

MASTER

Diamond in the heart the rise of public man

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DIAMOND IN THE HEART

THE RISE OF PUBLIC MAN

METROPOLITAN ENSEMBLE

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Diamond in the Heart of Cologne
Atelier Metropolitan ensemble

Master Thesis

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CHAPTER 1: THE BIRTH

starting point of the project



1-1 Life and Death of Icon/Landmark

Definitions of landmark

In literature: a geographic feature used by explorers and others to find their way back or through an area.

In modern usage: a landmark includes anything that is easily recognizable, such as a monument, building, or other structure.

In American English: to designate places that might be of interest to tourists due to notable physical features or historical significance.

In urban studies as well as in geography: an external point of reference that helps orienting in a familiar or unfamiliar environment

Definitions of Icons

In American Heritage Dictionary of the English Language, Fourth Edition:

- 1st. Of, relating to, or having the character of an icon.
- 2nd. Having a conventional formulaic style. Used of certain memorial statues and busts.

In Century Dictionary and Cyclopaedia:

1. Of or pertaining to a portrait or likeness or to portraiture; of the nature of a portrait.
2. Of, pertaining to, or resembling in any way an icon or sacred image, or the style of such image-paintings.
3. In art, conventional: applied to such work as the statues of victorious athletes commonly dedicated to divinities in antiquity, or to memorial statues and portrait-busts executed after fixed models or types, as the busts of the sovereign set up in British courts of justice.

In Wiktionary

- 1.adj. Relating to, or having the characteristics of, an icon.

In WordNet 3.0

- 1.adj. Relating to or having the characteristics on an icon

From the day that cities were born, they shaped themselves around reference points which the city would grow around it and make an image in mind of inhabitants and visitors. As the cities started to grow, having strong points to show the richness and power of city through them became more important. Nowadays is also not so much different. What we perceive from the cities at a glance is landmarks and iconic buildings. There have been shaping the spatial organization of the city through history.

As quoted by David Dillon: "Iconic buildings still have an intrinsic role in defining 'place'. Iconic buildings are landmarks that help us associate with a place ... Iconic buildings tell us where we are, at a glance....we can't decipher the landscape without them".

Iconic building are memorable since they are a break from routine. The concept of landmarks as something extraordinary has two readings. In one hand, is the morphologic reading which means the bigger and more eternal, the better. This is the point of view of architecture. And on the other hand the functional reading which means the more enjoyable, the better. This is the point of view of urban planning.^{1,1}

However not everybody interprets icons and landmarks in the cities in such way.

iconics and anti-iconics architects all have one common ground, a positive human characteristic. Any debates appeared to end with agreement that it is primarily quality that can make or break any building, not stylistic typology. But there is more to it than that. Anti-Iconics claim that such buildings are not needed and sustainable, so they have a negative effect on our society. These pieces would be considered as a "signature of Architect" rather than a good building.

However, in urban studies it is proven that cities need referencing point. Aldo Rossi mentioned in his book "the architecture of the City"^{1,2} that landmarks are the source of meanings and feelings with which we recognize the city or ourselves. He advancing this theory for urban artifacts and with a novel vision for urbanism says that a city is a collective memory of its people, and like memory it is associated with objects and places. The city is locus of collective memory.

There always have been various attempts to create a conscious collective memory through architecture and urbanism, or in another word to fill the emptiness that comes from having no memories, in the history of man.

What can be concluded from Rossi's book is to build in the city not

1.1

*What People Want: Populism in
Architecture and Design*
Michael Shamiyeh
DOM Research Laboratory
Basel : Birkhaueser, 2005

Rossi, Aldo 1.2
The Architecture of the City
1984
London : MIT Press, 1984

merely a physical transformation, but a transformation of the collective mental life of its habitants. Rossi and many architects had trust in this concept that for them the notion of the building is in the memory that they stand for.

In a way it is concluded that Icons bring the issue of branding to the cities, after all. They are one of the major elements which put the city on the maps.

In an event sponsored by CCA in June 2007 in Canada, Rem Koolhaas implied that there is an urgency of “the life and death of the icon” and this death is because of overdose of the city. He emphasized that there is nothing wrong in the notion of icons but it is how architects do it nowadays since architecturally icons are harmless and innocent.

In the same event in the same conference Peter Eisenman said: “in a way we need to make people more in touch with the physical environment. Because after all, Architecture is a one discipline that brings the mind, hand, the eye in physical being together.” ^{1,3}

1- 2 “Colonia Claudia Ara Agrippinensium”^{1.4}

1.4

Koln - Cologne Metropole am Rhein
Max-Leo Schwering
Ziethen Panorama Verlag
2010
Germany

Image 1.1

Picture of Centre of Cologne
Source:
Koln - Cologne Metropole am Rhein
Max-Leo Schwering
Ziethen Panorama Verlag
2010
Germany

The chronicle begins with Cologne's 450 years Roman past. The townscape and the people have been shaped by it right up to the present day. In the middle ages, Cologne was a Free Imperial city. Its heritage: remains of the massive city walls, the famous Romanesque churches and first and foremost the world-famous Cathedral, now a World Culture Heritage site.

Contemporary Cologne turned into one of Europe's main media and exhibition metropolises. A transport hub from time immemorial, the city now draws visitors from far and near to its expansive shopping precincts. Countless museums and art exhibitions have made Cologne a culture centre of international rank, along with its music and theatre scene with the Philharmonic Hall and the Koelnarena as its impressive showpieces.

After 1945, archaeology in Cologne had its heyday. Excavations unearthed large parts of the old Roman city. The underground world that came to light has been a source of magical fascination ever since.

Stroll through the city

The Romans laid the foundation stone, as it were, more than 2000 years ago, when they founded Colonia Claudia Ara Agrippinensium. Today, Cologne is a city of million inhabitants. Its urban culture makes the undisputed Rhenish metropolis a genuinely cosmopolitan city. It has a long tradition as a mediator between east and west, north and south. The merchants of days gone by fulfilled this task, as the modern trade fair centre does today. The motorway ring, the first in Europe, the Rhine, an international waterway, and the Konrad Adenauer Airport underline the fact. Bridges always have symbolic significance. Nowhere is this more true than in Cologne.

The cathedral is the city's undisputed landmark and symbol. In 1996 it was named a world culture heritage site. The Cathedral is the Cardinal Archbishop's "home" church and a place of pilgrimage at Epiphany. What would Cologne be without the Cathedral? The lyrics of a well-known local song tell us to leave the Cathedral in Cologne, where it belongs. Another famous song "Homesick for Cologne", composed in 1936 is full of similar sentiments and one of many literary and musical celebrations of this great building.

From time immemorial the Rhine has been Cologne's lifeline and life-blood. Nowhere else is the river spanned by so many bridges. The main station, right beside the cathedral, is one of Germany's busiest railway stations. From here the tracks curve round to cross the Hohenzollern Bridge.

The old town is the amusement quarter of a lively, dynamic city with talent for celebrating at every available opportunity. One

can find the Old Town pulsing with life and full of hustle and bustle when many nationalities get together.

A new quarter of Cologne is under construction in Raheinauhafen. Where once harbor warehouses, packed with all sorts of goods from all over the world, safeguarded the future of the city's trade, innovation architecture and historical building now combine in a new existing unity.

Cologne is a city that pulsates with life. This fascinating metropolis with its relaxed atmosphere is home to over a hundred nationalities, which bring life and color to the city.



Image 1.2
WDR Building - Cologne
Source:
Köln - Cologne Metropole am
Rhein
Max-Leo Schwering
Ziethen Panorama Verlag
2010
Germany

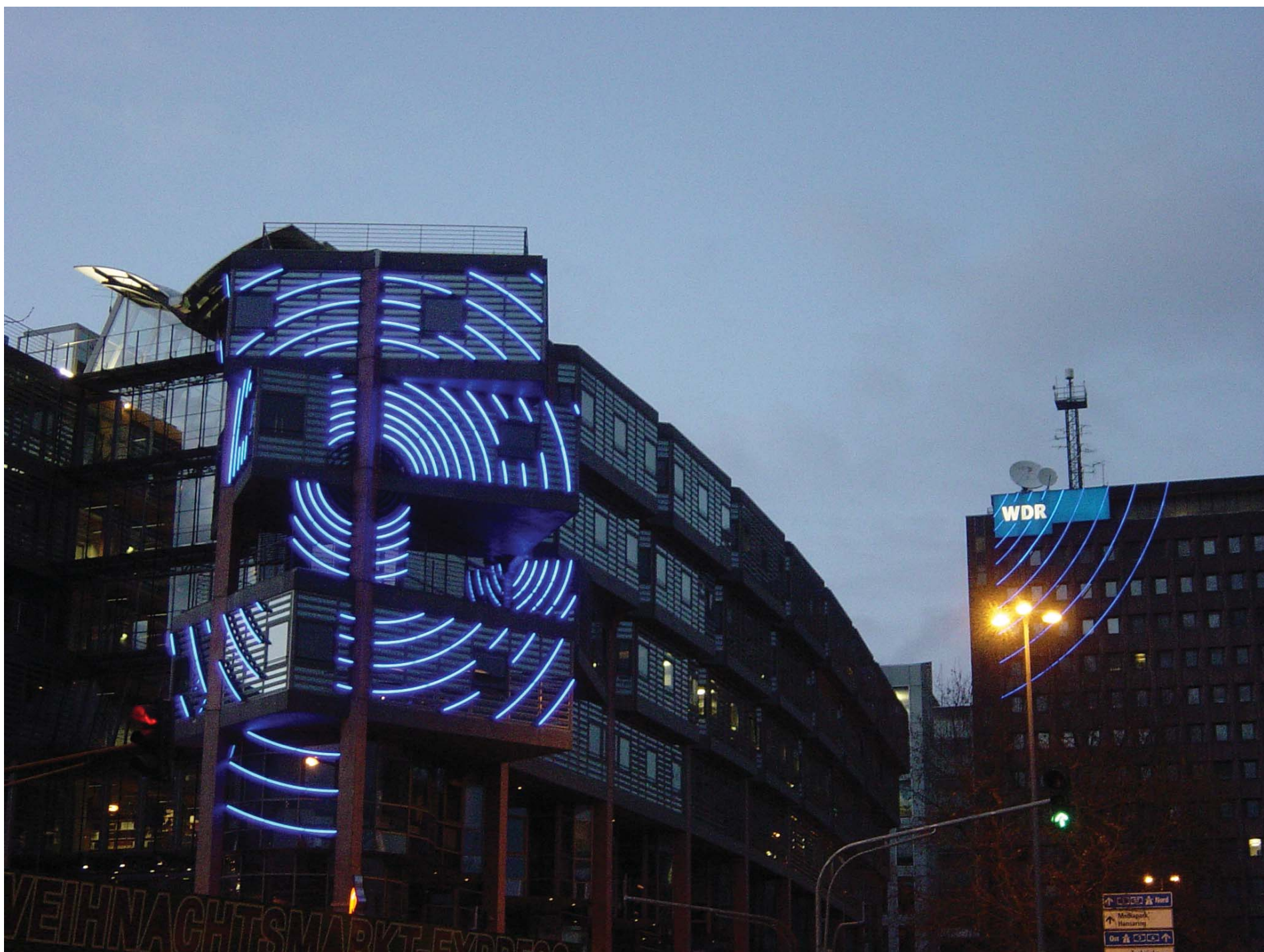
Cologne and Media

Ever since the foundation of the new broadcasting centre on Wallraf Square in 1949, Cologne's importance as a media centre has grown steadily. Deutschland Radio and Deutsche Welle (seated now in Bohn) identified Cologne as the most suitable base for their operations. They were joined by RTL, Cologne's local radio and TV station, VOX, Pro 7 Production corporations. There is now an annual Media Festival and a university devoted exclusively to media studies. With the MMC Studios in Hurth and the Coloneum grow Cologne to the greatness Center of Media in Europe.

