MASTER

I am the context
a housing complex and congress centre in Zürich

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summary
Integrating new developments into an existing city often proves to be a difficult process. After a history of failed projects, a new urban masterplan by Rotterdam based Kees Christiaanse Architects and Planners (KCAP) is to transform part of Zürich into a densely built part of the city: Stadtraum Hauptbahnhof. The former railway site has never played an active role in the experience of the citizens, making the integration an even more difficult task. Competitions have been held for several of the plots, and neither showed convincing potential in fulfilling that task.

This investigates the strategy of a building acting as a mediator, appealing to different scales: that of the city, that of the part of the city the developments are located in and that of the new development itself. How can future inhabitants of the new developments, the inhabitants of the current surrounding quarters and the people in a different part of the city establish a relation with the new building?

By introducing a program linked to both the city scale and the scale of the masterplan into a building covering plots b, d and f of Stadtraum Hauptbahnhof, the building will become the spokesman of the new plan, become part of the city. Its exceptional size and mix of programme, a housing complex and a congress center, will relate the new plan to the city and vice versa. In short: the building as context, for both the new masterplan, as well as the rest of the city.

The main feature of the building is a route connecting the existing underground complex of shopping mall Shopville and the main station to the projected bridge linking Kreis 4 and 5, two neighboring quarters of Stadtraum Hauptbahnhof. This sequence of spaces slopes from one end to the other, intersecting the ground floor level and thus the public space of Stadtraum Hauptbahnhof. Together with the Bahnhofsalle, the main element of public space of KCAP, this will act as an informal system of public space, exchanging population naturally. The route itself is divided into five parts, each shaped according to their assigned character of city, local and intimate.

The dwellings are separated in a core and a shell, both affected by the sculptural shape of the building. This stimulates a certain amount of personalization, creating a lively facade towards the main station and public space. This theme of the building as an image is further investigated at other points.

The congress center is designed as a continuous flow of movement, touching the surrounding public space as much as possible. Interesting visual and spatial relations are the result.
002. plan study, render
i am the context
The title of this project is a reaction upon the overused, underappreciated and misunderstood statement that one should always design with respect to the project's context.

Context is an infinitely complex concept, but is often easily reduced to something as simple as form, topography, climate, sightlines or a mixture of these. But in what terms can we describe our context in absence of form, interesting topography and climate? This is not a new question, and not an unanswered one. The answer is in scaling the question up, from building scale to city scale, and start talking about culture, state of mind, politics and social structure. The city in all its aspects becomes context, but I would like to reduce it to one concept: use. All cultural statements, political intentions and social actions done by inhabitants of a city are manifested by use and being used.

But now then, what if the area to be developed has not known this use, has never been part of the city, being only visible and usable for a very select number of people? How do you, as an architect, shape a positive image of a newly proposed masterplan, as previous projects on that location have all been cancelled? Nobody has any warm memories regarding the place and the forthcoming inconvenience of years of construction will not help making people like and thus use it in the future, let alone love it.

As an introduction to our individual graduation projects, our studio did a study on Parasite Architecture. Besides a theoretical and terminological study we did a comparison of specific areas in Zürich and Eindhoven. The comparison focused more and more on informal and bottom-up approaches and architecture. Combined with the theory of Oswald Mathias Ungers' Grossformen the studio investigated the role of architecture as framework for informal activity and unforeseen relationships and consequences. One of the conclusions was that architecture could take on both the role of host (framework) and parasite (infill) and as a mediator between the formal and informal. The success of the host-parasite system is greatly depending on acceptance and defense systems of the city.

I started this individual project as a critic, questioning the Stadtraum Hauptbahnhof masterplan for the development of a former railway site in Zürich. The scheme by Kees Christiaanse Architects and Planners (KCAP) had me questioning strategies for controlling and guaranteeing the development of a good quarter and its smooth integration into the existing city. The quarter Kreis 4 and the suggested densely built quarter have proven to have a difficult host-parasite relationship as we analyze the site historically. In terms of the research the studio did on Parasite Architecture, there was need of a mediator, an element linking the city with the new urbanized area. I had my doubts on the capability of the strategy and design laid down by KCAP to do this, as it was very fixed on aspects of public space on one hand and quite free towards the shape and distribution of built mass on the other. But mostly it was the first accepted architectural infill of the masterplan done by Max Dudler that scared me. His design effectively disconnected the main 'façade' of the whole Stadtraum HB project from its body, and even worse, disconnected half of the new district from Kreis 4, the neighboring quarter.

When designing a building within the masterplan (or a masterplan in general), one should make a statement to both the urban design and to the city it is located in. Otherwise, there is likely to be little interaction between the two. My project is that assignment, taking position as a mediator towards the KCAP masterplan and its possible content and towards the city and its possible development. My project needs to be context for existing and new, bringing them closer to one another.
This report is split into two parts. The first one investigates the city of Zürich, the way in which it works, and the current developments in the field of architecture and urban design. Two chapters are devoted to the Stadtraum Hauptbahnhof design by Kees Christiaanse Architects and Planners, of which one places the masterplan in a historical context, while the other analyzes the design itself.

The second part describes the strategy - and the reasons behind it - for integrating such a masterplan into its existing urban context. A case study brings more insight and inspiration. From this point on, the building will be described, each theme separately in its own chapter.
007. little big zurich
1.01. the urbanization of a compact city

little zürich
1.01. the urbanization of a compact city

Little Zurich

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1) Statistics taken from Wikipedia, collected in 2007. Very similar figures on Zürich where encountered in a presentation of a research on the topic of living in Zürich, entitled 'Stand der Dinge: Neuestes Wohnen in Zürich'. The research was done in name of the ETH Wohnforum and was carried out by professor Dietmar Eberle, Martin Schneider and Heidi Stoffel.

2) The quality of the city lies in its large number of easy connections to nearby attractions, such as the Alps as 'park', the Glatt-valley (Rhine-Valley) as work supplier and the airport and Hauptbahnhof as links to the larger region and the world. For a document on this policy and vision I direct the reader to: http://www.stadt-zuerich.ch/internet/stez/stz/home/Aussenbezuehungen/metropolitankonferenzen.Html

3) Detailed information on the policy and guidelines concerning high-rise building in Zürich can be found in the document 'Hochhauser in Zürich', published by the Hochbaudepartement of the city of Zürich in 2001. This document can be found via http://www.stadt-zuerich.ch/internet/hbd/home/Erwerben/PDF_Archiv.html.

008. sightseeing in Zürich
009. the principal urban agglomerations of the world
When you are in Zürich, you would probably take a walk in the picturesque Altstadt [1], down the Bahnhofstrasse [2] (one of Switzerland's most expensive shopping streets) towards the lake [3]. Then you would stroll along the banks of the lake, and on the way back visit the Kunsthuis museum [4]. You would follow the Sihl [5] or Limmat [6] towards the center for a dinner, probably a fondue. If you would have taken a train to Zürich you’d have already seen the Hauptbahnhof [7], located centrally next to the Landesmuseum [8] and Platzspitz park [9], and the enormous void in the cityscape created by the tracks [10] leading towards it. You may go to Kreis 5 [11] to see the Museum für Gestaltung [12] and visit the young and hip shops and bars located there, or go up the hill to the complex of the University of Zürich [13].

This would be the average city-trip sightseeing list in a nutshell. It does not describe a big city. Not in physical size, but neither in character. The thing about Zürich that is actually worth its status as a major city is the aura of the financial and business sector, something very untouchable.

The masterplan in which my project is situated, Stadtraum Hauptbahnhof [14] (outlined in white), is located in Kreis 4 [15], a part of the city not yet included in the touristic tour described before.

Zürich, with only 380,000 inhabitants, houses about three times less people than Amsterdam [1]. Yet the city of Zürich has a strong urge or wish to somehow take on the profile as a metropolis. It is part of the study ‘Metropolitanraum Zürich’, which is set out to investigate possibilities and potentials of Zürich, Winterthur and Luzern as agglomerate, a center of knowledge and a zone of intensification with metropolitan qualities [2].

