Hybrid Buildings as Catalysts on Urban transformations
Transportation nodes and interventions in complex urban environments_The new Zuidas station

MSc3 Hybrid Buildings Graduation Studio
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January 2013
Faculty of Architecture_TU Delft
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Introduction

This booklet is the result of the Msc3 of the Hybrid Buildings Graduation studio. The semester was divided in two parts, the research and the design part. While in the research part, we had to deal with architectural, social and philosophical theories, in the second part we focus on the design assignment of the studio, first trying to formulate our basic problematic statement and the research question, and subsequent to these was the exploration with design means in order to find the proper design solutions answering also the architectural problems.

In the first part of my booklet, I incorporate my position paper (Research Methods and Design Practices) and my research paper as integral parts of my design during this semester.
Nowadays, the train station is a part of the urban reality, an active element of the city. The travel is no longer an event, but an every day routine. Transportation nodes in Europe-particularly the one related with High Speed Trains (HST)- are more and more becoming pivotal elements in urban strategies, influencing greater areas that the one related to the building complex itself.

Sometimes, the train station is at the edge of the city, becoming a reminiscent of a frontier and a trace of old city’s fortifications-as it happens in the case of the Gare de Lille Europe-, the station still symbolizes an intense zone, following the traces of what was there and what was happening there many years ago. Usually, after the city’s expansion, the train station finally finds its place in the center of the city, playing a role in user’s life, functioning not only as a transportation node but also as a meeting point, a commercial center or even as a passage, a covered space to cross when it is rainy outside. All those are issues, we have to think and to puzzle over during the Hybrid studio.

According to the design brief, the graduation studio of Hybrid buildings focuses on how architectural interventions can activate and contribute to the process of urban transformation.

More specifically, in the case of Zuidas in Amsterdam, considering it an area with interesting potential not yet fully exploited, we try to understand how architecture, by reacting on the physical as well as the cultural context, can improve the performances of the space.

Zuidas is an international knowledge and business district. Although, it is still under development, it already offers a mix of high-grade economic activity, a university, a large congress center, urban living and appealing activities. It is a well-connected area to Schiphol airport and to Amsterdam’s historic center by different means of transportation.

According to the framework plan for the future development of Zuidas area, the A10 motorway will be rerouted underground at the center of the district, freeing up space to improve Amsterdam Zuid station and redesign the area around it. The station will be expanded in order to respond appropriately to the growth in passengers’ numbers over the coming years, and also will be supported by additional facilities to enable turnaround in the vicinity of the station.

For my design, I analyzed the problem statement in two scales, urban and architectural. I recognize the infrastructure as a border for the area, splitting the CBD in two parts, breaking the continuity, physical and visual. In its current condition, the infrastructure zone is perceived a negative space, as a crack whose edges adjoin the positive parts of the site. Whilst in the architectural scale I read as introvert building typology the one that predominate in the area. The existing office buildings force the users to stay inside even during the free time, offering them public facilities (gym hall, restaurants) primarily on the ground floor. So, the existing outdoor public space remains unoccupied, and functions just as transitional zone from the station to the buildings, without offering any spatial quality.

Concerning, the current condition of the Zuid train station, it is defined as a passage -with some basic supporting functions for the station users-, that connects the two plazas, the Gustav Malherplein on the one side with the Zuidplein on the other. A line that connects two definite points, from A to B. When the user walks the line, he/she meets four staircases that bring him/her up to the platforms. The user has no many choices. As he/she enters, either he has to cross, either to go...
towards the platform.

At that point, I could summarize my problem statement and my research question in the following sentences: ‘The failure of the public space to play its vital role, causes the fragmentation and the disconnection of the Zuidas area’, and ‘how can I transform the border from a problematic issue into an advantage for the area?’

On the hypothesis that a station is an active part of the city, I investigate my station project in two aspects and scales, in the urban and in the architectural. In the urban, I extend and re-organize the rail tracks and the circulation of transportations (bus, tram, taxi, car, bike). In the architectural scale, I investigate the typology of the station, as a complex building that accommodate the diverse program, but at the same moment as a transportation hub that is identified by the mobility and has to fulfill its main function, the travel.

