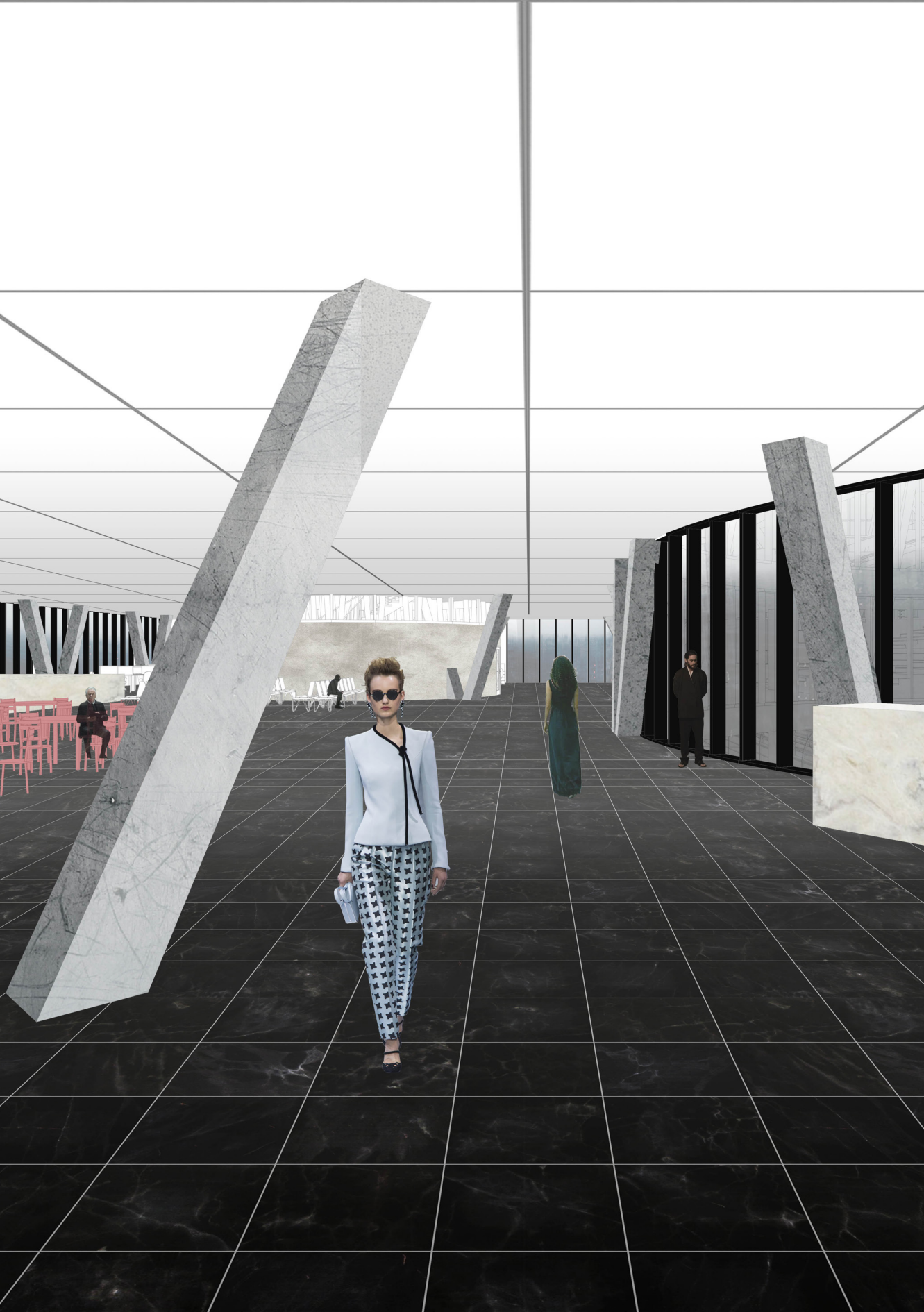
The metro platforms are situated at the Bijlmerbajes side of the building. There are four platforms, functioning as a transfer station. The metro station connects Amsterdam Overamstel (with its newly planned densifications) to the rest of the city. In order to function as a new center for this site, a smooth connection with the public realm is needed. This is done by functional stairway connections to the groundlevel and elevator connections to the library.



METRO PLATFORMS

The metro platforms have a more quick and functional character than the rest of the building does. This also plays out in its materialization. With concrete as most dominant material, it is a small reference to the old Spaklerweg station. The platforms are illuminated by the large hole in the middle of the building and an artificial LED ceiling. The metros arrive by tubes in order to let minimize the nuisance of noise. At the same time these tubes enable the slowing down of the metros to generate electricity. There is an immediate entrance from the platforms to the library as well.



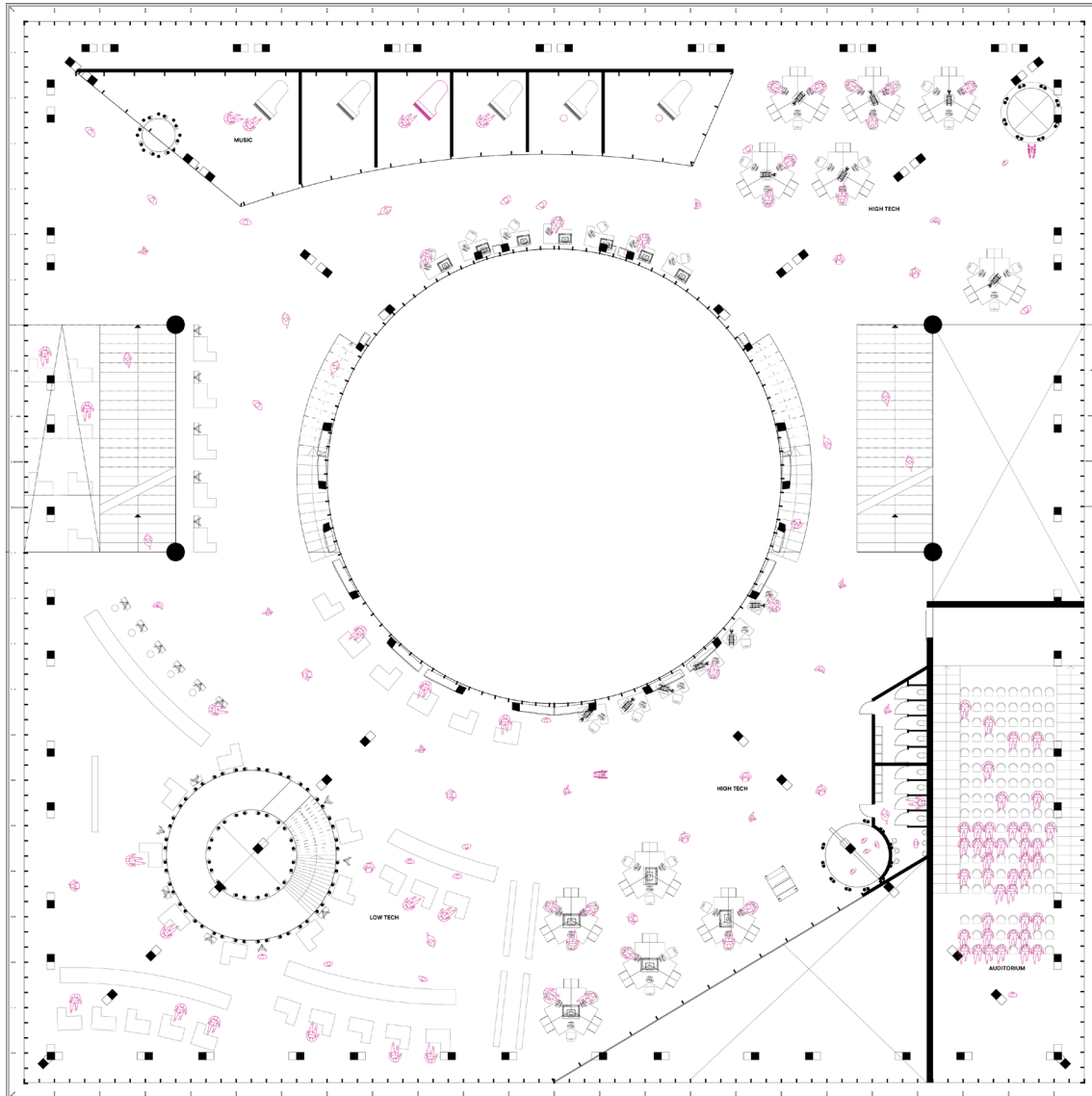


PUBLIC REALM

The core of the building is to function as a new center to the site. So the public space in the project is very important. The earlier mentioned gradient from very public to more introvert is continued in the building. At the first floor of the building the more public functions like auditorium, cafeteria, public affairs and offices are hosted. All of these functions have an extensive view over the entire site. Because of these more public functions, it is also materialized in a more formal way. With marble as floor and illuminated ceiling panels.