But the role of the city of Zürich in moving the whole area towards metropolitan status is unclear. The city is already quite densely built, compacted in the valley by the presence of the surrounding Uetliberg and Zürichberg. Furthermore, the Lake of Zürich and the river Limmat flowing out of it, as well as the Sihl river, have been major restraints in city expansion. The third limitation is the whole field of tracks mentioned before, leading from the northwest into the heart of the city. Finally, the compact city fails to become metropolitan due to its very strict high-rise-policy, allowing very few buildings to exceed the 25 meter standard-height **[1]**. Thus the city is dominated by its landscape, leaving it to be picturesque more than metropolitan. The ‘tiny-ness’ of the city expresses itself in its very humble size as compared to urbanized areas in other parts of the world.

But precisely in this compacted character lies one of the great opportunities for Zürich, if it were to fulfill part of its metropolitan wish. The city does have a limited number of options to urbanize itself and is already exploring these possibilities. A more complex and sophisticated manner of increasing a city’s density is carried out in Zürich, as opposed to the ‘real’ metropolitan areas in the world.

The very densely built Altstad has no room for expansion anymore, and even quarters surrounding it are tightly built. Zürich is forced to use more unorthodox ways to
010. part of the site is covered by a highway
011. silicity, a conversion of an industrial island into a shopping center
renew the built environment, getting up to standard and upgrade infrastructural facilities. For example, part of a highway has been placed over the Sihl, following part of its trajectory. But the large scale condensation of the city happens on two fronts far more important.

The first one is the seemingly great tradition-to-be of building underground, with shopping mall Shopville as its largest spokesman. The second strategy is a result of industry moving away from its historical locations alongside of the tracks and rivers towards the outskirts of the city or even further. This results in abandoned factories and the emptying of plots of industrial size, waiting for redevelopment. These two alternatives for further condensation of the city are already often used strategies within Zürich. I will analyze two projects to investigate the potentials of both strategies: Shopville, as underground structure and central location and Zürich West as update of former industrial sites.
012. shopville linked to the hauptbahnhof above it
understanding underground
1.02. condensed zurich

understanding underground

4) TAN is a Temporary Autonomous Network of younger professionals interested in the future of planning. It is a study group investigating the changing profession of architecture due to globalisation, information processing and telecommunication.

5) The full report is available for download at http://www.unesco.org/pep/focarp/tan/TAN_2.pdf


013. diagram showing shopville in its surroundings. Connections to ground floor-level are shown as red arrows.

014. diagram showing shopville in its surroundings. The new Durchmesserlinie station to be built underneath is shown in red.
When building underground architecture takes on a rather different role. It becomes pure in the sense that it is not about external (re)presentation anymore, but becomes more concerned with shaping spaces from an internal logic. That logic may be of infrastructural nature or deal with the entry of natural light into subterranean spaces. How does one make the transition from above the ground to the submerged? The proximity of Shopville has been of great importance for the development of my project, hence a quick analysis of this project and its position within Zürich.

The complex of underground shopping mall Shopville is located directly under the Hauptbahnhof and its surroundings. Besides 1650 square meters of commercial floor area it also contains some of the expanded programme for the Hauptbahnhof like lockers, showers and even part of the neighboring Landesmuseum.

The subterranean world of Shopville is interesting as a case study in order to better understand submerged architecture in the context of the city. Shopville could be described as an in-between space, linking the ground floor level of the Hauptbahnhof to its underground platforms of the S-Bahn, an inter-local transport system serving train-lines towards almost any place of some importance in the agglomerate Zürich. But more than being a hub in an infrastructural network, it is a destination in itself, as a shopping mall. Research on this peculiar project has already been done by the TAN in 1998 and has been published in a report entitled ‘Cultural Identity and Spatial Segregation’. Although the report mainly documents a discussion on heterotopias versus privatopias, together with the notion of network and systems, it does sum up some interesting conclusions on how to deal with the notion of cultural identity and, as their point of view highlighted, the disappearance of real place-to-place connections and the increasing role of transportation in this. The one aspect of Shopville that made it a very suitable case study for TAN was that it is very unique as a place of destination and as a network connection/intersection, as the publicity slogan underpins: 'Shopville: the only shopping center having its own main railway station'.

A short history reveals that Shopville is not so much planned as it just evolved. It was built in two parts, the first in 1967, in the hands of the municipality. The second part, owned by the SBB wasn't built until the construction of the S-Bahn in 1981. Alongside of these developments, a large-scale urban project was planned to further upgrade the area around the Hauptbahnhof, on which I will elaborate more in chapter 1.04. Most of today’s Shopville was built during this decade and a half, but the central delivery access wasn’t opened until 1995. Its enormous success is easy to make visible in figures. Although it only has thirty parking spaces, the 1400 train connection per day guarantee a flow of 350.000 passengers and potential shoppers to pass by the commercial infrastructure of Shopville. On peak days this number may reach 440.000 people. The structures underneath the Hauptbahnhof are about to expand even further, as a second series of underground platforms serving the S-Bahn is being built, accompanied by commercial spaces.

Conclusions TAN distilled from their conference studies, where amongst others that “if you deal with space, deal with the barcode of space”, meaning that one should create programs rather than places. Furthermore, one needs to “let some space for the unexpected. Strategies may be, according to Bernard Tschumi, trans-, dis- and crossprogramming”. Also, “planning is providing the framework. Therefore not the hardware-level (forms), nor the software-level (functions), but the orgware-level (uses-actions) is the most important factor...”

Although the conference of TAN was on segregation, they implicitly indicated in their conclusions as well as

015. plan of shopville with existing public space of shopville shown in yellow and projected public space of the new Durchmesserlinie station in orange

016. shopville infographic
in their analyses that the one thing making Shopville into a success is the fact it is not segregated at all in any way. Precisely this ‘connectedness’ is one of the great conveniences of Shopville. It is the framework of the project that makes it thrive. Of course its location, directly under the hauptbahnhof, the heart of the city, is one major contribution to this. The main hall of the station is one of the few places within the city you could call a square. The internal open space of the station is used as one - at the time of one of my visits some local Christmas-tree-throwing-competition was taking place. But the ‘square’ is bigger than just the physical size of the building, as it also includes the train platforms with their kiosks and newsstands, the sidewalks alongside it and even the banks of the Sihl and Limmat. The tentacles of the organism Shopville stretch out into every quarter surrounding the Hauptbahnhof, which comes down to linking to half of the city directly: the Hauptbahnhof, the Landemuseum, the Platzspitz park, the Bahnhofstrasse, Kreis 5 and Kreis 4 all have their own entrances. The concentration of people and public character of the space it is underneath support the existence of such a world. It quite literally sucks in people from every location it connects to with its elevators, escalators and flights of stairs. The surplus value in the case of Shopville is that this flow of people is not one-way only, but a complex of routes and destinations.

The large number of entrances and thus large number of possible routes for one to walk makes the subterranean world of Shopville both an informally organized system and a commercial labyrinth. Whether one has a more positive or a more negative view upon this organic organization determines the choice of words. Fact is that it is being used well, and functions as destination for shopping as well as shortcut as you do not have to cross the busy Bahnhofplatz and Museumstrasse. The role Shopville takes on in the life of Zürich’s population is not to be underestimated. On a Sunday it is for example one of the few places where you can enjoy a good breakfast.
industrial conversions
industrial conversions
Zürich’s visions and plans on future developments are largely based upon the strategy of converting old industrial buildings and plots into anything ranging from dwellings and shops to cinemas and theaters. A field trip to two recent redevelopments, shopping center SihlCity and neighborhood upgrade Zürich West, together with the future project of Stadtraum Hauptbahnhof illustrate the potential in such areas. Here I will describe the history and development of Zürich West.

Zürich West is the name for the result of the transformation of the quarter Kreis 5. It is located northwest of the city center and is bordered by the tracks [1.] to the south, and by the Sihl [2.] and Limmat [3.] to the north. The quarter was once drawn up to house the greater part of Zürich’s industry by Arnold Bürkli in 1870. Due to the Landesausstellung of 1883 only part of the plan was realized as intended, an industrial quarter, the rest was occupied as exhibition space. As a result, industry was forced to move to the west even more.

After the Landesausstellung the quarter became a home for many of the workers of the nearby industry. Wohnsiedlungen - collective housing - were built, and at time passed more functions related to dwelling were added. Parks were created, pools opened and museums built. These developments already indicate the tendency of developing in a direction other than industrial. But at the edges, at the riverbanks and next to the railway tracks, and more to the west industry had found its place.