In 1996, about 350 employees of West German Radio (WDR) moved into new offices. On the ground floor is a row of shops and a central canteen. This striking building, a fitting extension to an already existing WDR complex, has introduced new architectural concept to Cologne as a counterpart to new media. Since WDR was founded in 1954, the media sector has undergone rapid change and development, and characteristically, the city of Cologne has proved itself a master in absorbing and exploding these technological advances for its own benefit.

Cologne and the area around Cologne has become the centre of a flourishing film industry. Cologne has long been recognized as one of the leading media capitals of Europe. In the last ten years, the concentration of radio and television companies based here has led to a dynamic growth in the area. Over 350 films, TV and video production firms and well over 600 suppliers have established themselves here, as well as many stars and starlets. This is why Cologne, an attractive backdrop for so many productions, is well on the way to becoming a media star in its own right.

In Cologne, Europe's most up-to-date film and television metropolis, entertaining shows, informative magazine, popular soap operas and also international cinema films and videos are continually produced by endless numbers of hardworking teams. Remarkably, every twelfth employee in Cologne works in this branch. The spectrum of jobs on offer is incredibly varied, with a scope for an extensive range of interesting professions. In the meantime the industry has given rise to a new form of tourism, for every day, hundreds of people act as a live audience for numerous TV programmes.



1-3 Iconic Cologne

Image 1.3
Old Painting of Cologne
Source:
Koln - Cologne Metropole am
Rhein
Max-Leo Schwering
Ziethen Panorama Verlag
2010
Germany

People create structures in context of places; those structures then condition the making of people.
In that recursive process, people and places change, continually.

...
(Johnson et al 1990: 8)

For the thesis, a research has been done about the landmarks to cast new light on the relation between people and the built environment and show how important it is, in the practice of architecture, to understand the complexity of the relation between people, objects and environment. Therefore, it was decided to study landmarks.

Collecting the landmarks:

The landmarks of Cologne are collected in opinions of three different parties:

- The City Planning: information in the official website as the most important building in Cologne
- The Tourists Office: information in the official website due to most visited buildings, comments of visitors in the tourist office website
- Inhabitant of Cologne: interview through mail, interview through Facebook

These landmarks include museum, parks, restaurant, bars, churches, Rivers, squares, towers, operas, theatres, bridges and

The result of this information is on the list of 90 landmarks which is visualized in the map 1.

It should be mentioned that there are several of landmarks which are in three categories but the repetition is not illustrated.

After gathering all the data and illustrating them on a map, following conclusions are drawn:

- Almost all the touristic landmarks and municipality's landmarks are the same, while inhabitants have completely different landmarks except Dom.

- In morphology: most of the important churches are located in the old center of Cologne (the right side of the bank of River), High rise buildings are located on the ring road of Cologne which does not disturb the perspective of the old center when it is viewed from the river. Museum and Theatres all are located in the right side of the bank while the functional buildings (offices, congress rooms and ...) are at the left side of the river bank.

- Landmarks by inhabitants of Cologne are outside of the center which the one of qualities of those locations is that there is no so many tourists in them and also the transportation systems.



List of Landmarks

Map 1.1
Landmarks
Scaled to fit

- 1.Sankt kunibert
- 2.Sankt anges
- 3.Gross sankt martin
- 4.Historisches rathaus
- 5.Sankt Mauritius
- 6.Sankt aposteln
- 7.Opera house
- 8.MUNGERSDORFER Fussballstadion
- 9.Weltstadthaus
- 10.Westdeutscher rundfunk
- 11.Minoritenkirche
- 12.Hohenzollernbrücke
- 13.Museum Ludwig
- 14.Kraftwerk niederaussem
- 15.Sankt gereon
- 16.Ringtrum
17. Messetrum
- 18.historische konlgliche eisenbahndirektion
- 19.Hansahochhaus
- 20.Colonius
- 21.Kolntrum
- 22.Sankt Ursula
- 23.Musicaldome
- 25.Sankt maria himmelfahrt
- 24.Kloner hauptbahnhof
- 26.Kloner Dom
- 27 Altstadt
- 28 Bettenhaus uniklinik
- 29.Herz jesu kirche
- 30.Justiz
- 31.Unicenter
- 32.Klein sankt martin
- 33.Kraftwerk knapsack
- 34.Deutzer brücke
- 35.Wassertrum
- 36.Sankt maria IM capitol
- 37.tanzbrunnen
- 38.Colonia haus
- 39.Zoobrucke und rheinseilbann
- 40.Mulheimer brücke
- 41.Messehochhaus
- 42.Stadtautobahn
- 43.Koelnmesse
- 44.Lufthansa
- 45.Designpost
- 46.Schloss bensberg
- 47.Constantin hofe
- 48.Deutzer bahnhof
- 49.Stadthause
- 50.Laxness arena
- 51.Tuv rheinland
- 52.Facahhochschule deutz
- 53.Siebengebrige
- 54.Drachenfels
- 55.Post tower
- 56.Rodenkirchener autobahnbrücke
- 57.Neu sankt heribert
- 58.Aurora muhle
- 59.Raffinerie godorf
- 60.Sudbrücke
- 61.rheinauhafen
- 62.Ehemals luftansa
- 63.Deutschland funk
- 64.Deutsches sport und olampia museum
- 65.Schokoladenmuseum
- 66.Severinsbrücke
- 67.Abtei deuts
- 68.Alt sankt heribert
- 69.Sankt severin
- 70.Landeshaus
- 71.Sankt maria lyskirchen
- 72.Herz Jesu Kirche
73. Park am Aachener Weiher,
74. Wallraff-Richartz Museum
75. Restaurant... Paffgen Brauhaus
76. Hellers Brewery
77. Aachener Straße
78. Friesenplatz
79. Zulpicher Str.
- 80.Cologne Triangle
- 81.Rheinauhafen
- 82.Platz/Vierscheibenhaus
- 83.4711 House
- 84.Overstolzenhaus
- 85.Klumbia Museum
- 86.Zeughaus
87. Romano-Germanic Museum
88. Nuemarkt
89. Huemarkt
90. Rheine River



32 ↙

63 ↓

58 ↓

55 ↓ 54 ↓ 53 ↓ 52 ↓

● The City Planning

● The City Planning

● Inhabitant of Cologne



1-4 Conclusion

The result of this research points out two important aspects:

- The experiences categories all the landmarks in two architecturally groups base on how they affect the behaviors: Introverted landmarks and extroverted landmarks.
- Base on the studies and observation all 90 landmarks they have one common characteristic in common: They are all solid.

Perhaps Cologne is no longer an ideal city for creating landmarks anymore. Cathedral of Cologne submitted as a cultural world heritage in 1996.^{1.5} Since then all the decision of city planning is doomed under the shadow of Cathedral. No buildings should have been built to steal the thunder of Cathedral since the city planning would not jeopardize the statue of its world heritage. But yet, Cologne is a city that in every turn of every corner, visitors can go WOW and this is the main characteristic of icons which they can surprise you.

A new idea was born:

How about a building that can both be extroverted and introverted while expressing the character of media.

An interactive building which gives a unique experience and bring more energy to the city by cooperating the main feature of Cologne, Media, make a unity between old and new.

The fact of the importance of the users' experience in landmarks, has brought a new idea; a new way of experiencing an architectural Icon. An object which respond to you and it environment which makes it no longer a solid object. Users have an unique experience which can be different from any other persons.

The new building can be a combination between the scientific developments that resulted in Ambient Intelligence systems and the aesthetic motivation behind interactive art installations and the architecture as base to create an space for it. Responsive environments has been redefined as physical spaces, such as city squares, public halls, etc, that are enhanced with the use of technology and media. This context provide the awareness and user experience have an important contribution to the success of a responsive environment. An environment where the aesthetic of interaction, user engagement, access, embodiment and intimacy are also to be taken into account in the design and specifications.^{1.6}

The complete research can be read in the booklet "Metropolitan Ensemble: Analysis of Cologne", chapter 2- Landmarks and Movements.

1.5

<http://whc.unesco.org/en/list/292>

1.6

Jorge Alvas Lino
Benjamin Salem
Matthias Rauterberg
Department of Industrial
Design, Eindhoven University of
Technology
Published in Journal of Ambient
Intelligence and Smart Environ-
ments archive
Volume 2 Issue 4,
December 2010
IOS Press Amsterdam
The Netherlands







CHAPTER 2: THE LOCATION

place to belong to



2-1 Maritim Hotel

Images 2.1 - 2.2 - 2.3 - 2.4
The public Passages Through
Maritim Hotel
Source:
By Author
2011
Cologne - Germany

In the center of Cologne, lies Heumarkt, a square with a rich history. Between Heumarkt and Rhine, Maritime Hotel is located. Maritim Hotel is perfect building to make it as a Media Icon for several reasons:

First of all, hotel has a strategic location. Building is a bridge head which different kind of traffic included cars, trams, buses, bikes and pedestrian pass by or right through it. Nevertheless, streets around the hotel shaped an island. The advantages on this characteristics is that the building is a free standing object which makes it perfect as an icon.

Secondly, building is visible from the opposite river bank and also Huemarkt which makes it a center of attention, in a livable square in the center. The new plan of the metro station is also can strengthen the features of media.

Thirdly, the building was designed to be public but it never succssed. In the contour of the ground floor, there a tunnel for cars cutting right through the building. And in the contour of first floor, there a pass way for pedestrian with shops and restaurant. Nevertheless, the parking of the hotel is a public parking that belongs to the city.

Fourthly, Deutzer Brucke is one of the most important roads to enter the city center Icon.

And nevertheless, the size of the building and its function makes a media center and experiencing the building a unique opportunity.