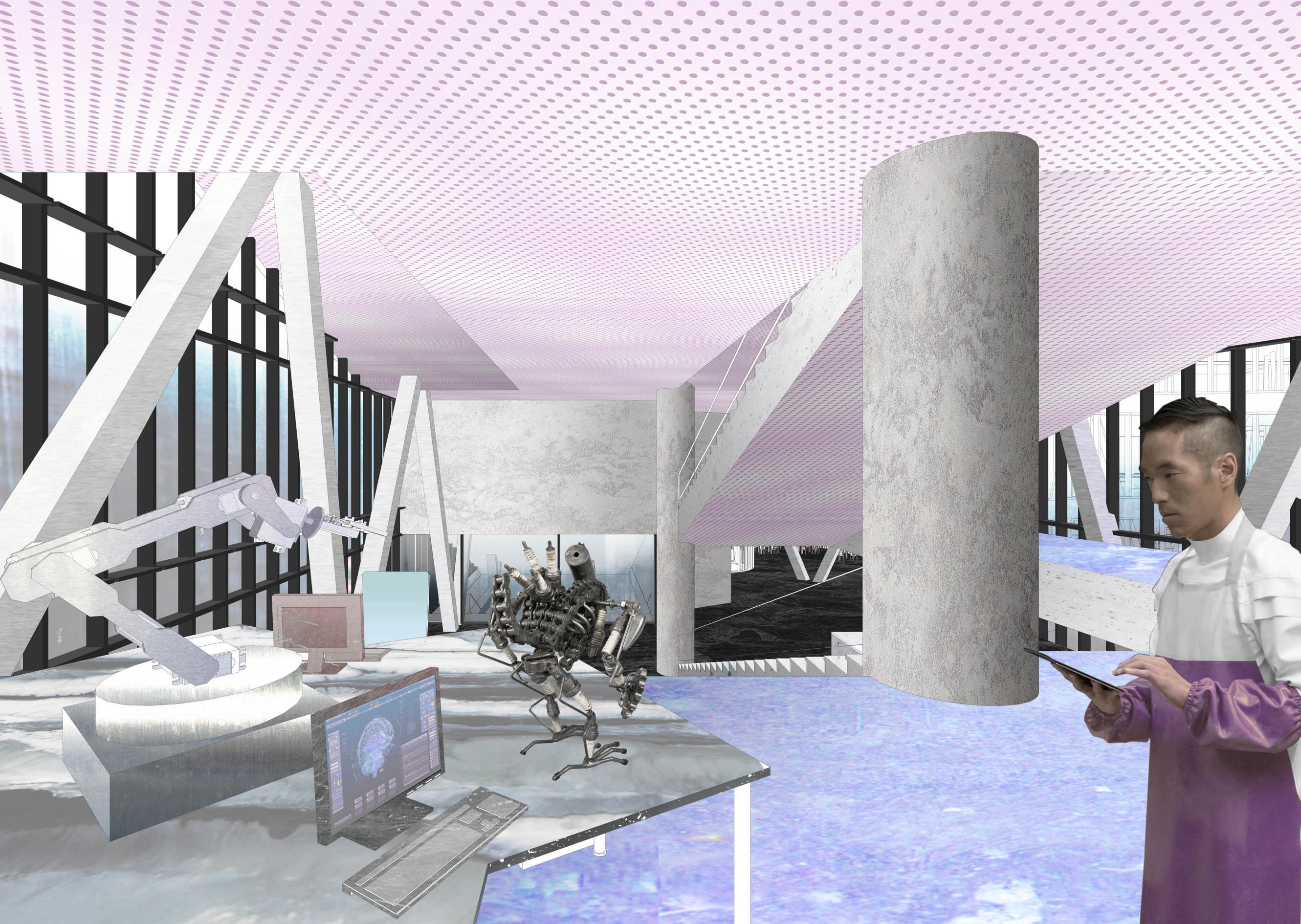


MAKING



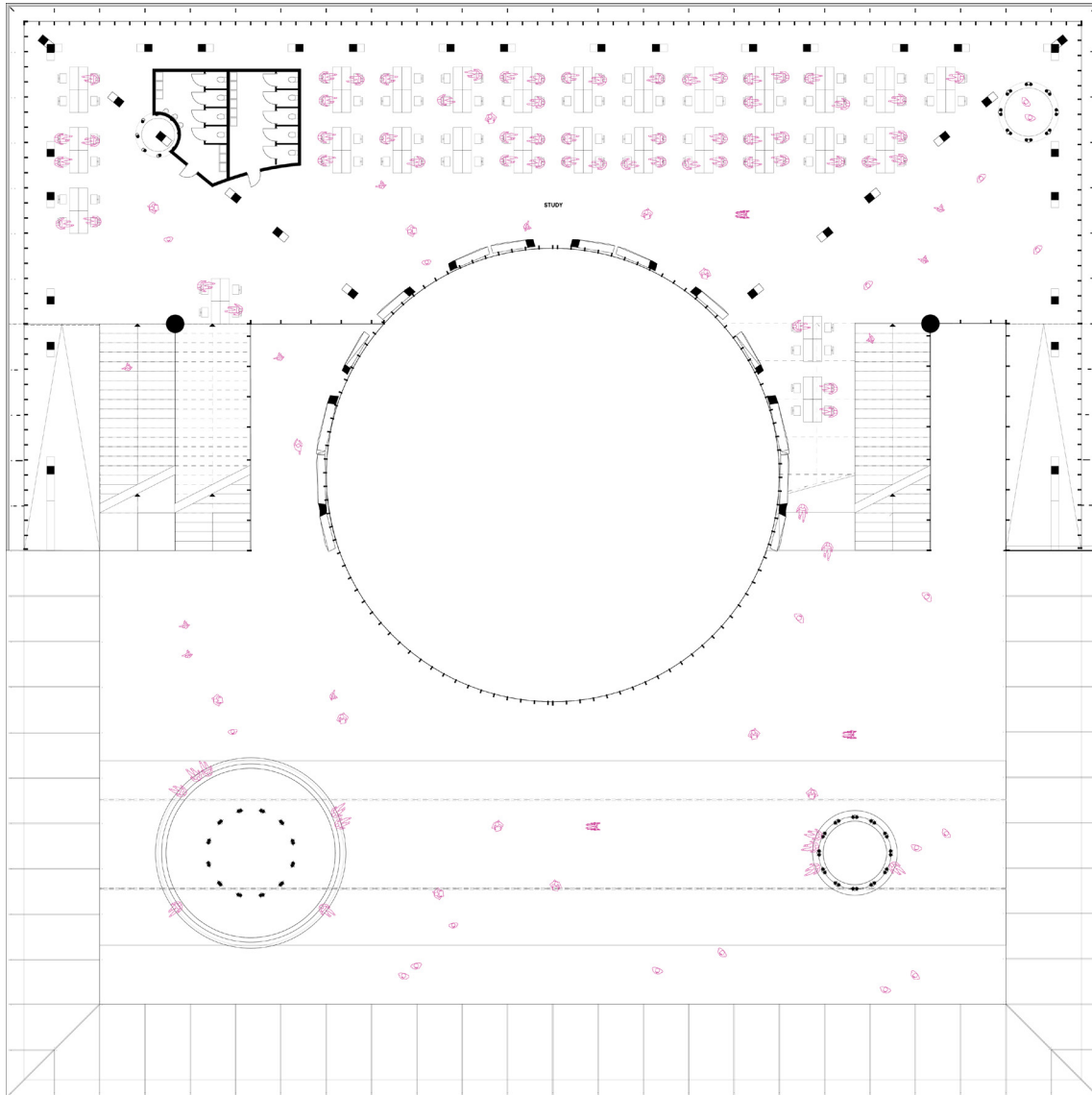
The level above is more focused on the creative process and individual development. This is where the makerspaces are located. This level is more informal than the first level. Things are created here, stuff is made. So it does not matter whether the floor or furniture gets dirty or damaged. Because of this, the floor is made of concrete. The entire building has quite the industrial character in it. This is a reference to the industrial and productive identity and history the entire Amsterdam Overamstel has. Especially the trusses play an important role in this.