More specifically, concerning my design proposal, from the urban analysis I came up with the potential zones for future development and, taking into account the connection with the university area, I inserted a new point, and therefore I defined the area of interest for my design that focuses on the central zone of the CBD. In that way based on the site characteristics, I experimented on diagrams, models and drawings, trying to find out the proper design solution that would answer on the architectural and theoretical questions of my project.

More analytically, concerning my design I keep the current condition of the dike, although adding more rails for high-speed trains and extending the platforms. This condition made me to lift part of the functions on the top of the railway. (Cultural program) I use also the space on the top of the A10 tunnel on the two sides of the station, for commercial program on the ground level and for car parking on a second level, creating a space of 1100sq. m for 400 cars. These two side-facing zones create a relation of the inside - outside space and continuity, stimulating the flow of people towards the public functions.

Considering the design of the station as an opportunity for re-designing the city and the station in combination, I design the roof of the station as an exceptional element, that fulfils not only its basic function to cover and to protect the station, but as a programmatic element (creating a recreation area on it) and as an element that connects and extends the city in the station. Also historically, the roof as an element was the part that symbolized the railway station, for instance the St. Pancras station (London, 1868), the Milan central station (1931) and Orsay station (Paris, 1900). It created the identity of the public building in the city that was directly recognized as train station.

In my proposal, the infrastructural issues were only part of the problem, as the main question throughout the whole process is still remains how to turn the complex into a beating heart of Zuidas area primarily and of Amsterdam city in a second phase.

“It seems to me that from the moment that one separates Theorem and Pratem, one considers architecture as a simple technique and detaches it from thought, whereas there may be an undiscovered way of thinking belonging to the architectural moment, to desire, to creation.”

In the sentence above, I would like to emphasize the inseparable relationship between design and research. From the very beginning, considering the design as a process for practical and theoretical investigation, I found many times my departure points in the field of art, as well as in different ‘epistemes’, theories and methodologies that are connected to the architectural practice such as the phenomenology and the typological research. Phenomenology, as a part of philosophy that seeks to reveal the relationship between states of individual consciousness and social life, was considered an appropriate method to address the issue of urban fragmentation. In a second phase, I analyzed the existing building typologies in the area, as well as references projects to realize the needs for supporting functions and bigness of spaces in that scale that was something difficult to conceive-, and then to implement it in my design.
On the assumption that the train station is a threshold for the city, giving to the people a ‘fast preview’ of what they are likely to experience out there, as well as a mediator for the creation of the city, and a symbol of its publicness, throughout my design process I try to answer not only to practical questions about the feasibility of the building and its constructions, but also to combine that with the symbolic meaningfulness of the train station as a public element for the city.

As a conclusion, I would say that the station always had an influence on the formation of the city and on its image. As it accommodated, -and it still does so-, public activities in it, people went and still go there not always for travelling, that the main purpose but just to meet people and socialize. Therefore, the goal for my design is to be a transportation hub, that gives multiple choices to the users, directs them to their specific destination (when they are in a hurry to board a train, tram, or metro) or attract the users to live the space as being a ‘space of desire’.
In the reality of thresholds

Introduction

‘Intermediate spaces have the qualities of frontiers, edges that separate. Thresholds are both exterior and interior, and with some nuances we can experiment with turning them into specialized places or simply allow them to languish in ambiguity, without completely defining them’.

‘Intermediate places, like all places, are in a constant state of transformation and alteration. They are ephemeral and evasive, often defying conscious analysis. Therefore, sensation, as a tool of unconscious- yet enormously synthetical and powerful- perception, is the most appropriate instrument in our journey through the intermediate.’

In this paper, I investigated the nature of the thresholds, as transitional places through two complementary research methods. The first one was to analyze different writings, based on etymology and definitions in order to better understand the diverse approaches of people exploring the thresholds, from Walter Benjamin and Martin Heidegger to other more recent writings, creating a ‘glossary’ that can give rise to further discourse, while focusing on two aspects of the threshold, as a route and as a door.