In general you can see a division of the whole into an eastern and a western part, separated by the Lettenviadukt [4.], which was built in 1891 to replace a heavy earthen dam which raised the railroad to Oerlikon. This dam was a strict border at the time, and prevented further development of the Industriequartier, as it was called then. The difference in plot sizes is clearly visible, giving away the distribution of dwelling functions to the east and industry to the west.

In the 1980’s, there was a general decline in the presence of industry in the area, caused by fusions, bankruptcies, incorporations and general moving away to sites outside the city border. The sites left were at first a source of problems related to squatting and the drug-scene, but the area has been swept clean recently. The area is in transformation since 1993, when one of the first projects helping to regenerate the area was built: the Technopark building [5.]. This project can best be summarized as a collective building for enterprises, sharing entrances, cafeteria and warehouses. Around the same time, the eastern part was gradually being transformed into an up-to-date and young quarter filled with design, boutiques and shops. Small scale cinemas/housing combinations like RiffRaff [6.] (by Meili Peter Architekten and Staufer & Hasler) continue this trend. Basically the whole western part has been or is going to be transformed. Recent projects include the Puls5 shopping mall and office building [7.] and its Turbinenplatz park (ADR Architects and Tobias A. Eugster), the Schiffbau theatre [8.] (Ortner & Ortner Baukunst), the Cinemax cinema and housing complex on the former Seinfels site [9.] (Herzig Hubeli and Meier + Steinauer) and housing and offices at the former Röntgenareal [10.] (Isa Stürmi Urs Wolf SA). Future developments include amongst others cultural facilities at the Löwenbräu site [11.] (Gigon/Guyer and Atelier WW) and conversion of the Maag Areal [12.] (Diener + Diener, with a high-rise building by Gigon/Guyer), turning the whole of Kreis 5 into young and fashionable Zürich West.
on the mind
1.04. History of the location

on the mind


020. Main borders of the site
The next step in the redevelopment of former industrial sites is not just a logical follow-up to the recent actions taken in Zürich West. In fact, there have been made plans to greatly intensify and urbanize the area bordered by the tracks [1], the Kasernenstrasse [2], the Lagerstrasse [3] and the Langstrasse [4] for almost forty years - since 1969.

The Stadtraum Hauptbahnhof masterplan by Kees Christiaanse Architects and Planners has known its fair share of predecessors, and all encountered fierce protest or troubleshooting otherwise. Richard Wolff wrote an article on this eventful history, entitled ‘The rise and fall of great railway station redevelopments: the case of Eurogate/HB Südwest’.

The following story on the previous projects on the location of Stadtraum Hauptbahnhof is an abstract of Richard Wolff’s article.

The first proposition for the area was done by Ziegler in 1969 [figure 18, next page], in times of economical prosperity. It comprised the demolition of the old Hauptbahnhof and replacing it by a new building, stretching further down the tracks - both next to and above them. Some 400,000 square meters of commercial floor space was to be created, as well as a 43 storey hotel and 4000 parking spaces and flats. Unfortunately for the project, Zürich has a direct democracy system of referenda, and the people of Kreis 4 and 5 did not like the project at all. Most of these inhabitants were working-class, and they feared gentrification processes and a decline in quality of life. Together with the negative vote for hosting the Olympic Games, the metropolitan vision on the area of the Hauptbahnhof was turned down.

In order to improve valuation by surrounding inhabitants and the media, a process of participation and consultation was started. Adaptations were made, scaling the project down in size and height, and...
1.04. history of the location

left to right, top to bottom: 021, 022, 023, 024, 025, 026.

eventually everybody seemed to look upon the project reasonably positive [figure 21]. But Ralph Beanziger, the driving force behind the whole thing, was sacked after he refused to let in other architects to satisfy the public and media. He threatened to defend his copyright on HB Südwest. In 1991, the economic climate chilled and in the recession in the following years led to a stop on investments in the project. By 1992, HB Südwest was dead.

But Beanziger refused to give up his life's work and developed a variant under the name of Eurogate, which he presented in 1996 [figure 22]. The reaction of the City Council's building department, lead by Ursula Koch, was a list of 200 conditions to be taken into account, some of them enough to knock down the project by themselves. Some of them were fought over in court, and elections in 1998 brought a more supportive head of the building department into game. The then current project [figure 23] almost made it through, but in the meantime, investors had become fed up with the endless fights in court and announced their withdrawal, putting another end to project Eurogate.

Against anyone's expectations, a new consortium of three of Switzerland's biggest contractors, together with the largest bank in the world as investor, took up the project again. The timing was right from an economical as well as a political point of view. In July 2000, the City of Zürich granted permission for the 250,000 square meter project for 5000 jobs and 500 flats. Only a few things were holding back the project, the main thing being a pending lawsuit regarding the number of parking spaces. Time was running out as the Swiss Railway (SBB, the landowners) had set a deadline for April 30th, 2001. Unbelievably, the issue of the parking spaces remained unsolved to the day of the deadline, resulting in literally last minutes negotiations with all parties. While the SBB officials were waiting to sign the contract in one room, representatives of the Eurogate project were waiting on a reply to their request for concessions on the number of parking spaces. Fifteen minutes before the reply came in, stating that the opposition would compromise on some issues, which meant the deal could be sealed, the Swiss Railway had left the meeting, refusing to wait any longer. No new meetings were considered, the project was over. It is probably safe to say that none of the parties were very enthusiastic about the project in the end, fearing the profitability and did not mourn long.

The bad image of Eurogate had casted a shadow on developments in that area. Nonetheless the great potential of the very centrally located site, together with the vision of Metropolitanraum Zürich, remained to have an appealing effect. Regional connections intersected at Zürich's Hauptbahnhof, making the area 'the focus of metropolitan space and the city center of Zürich'. In 2001, the SBB in collaboration with the Swiss Post, invited three architectural firms to draw up an urban planning concept. Rotterdam based Kees Christiaanse architects and Planners was chosen as winner, above Devanthery & Lamunière and a team of firms from Zürich: Theo Hotz AG with burkhalter sumi and Gigon/Guyer.

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off the map
1.05. stadtobaun hauptbahnhof

Schlankheitsregel
dia = 1.45 x Kantenlänge

033. the framework/envelope
034. rules applied to the envelope
The difference between this particular site and the other conversions of industrial sites is that this area has never been part of the lived city. Only very little people used to work here, and since it was property of the postal services, it was well secured too. To put it simply, the area was off limits. You could characterize the area that is claimed by the tracks as an urban wasteland, not necessarily unused or empty, but inaccessible and unusable for the mean inhabitant of Zürich. Therefore the area is not memorized and valued as for instance how a good park with the same surface area would have been.

It is important to understand the impact of this on the acceptance of a new urban plan and infill by surrounding inhabitants in order to create a successful building. Kees Christiaanse Architects and Planners (KCAP) faced the task to do what can't be done: integrate a new design with densities and floor areas multiple of those of their surroundings, into a city best portrayed as picturesque and smalt scaled, while the neighborhood has had troublesome experiences with such projects.

After an analysis of the Stadtraum Hauptbahnhof masterplan by KCAP, I personally felt unsatisfied and not convinced it was able to do this. An interview with Ute Schneider of KCAP, who had worked on the plan took away most of my critique. Apparently, some of the most interesting (and wild) ideas had been discarded by the municipality and the city of Zürich. The KCAP proposal which is in effect now, is a subsided version of the original. The very nature of the masterplan - it is a strategy more than an image of a final result - requires some bold features to provide direction and support, and these are left out now. This makes the current framework vague and indefinite in certain points.

So what are the main features of Stadtraum Hauptbahnhof? First of all, it was set up as a set of rules and guidelines providing a framework, an envelope for architects to work in. This framework consists of very simple and straightforward ideas, which we can attribute to standard themes of infrastructure and movement, functional mixing and sunlight.