The ceiling of the makerspaces is perforated aluminum, with integrated muting, because the machines in there can make a lot of noise. Also the ventilation is more intense in these areas.





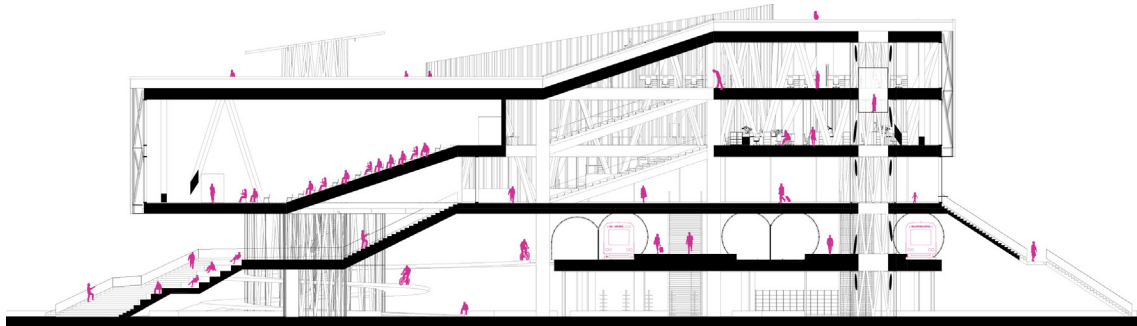
VANTAGE



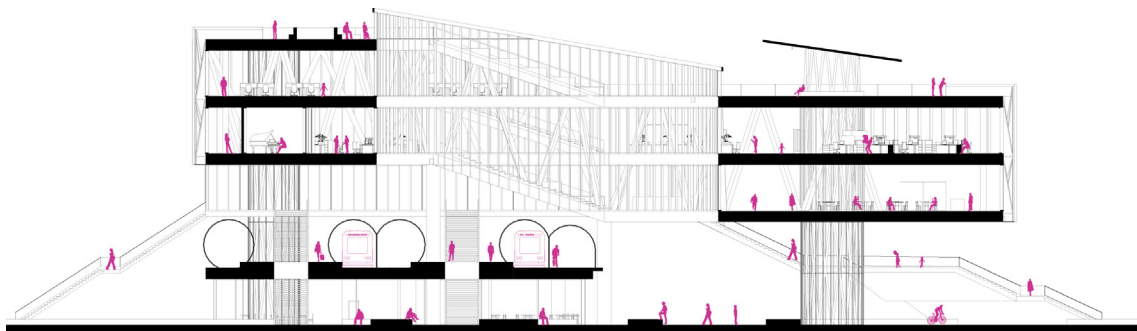
At the top of the building the most introvert spaces are located in terms of the study spaces. These are more introvert than the rest of the building, as the focus of the building has to be on the inside. On this level the roof terrace is as well. This terrace functions as a vantage point over the entire location while at the same time public events like performances can be given under the sloped roof which is added here. At the same time people can sit and read here in the sun during summer.



PUBLIC AND INNER RELATIONS

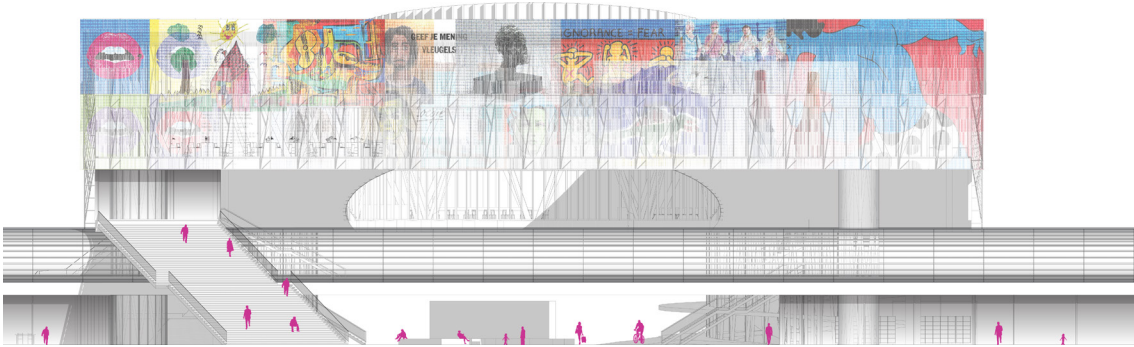


The building functions as an extension to the public space. In the first section can be seen that the fluency of the entrance is continued in the building itself. This way people pulled in by the large entrance experience the same way of moving up to the highest level.

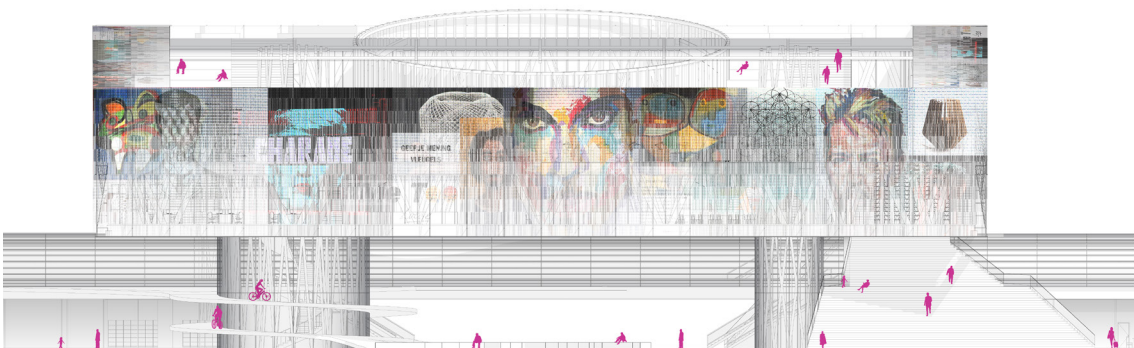


In the second section can be seen how the relations between the building itself, metroplatforms and the activity route below are. These visual connections are crucial to the integration of the library above to its surroundings. From every point in the library above both of the axes can be seen, letting the visitors realize where they are.