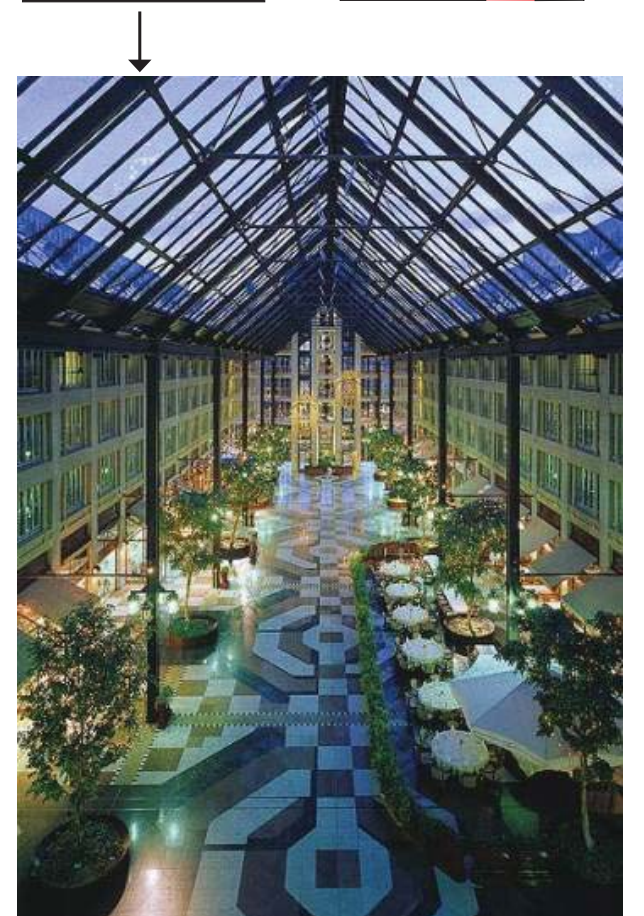
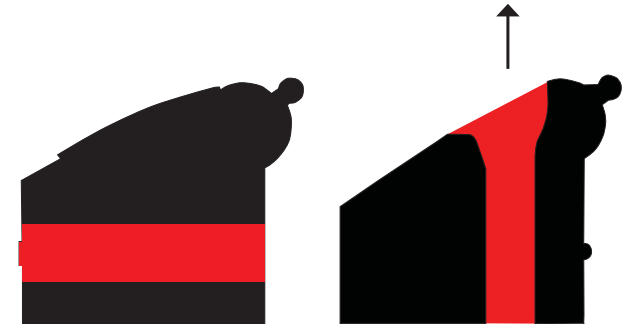
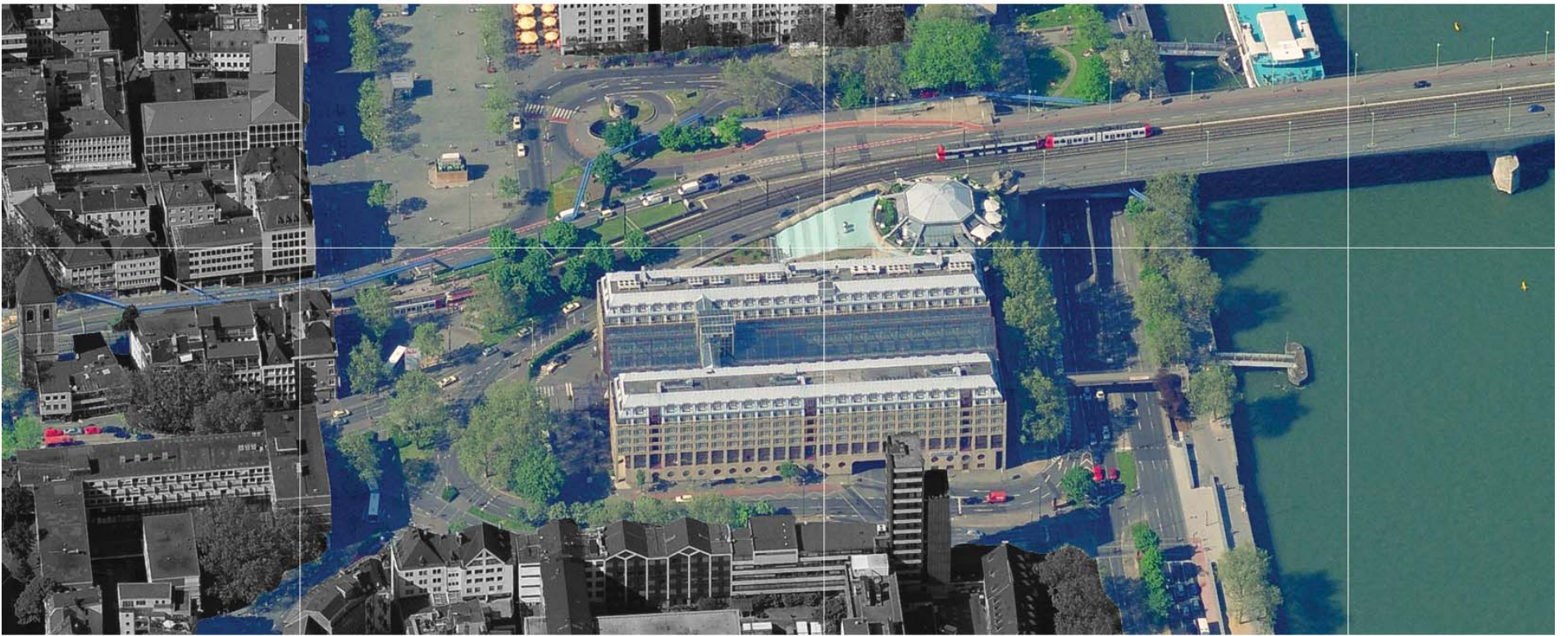


Image 2.5
Location Maritim Hotel
Source: Bing's Map





2-2 History of Maritim Hotel^{2.1}

Short summary of the Maritim hotel

2.1
Impression Booklet
By the Graduate Class
Master Project 3

Image 2.6
Birds eye view of the
Markthalle, 1939.

Markthalle

The current location of the Maritim hotel used to be the location of the Markthalle. The Markthalle was built in 1903-1904 and was designed by Otto Müller-Jena. The Markthalle was used for selling provisions. They sold, among others, fruits, vegetables and potatoes. Other than that it was used as a stock for large amounts of supplies. The square at the north of the Markthalle was used for supplying and transporting goods. The building had a connection to the railway that ran parallel to the river Rhine over the Heumarkt to the north of the city. Horse and carriage were mostly used for transportation around the year 1910 and were later on replaced by small trucks.

The building was outdated and did not fulfil the needs of the city anymore in the thirties. Because of this a new market hall was developed in the Bonner Straße west of the location of the Markthalle. Cologne was heavily bombed during the second world war in 1943 including the Markthalle. It was damaged for a large part. The market hall at the Bonner Straße was slightly damaged and had taken over most of the cities demands. That was the reason why the original Markthalle was demolished in the early fifties.

Maritim Hotel

After the demolishing of the Markthalle around 1950, the site has been used for years as a car park. The location has known many plans, but the municipality of Cologne eventually decided to collaborate with the Maritim to build a new hotel on the site of the former Markthalle. The municipality was interested in having the well known and praised architect Gottfried Böhm design the new hotel. However, at that moment Böhm did not have the time on his hands to accept the offer. A competition has been held and architectural office KSP won this competition. Stefan Schmitz was contacted because his graduation project was all about the location of the Heumarkt. Gottfried was eventually involved in the project and he designed the largest part of the Maritim hotel. Stefan Schmitz was project leader under supervision of Böhm. The facades, the roof and the conference hall were Böhm's design. Only the interior was designed by the regular architects of the Maritim itself, Reinhardt & Sander. The use of material was in advance set by the municipality. The hotel was eventually built in 1988. There are 454 rooms including 28 suites. The biggest hall has a capacity of 1.600 persons. There is room for 600 cars underneath the hotel. The central passage with stores is officially a public space. The hotel actively takes part in the local traffic intersection because it is connected to the Rhine promenade through a pedestrian bridge on the east side and it has a tunnel for motorized traffic running through the building. Slow and fast traffic flows come together on this moment in and around the hotel.