Whereas the first part is based on writing research, the second method—or using Heidegger’s more general term odos- was the personal ‘exploration’ on the site of Gare de Lille Europe in Lille. There, I tried to observe and record my movements on the site (as I haven’t been there before), as well as other users’ movement and reactions, and through that to write a personal reading of the space, confirming Jose Alfonso Ballesteros’s definition that I mentioned before, according to it, the “perception” is the most appropriate tool to explore complex, intermediate places, like the thresholds.

Finally, in the third part, I conclude with the relation of the station and the city, exploring again the role of the first one as a threshold for the latter and more generally the symbolic role of a station in the city.

My approach traces back to Kevin Lynch book “The image of the city” and to the episteme of phenomenology. According to Lynch, deeper perception of the space is possible through empirical research on how individual perceive and navigate the city. During my ‘recording’ of the Gare de Lille station experience, I mentioned many times, almost unconsciously, to Lynch’s five elements (paths, edges, districts, nodes, landmarks) in order to describe the space and the way people move and interact with it.

In Lille. Gare de Lille Europe: Experience and observation. Experiential text

Our meeting point for the Lille tour was at the fountain in front of the Gare de Lille Flandres. 500 meters and 15 minutes later—taking into account the stops for taking photos during the route-, I was in front of the new TVG station, known as Gare de Lille Europe, that it is used as a through station for trains between the UK, Belgium and the Netherlands. The structure is projected on the location of the former city fortifications by Vauban, being the “line” that connects the old center of the city with the new periphery.

The Place de l’ Europe, an extended urban square, lies in front of the station and welcomes the users. It is a full of intense activity space. The movement never stops here. People constantly cross it and each instant image of the space is never the same as the previous one. This plaza is perceived not as a place to remain, but mostly as a place of movement and transition, the in-between space from the exit of the Euralille commercial center to the entrance of the station. The wooden seating area in front of the water functions as a place for waiting and meeting people, as well as a small auditorium for the “spectators” watching the sparkling effect of the water and of the trains’ movement inside the station. (image 3)

The linear transparent façade of the station appears as a gigantic, transparent, real time scene, which allows the visual interconnection of the interior and the exterior space, as well as the interchange of informa-
tion. The transparency enhances the theatrical aspect of the building, as one of the main features of the station. In fact it is opened up as perspective on the city. As Rem Koolhaas (the architect of the Euralille master plan) suggested, the moving trains should be on view and each train arrival can be a memorable event for the space. (Japan Railway Review 28) (image1)

Therefore, there is always a parallel action between the interior and the exterior space. The two parts interact and complement each other. In that way, the plaza becomes the street, passage, seating, platform and door for a multitude of events that produces by itself and the train station accepts and receives those entire events.

The sequence of the arcs on the plaza, forming an imaginary corridor, are the elements that force people to move towards the entrance of the station, to cross the threshold and to pass the line from the outside to the inside of the station. On the top of the arcs, Le Corbusier Avenue is situated, and functions as a bridge for the cars and crosses the linear in shape building of the station, splitting its curved roof in two pieces. (image 2)

At the end of the arc corridor two escalators and one staircase “absorb” all the flows of people to the interior space. The first moment, you stand out of the building, and the second one you are on the escalator, exactly at the edge of the building. Almost outside, almost inside, not having entered yet. It is that space of the building that is characterized by abeyance and questionability. The escalator stands in between the interior and the exterior, and at the same time it doesn’t belong to neither of them.

The movement of people there seems to be endless. The escalator is the element that makes the idea and process of entering into a form. At the end of the escalator ascending, you are already in the interior space of the station. You have already passed the threshold and now you stand exactly on the node, on the point where the flows of the escalators, the people moving in the building and the cars crossing the building (on a different height level) intersect.

The basic attribute that characterizes the space is the mobility. Elevators, escalators and walkway systems give access to the users to the subway, the platforms and the parking level. Then you have to decide
Threshold: Through different readings and definitions

“The threshold is the ground-beam that bears the doorway as a whole. It sustains the middle in which the two, the outside and the inside, penetrate each other. It bears the between, what goes out and what goes in, in the between, is joined in the between’s dependability.” The Heidegger’s etymology of threshold contributes to a better understanding of its meaning. The notion of the threshold that is perceived not as a line or a limit, but as an area with a mediating role, an intermediate zone, a transitional space from one condition to a second one.