The first theme, infrastructure and movement, is embodied by a continuation of the urban fabric of Kreis 4 and 5 and the introduction of a diagonal street leading from the main station towards the Kanonengasse Kreis 4, the Bahnhofsallee. The shape of this diagonal resembles vaguely an hourglass, resulting in something quite rare in Zürich: two linked squares. One of them is the new station square to-be, the other a, for the moment, unclear spacial accent within the city, emphasized by a high-rise building on each side. Clearly, the intention is to extend the city center to the west, into the new district and maybe even Kreis 4, after it has had an upgrade like big brother Kreis 5. New pedestrian and bicycle-bridges were envisioned to increase accessibility of the new project and establish a stronger link between the two quarters, but only one of those connections survived. I can imagine this to draw some of the positive image of Kreis 5 into Kreis 4, as they become literally linked.

Furthermore, the trajectory of a new tram line, Tramline 1 is to follow the Bahnhofsallee heading west into Kreis 4.

The diagonal cut and continuation of the Tellstrasse, the Kanonengasse, the Eisgasse, the Freischützgasse and the Reitergasse result in unusual building masses. They are further to be sculpted according to sunlight, function and a set-back rule (the higher one builds, the further the high-rise stands back from its plinth). We have to keep in mind that in theory, all shapes and masses shown in images on the next page are just examples of what can be built within the framework/envelope.
1. Blöcke mit 18m-Traufe und Bürogebäuden
2. Blöcke mit Setback-Geschossen über der 18m-Traufe und Wohntürmen
3. Blöcke mit 18m-Traufe mit Wohnturm- und Bürogebäudemix
4. Blöcke mit 18m-Traufe und Wohntoren

131 This was stated by Ute Schneider of KCAP in an interview on the 28th of January, 2008.

035. four possibilities to fill in the envelope
036. stadttraum hauptbahnhof, model
As a general guideline, dwellings are not to be built to the east, next to the station, but more to the west. This is probably because of the proclaimed regional character of the public space surrounding the Hauptbahnhof and the more intimate character of Kreis 4.

A deepened square was envisioned next to the station as to open up the subterranean world, but was disapproved by the City of Zürich as ‘nothing but a hole in the ground’.” Also, the very flexible envelopes were adjusted, because authorities feared an architectural infill too expressive and asked for conditions that would guarantee something more subtle. Height restrictions were enforced to satisfy the other parties, leading to a masterplan that isn’t really flexible for architects to work with, nor is fully controlled by the urban planners. A very unstable and vague status indeed.

There have been held competitions for both the public space and the infill of these plots separately, namely plots a, c and e. The design by Rotzler Krebs Partner GmbH was chosen as winner for the public space. It accentuates the diagonal with lines of Ginko trees, places a water feature on the western square of the hourglass and creates a station related square with great connection to the Sihl river on the other side. The pavement will be asphalt with an inlay of natural stone.

Plots a and c, two thirds of the area squeezed in between the Lagerstrasse, the Bahnhofsallee and the Kasernenstrasse, where given to Max Dudler. He proposes a double figure, each consisting of a plinth (a raised square/courtyard) with four buildings on top. Each of the buildings behaves in the same way. Two corners have been cut out of the two top floors, for increased sunlight and softening of the silhouette. A very rigid pattern of windows determine all facades. The most right figure has one exception, a building with an atrium and a fully glazed façade and also has a different programme. It is to house the Pedagogische Hochschule. I have quite some problems with the architectural infill by Dudler. I think he may have underestimated the effect his raised squares/courtyards have on the accessibility of Stadttraum Hauptbahnhof. In plan it may look like a filter of some sort, allowing small flows of pedestrian traffic to pass through the building masses into the heart of the project, but I doubt that anyone who does not need to be in one of his buildings will use the space he provides. The attraction of the bigger entrances of the Bahnhofsallee exceeds that of the stepped entrances of Dudler. In effect he blocks any informal relationship and accidental use of the new quarter inhabitants of Kreis 4 could have. All traffic may be pushed onto the diagonal of KCAP, trapping them between the glass façades. The flows of pedestrian become highly hierarchical, while the original design proclaims a strong sense of porosity, precisely that informal interaction of the new quarter and the old city. And this is very necessary for the masterplan to be accepted as part of the city, as being used - deliberately or incidentally - results in the projects being mentally mapped and becoming part of the city’s collective memory.

The design for plot e, by Caruso St John, was announced only very recently. Therefore I chose not to analyze and incorporate this design into my project.

Finally, the programmatic distribution troubled me. The public space around the main station would be dominated by the image of office space, and they often seem to be designed in a way that separates interior from exterior, resulting not in actual façades, but in skins. This image should not be the first thing tourist see as they come out of the station. Although Zürich is a city known for its business and economic aura, this is not the picture of Zürich. It is about the small scale, and dwelling do have this small scale and level of detail to make that first image attractive. A more round-the-clock liveliness is more suitable for the area directly next to the station.
037. stadtraum hauptbahnhof (new version) in its surroundings, with max dudler’s double figure and the plan of the public space
038. plot a, max dudler, seen from main station
039. plot c, gigon/guyer
For my project I decided to work with the older version of Stadtraum Hauptbahnhof, revisiting its starting points and in essence appealing and interesting ideas. Yet I felt that the already chosen winners of the competitions for public space and for plots a and c should be dealt with too, to be able to make some sort of a counter-project.
044. zürich and all of its developments and projects
1.06. future developments and projects

zürich forward
1.06. future development and projects  

zurich forward

045. stadträume 2010
046. section across the station, with the projected durchmeserlinie visible in orange
In general, Zürich as a city is very concerned with its development, constantly thinking up schemes to keep up the high quality of living it is renowned for. The diagram on the previous page shows in one view the different scales and themes of this thinking. The development of the area of Stadtraum Hauptbahnhof is marked as Entwicklungsgebiete [E1, see previous page], and due to its advanced state also as having a Gestaltungsplan [G7]. For my own project, I accepted the existence of the plans and studies listed below as a given. They sum up the most influencing developments in the surroundings of Stadtraum Hauptbahnhof.

Some of these projects are of infrastructural nature. The realization of the Durchmesserlinie [J1], including its underground station is to be taken into account for further thinking on the meaning and functioning of the site, as it increases its reachability even more. Also, it results in an extra link towards Shopville.

Project Stadttunnel Ostanstoss [J5] includes the construction of three underground motorways, connecting underneath the main station. It was initiated as a continuation of an old proposition for increasing traffic flows leading into the city center by laying down so-called ‘Expessstrassen’, with the big difference that the old project was not intended as to be underground. Stadttunnel Ostanstoss is scheduled for 2020-2025. One of its results, affecting the whole city, is that the left bank of the Sihl will become car-free in order to upgrade the river fronts and expand the center towards the west.

The area of the Langstrasse, a historically important street, is also on the list of areas to be improved [A2]. This was the most vibrant street in the beginning of the 20th century.

Affecting the development of Stadtraum Hauptbahnhof also is the general project Stadträume 2010, in which is stated that the area surrounding the main station should be of regional character. The area directly around the station, the Platzspitz and Landesmuseum and the Altstadt are of international importance.
047. longitudinal section, scale approximately 1:1000
01 storage, installations, depositories
02 big hall, 3000 seats
03 side foyer, linked with a ramp to main foyer
04 toilets
05 changing rooms artists, offices kitchen, housekeeping
06 changing rooms personnel
07 kitchen, cold rooms
08 vip parking
09 entrances to dwellings
10 parking garage
11 deepened square, -10.00m level
12 pavilion containing escalators, elevators and small shops

048. plan of second basement level, scale approximately 1:1000
grey parking storage, installations, depositories etc
green congress center
blue dwellings
red internal route, public space
01 storage, installations, depositories
02 big hall, 3000 seats
03 side foyer, linked with ramp to main foyer
04 toilets
07 kitchen, cold rooms
09 entrances to dwellings
10 parking garage
11 deepened square, -10.00m level
12 pavilion containing escalators, elevators and small shops
13 rear foyer
14 main foyer
15 wardrobe
16 entrance parking, linked to other underground parking
17 internal route
18 bicycle stand, guarded
19 existing underground structure
20 deepened square, -5.00m level