DISPLAY FOR SOCIETY

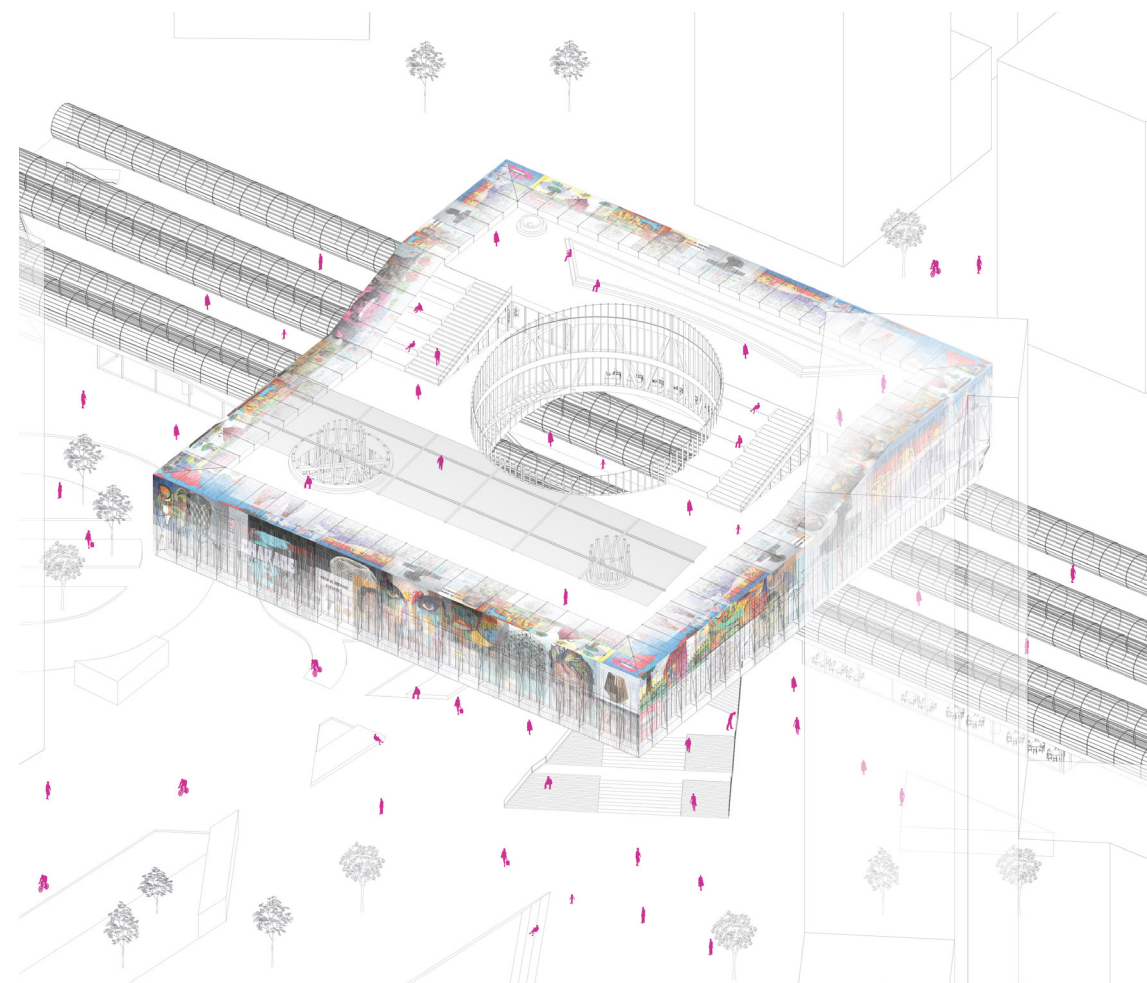
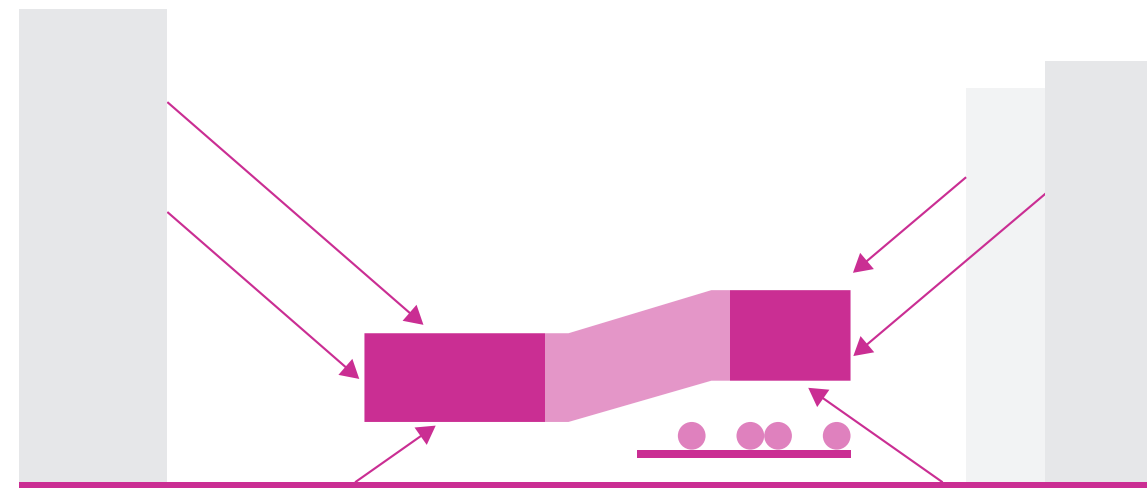
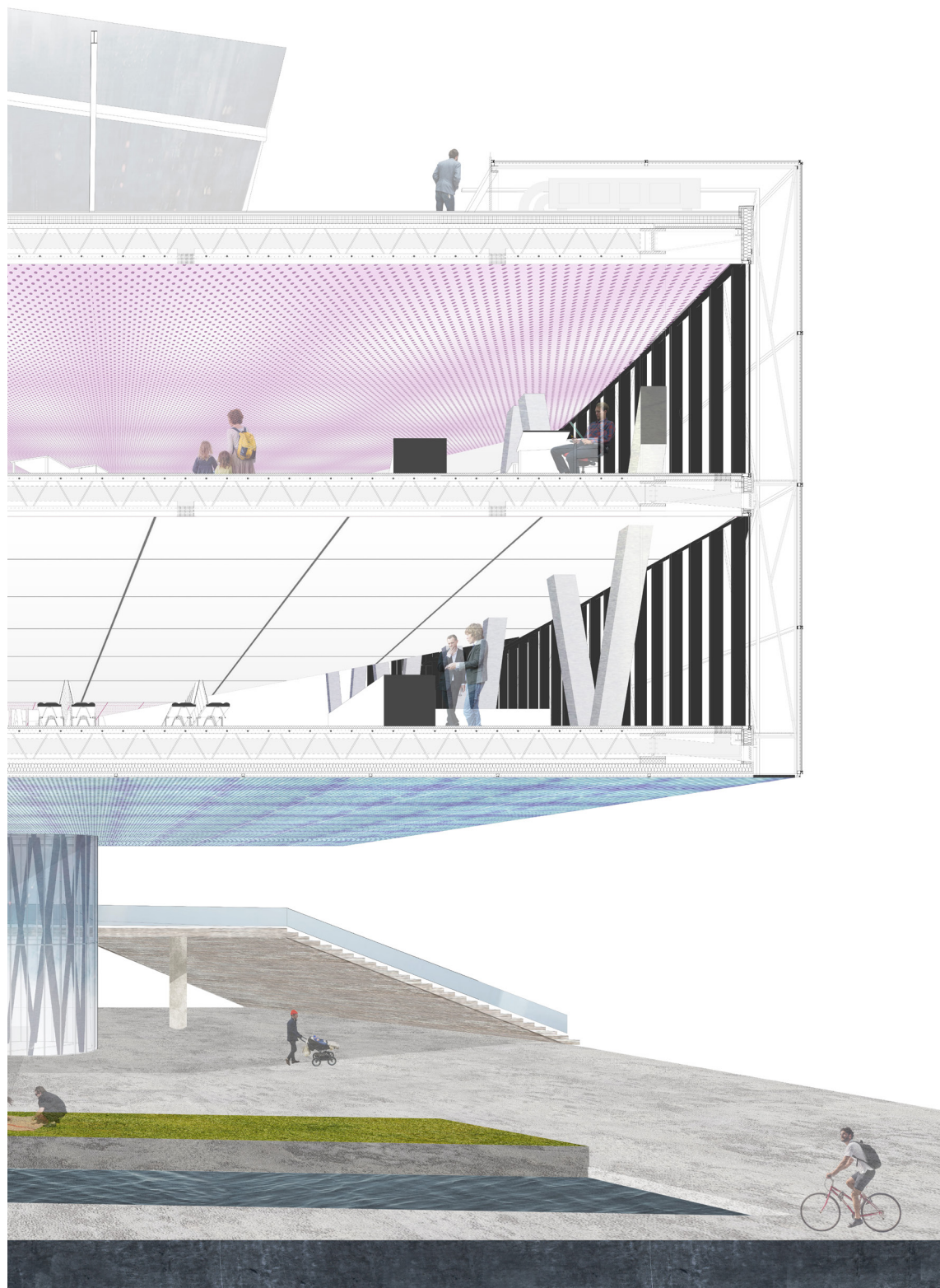