Additionally to the previous idea, Susanna Cros defines “the threshold as a very potential space, as the place of suggestion, where things happen only in a half way. According to her definition, a threshold is a place where the moral and the amoral, the legal and the illegal, the truth and the lie cannot be sorted out. It is place where everything is possible, just for a moment, before you pass through it.” It is clear, that here the unpredictability and the abeyance emerge as inherent attributes to the threshold.

In his manuscript for the Arcade project, -known with its German title Passagen-Werk (The passages work), - Walter Benjamin discusses about important passages over boundaries and thresholds. Between these two meanings, he makes a conceptual distinction: ‘The threshold must be carefully distinguished from the boundary. A Schwelle <threshold> is a zone. Transformation, passage, wave action’. Whereas a boundary is a line that separates, a threshold is ‘a zone of transition’. Thresholds are interesting since they allow passages over them, transitions between states, -usually different ones-. And while boundaries tend to stop movements and transition in an abrupt way, thresholds invite change and transformation, becoming potential space for hybridization.

Using the latin words ‘pesus’ (passage) and ‘limen’ (threshold), Benjamin signifies the temporal character of the threshold. A ‘passage’ can be the movement, the act or process of moving through something from one place to another, or the structure itself, a narrow way that allows access between different buildings or different conditions. Finally, passages can be movements in both time and space with some intensified
contrast between the moving subject and the surrounding contextual structures.
On the other hand, Stavros Stavridis approaches the threshold as a means to comprehend the transitional character of heterotopia. As a threshold, he defines the in-between space that identifies the passage from one state to a second one, focusing on the nature and the characteristics that this space has. However, it is common for this space to be perceived as a boundary between two territories, in a closer examination someone realizes that, in every case, even if the duration of the transition is very short, it is of great importance. He remarks the relationship of the threshold with the meanings of space, time, and movement. The movement itself, in combination with the time, forms the threshold. Finally, the thresholds are transformations of space and time, forming experiences not as formulations of space but as deeper empirical events. (βίωση, in Greek)
Following Benjamin’s example, he also makes a conceptual distinction between the threshold and the boundary, writing that only when a threshold loses its transitional identity, it degenerates into a boundary. As a consequence, the threshold can transform itself into a boundary, whereas the reverse transformation is not possible. Furthermore, key difference between these two, is the relationship they create between their ‘territories’. On the one hand, the boundary as a limiting line forms a relationship of hostility between the two sides, whereas the threshold forms a relationship of interdependence and coexistence between the two alterities.

**The threshold as ROUTE**

According to Heidegger, “a boundary (Greek peras) is not that at which something stops, but as the Greeks recognized, the boundary is that from which something begins its presencing”. As the vessel’s shell closes, it leaves the openness outside of it. The inside is formed by the proximity of constantly opposing borders, whereas the outside is spread out because of the open borders. The threshold is a symbol. It is the element that identifies a space, beyond its strict geometric boundaries. In the lecture ‘Building Dwelling Thinking’ Heidegger investigates two questions, first, the relationship between place and space and second, the relationship between human and space. He uses etymology to penetrate the words, place, space, and position. Space is in essence that for which room has been made, that which is let into its bounds’. In his argument, the place rather than being opposed to space, Heidegger reexamines the space through its relation to place, in order to find out the deeper connection.
He uses the bridge as a built object as an example for reflection. “The bridge is a location allows a site for the fourfold. The space allowed for the bridge contains many places variously near or far from the bridge. These places however may be treated as mere positions between which there lies a measurable distance; a distance, in Greek stadion, always has a room made for it, and indeed by bare positions. The same word means in Latin, a spatium, an intervening space or interval.” Therefore, the distance between two positions can be identified as the intermediate place. The bridge that initially appears as a mere something at some position, it is a thing that can be occupied at any else time or replaced by something else. In that way, he attributes to the threshold-element a beyond local character.
Our appreciation of thresholds depends to a great degree on the scale at which we observe them. What it seems to be a definite line from a close distance, it becomes a field of gradients, an ‘area’, you realize if you examine more closely.
Victor Turner, analyzing the route for the pilgrimage in the temple, he approaches this route from the point of departure to the destination, as an ‘extended’ threshold in space and in time, a crossing condition,
meeting intermediate stopping places which are more dense as you come closer to the final destination point. This is the point where more than one routes converge.