2-3 Summary of Interview Stefan Schmitz ^{2.2}

2.2
Impression Booklet
By the Graduate Class
Master Project 3

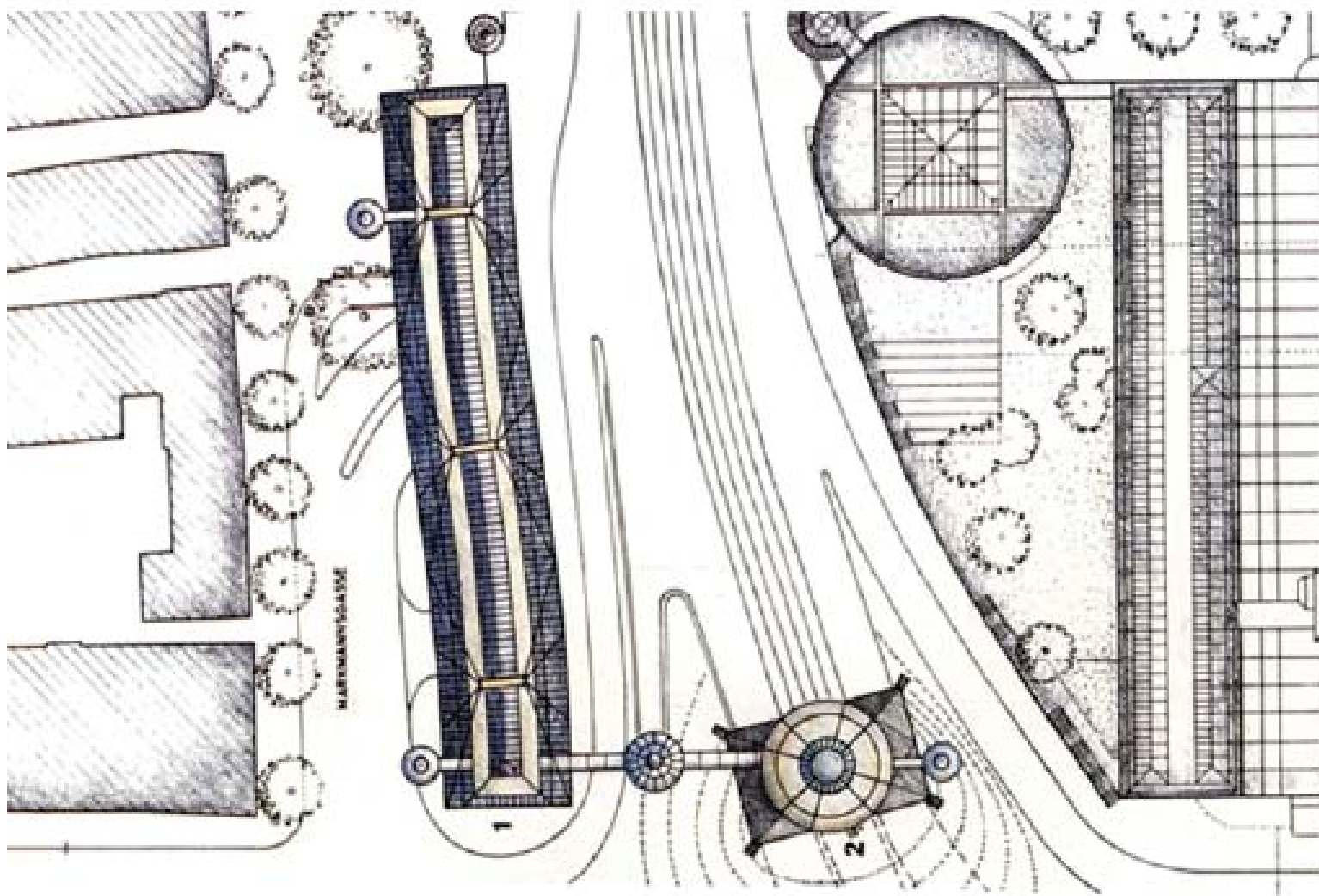
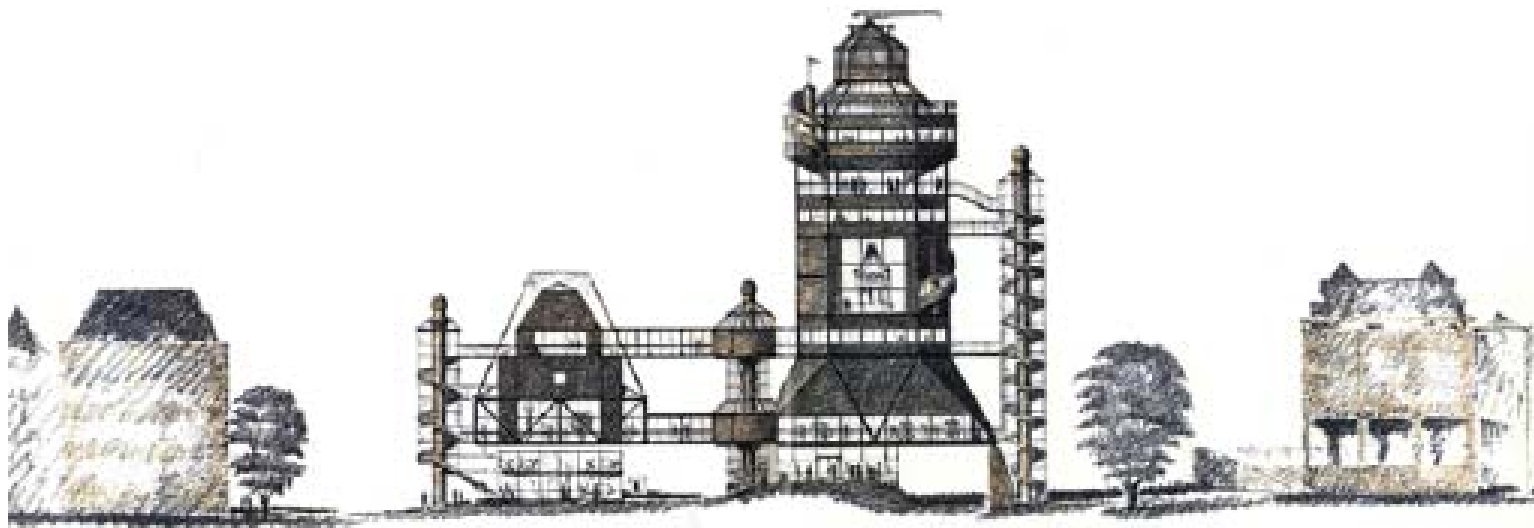
Image 2.7
Design of a tower at the end of
the Bridge by Böhm.

The design of the hotel was the outcome of a competition. Gottfried Böhm was asked to join the competition, but since he didn't have time for it, the architectural firm KSP eventually won the assignment. Stefan Schmitz did a graduation project about reconstructing the area around the hotel and the hotel itself. The architectural firm KSP was familiar with Stefan Schmitz and his graduation work, therefore they thought he would be a good addition for the design team. The design team mainly used the volumes of the design of Stefan Schmitz. The design of the roof and the facades was done by Gottfried Böhm. He came into the picture again because the municipality thought he was very important and wanted a design of him very gladly. The function of Schmitz in the project was project manager. In this function he was positioned between KSP and Gottfried Böhm. This led to the strange construction that he worked for Gottfried Böhm, but was paid by KSP.

The design of the interior was partly done by Gottfried Böhm, but the wishes of Maritim hotel played a major role in this. Maritim has an explicit own style, which they use in their hotels. Because of this they always use the same designers: Reinhardt & Sander. They made the construction drawings and the interior sketches. The designs of the interior were strongly influenced by the owner of Maritim self. Integration of the pool was not a direct result from the needs of the audience, but was a requirement to obtain the four-star class they wanted for the hotel. The part of the design where Gottfried Böhm had much influence on was the design of the glass atrium. The municipality prescribed that the glass atrium should be a public space. The atrium was also a public space in the design of Stefan Schmitz. Although Gottfried Böhm designed this public space, the design was adjusted by the Maritim hotel later on in the project because they didn't support the idea of a public space in their hotel very much. An example of this is the design of the flower-stands. In the idea of Gottfried Böhm the flower-stands also contained an edge where you could sit down. Maritim changed this edge in a diagonal face on which sitting down was not longer possible. There were more disagreements, Böhm for example wanted to use the material of the outside also on the inside of the building, to make clear the ground level was part of the public space. The Maritim wanted polished natural stone and forced it by bypassing Böhm.

An urban plan was designed together with the design of the hotel. This plan was rejected because the costs of it were too high. The plan contained a tower at the end of the bridge where the roads would go underneath through a tunnel under the Heumarkt. The tower would also form a connection between the Maritim and a new museum opposite of the Maritim. The new museum would have the same volume as one wing of the hotel. The tunnel was proposed to bring back the old Heumarkt. The entrance of the hotel was also different in this design. In the plan made by Stefan Schmitz, the road in front of the hotel at the Heumarkt was crossed by a small pedestrian bridge giving direct access to the public floor of the hotel.







CHAPTER 3: IN SEEK OF LOGIC

Analysis of Elements in the Location of Design



3-1 Introduction

Explanation of parts of analysis

In the case for designing any building, it is necessary to study the context carefully.

The chosen location has various elements with their own characteristics which in the end make a rich urban environment with a unique coherence and identity.

The location is consisted of:

- River and the promenade
- Traffic roads
- Heumarkt Square
- Deutz Bridge and Bridgehead
- Maritim Hotel

This chapter focus of the analyzing the context through the points above in order to get a vision about the site.

Map 3.1
Analysis Area

Image 3.1
Location and its elements



Heumarkt

Deutz Bridge



Roads

Maritim Hotel

Rhine Promenade



3-2 Rhine and the Promenade^{3.1}

3.1

This chapter is taken from chapter 5 "Rhine promenade" by Bram Chermin in the booklet "METROPOLITAN ENSEMBLE: ANALYSIS OF COLOGNE" made by the students of graduation studio "Metropolitan Ensemble" This part is summarized of that chapter and the content has been rewritten but the images are exactly the same

Cologne is the fourth largest city of Germany. The city is situated in north Rhine – Westphalia. The Rhine performs an important role for Cologne and had contributed to the growth of the city.

The river is the first reason Cologne was made in the current exact location. Almost in every picture and illustration of Cologne the river is present. The River made the long distant trade possible and created a rich economy for the city. Cologne owes to the river. Nowadays, Rhine is mostly used for leisure, so its promenade.

This part consists of mostly newer buildings. The part can be reached by crossing a bridge under which an access to the small port. The part is characterized by its museums and the modern housing- and office buildings. These buildings form a wall to the rest of the city what results in a quiet promenade.

In short, the part consists out of a public space where the museums are located and also serves as a modern urban passage.

A Tour Along the Promenade

As one goes along the promenade from north to south, will understand that the promenade split into four various parts with different characters.

The first part is northern part of Rhine promenade that consists largely of space for slow traffic and pedestrians. This space is formed by elevated green parts and the level difference with the adjacent thoroughfare. The part is a quiet place where people can continue their way to the north or the south of Cologne. In summary, this part is used as an urban passage.

As walking toward the south, promenade changes its character. The second part starts to focus on the tourists. From the railway station people can make their way to the promenade by a public space. This public space is separated in two by a big staircase. The public space is formed by level difference from green, plaza-like spaces and street furniture. This part is mainly used as a touristic space and for the inhabitants and business people of Cologne as a meeting place and a relaxation area. The public space continues south with adjacent hotels and bars with their terraces. In short, the primary function of this part consists of public space and leisure element. The secondary function is an urban passage.

In the third part, the promenade is in front of the Maritim Hotel. This part is formed by a wall that separates the adjacent crowded thoroughfare from the promenade. This part is characterized by the wall. It is a quiet passage but nothing more.

In the design process of the hotel was mentioned that a connection should be established between the hotel and the Rhine. This connection is realized in the form of a simple footbridge across the crowded thoroughfare, and connects to the promenade. In short, this part of the promenade is a functional passage and a lost space compared to the other parts.

The fourth part of the Rhine promenade has been restructured.