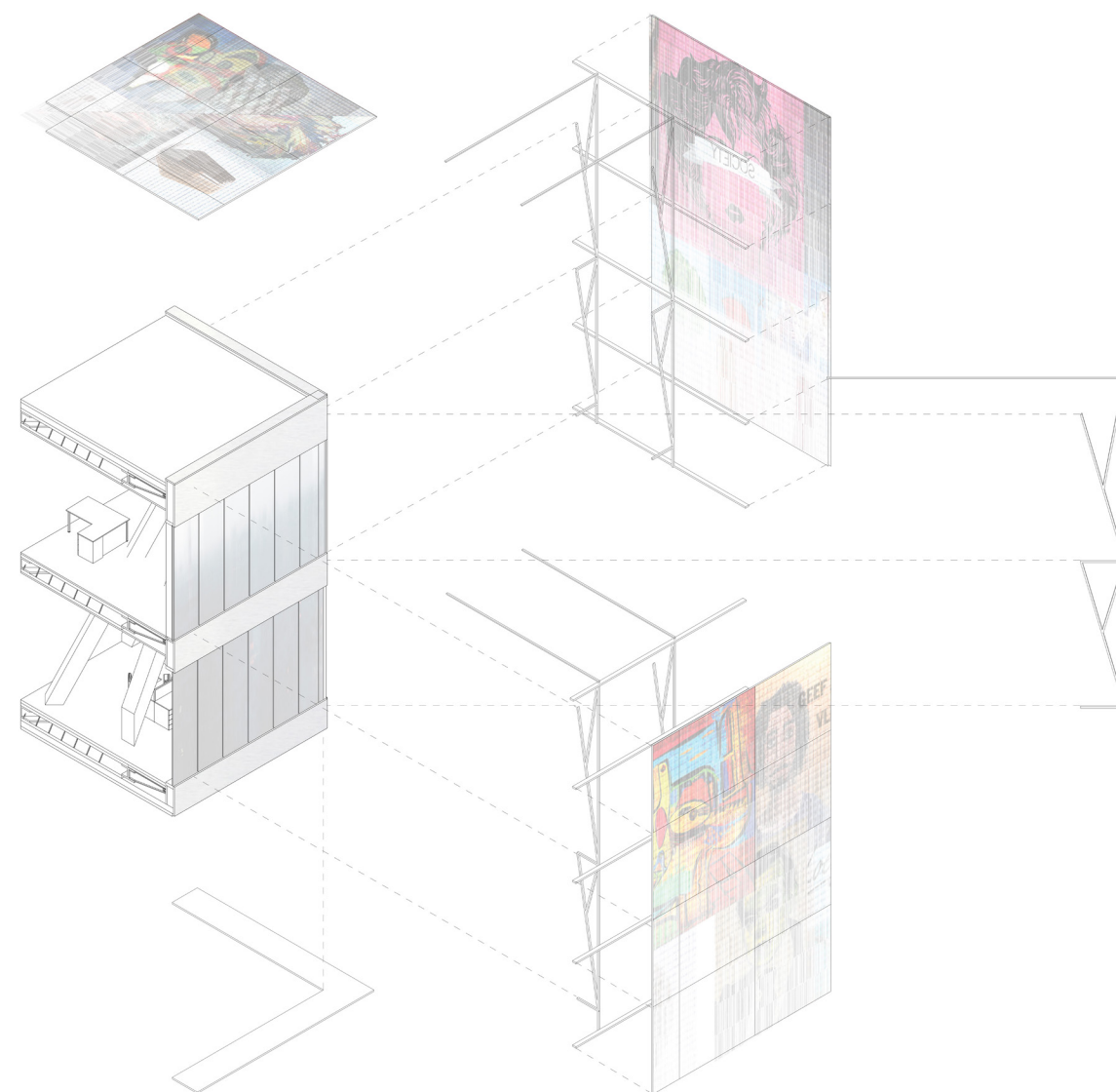
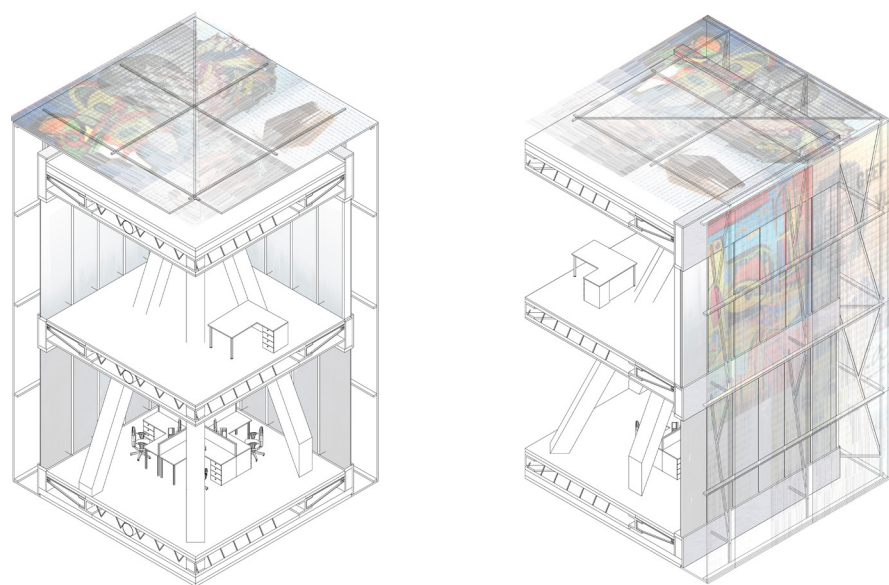
The facade of the building is an integrated LED facade with a gradient in it. On this facade everything created inside can be exhibited. This way the building is a recognizable point in its surroundings and it directly shows what happens inside. The gradient is in there to maintain the nice view over the location at the public functions on the first level, where slowly getting more introvert going upward.

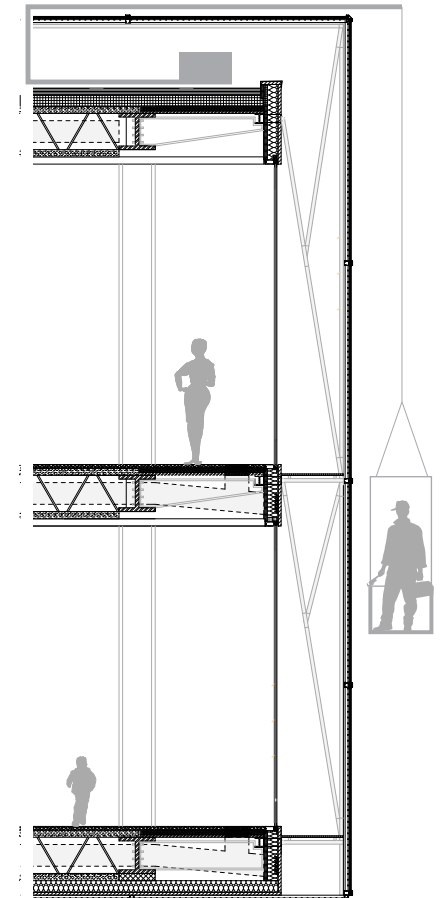
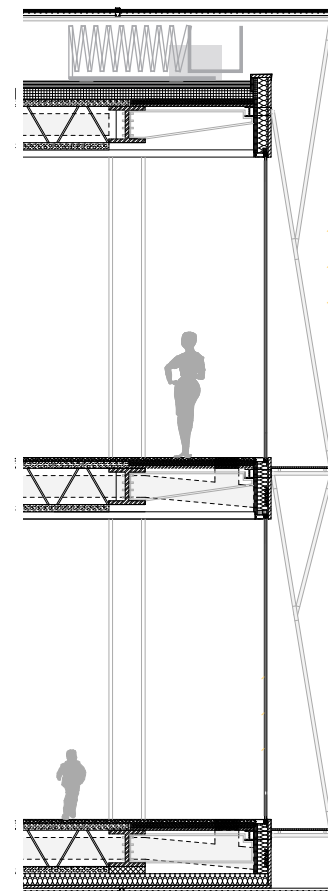
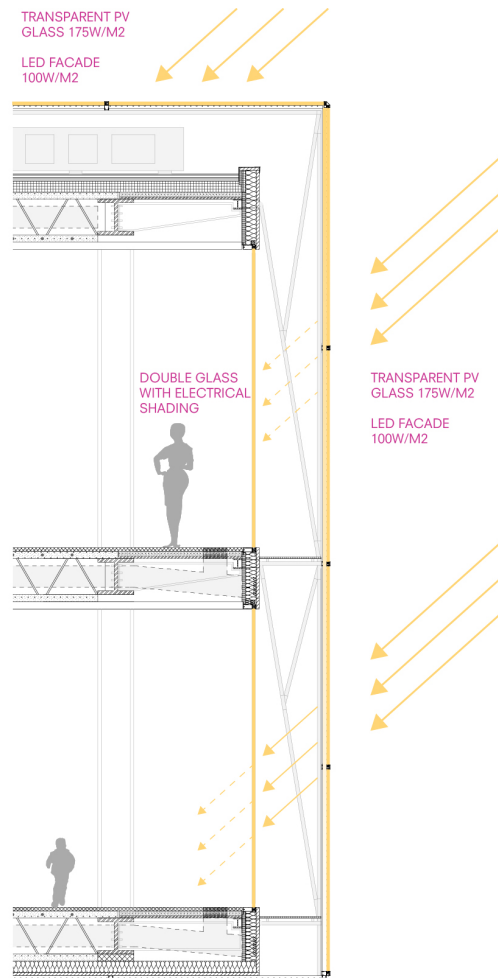