Back in the case of Gare de Lille, the sequence of arcs form a route, as an extended threshold that has as a starting point the first arc and as an endpoint, the entrance of the building. This is the bridge that connects the outdoor space of the station with the interior, and ‘force’ the people to go inside.

**The Door as Threshold**

In his essay ‘Bridge and Door’, Georg Simmel emphasizes the close interdependence of separation and connection. Both types of activity come together in human undertakings. As the human being is the connecting creature who must always separate and cannot connect without separating*, he always defines a boundary for the space around him, still in a way that he can always move himself out of it, as the ‘human being is the creature who has no border’. Thereby, it comes naturally that ‘things must first be separated from one another in order to be together’, since it would be meaningless to connect that which is not separated.

The bridge is that kind of element that takes the connection as an idea and brings it directly into a visible form. On the contrary to the bridge, the door is the element that represents in a more decisive manner how separating and connecting are only two sides of precisely the same act. The door is a threshold. It is a borderline that defines two different places, by separating the inside and the outside. Its nature is flexible, as it can be open or closed, wide-open or half-open, defining diverse relation with the space. The axis of rotation is the elements that define the form of the door, the way it opens/closes and the space it needs for its rotation.

The door can “interact” with the space, as it incorporates the possibility of permanent interchange, contrary to the bridge that connects two definite points, from point A to point B. Flows have the potential to cross the door to unlimited possible directions.

Compared to the decisive element of the wall, the door’s enclosure feeling indicates stronger isolation, because it can be opened. As characteristically Gimmel writes ‘the door speaks, whereas the wall is mute’. The door can be tightly closed defining the condition of protection or limitation, whereas the open door gives the feeling of freedom and escape. The door’s turning condition changes the balance. The door is the archetype that defines the entrance/exit of every single building, private or public, old or new, real or imaginary. The door is the element that indicates where someone’s privacy stops and someone else’s begins, as it symbolizes the personal threshold, the borderline where the owner of the house welcomes and the guest asks for permission to get in.

Back to the case of Gare de Lille, the frame of a door defines the threshold, the process of entering from the outside to the inside. The ‘lacking door’ symbolizes the publicness of the station building that is accessible 24h/24.
Instead of an epilogue. The city and the station

The station represents a threshold for the city in two different scales, in the local and in the global. In the first one, the train station absorbs the users in its reality, directing them to their own destination. As an active part of the city, the station consists of urban features, and as a miniature of it, gives to the users a general image of what there are likely to experience in the city. It always accommodates supporting functions, and in that way ‘tries’ to keep people for a shorter or longer period of time in its space.

In the global scale, the train station is a threshold giving the potential to the city to be connected to the rest of the world. It is the gateway that changes the user’s reality, giving multiple choices of destinations to travel, multiple choices of potential ‘utopias’ to live in.

The station for the city is a symbol of publicness and a means to form an image for it. For many years, the train station site was connected with the leftover part of the city, most of the times dangerous areas, where illegal deals and transactions took place and homeless people found ‘home’. However, in most current examples, as the train station exists parallel to other real-estate programs, and being connected to the consumption, train station areas have transformed into luxurious ‘public’ buildings, strictly protected by security guards, and therefore contributed to the modern identity of the city.

As the image and the identity of the city can maintain their presence and can be as important as the city itself, the role of a building, let alone a public building is likely to characterize and define the perception of people for the city. In that way, as the building-space, in the general term- is perceived as positive, not as a space to be ‘consumed’, but to be ‘desired’, then we could say that the ‘building’ and architecture have fulfilled part of their goal.