049: plan of first basement level, scale approximately 1:1000
grey parking storage, installations, depositories etc

green congress center

blue dwellings

red internal route, public space
02 big hall, 3000 seats
03 upper side foyer, linked with curved stairs to main foyer
04 toilets
09 entrances to dwellings
11 deepened square, -10.00m level
12 pavilion containing escalators, elevators and small shops
14 main foyer
15 wardrobe
17 internal route, intersection with bahnhofsalle
20 deepened square, -5.00m level
21 entrance congress center group and seminar rooms
22 terrace
23 restaurant
24 congress center group rooms
25 generic dwellings
26 condensed dwellings

tramstop tramline 1

050. plan of ground floor level, scale approximately 1:1000
02 big hall, 3000 seats
04 toilets
09 entrances to dwellings
11 deepened square, -10.00m level
12 pavilion containing escalators, elevators and small shops
17 internal route
20 deepened square, -5.00m level
22 terrace
24 congress center group rooms, seminar rooms
25 generic dwellings
26 condensed dwellings
27 auditorium
28 entrance congress centre offices
29 foyer congress center group and seminar rooms

051. plan of first floor level, scale approximately 1:1000
grey parking storage, installations, depositories etc

green congress center
blue dwellings

red internal route, public space
04 toilets
09 entrances to dwellings
17 internal route
24 congress center group rooms, seminar rooms
25 generic dwellings
26 condensed dwellings
27 auditorium
29 foyer congress center group and seminar rooms
30 entrance congress center small halls

052. plan of second floor level, scale approximately 1:1000
grey parking storage, installations, depositories etc
green congress center
blue dwellings
red internal route, public space
30 congress center vip area
31 congress center offices
32 congress center interview room
33 collective space

053. plan of third floor level, scale approximately 1:1500
054. plan of fourth floor level, scale approximately 1:1500
055. plan of fifth floor level, scale approximately 1:1500
34 small hall, 800 seats
35 tower, 4 apartments per floor, 8 floors

056. plan of third floor level, scale approximately 1:1500
057. plan of fourth floor level, scale approximately 1:1500
058. plan of fifth floor level, scale approximately 1:1500
059. Crosssection, approximately scale 1:1000
part. two
the building
stadtraum hauptbahnhof, my building and the city
2.01. strategy

the building as part of the city
2.01. strategy
the building as part of the city

061. zürich inhabited
062. sketch of route connecting to city and local public space
063. infographic underground world, my building and the bridge
As stated before, my project is concerned with integrating Stadtraum Hauptbahnhof into the city of Zürich. It is to be a mediator between the two scales, a project to be used by both inhabitants of the building and districts as well as people living on the other side of the city. In other words: the buildings needs to act on an interlocal scale as well as the local scale of the Stadtraum Hauptbahnhof masterplan. Furthermore, it should make a counter-statement against the architectural projects already approved within the masterplan. Their, in a sense, egoistic behavior of occupying the full plots given without much relation to the public space created by KCAP, let alone the space of the city, does not make a hospitable architecture. Therefore, as a first starting point, you could say that porosity is a desirable feature for a building in such a masterplan. This porosity can be physical, making it possible for anyone to enter the building or can exist only of views into and through them.

As we take the whole of Stadtraum Hauptbahnhof, and critically analyze the basic layout of the building masses, the logic of extending the Tellstrasse, the Kanonengasse, the Eisgasse, the Freischützgasse and the Reitergasse into the new masterplan disappears. The cross·connections create three large building zones (baubereich I, II and III), and the streets mentioned before determine the plots. But plots b, d and f are not centrally located within the plan and have in fact a 'rear' side, as opposed to the other plots. This does not mean that side is less important, as it is the image for people entering or leaving Zürich by train. Functionally and as an image, this side should not be interrupted, but presented as a whole.

Secondly, you could state that plot b, d and f are in the lee of pedestrian and bicycle traffic in Stadtraum Hauptbahnhof. They are bordered in the west by the proposed pedestrian/bicycle bridge connecting Kreis 5 and Kreis 4 as well as the western square of the Bahnhofsallee. In the east is the whole complex of the Hauptbahnhof, including the developments of the new Durchmesserlinie and shoppingmall Shopville. In fact, the more logic thing to do is to consider the three as one plot, stretched between the two points - a conclusion underpinned by assessments made above.

Finally, the building needs to be considered as an image - or a set of images - as not everyone will enter your building. So at that moment, the façade is the full representation of the project, an image for those passing by. In the case of building within Stadtraum Hauptbahnhof, this becomes even more important. As it is situated alongside of the busiest railway station in Switzerland, this aspect is the one most people will ever get to know of the building. Besides this general view to the building as an image, I would like to use it as a design tool, a mechanism to enrich the view from the main station towards the Bahnhofsallee. As the pictures of dwelling in Zürich show, inhabitants tend to express their presence by personalizing their own little piece of façade, if the possibility for this exist. Flower pots, laundry, bikes, garden furniture, objects to ensure a certain level of privacy; all are pushed outwards into the image of the façade. To create such an image of inhabitation I introduce dwellings into the programme of plots b, d and f, and provide opportunities to personalize the façade.
064. the building as an image: ensemble
the building as part of the city
the building as part of the city
The conclusions drawn before lead to the decision of making a design for plots b, d and f, considered as one. In order to appeal to both the intimate personal scale and the collective city scale, a programme will need to consist of dwellings as well as a function of regional importance. I would like to introduce a congress center as city scale programme. The enlarging of the current building, situated on the end of the Bahnhofstrasse, next to the lake, is an actual discussion in Zürich. Its current plot is too small to house the floor area projected in a decent way, and potential new locations are considered. The new congress center for Zürich is a function capable of making the building of significance on a city scale, while the dwellings ensure direct contact with Stadtraum Hauptbahnhof itself.

The thoughts on porosity and the building as a whole versus the detail have acted as overall guiding principles for making decisions in the design process.

The unity of the whole, the stretching of the building between two points of city scale, is interesting as these points do not touch the other public space introduced by KCAP - they are on completely different levels. The way these differences in height may be overcome remains a point of discussion and uncertainty. The deepened square designed by KCAP, intended to open up the underground and extend it onto to ground floor level of their diagonal, failed to convince authorities as it seemed to be a too illogical way of transiting from underground to ground floor level. The design of the difference in height of the pedestrian and bicycle bridge crossing the tracks and the ground floor public space is as for now nothing more than a purely functional set of ramps and stairs.

I propose a more unconstrained way of making these transitions. When we imagine a longitudinal section, the line connecting the bridge in the west, at eight meters above ground floor level, and the underground complex in the east, at minus ten meters, will intersect the main public space of KCAP, the Bahnhofsallee. This line can be designed as a sequence of spaces naturally linking all levels: an internal route. The word internal here indicates its position in the center of the building, as seen in plan view. In my view the route should have no roof, essentially being like a canyon eroded by a river. The direct result is the porous character I have been looking for. This internal route is to be the backbone of the building, from which all content of the building will be entered. Therefore it is not so much of a duplication of the Bahnhofsallee, with its commerce and food and beverages, as this would lead to unnecessary competition. The internal route
2.02. design

066. the five characters of the internal route
forms, together with the Bahnhofsallee, an informal system of pedestrian and bicycle traffic, naturally exchanging and distributing its shared population.

The strategy for shaping the internal route is based on the differences in character it should have on different parts of its trajectory. It is stretched between two ends of city scale, which accordingly should have a city-character. The western endpoint climaxes at the height of the bridge, presenting itself with a wider profile, a raised square: a podium. The eastern courtyard, a negative of the archetype of living in Zürich - and all over the world - the (closed) building block. The articulation of these characters, will mostly be visible on the internal façades and massing. Only the southern façade facing the Bahnhofsallee steps back on two points to create an image of an ensemble of buildings, with the tower in the back. The two 'holes' in the façade are a terrace (required by the congress center) and a playground bordering the Bahnhofsallee.

So, summarizing, my project basically is a linear level with an existing underground structure, which was used by the Swiss Post as delivery tunnel. I envision a re-use of this hidden structure, as authentic part of the subterranean world of Zürich. From this point, the building becomes void, leaving room for a deepened square which will welcome people arriving by train. The building becomes the image I mentioned before, a décor. Most of this 'void' remains at minus five meters, to avoid a gigantic 'hole in the ground', only to dip to minus ten meters at the very eastern tip.