Map 3.2

The quartering of the Rhine promenade

Image 3.2 (first from top)

The use of space by campers and the slow traffic road

Image 3.3 (second from top)

Public space in the direction of the railway station

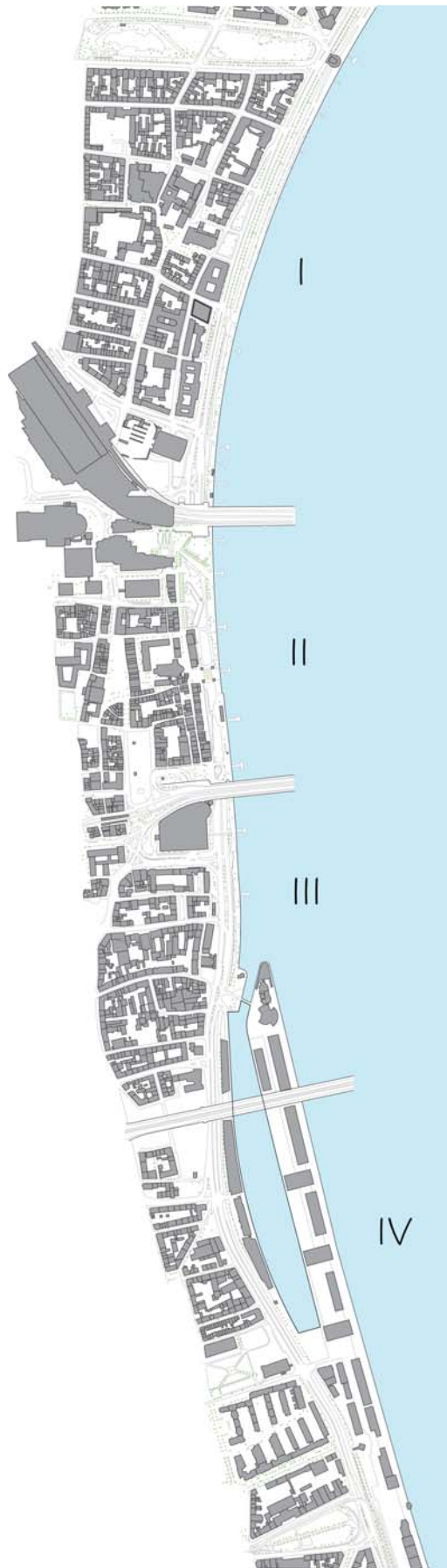
Image 3.4 (third from top)

The passage with the characterizing wall

Image 3.5 (fourth from top)

The modern urban passage of Cologne





Functions

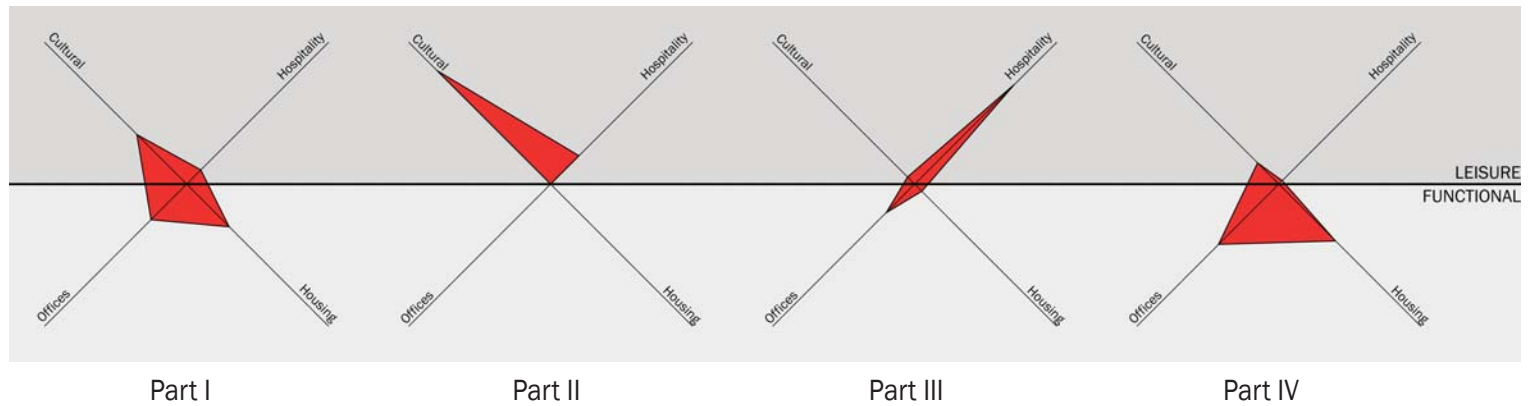
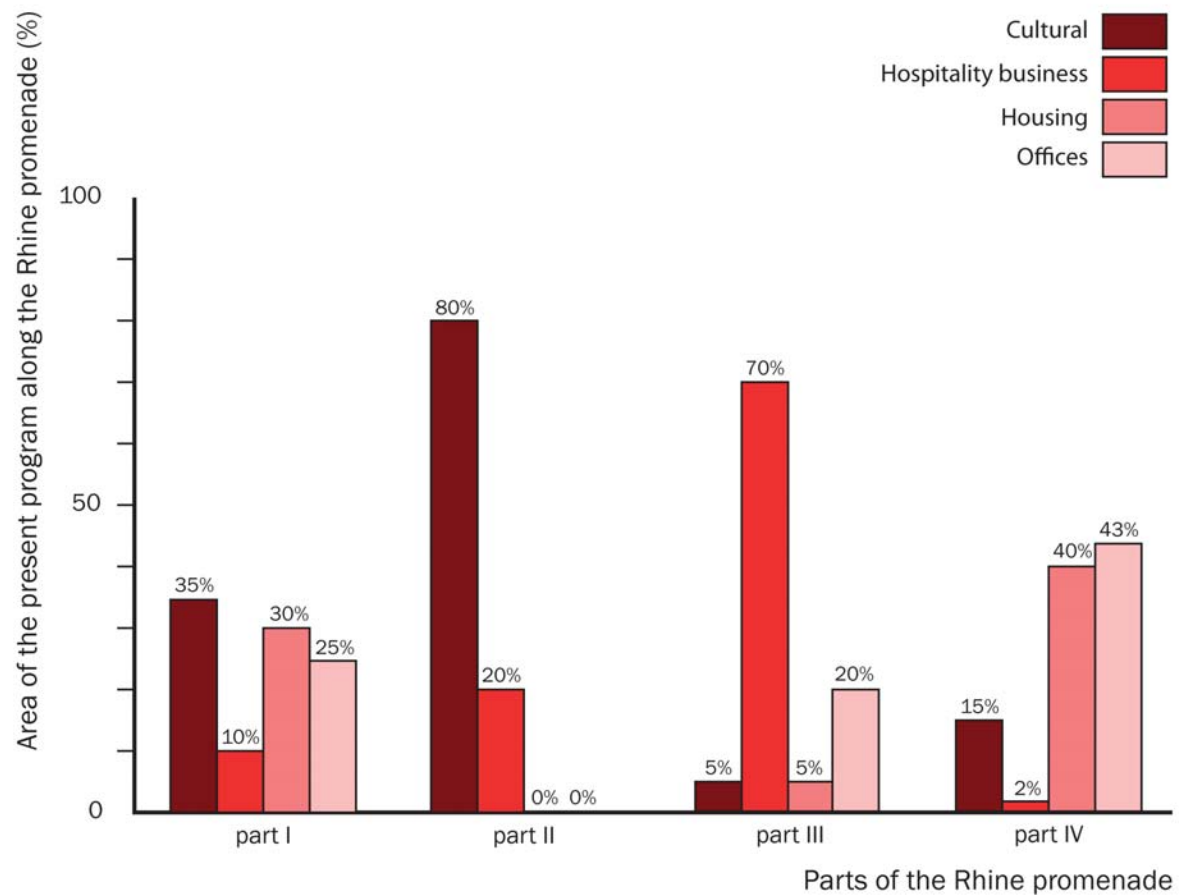
The functions along the promenade make difference in atmospheres.

The following diagrams show the comparison.

Function can be group in Culture, Business, housing and offices. In front of the Maritim hotel, the dominating function is Business related which can make a conclusion of no attraction for many people.

Scheme 3.1 (top)
Table of the percentage of the program along the four parts of the Rhine promenade

Scheme 3.2 (bottom)
Radarplots of the program along the four parts of the Rhine promenade linked to the functional or leisure use of the promenade

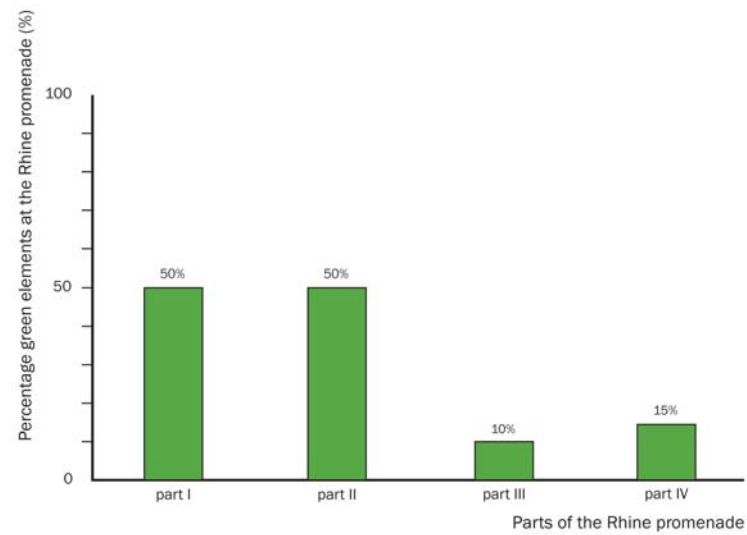


Green

An image of a river promenade comes with an impression of a natural green space.























But the studies in Cologne shown, the analysis area is far behind from being Green.

This can affect people's behavior, to find the promenade not pleasant or insecure.



Scheme 3.3 (top)
Table of percentage of the present green elements at the four parts of the Rhine promenade

Scheme 3.4 (bottom)
Table of the different kinds of green elements at the Rhine promenade that are functional or leisure oriented

		GREEN ELEMENTS						
								
PARTS OF THE RHINE PROMENADE	Part I						25%	PERCENTAGE USE OF SPACE
							75%	
	Part II						40%	
							60%	
Part III						0%		
						100%		
Part IV						0%		
						100%		

Functional  Leisure 

Conclusion

Four different parts of Rhine have their special characters. This is not necessary a negative point but can introduce the diversity. This makes some part more attractive than others and some parts not so appealing and in result people will take a longer route and the promenade can become a gap.

In this case, there is the necessity of a new element which not only makes a good quality urban space but also contacts the upper part of river with lower part of the river.

*Image 3.6
Rhine River
Cologne*

Source:

*Koln - Cologne Metropole am
Rhein*

*Max-Leo Schwering
Ziethen Panorama Verlag
2010
Germany*

Base on the analysis, new design should:

- **Bring an attractive function**
- **Make a good connection to river**
- **Upgrade the green spaces**





3-3 Traffic Roads^{3.2}

3.2

This chapter is taken from chapter 7 "Ost-West-Achse and its traffic" by Geert Filippini in the booklet "METROPOLITAN

ENSEMBLE:

ANALYSIS OF COLOGNE" made by the students of graduation studio "Metropolitan Ensemble" This part is summarized of that chapter and the content has been changed and the images are exactly the same.

Map 3.3

Arrangement Heumarkt

Cologne is a city that is very accessible. It is especially designed and built to accommodate the automobiles. The same goes for one of the most important squares of Cologne, the Heumarkt (the area of analysis). A thing that the city almost has not heard of is "quiet traffic" areas. Only the city center is inaccessible for automobilist.

The main traffic axe of the Heumarkt is the one that forms the East-West axe. It consists of three straight running lines, two for cars or busses and one for trams. They are guided and separated by small green areas or even by buildings or building blocks. Apart from the simple ongoing roads, there are also a few exceptions to this rule. People who want to go south can drive into a loop on the North side of the bridge. This road continues underneath the Maritim Hotel and afterwards next to the Rhine. Underneath the part of the Rhine promenade north of the bridge there is a tunnel that also holds this same North-South axe.