Bibliography

2. Gausa M.,Guallart V.,Muller W., The metapolis dictionary of advanced architecture, Barcelona: Actar, 2003
8. Stuart Elden,. Mapping the Present: Heidegger, Foucault and the Project of a Spatial History (google books)
9. Αντονάς Αριστείδης, Γιαννίτση Φοίβη, Το δοχείο, Μαύρο μουσείο, Αθήνα 1998
(Antonas Aristeidis, Giannitsi Fivi, The vessel) (transl. by F.Ntintoka)
11. Σταυρίδης Σταύρος, Προς μια ανθρωπολογία του κατωφλιού, Ουτοπία (33),1999
(Stavridis Stavros, Towards an anthropological approach of the threshold) (transl. by F.Ntintoka)(http://courses.arch.ntua.gr/stavrides_gr.html)
12. Σταυρίδης Σταύρος, Μπρεχτική απόστασιοποίηση και ετερότητα.Οι μετέοροι τόποι των κατωφλιών, Σύγχρονα Θέματα, (71-72), 1999
(Stavridis Stavros, Brechtian alienation and otherness. The thresholds as unstable places)(transl. by F.Ntintoka)
13. Σταυρίδης Σταύρος, Οι χώροι της ουτοπίας και η ετεροτοπία: Στο κατώφλι της σχέσης με το διαφορετικό, Ουτοπία (31),1998
(Stavridis Stavros, Spaces of utopia and the heterotopia: On the threshold of the relationship with the unknown) (transl. by F.Ntintoka)(http://courses.arch.ntua.gr/stavrides_gr.html)

Images by the author
Hybrid Buildings Graduation studio

Hybrid Buildings are receiving increasing attention in contemporary architectural debates and practices, showing the attempt to escape the traditional but arid binomial form-function by addressing buildings with multiple performances. They combine different programs into a 'hybrid' whole and show new ways of organizing space. Therefore, rather than looking for mere programmatic solutions, hybrid buildings offer up to date answers to our way of living, working and entertaining.¹

Hybrid buildings adapt to the needs of contemporary cities, mitigating the division between the private and the public realms. These buildings tend usually to be invasive in nature, proposing complexity in terms of form and functional diversity. They shatter the borders between architectural and urban scale, challenging pre-established notion of density and scale.

The graduation studio of Hybrid buildings focuses on how architectural interventions can activate and contribute to the process of urban transformation, explores the Hybrid buildings as catalysts of urban transformations. In the studio, keyword of the design process is always the relation between urban and architectural scale. We investigate the architectural intervention into the framework of urban context, based on the hypothesis that architecture exists within its urban context, and vice versa.

¹ http://www.tudelft-architecture.nl/chairs/building-typology/education/programmes
The site

The site chosen for this year studio is Zuidas area in Amsterdam. It is a large, developing business district and lies between the rivers Amstel and Schinkel along the ringway A10. Considering it an area with interesting potential not yet fully exploited, we try to understand how architecture, by reacting on the physical as well as the cultural context, can improve the performances of the space.

As Zuidas is a relatively new urban phenomenon it is important to understand how this site emerged. Before the completion of the roads, the area of Zuidas was only an agriculture land without specific identity. The introduction of the roads and the railway charged the area with the potential to become a dynamic urban area with the best connectivity in the Randstadt. This fact together with the proximity to the Schiphol airport became crucial factors for the establishment a central business district exactly at this plot of land. The building of the World Trade Centre was the first to be completed on the site in 1986. Today, the image that Zuidas presents is the one of the contemporary CBD with high-rise office buildings. However, the project of Zuidas is still unfinished. It is not yet in its fixed condition, but a piece of urban fabric under development.

Consequently, we understand that Zuidas was defined through these infrastructural edges since its establishment in mid-1980. In that moment, when Zuidas doesn’t need the edges anymore for be defined area, the perception of the boundaries has changed as well. They are perceived as obstacles that divide the area and interrupt the continuity of the urban fabric.