The intersection with KCAP's Bahnhofsallee is of local importance, on the scale of Stadtaum Hauptbahnhof. In between these points, the route is in essence a space related to the dwellings, intimate of character. The typology applied here is that of the courtyard, a negative of the archetype of living in Zürich - and all over the world - the (closed) building block. The articulation of these characters, will mostly be visible on the internal façades and massing. Only the southern façade facing the Bahnhofsallee steps back on two points to create an image of an ensemble of buildings, with the tower in the back. The two 'holes' in the façade are a terrace (required by the congress center) and a playground bordering the Bahnhofsallee.

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2.02. design

067. the building in its surroundings, model
068. the building in its surroundings, model
069. edificio diagonal, avenida diagonal, barcelona
the building as part of the city
2.03. case study: edificio diagonal

the building as part of the city


15 Ibid. pp. 10.
The total floor area of a building that would completely fill the envelope of plots b, d and f would be some 123,000 cubic meters. It would stretch for almost 380 meters. In order to better understand the impact and possibilities of such a complex building on such a giant scale, I felt a case study was needed.

Edificio Diagonal in Barcelona, a project by Rafael Moneo, in collaboration with Manuel de Solà-Morales, succeeds in being a building in dialogue with its urban context. In fact, it is on the scale of the city and thus becomes urban context itself for surrounding buildings.

In Lotus 82, Antonio Monestiroli describes the urban position of the 330 meter long building, in relation to the Avenida Diagonal. He notices the special location, precisely at the point where the screen of buildings of the Cerda urban plan turns into a collection of flanking point-buildings. "In the open building approach [the Avenida Diagonal] becomes chiefly an axis of transit, whereas the one based on a screen of buildings gives it the character of an urban route that is in use at every point."\(^\text{14}\) This statement can be transferred to the situation of Stadtraum Hauptbahnhof, although only to a certain extent. Three separately designed blocks would not exactly behave as point-buildings, but would have less coherence. Monestiroli: "Where it is designed as a single construction the decision to divide it into parts becomes charged with significance. It stresses the desire to interpret all the themes that pertain to it historically: its construction by parts, the theme of the corner, the distinction between outside and inside, and so on."\(^\text{15}\) The design clearly plays with the thought of the complex building, containing a mix of commerce, offices and dwellings, as exceeding the sum of single buildings each containing one function.

A great part of this effect can be ascribed to the interior of the building, which introduces a route parallel to the Diagonal. Around this route, the building becomes shopping mall, linked to the pavement of the Diagonal on several points and on different levels. This makes the building porous, and informal exchange of traffic between the internal route and its outside counterpart is stimulated. My own project envisions the same effect.

Another theme of the Edificio Diagonal overlapping my building, is that of the whole versus the detail, visible in the façades. Moneo and Solà-Morales split the front façade into a lower and an upper part. The lower half is materialized in black marble with large openings for its commercial functions, while the upper half is a white stone wall with windows. The figure of the window is stamped onto the whole front in an apparent repetitive way, but when examined closer they reveal a variety of slight differences in shape and size. The fine detailing in the railings and window framing are directly in dialogue with the block as a whole. The interior of the block - not the internal route but the 'courtyard' - speaks a very different language. Long horizontal windows are framed with equally long elements providing shade.

For my own projects I do not wish for such an division in front and back. The canyon-like character of the internal route rather calls for a inside-outside approach, but even this needs to be questioned. My internal route does not claim to be more important, or even different as compared to the Bahnhofsallee of KCAP. Emphasizing the inside of my building by applying a different façade would disturb the balance between internal route and external street. Model studies I made, already show a uniform approach to all façades, independent of orientation and position. The length of the building is accentuated by horizontal bands running along the façades, indicating floors.

Finally, differences in height are a theme in Moneo and Solà-Morales' as well as in my own project. Whereas I created an artificial 'landscape' in order to bridge an eighteen meter difference, the Avenida Diagonal has a natural slope. This allows the
2.03. case study: edificio diagonal

073. edificio diagonal, elevation façade facing the avenida diagonal
074. own project, section, mirrored
exceptional long building alongside of it to have a supermarket on ground floor level, while this same level becomes basement further down the length of it. A great potential is unleashed by introducing the artificial 'landscape', as the linear element of the internal route can be continuous while the surrounding spaces divided by it create an dramatic and dynamic spatiality of double-height ceilings and cramped spaces.
sequential void
connections and
access points

075. plan view of internal route

total length: 385 meters = 6-7 m
2.04. public space

the building as sequence of spaces

1 m/s = +/- 4 km/h
the building as sequence of spaces

076. view if internal route, with the podium in the front
077. parking garage with suspended internal route
The first thing about this project to be explained in detail is the internal route, as it is the backbone of the functional arrangement and has some great consequences spatially. Figure [75, previous page] shows a plan view of the total length of the internal route, not visible in the other plans because of its slope. The translation of the diagram of the five characters is clearly visible. The best way to describe the design and the decisions made is by making a fictional trip along the trajectory of the internal route, from the new Durchmesserlinie station, ten meters below ground floor level, uphill towards the bridge to Kreis 5, eight meters above ground floor level.

The eastern endpoint is the building as ‘void’, a deepened station square. The public space of KCAP is allowed to expand to create a ground floor station square. The two are connected by a small building extending all the way from the deepest point to the ground floor level, basically a fifteen meter high pavilion. It houses elevators and escalators, some kiosks and food stalls. The small building is crowned by the existing ‘Chinese lanterns’, the colored skylights that indicate some hotspots under the roof of the platforms that occupy the space currently, like escalators and a meeting point. The deepened station square relies heavily on the concept of the building as an image, as stated before. Thus the use of existing, recognizable elements ensures a certain familiarity within that image. Both the ground floor and the deepened station square are materialized as Rötzer Krebs Partner GmbH propose in their design for the public space of KCAP: asphalt with an inlay of a pattern of natural stone.

A wide flight of stairs brings us to the main level of the deepened square, at minus five meters. The existing postal tunnels and ramps connect to the beginning of the internal public route here. The tunnels may be a underground shortcut to Max Dudler’s Pedagogische Hochschule, the ramp lead up towards the ground floor level, to the platforms of the main station. The edge of the ground floor level hangs over the edge of the deepened square, its articulation in the same language as the bands that run alongside of the building. The architectural detail becomes furniture: the bands come down to form railings and seating at ground floor level, the spacing of load bearing columns becomes the spacing of light fittings.

A guarded public bicycle stand and rental is located to the right of the ‘entrance’, marked by a fifteen meter continuation of the building, six meters above the square. The gentle slope of the route is suspended above the parking garage, which is double height at this point. Natural light seeps in from the sides, as the floor above is two meters above ground level. This gives the parking garage a sense of monumentality, and allows for natural ventilation. From the start of the route we get a glimpse of what is ahead: the ground floor intersection with the Bahnhofsallee.

We follow the route - which is provided with an asphalt surface too - passing an entrance point to the dwellings above on our right hand. We have risen one meter at the point we connect with the first basement floor, a parking level too. On the right is another entrance to a bicycle lock-up, also sloping, its exit located some twenty meters further. The next time we pass an entrance point to the dwellings above, the sky becomes visible. This is the first ‘courtyard’. Although it does not have the dimensions of a habitable courtyard, the programmatic distribution allows this proximity of façades. Only to our left, are dwellings, receiving plenty of light from the south side. The right side houses the group and seminar rooms for the congress center, not in need of direct sunlight, and acting as a sound-wall to the proximity of the tracks.

We are now half-way, as we reach the point we can choose to switch to the Bahnhoofsallee to the left, for some shopping or if we need to take tram 1 into Kreis 4. We can reach the main station if we turn
2.04. public space

078. out of the cramped last stage of the parking garage...
079. ...into the light eastern 'courtyard'
right and follow the platform. Another entrance to the dwellings is visible to the right, to the left is a restaurant, a more or less autonomous volume within the whole of the building. It has its own terrace, at 1.20 meters above ground floor level. You could describe it as an oversized window framing a view towards the Bahnhofsallee. But it is the view from the Bahnhofsallee into the building that is being framed, a sneak preview of the interior. The slightly raised terrace prevents direct entrance, but allows a view directly onto it from the public space of KCAP.