Heumarkt South is a truly irrational collection of roads. Contrasting to this confusion stands the openness of Heumarkt North where the roads define the inner square and emphasize the outlined facades. All of the other roads and alleys are easily accessible; most of them by car, and therefore also by bike or by foot. Some of them are only to be entered by bicyclists or pedestrians like the closed building blocks at the North of the map.



Morphology

As it can be seen in the Map, there is a balance between built and unbuilt spaces; of course, thanks to river promenade and Heumarkt.

The morphology of the building contours shows that most of the buildings are big scale and the only open space for them, is the public space which gives the streets a stronger image and create a more vivid environment.

This character even gets stronger because of the buildings heights. The average height of buildings are between 5 and 6 floors. The heights of buildings do not allow a deep urbanscape but every now and then the towers of Cathedral reveal themselves.

Nevertheless, the ratio of height and the width of street/square make a perception of a closed and safe space for people.



Map 3.4
Morphology building blocs



The Roads

The roads can be characterized in various ways.

One is the underground and normal roads which the hotel would counts as a underground road for cars and the pedestrian normal road.



- Underground Roads
- Normal Roads

Map 3.5
Roads



Pedestrians and Public Transport

Many stops for pedestrians and cars, also the bus and tram station, make a moment which everybody can take benefit from environment and architecture in around Heumarkt. Nevertheless, the east and the west facades can be viewed from the axes of the roads.

But it has to be mentioned that these points are not the lingering points. The main pedestrian areas which one can stand or sit and view an urbanscape is from the river promenade and Heumarkt.

But the relation between the tram ways and pedestrian areas, make the station a strategic point of view to the Maritim building and a facade which gives information and communicate.

Map 3.6
Tram way and station

Map 3.7
Traffic Stop Lights

Map 3.8
Pedestrian Crossover and tunnels and bridges



- Tram Line
- Tram Station





● Traffic Control Stop Lights



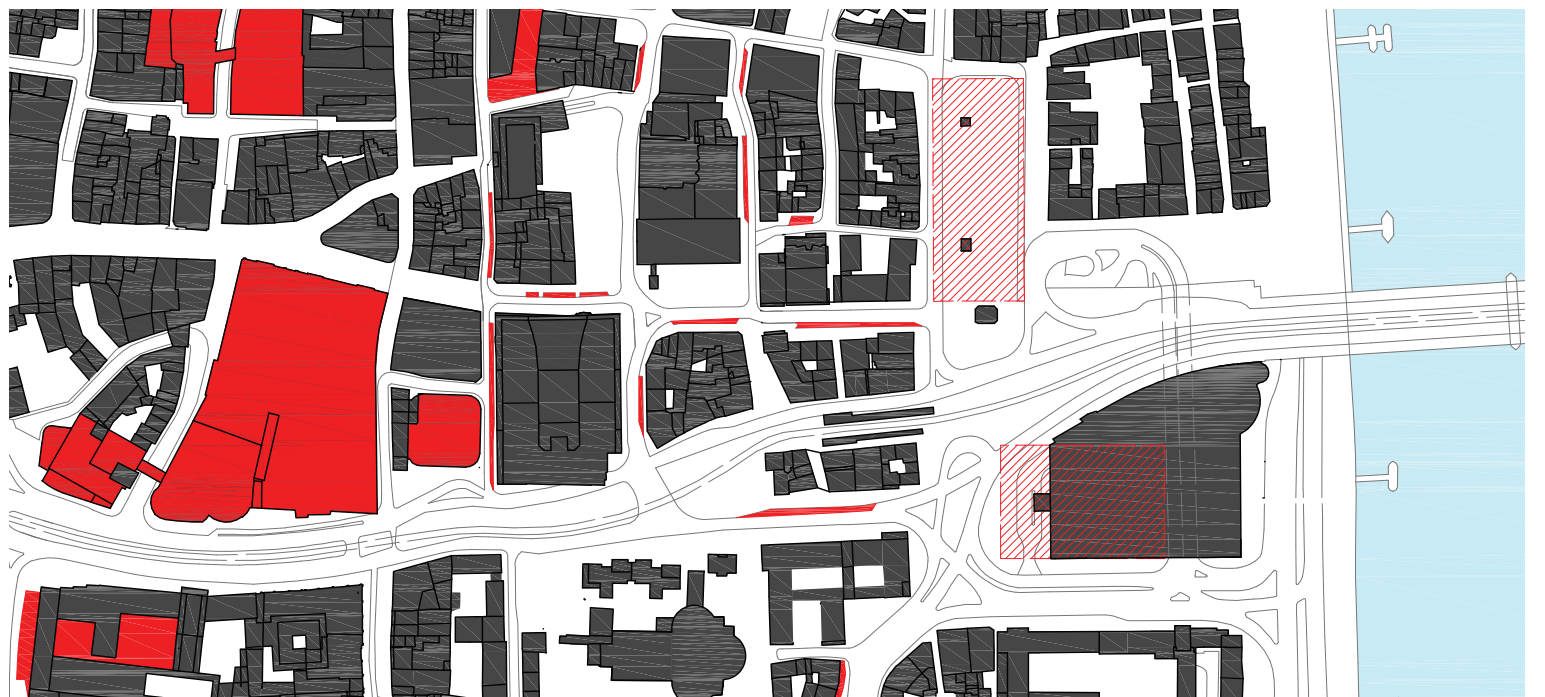
■ Pedestrian Tunnels and Bridge
■ Pedestrian Cross overs



Parking

The relation between parking and public spaces can be important. There are two types of parking in the analyzing area; underground and normal parking places. But the noticeable point here is that all the parking are public and belong to the municipality. This fact encourages the image of a public and vivid urban environment.

Map 3.9
Parking



Green

Green structure in relation with traffic can make an urban environment to clam down.

Also the trees can block the view for a media facade. As it is shown in the following map, the green structure is dense around the roads to calm down the atmosphere while Heumarkt has no trees or green structure.



Map 3.10
Green Structure



Conclusion

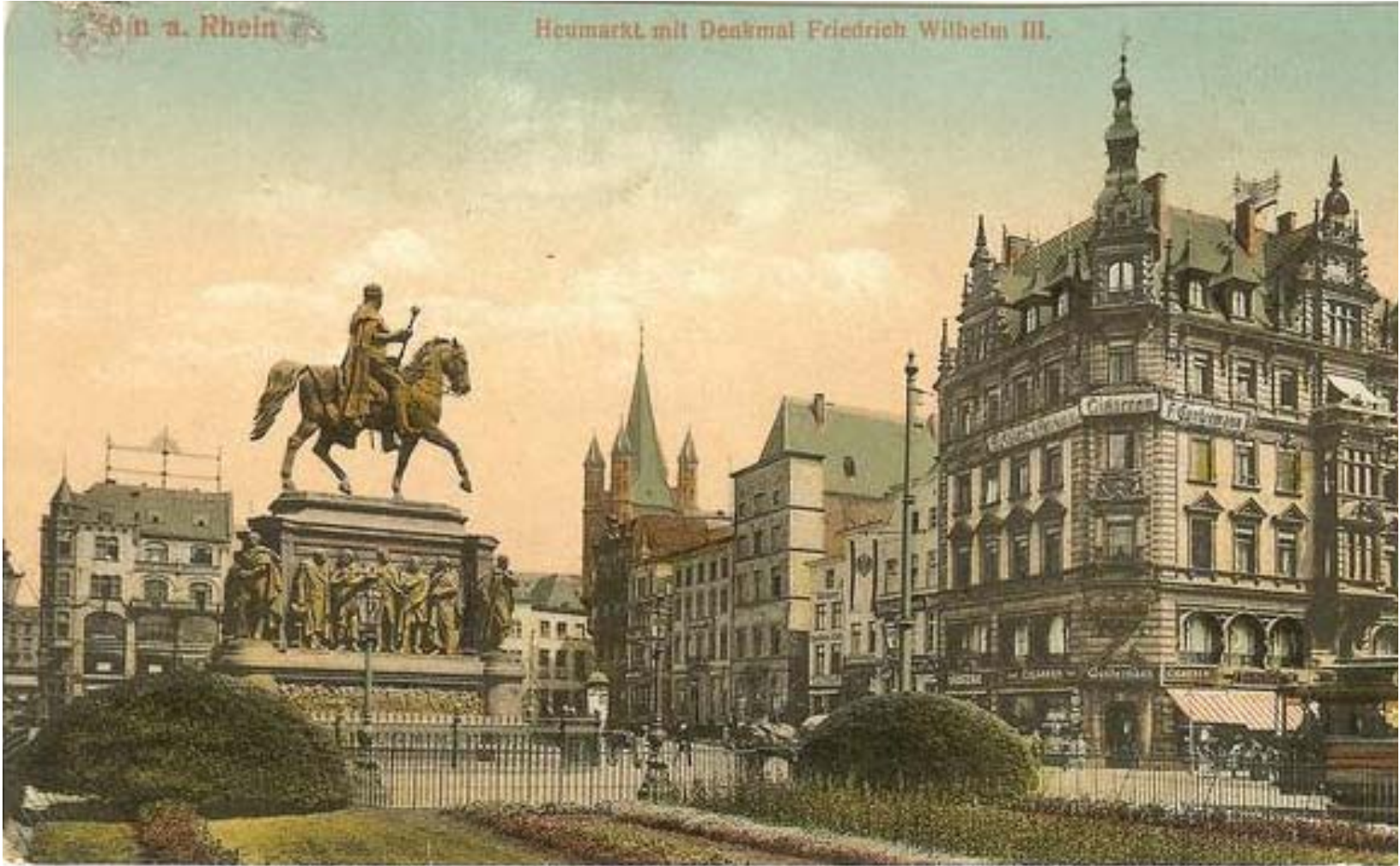
As it can be seen in the Roads analysis, the traffic play an important role, maybe the most important role, in Heumakt.

Traffic is the elements which makes the square to split in to two parts, with two different characters. Traffic made the location as a Gate for the city and most importantly traffic is the first and last element which is making the location to fall apart or come together.

The traffic was and is always an issue in this location; boats, carriage, cars and parking made a square to change appearance a few times.

As result, any design for the location should consider the roads. The perfect solution is to get some spaces from roads without interrupting the traffic and turn them to a public space.





3.4 Heumarkt^{3.3}

3.3

This chapter is taken from chapter 8 "Heumarkt" by Robin Aerts, Xaviera Burón Klose, Faye Hermens in the booklet "METROPOLITAN ENSEMBLE: ANALYSIS OF COLOGNE" made by the students of graduation studio "Metropolitan Ensemble" This part is summarized of that chapter and the content has been changed but the images are exactly the same

The Heumarkt is one of the main squares in Cologne. There is a lot going on in this part of the city, because it is located just in between the city centre and the Rhine.