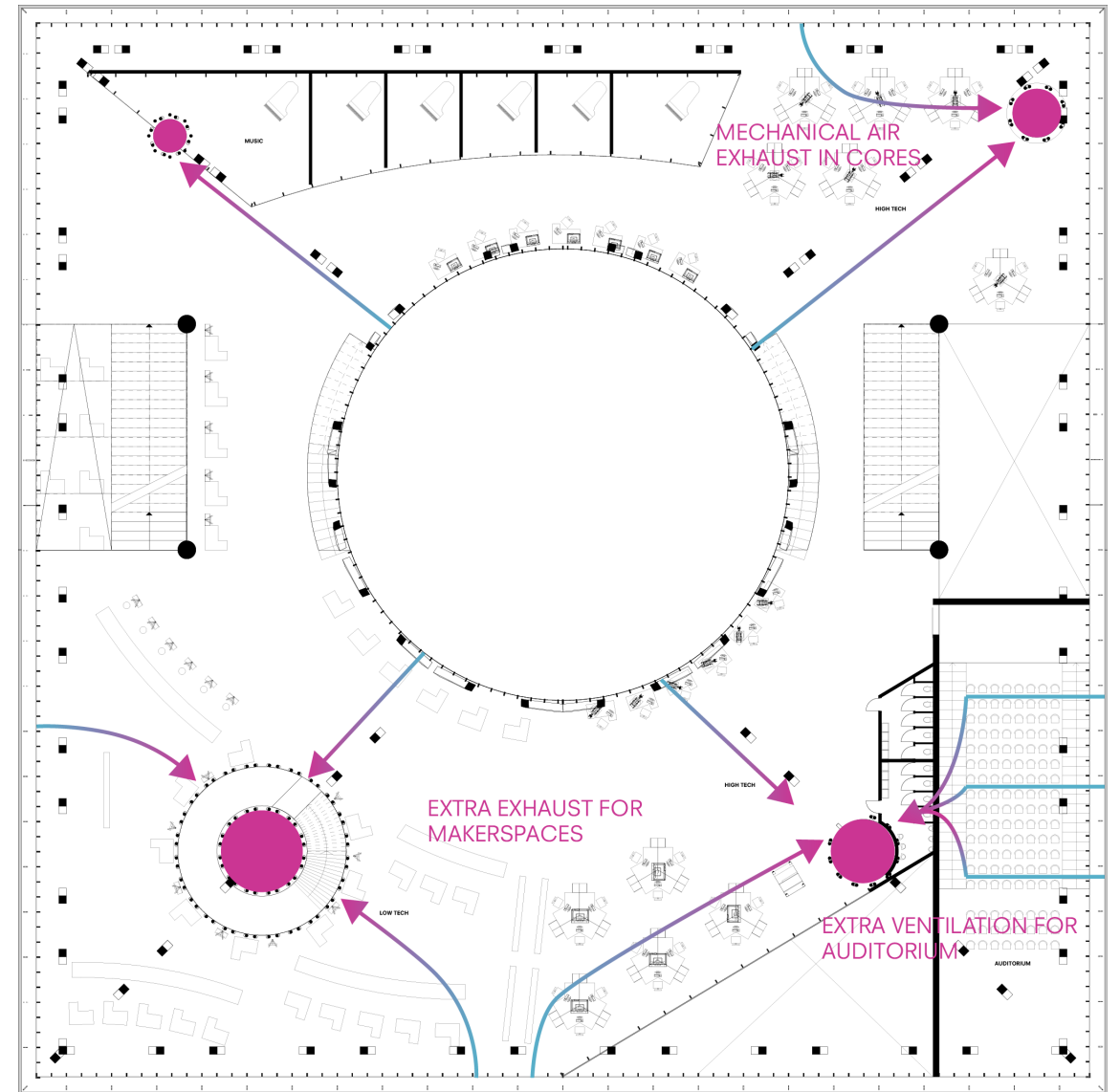
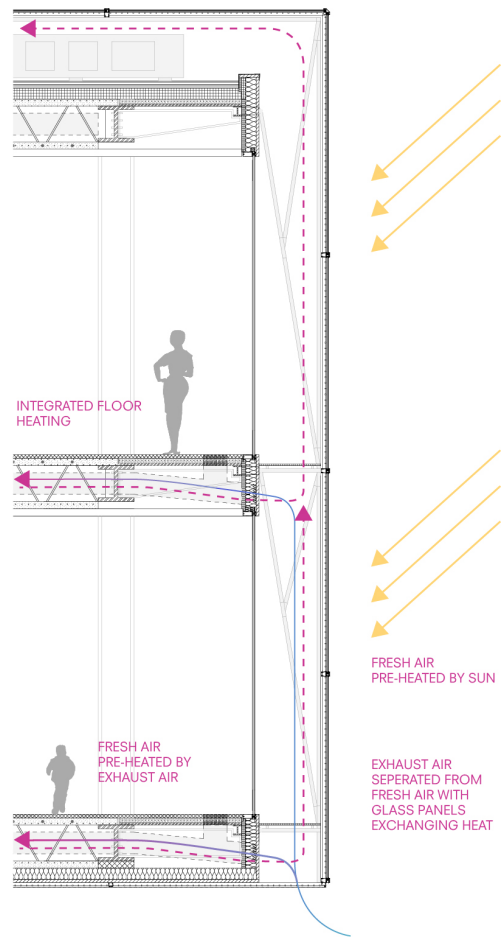
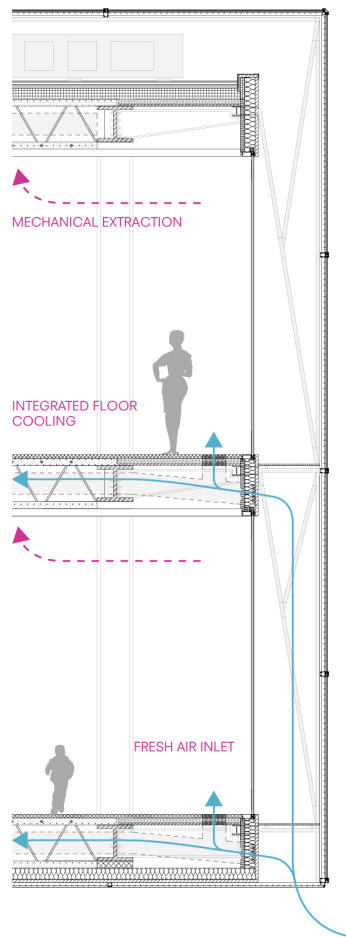
Eversince the library is a lifted volume and at the same time by far the lowest building in its direct surroundings, the bottom and roof of the building also become important facades. For the roof this means that the sides fold around the edge of the roof, continuing so the people from the towers around have a clear screen to look at as well. For the bottom this means that there is artificial lighting in the form of LEDs continued from the front facade. This lighting gets its color scheme from the images project on the front facades.