Directly after this the internal route widens to form the second courtyard, flanked by dwellings. The rising internal route is at first some three meters beneath the surface of the courtyard, making views into the foyer of the congress center underneath possible. The courtyard is articulated into the internal route, a wide surface sloping very lightly into the opposite direction of the route, and a couple of slopes on the northern side, connecting to the level of the dwellings.

The route narrows down to six meters, with on the left a view into the entrance hall of the congress center and on the right the entrances to the congress center offices. Again, the slope of the routes allows for views underneath the floors it is passing, this time into the big hall of the congress center. The right wall becomes solid, a potential place to put posters of upcoming activities. To the left, we come to the main entrance of the congress center and the route widens to become the podium. Its right ‘wall’ is the entrance towards the small hall and the auditorium, which is combined with another entrance for dwellings, this time the ones in the high-rise accent. This western endpoint connects with the bridge, which has not been designed yet (and is not part of this project). I do want to some aspects of the connection of the bridge with my building. Although it is to hang free of my building, having its own architectural style and language, the deck of the bridge will correspond with the material of internal route. The element joining the two is a steel latticework, to emphasize their separation.

This tour has touched on many of the themes I introduced before, but above all should have made a lot of things clear about the use of the building and its internal route. The rest of the building will be discussed by focusing on the other themes.
080. entering the western courtyard, in between the vierendeel-beam construction carrying the internal route over the foyer and big hall. Foyer is visible through the windows.

081. view of the western courtyard, with in the middle the descending route towards the intersection.
2.04. public space
2.04. Public space

082. View from a gallery on the north side of the western courtyard.

083. View from podium towards western courtyard, with on the left views into the main hall and the main entrance to the congress center on the right.

084. View of the podium, on top of the big hall of the congress center, model.
085. exploded view into the 'full-house'
the building as personalized object
2.05. dwellings and facades

- Proposed infill by KCAP: 230.00 m³
- Total envelope: 330.00 m³
- A house: 360 m³

Comparison of the unit to the whole
086.

Basic concept of the unique dwelling and the core and shell concept
087.

Facade concept: the kinked line, stretch points
088.
After having discussed the building as a whole, its intentions and themes, the unit is an important theme. This unit is, obviously, the single dwelling.

When we look upon this project as a mass-housing scheme, certain problems arise which architects have stumbled upon in the recent decades. Typology is one of them, and standardization has led to projects that turned out to be boring, and lacked identity. The average high-rise building contains apartments that all look alike, with little outside space and an endless gallery connecting a dozen or so identical front doors to a poor maintained staircase.

Attempts have been made to upgrade the dwelling as single unit of a mass-housing scheme, or to put forward the ideal of collectivity, small groups of people living together in harmony. More recently, discussion focused on themes like individual identity and privacy. Diller + Scofidio (+Renfro) tried to bring privacy, or maybe better, the feeling of a freestanding house, into mass-housing. Their Slither building rotates every dwelling in relation to the next, places them with next to each other with a height difference of three steps and places the entrance on the side of each dwelling. Big architects from Denmark give each unit in their Mountain Dwellings their own parking space on the same level of their apartment. Every unit faces the same way, minimizing contact between them and thereby individualizing mass-housing. The downside though, is that both projects put overall image and concept above individual identity: every dwelling is the same, has the same features and becomes an anonymous unit within the whole. Inhabitants of these cells can only personalize the interior.

For the mass-housing part of my project, I wanted to enlarge this personalization, or at least maximize the visibility of this process, of turning an empty carcass into a home. The façade becomes a celebration of fashion and personal taste.

The sculptural envelope of my building is in concept perfect for individualizing mass-housing. By superimposing a 5.4 meter grid, a standard width for dwellings produced in the Netherlands (using a tunnel-mold to cast concrete, creating a rigid framework), every slice of the building is unique. Shape, size, orientation and location all become factors that influence individual decisions on decoration and use. This concept cannot be applied directly, as accessibility needs to be considered.

A variation on this concept is used instead. In essence all dwellings within the project consist out of a core and shell. The core is the dwelling itself, a 12x5.1x6 meter interior space, which is basically a typological maisonette. Only the shaft containing the ducts for water and ventilation are fixed elements. They do ask for a response of future inhabitants as they do not follow the angles of the façades. [figure 83.]

This way, the arrangement of furniture and kitchen remains negotiable, even generic and personal.

The shell however, is affected by the irregular shape of the envelope and differs from place to place within the building. This shell is the space between the insulation border and the bands. As figure [84., next page] shows, the depth of this adaptable zone is divided into the bands, the railings, the outdoor space and the floor-to-ceiling glazing of the dwelling. The shape and use of the outdoor space is amondetermined by the angle of the façade of the building, which changes slightly from floor to floor to add subtle differences in shading. Only a few points change: the corners of the tower and the two kinks where the building is at its widest. These are the most visible points, and due to the length of the building and the way it is seen (not frontal, but parallel), every small change has great impact on the image of the building.

Each dwelling has four of these outdoor spaces, two facing the south side, two facing north,
2.05. dwellings and façades

089. the depth of the façade and its possibilities for personalization
090. filters, from top to bottom:
which also determines the use. One of these on the lower floor of a dwelling is gallery. The extension of the load bearing walls creates an area of relative lee, as passers-by are kept away from the own dwelling a meter or so because the walls become obstacles. Also, they discourage views into dwelling, as they form a series of screens when looking down the gallery. Finally, the extensions are structurally important as they support the outdoor spaces completely.

There are four different façades for the shell to respond too by means of an adjustable filter [figure 85.]. On south façades, this filter is for shade and can be lowered and raised to the wish of the inhabitants. They are made of woven steel wiring. The north façade facing the internat route is equipped with a privacy filter, made of one meter wide bands of open-woven textile. These can be adjusted horizontally, so inhabitants can place them to block partial views. The north façade facing the tracks have a noise filter, although Zürich Hauptbahnhof is an end-station and noise levels are reduced drastically because of the low speeds. The wideness of the view on this side are spectacular and can still be enjoyed as the noise filter is a type of glazing system. Parts of this filter can be opened for fresh air.

The dwellings are grouped into a basic layout of ten; two clusters of five, which are mirrored in relation to each other, with a point of vertical transport in between them. The standard dwellings described above, are tested in an example, suitable for two, three of four inhabitants.

Exceptions are made, as well in the number in which they are grouped as in floor surface. Smaller variants are placed on the south side of the eastern 'courtyard', and larger variants in the eastern end, following the contours of the building.

As a provoking counter-example to the basic maisonettes, I designed a condensed house as well, the Full House. This house-as-furniture will be inserted in the building in the places where the building acts as an image: at the deepened station square. In this way, the condensed dwellings become not only a challenging symbol of a more personal and articulated layout of the home, but also the representation of the dwelling-programme to the city of Zürich. They act as a false façade, pretending that the whole building is packed with these types of dwellings. The irregular arrangement of floors imprints the façade with a pattern and relief. Some of the faces of the pattern are glazed, for the inhabitants to peak out onto the station square, some of them become niches and are fitted lights. A second layer of open-woven textile, printed with advertising make up the other faces of the pattern: the façade as image.

The condensed dwelling has the same basic layout of two stories and two shafts for ducts, but instead of allowing flexibility, it enforces a use onto everything. A stepped first floor creates possibilities for a sunken bath in the bathroom and a small cinema/play room on the first floor. The master bedroom has a 2.30 meter free ceiling height because of the floor layout, allowing the living room to have a height of 3.10 meters. The shell of the dwellings continuous around this exceptional core. The result is a balcony seat; as the floor level of the bedrooms is 40 centimeter higher.

The 'elemental' dwelling wishes to be as generic as possible. The two shafts for ducts allow various layouts for kitchen and bathroom. A proposal has been made for extending the elements of the shaft to house bathrooms and storage spaces. Floor to ceiling doors on the upper floors give the privacy needed, but are abstracted as they do not have a frame to remind one of a traditional door.
2.05. dwellings and facades

- full house
  - 2 adults | 2 children

091. Floor plans and schemes of use of the full house, approximately scale 1:200.
092. Floor plans and schemes of use of the house of elements, approximately scale 1:200.
2.05. dwellings and façades

093. section of the full house, approximately scale 1:100.