When looking at the city as a whole it is visible that a lot was lost during the war. The square itself and some buildings were preserved, but the bridge at the East side of the market was lost during the war which they rebuilt afterwards.

Transformation Heumarkt

The transformation of the Heumarkt is very special. One can see that the square itself did not change in shape throughout the history.

At first the square was defined by the use of the buildings blocks. But then gradually the building blocks on the North-East side are starting to disappear. Until 1921 when they are demolished to make room for the new suspension bridge. During the Second World War almost the entire Heumarkt is bombed. The suspension bridge is destroyed along with almost all the buildings surrounding it, only a few are still standing.

After the war Cologne starts rebuilding and a lot is based on the way it was before. However, there are also some changes made.

The traffic is getting more and more important and the new Deutzer Bridge, becomes one of the most important bridges of Cologne. Not only cars and busses travel cross it, but also the main tram line from East to West, is now situated on this bridge. Building blocks are designed in new ways and there are more and wider streets to guide the traffic through the city. But all of these have one disadvantage: the Heumarkt is split into two pieces.

Maps 3.11 - 3.14

Transformation of Heumarkt

Image 3.8

Cologne bombed during WO II,
www.de.academic.ru





1898



1912



1921



1957

3.4

This part has been written by
the author

History^{3,4}

Streets, plot and building affect each other continually in every city. Sometimes building and plot shape can receive or guide or pulse the traffic. And sometime traffic is dominating how a plot or building should be built.

Image 3.9

Heumarkt 1850

<http://www.bilderbuch-koeln.de>



Image 3.10

Heumarkt 1850

<http://www.bilderbuch-koeln.de>

In Roman times, Heumarkt was a swampy Roman harbor. Around 11 to 13 century, Heumarkt was drained and became the offshore island of the Rhine and transformed into a place of trade that the reason the square was given the name "Heumarkt". The farmers brought hay (in German Heu) from the surrounding area and sold it to the townspeople who were feeding their horses. In addition to hay, salt, meat, cheese, cloth and leather was offered.

In 1580, a building was constructed in Heumarkt for the Cologne stock exchange. The aim was to merchants have meeting there for next 150 years. With this building Heumarkt was promoted to a financial market place.

Square became a center of earning money and so artisans and merchants built their houses around it. The house of the mayor Pilgrum Gerhardt (around 1540) was at the Heumarkt. In the 11th century, the archbishop's coin was built at the Heumarkt and in In the 13th century it became a canvas market and later on converted to the meat market.



Map 3.15
Heumarkt 1850



In 1720, the Cologne Council built a new stock exchange in order to organize meeting for sales teams.

In 1757 the first theater was built on the Heumarkt.
From 1843 the market moved temporarily to the Overstolzenhaus.
Between 1844 and 1877 there was a main station for 50 soldiers and 50 prisoners in Heumarkt.

Beginning of the 19th century, the merchant and town councilor “Johann Nepomuk Jacob Lyversberg” brought the largest private art collection to Heumarkt, which was also attended by “Schinkel” and “Schopenhauer”. In 1848 Karl Marx and Friedrich Engels, built their editorial offices in the Heumarkt 65th (Rhenish Newspaper).

On 26 September 1878, citizens of Cologne decided to build a statue of the Prussian King Friedrich Wilhelm III in Heumarkt which till now it’s remained in the square.

By 1885, the Heumarkt became a place to hold the annual Christmas market in the traditional wooden huts. The term “Hötte” (for the wooden huts) coined the phrase “en de Hötte gehe”. Since today the Cologne Christmas Market is being hold in Heumarkt.

Till this time, beside the big buildings appearing and disappearing, rests of the buildings were houses (especially houses for elites). The plots were small, the streets were narrow and in general the location was consisting of small elements in human size. The Heumarkt itself was a complete rectangular square with a central monument in the middle of it. The whole location was one coherent neighborhood.



Image 3.11
Heumarkt 1910
<http://www.bilderbuch-koeln.de>



Image 3.12
Heumarkt 1850
<http://www.bilderbuch-koeln.de>



Image 3.13
Heumarkt 1850
<http://www.bilderbuch-koeln.de>

Image 3.14
Heumarkt 1938
<http://www.bilderbuch-koeln.de>

In 1904, the main market hall was built. The Markthalle was a gigantic structure in a square shape plot. Although it was a giant volume, it was fitting in the surrounding perfectly since the building was in between the finer structure of housing blocks. The only elements that would make this building more special were the two towers.

At the time of the Markthalle the municipality of Cologne made a radical decision. Between 1913 and 1915 they have decided to construct a fixed bridge to replace the old boat bridge. This new bridge was the "Deutze Brücke". There was only one problem. The landing of the new suspension bridge needed space that was not available on the given location. That is when they decided to demolish a complete urban block on the east side of the square to make an entrance for new "Deutz Bridge".

This radical intervention is the scar that we still see today at the Heumarkt. This action was the first step to make Heumarkt less than a complete rectangular and closed square. Nevertheless, this intervention was the start of welcoming traffic to the location.

At the same time on the west side of the square was a breakthrough. Late 1930s, there was in the construction of the east-west axis road, another breakthrough in the direction of the "Neumarkt".

It is clear that the Markthalle only attracts attention because of its small towers and strong pitched roofs at the front side coming from the Rhine over the Deutzer brücke but it does not do anything with the traffic flows other than guiding it city in- and outwards.

The Markthalle is different by its size in relation to the other urban blocks, but does not do anything more than completing the structure of the urban block of which it is part.

The bridge made a controversy. Municipality wanted to Heumarkt becomes a complete square again. So there were a few proposals how to close the gap but none of them was executed.



Map 3.16 (left)
Heumarkt 1935

Map 3.17 (right)
Heumarkt 1938



This issue continued to the time of World War II. The bridge, Markthalle and most of the building in the location were destroyed. Today, still can be seen. The late-Renaissance house “ St. Peter” Heumarkt 77 or a house for alderman and Wine Master William Peter Terlaen of Lennep.

During the reconstruction of Cologne’s Old Town after the Second World War, most of the formerly intensively used space was gradually turned into a grassy area surrounded by streets. A further reorganization took place in the late 1970s, as the Deutz Bridge was widened due to the expansion of light rail way which as the result divided Heumarkt into two pieces.

In the late 1990s, the newly re-designed Heumarkt was ready. On the south side of the square, where Markthalle used to be a parking garage was built with 460 car capacity. The glass entrances of parking were on the edge of the square. In redesigning the square, parking garage was built on southern side while it has been tried to keep the square’s historic character on northern part.

This time for the first time the Heumarkt was literally divided into two parts. One dominated by cars while other one was dominated by history. With parking garage the location started to build up a character of traffic and modern society.

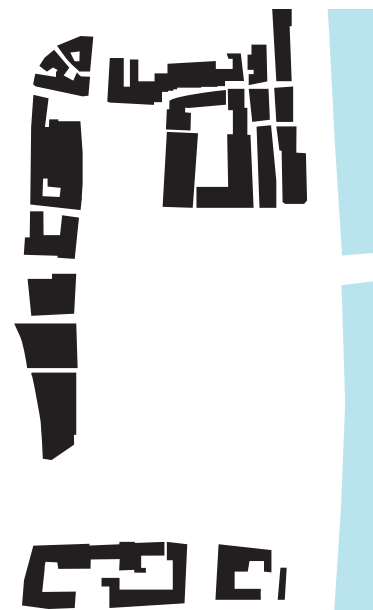
The equestrian statue in the middle of the square was badly damaged in World War II and the remains removed in 1950. In 1990, a partial reproduction cast of Düsseldorf sculptor Raymond Kittl was set up with original parts to make the statue one more time. On 6 October 2009, the monument back on a pedestal.



Image 3.16
Heumarkt 1850
<http://www.bilderbuch-koeln.de>



Image 3.17
Heumarkt 1850
<http://www.bilderbuch-koeln.de>



Map 3.18
Heumarkt 1985

Image 3.18
Heumarkt 1938
<http://www.bilderbuch-koeln.de>

In 1980, Gottfried Böhm designed together with Stefan Schmitz a new plan for the bridgehead to replace the parking garage. The concept of the proposal had one clear goal. For the connection between the Rhine and the Heumarkt, and the connection between the bridge and the tunnel, it was necessary to have a dominant building that would become a new icon for the location.

Gottfried Böhm made a plan that contained three important elements: A hotel, a museum and a tower. At this point, only the hotel (currently the Maritim Hotel) has been realized.

The volume of the museum has the same dimension of one wing of the hotel. This proportion of the museum creates a natural traffic flow. The function of the museum will have a positive effect on the Heumarkt, because of the public functions at the Heumarkt. The volume of the museum in combination with the tower will create a new boundary for the Heumarkt.

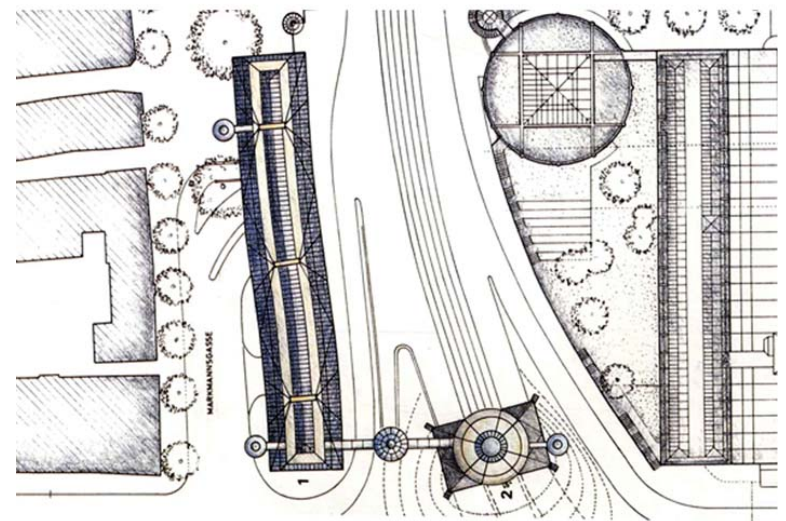
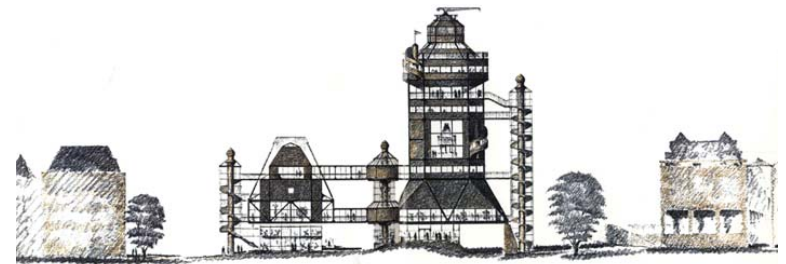
The Heumarkt was, and still is, completely carved up by traffic. The design proposed to retain the present transport routes to knit the area together. The museum should be a large building block, a bit rotated towards the historical building blocks at the north. This rotation in the block helps the flows from the Deutzer Brücke to guide them through the tower. The tower is placed in the middle of the roads and can be seen as an attractive construction that will attract flows. The roads will go below the surface of the Heumarkt at the position of the tower in order to reduce the traffic flows on the square. The Heumarkt will be experienced as an undefined space and will be used as a buffer zone to enter the city.