However, these boundaries are the same moment part of the success of Zuidas, as this infrastructure offers high connectivity in local, regional and global scale. The area highly connected to Schiphol airport in 6 minutes by train and 15 minutes by car, to Brussels and Paris by high-
speed rail network, in 2 hours and in 3.20 h respectively, and literally can be connected to every city of the world through the Schiphol airport. Zuidas, at the moment, offers a mix of high-grade economic activity, a university, and a large congress center, but not a high-quality urban living yet. This is partly the goal of the Zuidas project for the future. To develop the area into a leading international location, where the combination of high-end office spaces, housing and public amenities will create an attractive environment, making Zuidas an integral part of the city of Amsterdam.

The diagrams are part of the Urban analysis booklet, in collaboration with Roman Popadiuk and Jaap de Jong.
The problem

For my design, I analyzed the problem statement in two scales, urban and architectural. I recognize the infrastructure as a border for the area, splitting the CBD in two parts, breaking the continuity, physical and visual. In its current condition, the infrastructure zone is perceived a negative space, as a crack whose edges adjoin the positive parts of the site. Whilst in the architectural scale, I read as introvert building typology the one that predominate in the area. The existing office buildings force the users to stay inside even during the free time, offering them public facilities (gym hall, restaurants) primarily on the ground floor. So, the existing outdoor public space remains unoccupied, and functions just as transitional zone from the station to the buildings, without offering any spatial quality.

Concerning, the current condition of the Amsterdam Zuid station, it is a linear passage, connecting the two sides of the CBD, the two plazas.

The station that is supported only by some basic commercial amenities, does not offer many options to the users. At the moment, the station is reaching the limits of its capacity, due to the increasing number of people use the public transport. In the future years, the Zuidas station will be expanded, accommodating more tracks and public amenities in order to respond appropriately to the growth in passenger numbers. (According to the plans of the ZuidasDok project. See facts and figures)
At that point, I could summarize my problem statement and my research question in the following sentences:

**Problem statement**
The failure of the public space to play its vital role causes the fragmentation and the disconnection of the Zuidas area.

**Research question**
How can I transform the infrastructure border from a problematic issue into an advantage for the area?
Potentials

In that step, I tried to figure out which are the disadvantages or the challenges for the area and what are the values that the site has, and developing them we can turn them to advantages. Discovering the existing potentials and enhance them, can improve the current condition.

In the first diagram, I highlight the potential areas, the free space on the top of the A10 highway and the public space, that at the moment is undefined, as well as the relation(on the program of the intervention) with the VU university. (20,000 students)

It comes as consequent the second diagram that shows the relation between these ‘points’. The existing relation of the current axis, and the new one, that relates the south side to the north one.

These areas and points define as site of interest, the central zone of the CBD area, the infrastructure zone and and new free parts of the A10.
Goals in the design

Goals in Urban and architectural scale

To design the new complex for Zuidas station and re-organize its relation with the public space in order to re-connect the area. The station will have an impact on the entire Zuidas. The re-organization of the circulations (train, bus, tram, metro) is part of the infrastructural issue, so that in the station people can change from tram to train, and from metro to bus.

Finally, the goal is to turn the infrastructure border into an active zone for the area, and the new station complex to attract existing and new users to visit, work and live in the area. This part of the goal can be achieved incorporating a diverse program on the complex.
Strategies

The continuity of the public space

At the current condition, the public spaces in each side are lacking connection. Due to the infrastructure barrier, the continuity physical and visual is interrupted, and the two sides do not interact. Designing the station, gives us the opportunity to design the city. Designing the station in relation to the context, to the public space surrounds it; we create the potential for this space to be activated and the public space to function as a connector element between the city and the buildings. The relation of the building with the public space defines
Programmatic diversity

Currently, Zuidas is primarily a monofunctional office area. The majority of the users are businessmen who work and leave the area after the closing of the offices. The area has no much to offer, so as to keep the users there. The goal is the new station complex to attract the existing as well as new users in the area. Incorporating a diverse program (commercial space, cultural space, car parking, bike parking, recreation space) has the potential to turn the complex into an attractive space that gives to the users many options in terms of facilities and qualities of space.
Station and the city