094. section of the house of elements, approximately scale 1:100.
2.05. dwellings and facades
095. the corner of the big hall breaching the envelope onto the Bahnhofsallee, allowing views and direct touching of the city scale of the building
the building as grossform
096. View of the main foyer, with the internal route visible in the ceiling.

097. View of the side foyer with a ramp leading up to main rear foyer. The internal route hung from the ceiling allows light to enter as well.
The other 'half' of the building, the congress center, is constantly in dialogue with the dwellings in the building as well as the large scale of the city. The building, even seen apart from its size, acts as a public face towards the new masterplan and the city. It exceeds the impact a normal building would have, as it becomes part of the city and relates it to the new Stadtraum Hauptbahnhof masterplan. It conforms itself towards the public spaces, both the internal route and the Bahnhofsallee. Requirements were amongst others a 2500 square meter big hall, an 800 square meter small hall, a 700 square meter auditorium and a 4500 square meter foyer. The total programme adds up to 20,000 square meters and is included as an appendix. Careful arrangement of these spaces was needed, as there presence within the building was not to interfere with the dwellings but engage in a exiting relationship. At the same time, the theme of the image has influenced the design.

The idea of a barely noticeable 20,000 square meter congress center fascinated me, as large spaces had to find their place without disturbing the main element in the building, the internal route. Therefore the programme has been divided into several parts. The first part consists out of the main entrance, main foyer, and big hall with all their supplementary functions.

The second part is the small hall, the auditorium and congress center offices. Seminar rooms and group rooms make up the third part.

The first part, the main body of the congress center, is designed as a continuous flow of movement, pushed to the edges of the envelope to generate view relations with the public space. The entrance hall is entered via the 'podium' segment of the internal route and offers views of the western ‘courtyard’ and of the Bahnhofsallee. A seven and a half meter wide flight of stairs lowers you to ground floor level, where you can go to the restaurant, using the terrace, walking alongside the pedestrians on the Bahnhofsallee. Perhaps with the same destination. A small wardrobe is located on this level as well. The wide stairs continue downward and gracefully curve into the foyer, at four meters under ground floor level. Another, much bigger wardrobe is located on this level, also serving the group and seminar rooms. The articulation of the courtyard is directly visible in the ceiling. The constructive support for the internal route suspended in the ceiling is a deformed vierendeel beam, spanning thirty meters. The glass infill of the beam enables the exchange of views and the admittance of natural light.

A ramp links the main foyer to the side foyer at minus seven meters, leading directly to the
098. view of the side foyer, visible from the Bahnhofsallee (would almost be the same view)
099. view of the side with stairs leading up to the rear foyer and the rear entrance of the big hall
side entrance of the big hall. A set of stairs continues the flow of movement back to ground level, passing the doors leading to the depositories and installation spaces and the rear foyer above those. All changing rooms can be reached from the side foyer as well.

The big hall is a void in the building, situated at the bottom, an unusual approach as this can cause some problems in the field of construction. The trajectory of the internal route as well as the auditorium above the big hall are visible in the ceiling as negative imprints. The same construction principle is used for the suspension of the internal route here as in the foyer. The grid of load bearing walls continues as a system of columns and beams. The big hall is constructed as a box, and is visible continuously during the sequence of foyers leading towards its entrance. It also presents itself to the public space of KCAP, as a corner penetrates the envelope. Windows allow a view into the big hall. The side of the big hall facing north is full of windows, from the ground floor up. Although the hall can be darkened fully, this may not be necessary during some uses.

The placement of the smaller halls on top of the big hall requires the extension of a side wall to the other side of the internal routes, transferring forces to an extra heavily constructed elevator shaft.

There are separated entrances to the small halls and the offices, the first one located at the podium, the latter next to the courtyard, at the level of the internal route.

Part three is accessible in two ways: directly from the main foyer, or via a separate entrance at ground floor level. The group and seminar rooms are stacked around the space of internal route, with their foyers pushed towards the internal route. This keeps the grid, derived from the dwellings, intact in the façade. Also, the ‘intersection’ part of the internal route a more spacious feel as the foyers are fully glazed.
100. exploded floor plan model of the building, model
The subject I chose as assignment for my graduation projects is, as I see it, one of the more important themes in architecture. Integration of an urban plan into its context, essentially to make it work, is a process that takes time, which makes it all the more interesting to investigate ways to accelerate this process.

To this by means of a single building, is pushing architecture to its limits: architecture as part of the city. The danger is in losing the architectural detail, and thus losing the relation to the human world.

I think I have succeeded in keeping in control of the design of both the building as a whole and of the detail. Current relevancy as well as personal interests have determined the choice of themes to focus on, like façade/skin, density and the building as a set of images. The size of the project has proven to be very difficult to handle, as each tiny decision influences a volume many times greater than anything I have worked on before. Therefore, some details and materialization questions have not been answered. The theme of the roof has not been discussed either, although it is a closely linked to high density dwelling. Still, the project is able to tell a story on the integration of a new urban plan into the context of Zürich, on a level of detail I am personally very satisfied with.
word of gratitude
First of all, I would like to thank my graduation committee, dr. ir. Jos Bosman, dr. ir. Michiel Dehaene and ir. Sjef van Hoof, for their expertise, advice and motivating words. I am also grateful to my family and girlfriend, and all other people who have taken the time to listen to me every once in a while, or helped me otherwise. A special word of gratitude goes out to Franzo and Coen, with whom I had weekly discussion on the project.

Luuk
In general, all images containing the KCAP masterplan Stadtraum Hauptbahnhof and its surroundings have been based upon material provided by Ute Schneider of KCAP.

part one
002. Own image
003. Own image, modified version of image taken from http://www.placeware.com/map/zurich-map-ch-zurich_c.htm
004. Own image
007. Poster of Zurich by Otto Baumberger. You can buy a 50x70 cm print via http://www.allposters.com
008. Own image
009. Diagram of the world’s principal urban agglomerations, in alphabetical order. Taken from http://www.citypopulation.de/world/agglomerations.html
010. Own photograph
011. Photograph taken from http://www.sinhlcity.de/ueberusw/bilder_pres.html
012. Photograph taken from http://www.flickr.com
013. Own image
014. Own image
015. Image taken from Zürich Baut. pp. 225. (altered to fit layout)
016. Image courtesy of Stadt Zürich
017.-020. Own image
028.-032. Images courtesy of KCAP, Rotterdam
033. Image courtesy of KCAP, Rotterdam, taken from Situations, pp.
034.-036. Images courtesy of KCAP, Rotterdam
037. Own image
044. Image taken from Zürich Baut. pp. 109
045. Image taken from Zürich Baut. pp. 121
046. Image taken from http://www.durchmesserlinie.ch

part two
047.-068. Own image
069. Photograph taken from Lotus 82, pp. 25
070. Satellite image taken from Google Earth
071. Photograph taken from Lotus 82, pp. 29
072. Own image
073. Photograph taken from Lotus 82, pp. 14-15
074.-106. Own image
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Interview with Martin Schneider, 30-01-2008
@ Ankerstrasse 3, Zürich, CH.
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Flickr
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Google Maps
http://maps.google.com
Windows Live Earth
http://maps.live.com
appendix.a
### Program Congress Center

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<th>Nr.</th>
<th>Height (m)</th>
<th>Surface (m²)</th>
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<th>Total volume (m³)</th>
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\[1.2x + 2.8x = 4.0x \Rightarrow \frac{1.2x}{2.8x} = \frac{1}{2.2} \Rightarrow x = \frac{4}{9} \approx 0.44 \]
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<th>Total Volume (m³)</th>
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<td>1750</td>
<td>With a big (covered) terrace direct entrance for external guests as well for congress quests</td>
</tr>
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<tr>
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<td>With two workplaces</td>
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<td></td>
<td>30</td>
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<td>With 40 closets</td>
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<td>80</td>
<td>224</td>
<td>Ladies and gentlemen separated; every room 50 closets, 3 showers and 2 toilets.</td>
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<td>224</td>
<td>Ladies and gentlemen separated; every room 50 closets, 3 showers and 2 toilets.</td>
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<td>Sanitary Women</td>
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<td>2 showers and 2 toilets</td>
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<tr>
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<td></td>
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<td>42</td>
<td>2 showers and 2 toilets</td>
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<td>For small repairs</td>
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<td>For small repairs</td>
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