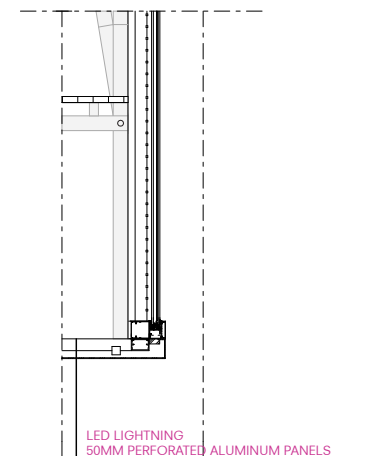
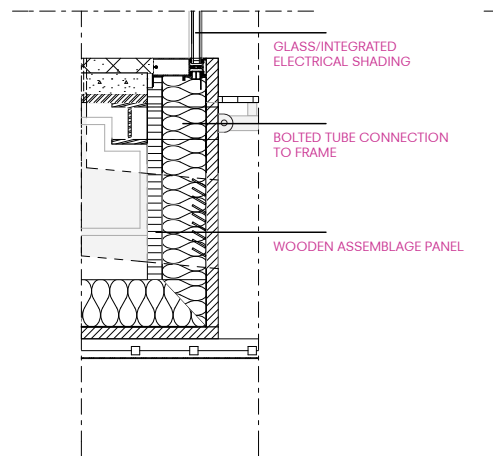
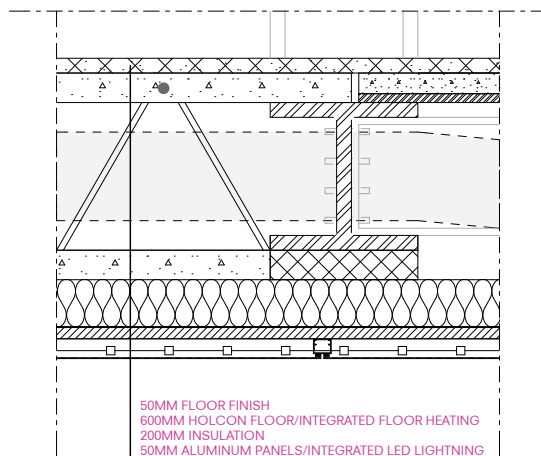
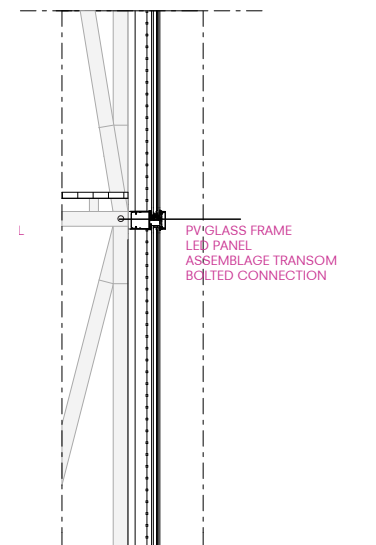
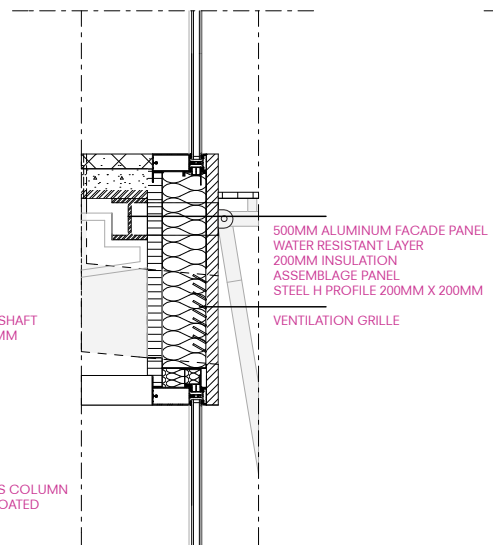
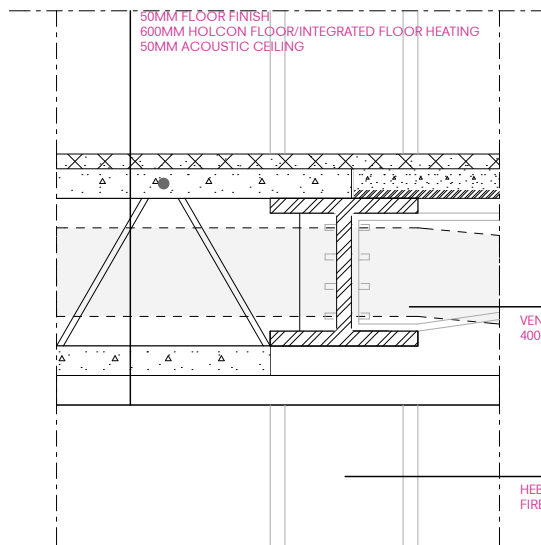
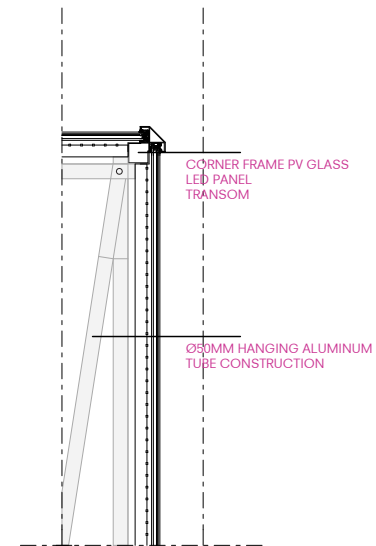
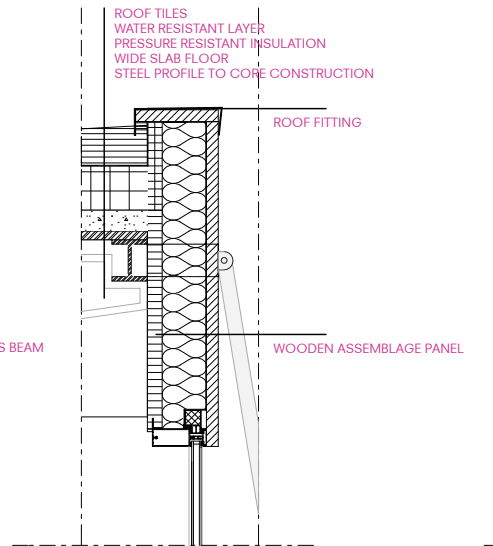
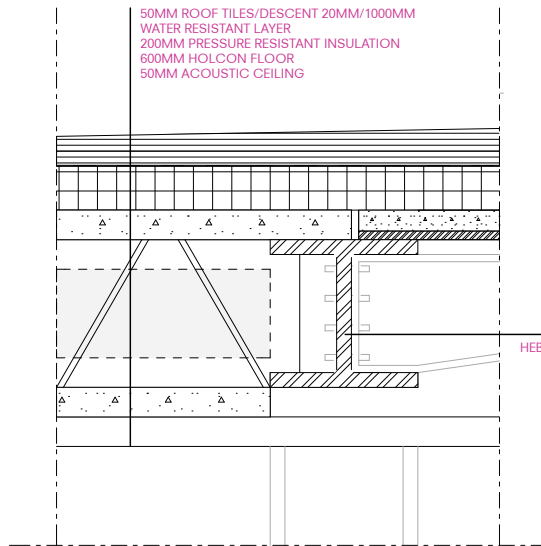
Being a second skin facade, this enables the building to do the ventilation inlet naturally. The air exhaust is done mechanically through the different cores which are situated in the building. Also the gradient of LEDs in the facade cause a natural shading.