Station plays a vital role of the city. It is an active part of it and has an influence on the formation of the same and of the image of the city as well. It gives to the users of it an image of what they are likely to experience in the city in a different scale. Furthermore, the station is the gateway that allows connections, in local and in global scale. The station has always been a symbolic element of publicness for the city. As it accommodated, -and it still does so-, public activities in it, people went and still go there not always for travelling, that the main purpose but just to meet people and socialize. We have recent examples of new train stations that accommodate commercial centers, and it’s sometime difficult to say which is the main function of the space, the retail or the travel. (Berlin Hauptbahnhof is an example of this.) In any case, primary goal for the design of a station as a space is to be attractive and functional for the users.
The design

I investigate my station project in two aspects and scales, in the urban and in the architectural. In the urban, I extend and re-organize the rail tracks and the circulation of transportations (bus, tram, taxi, car, bike). In the architectural scale, I investigate the typology of the station, as a complex building that accommodate the diverse program, but at the same moment as a transportation hub that is identified by the mobility and has to fulfill its main function, the travel.

More analytically, concerning my design I keep the current condition of the dike, although adding more rails for high-speed trains and extending the platforms. This condition made me to lift part of the functions on the top of the railway. (Cultural program) I use partly, the space on the top of the A10 tunnel on the two sides of the station, for commercial program on the ground level and for car parking on a second level, creating a space of 1100sq. m for 400 cars. These two side-facing zones create a relation of the inside - outside space and continuity, stimulating the flow of people towards the public functions.

As I mentioned above, I consider the design of the station as an opportunity for re-designing the city and the station in combination, I design the roof of the station as an exceptional element of it, further than fulfilling its main function to cover and to protect. Historically, the roof as an element was the part that symbolized the railway station, for instance the St. Pancras station (London, 1868), the Milan central station (1931) and Orsay station (Paris, 1900). It created the identity of the public building in the city that was directly recognized as train station.

Consequently, I design the roof also as a programmatic element of the complex (accommodating a recreation area on it) and as an element that is extended to the city and connects the railway station with it. I find also the relation of the cultural space and the roof, as the function of the first supports the function of the second and vice versa, as the aim for the complex is to turn it into a beating heart of Zuidas.

Taking into consideration all the conditions I try to reach through the design my initial goals and to answer to the problematic statement and my research question.
Exploring the possibilities

**condition1:** change the dike functions underneath and on the top of the railway platforms

**condition2:** change the dike functions on the two sides and underneath the railway platforms

**condition3:** keep the current condition of the dike functions on the top of the railway platforms

**condition4:** keep the current condition of the dike functions on the two sides and roof on the top

**condition5:** keep the current condition of the dike Functions on the two facing elements. These elements play the role of the interface between the exterior and the interior space, attracting people to enter the building. Considering the roof an exceptional element of the station, designing a recreation space on the top, I have also the cultural function in a higher level, so as the two programs and spaces to interact and the function of the one to support the latter.
Exploring the possibilities...on form

the walkable roof zoning system

side zone access from the ground level to the roof

the zones form areas

roof connected to the plaza access to the 'city'
The ‘final’ Design under development
TODAY. Current infrastructure zone
Future, step 1: underground A10
keeping the existing condition of the dike
extension and re-organisation of the rails

Future, step 2: use the free space partly on the top of the A10-the two facing zones
Future. step 3 - use the space on the top of the railway platforms

Future. step 4 - the roof as exceptional and identical element of the station
A diverse program responds to Zuidas monofunctionality in order to activate the area and to attract different groups of users.
The drawings

**ground level** three points of entrance, connecting the city to the complex and access to the second level (platforms) from two sides. Commercial program on the two side zones (interface zone) and last minutes shop on the entrance zone. Bus stop and tram close to the platforms’ access.
railway level: high speed train, simple train and metro platforms
bike parking for 2400 bikes on the north side zone and car parking for 400 cars on the south side
cultural level — auditorium, multi-purpose room, workshop room, working spaces, library, cafe and restaurant
roof level diagram of the route and program

- urban green
- route
- not walkable
- open air auditorium, seating areas, skate park, observatory, playground
longitudinal section

cross section