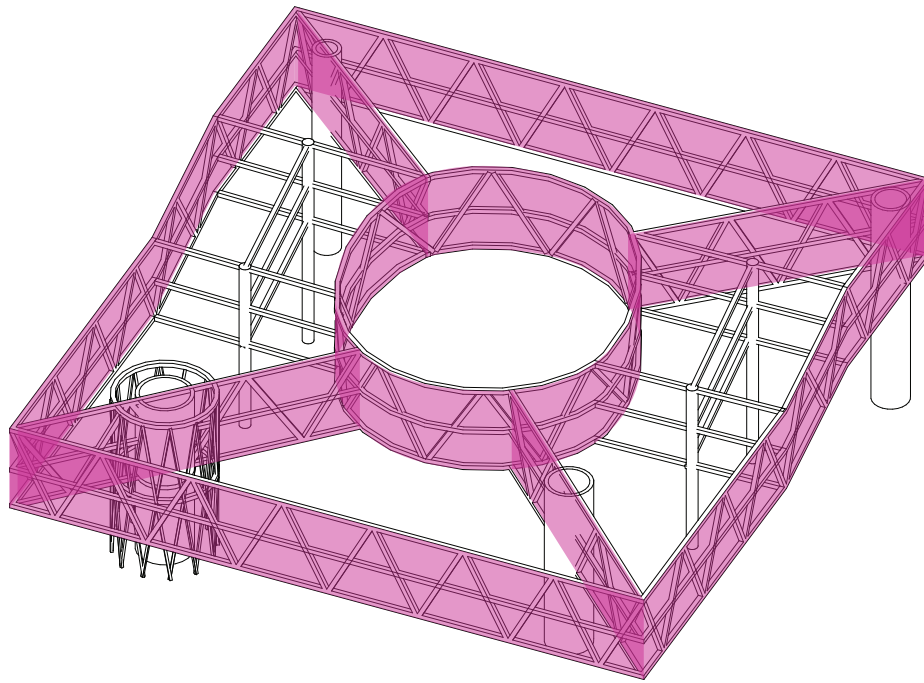






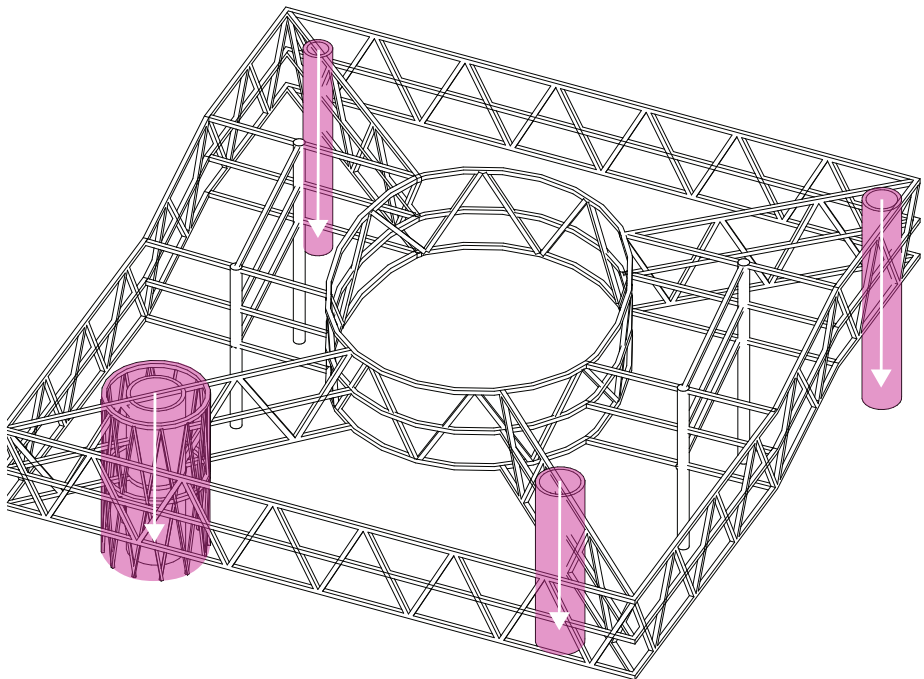


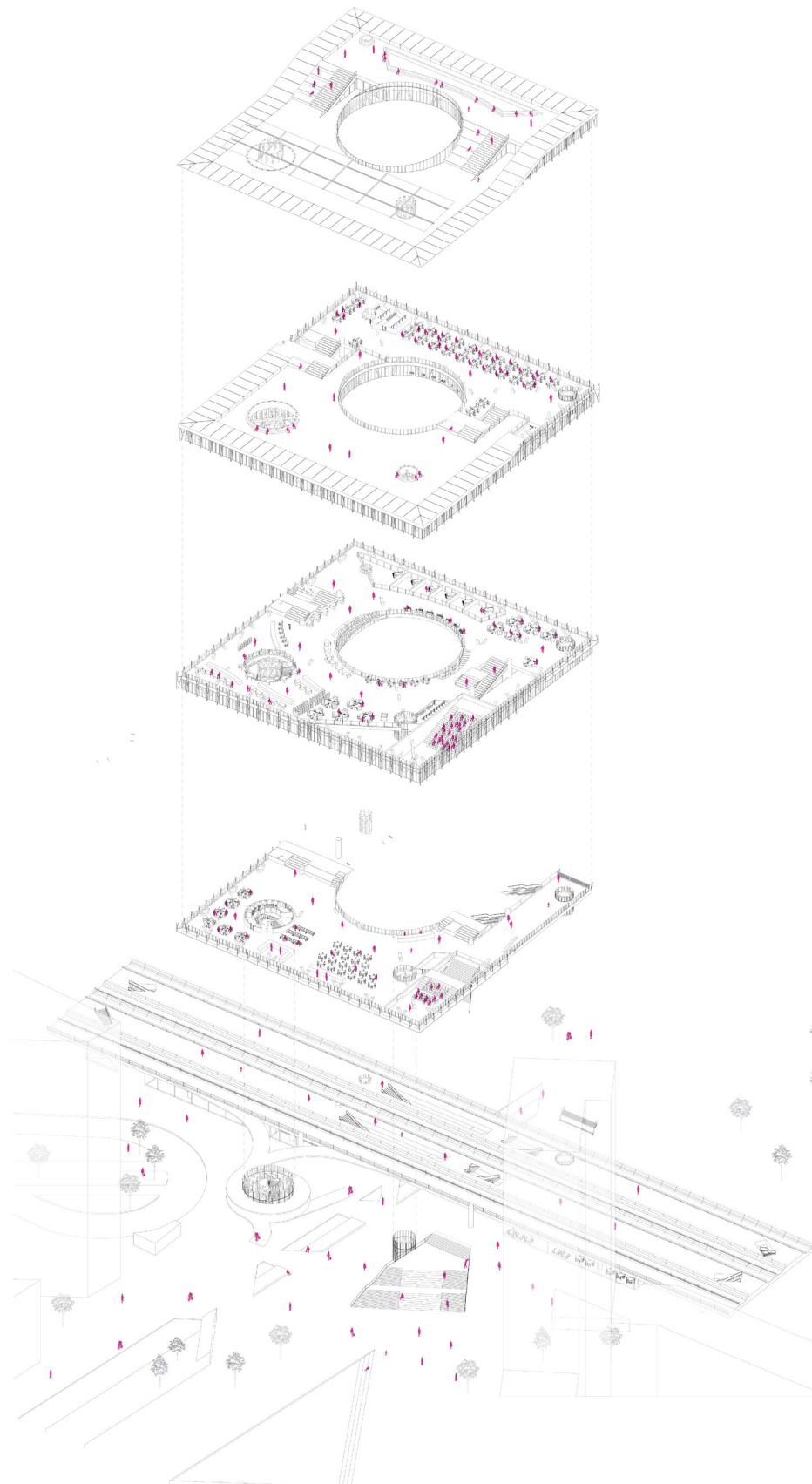
CONSTRUCTING PUBLIC REALMS



The entire volume of the library is lifted, with enormous spans. This is possible because of the large trusses used in its construction. Except for just giving the building its industrial character, they create a stiff box. This stiff box rests upon the four circular multi purpose cores.

Inbetween these trusses Holcon floors are used. These floors have the benefits of being able to span up to 25 meters, while also being able to integrate heating and cooling and air ducts. This way the building technology solutions are all nicely hidden.





CONCLUSION

Looking at Amsterdam with its current and future densification, clear problems and clashes with current infrastructure and other (physical) barriers will arise. This project offers a clear solution on how to deal with these problems with creating connections in the broadest sense of the word. By doing this a new hierarchy between public space, infrastructure and its surrounding neighborhoods is established. This is an essential part in (re-) developing the urban fabric in every city around the world.

The thoroughly done research in the studio might form an example on how to structure the design process later in practice. Obviously also in practice a lot research is done nowadays, but the designs themselves originate from clients instead of flowing from research. The research often starts after the project is assigned and a deeper understanding of location and its sentiments lacks. Shifting this order around might cause interesting results and makes it possible to use the research methods learned in this chair in practice.