The part of the design that actually has been built is the hotel, better known as the Maritim Hotel.

The location of the hotel used to be a large parking lot, so the new design had to provide new parking opportunities. The morphology of the hotel is in contrast with the small historical building sizes in its surroundings. The size of the hotel is similar to a complete building block.

The hotel is located at the Heumarkt, filling one of the square's open sides towards the Rhine, and consists of two long drawn wings with a hall of glass in between. The underlying idea is that the ensemble will present itself as a group of houses. The hall between the long blocks is designed to be a public passage. In the two long blocks are hotel rooms and office spaces.

Gottfried Böhm managed to convey the feeling of self-awareness to people, regarding the problems at the Heumarkt. This feeling is evoked through his use of large public spaces and symmetrical forms, like the glaze hall and the big stairways inside the hotel. The contour of the Rhine side of the hotel will represent the historical typology of buildings in front of the Rhine. The building



Map 3.19
Heumarkt 2010

can be entered from two sides. The interesting part is that a small bridge provides access to the public hallway when entering from the Rhine side.

There is a huge conference building attached to the hotel, which has a dynamic shape. Due to the bridge and its flows, the shape of this particular building could not be square; it had to be something dynamic. Böhm designed this shape that follows the contours of the road to soften the transition from bridge to building. This block has a major importance to the guidance of the intense flows of traffic. A long stair will lead to the roof landscape on top of the congress building.

To reduce the traffic flow of cars on the Heumarkt, Böhm designed a tunnel underneath the hotel. This tunnel is connected to the entrance of the large parking space underneath the hotel.

The congress building is round shaped and made of concrete. When entering the city from the Deutzer Brücke the rounded shapes of the congress building will guide the traffic flows to the East-West-axis.

The west side of the Maritim Hotel creates a boundary for the Heumarkt. The scale of the building is too large to cope with some of the separate buildings around the Heumarkt. The human scale, introduced in the building blocks at the Heumarkt, is gone.

There is no connection between the Heumarkt and the hotel. The only connection is the long stairs of the congress building, but nowadays these stairs are closed and people are not allowed to enter them. The manager of the hotel wants to open the stairs in the near future as an experiment to see if the connection will be improved.

It could be said that the Maritim hotel does not work like an entrance to the city. You can hardly see the building from a distance when standing on the bridge. When approaching the building you do not notice that you are approaching a city center. A volume at the other side of the Maritim Hotel, on the location where Böhm planned a museum, is necessary to let the bridgehead function like a gateway to the city.

Today restaurants with outdoor terraces determines the image. For events, concerts and sporting events Heumarkt is used as a gathering point. Close to exit the Deutz Bridge stands the colossal statue of Friedrich Wilhelm III of Prussia.

Lord Mayor Fritz Schramma called the Heumarkt as one of the most beautiful squares in Europe. Even though this is applying to the time that Heumarkt was a hay market. At that time he compared it to St. Mark's Square in Venice.

This is an image from Heumarkt in 2010. While the image of the current square is important to the city, it is a place where few locals visit. It is now serves as a mere backdrop for the day to day life of residents of Cologne... The gap in the boundary of square has interrupted the definition of one large coherent square. The traffic tore it apart into two small squares with a large traffic vein in between.

Heumarkt through history is a remarkable square in Cologne; pioneer, a big market, an elite housing, a busy square (cars or people). Heumarkt truly was a vivid urban square. Nowadays it is becoming just an ordinary square with bars and restaurant. It is about time for Heumarkt to go back to be one of the most beautiful squares once again.



Image 3.19
Heumarkt 1850
<http://www.bilderbuch-koeln.de>

Morphology

Nowadays the separation of the Heumarkt is noticeable. However, only looking at the morphology of the Heumarkt, it still is a rectangular square. Within the surrounding structures, this big square does fit in beautifully. It is surrounded by some smaller squares and has a (visual) connection with the Rhine promenade. What really is striking about the morphology of the Heumarkt is that the difference in building age that is displayed in the facades. The oldest buildings are the small building blocks or lines of buildings, while the newer ones tend to be bigger in scale, with the Maritim Hotel as the largest in the area. The Heumarkt is defined by the buildings, which oddly enough do not all stand in the same line as they jump forward and backwards a little bit. Still this jumping back and forth creates a line of facades which functions as a guiding wall along the square. On the side of the bridge a huge void makes the square float into the Rhine promenade.





Image 3.20
Heumarkt
Cologne
Germany
2011

Materials and Typology

To get an idea what exactly determines the atmosphere of the Heumarkt, it is also necessary to analyze the materials of the facades. The Heumarkt is constructed out of concrete, stones (Slate), steel (Zinc and Aluminum) and some elements of wood. Finally the most important material is stucco. Stucco is a material widely used in the German architecture.

The wide range of using different materials makes a informal atmosphere; an urban space which everyone can feel comfortable in.

Nevertheless this way of using material creates a certain typology that maybe only in Cologne one can see it. War, renovating and way of using materials, tend to imitate old buildings and also the influence of modernism in 20th and 21th century, create a collage of modernistic and old buildings in Cologne.

The typology and the use of elements, such as mix of old and new, pre war buildings with different details and ornaments, make a special decoration for Heumarkt; in a way nostalgic character.

As one moves from northern side of Heumarkt towards the south, the characters of Heumarkt start to disappear from cozy bars, cafes and restaurant to an expression of modern city with big streets and lots of traffic. At a certain point, the traffic flows cut into the building blocks in such a way that two special islands are created between these flows. The different flows form an invisible wall that visually and sensitively separates the Heumarkt into two squares; one in the North and one in the South. Heumarkt South is a variation of the tangled structure of roads in the middle, whereas Heumarkt North has all the typical looks and feelings bound to be present at every good working public square.

This transformation is so smooth that make the square an appealing urban place.

In this perspective typology, disclosure, arrangement, materials and other aspects are reasons that make the Heumarkt the way it is nowadays.





Image 3.21
Heumarkt
Cologne
2011

Atmosphere and Expression Heumarkt

The authentic feeling of a public space at Heumarkt South is created by multiple parameters. Most importantly is the green that is present at the square, combined with the street furniture. Combining trees, benches, terraces and lanterns creates a welcoming gesture.

But Heumarkt South is a truly irrational collection of roads. Contrasting to this confusion stands the openness of Heumarkt North. All of the roads and alleys are easily accessible. Some of them are only to be entered by bicyclists or pedestrians. They might have one or two entrances for automobilists.

These small roads with their authentic street tiles and narrow spaces between the surrounding building volumes are a fun labyrinth. Every street has its own special view and a surprise around each corner.

Colorful buildings with diversity in traditional and more modern building styles define the square. At the same time these colors and collage of styles, refer to feelings of happiness and childlike optimism. Also the feasts such as carnival and Christmas market introduce a unique face for this part of Cologne.

Small square connected to Heumarkt North is typical for Cologne which dares its inhabitants and visitors to discover its cultural, social and architectural treasures. There are a lot of spaces to be found walking around. Good example is the small square connected to the Heumarkt North. This square connects the large/scaled Heumarkt with the location where the "Jewish Museum" will be built as designed by Wandel, Hofer, Lorch and Hirsch. This kind of erupts from the Heumarkt but has a totally different atmosphere. The typical elements forming this space are one again, the greenery, but also the little poles, the different stones and the wall of houses next to this small square. Beside from the small squares that surprise people in the most unexpected parts of Cologne, there are also more hidden spaces like this. Next to the Heumarkt, for example, there are a few building blocks that contain an inner courtyard. These courtyards are semi-public as they are less accessible in comparison with other parts of Cologne that are sometimes even over-accessible.

The courtyard displayed at the page on the right is called the Ostermannplatz. Another example of a courtyard is the Eisenmarkt. Typical elements in these courtyards are often the trees and other elements intended for greenery. Most important however are the absence of (moving) cars and the inclusion of the space by the buildings surrounding it.





3.5

*Der Masterplan für Köln by
Albert Speer*

Conclusion - Plans of Speer

There is master plan of Cologne by “Albert Speer”, designed in 2008 and it is decided to execute it. There is also plan made for the Heumarkt. In this plan Speer makes several statements about the current situation in the Heumarkt which he wants to address, which he made clear in illustrations of a new master plan shown on the right page.

Speer accepts the traffic flow from the East-West axes, but he does mention that the traffic situation in the South part of the Heumarkt needs to be changed and reduces to a bare minimum. Speer also addresses the separation between North and South. He wants to create the feeling of the Heumarkt as a whole again by using the same materialization in the North and South part of the square. Also a line of trees from North to South should help recreate a visual square.

Scheme 3.5

*Analysis Heumarkt by Albert
Speer*

Scheme 3.6

(left)

*Current situation Heumarkt by
Albert Speer*

After analyzing the current situation of the Heumarkt it has become clear that the Heumarkt has different qualities. On one hand it comes together by means of typology. On the other hand the Heumarkt falls apart by means of atmosphere, created mainly by the strong presence of the traffic flows. The situation in and around the Heumarkt is truly a reflection of Cologne as a city. It is a collage of people, functions and buildings connected by a spider web of traffic. Albert Speer has already designed a master plan for the Heumarkt. In this master plan the focus lies on connecting the Heumarkt as a complete rectangular square, as discussed in the previous paragraph. This plan adds a volume, a design for a “Duftmuseum”, that functions as a puzzle piece completing the Heumarkt and at the same time functioning as a bridge head.

Preferably the traffic would be deranged by a tunnel. However, the analysis also created a second plausible option for a Heumarkt master plan. Creating two public spaces with a different atmosphere can still make the Heumarkt one large public space. In this option however, the traffic is chosen as a strong line of division between North and South.

This tension between these two options is noticeable in the image that Albert Speer made, and that is shown next to this text. The southern and northern part, have different hatches for a reason.

The requirements for the new proposal is to find a solution for the Heumarkt. It means whether it must connect as if square again or accept the fragmentation.





3-5 Bridge^{3.6}

3.6

In this part of chapter some information from the chapters 6 "Bridgehead" by Yuri Buteijn and Rik van den Elzen and chapter 8 "Heumarkt" by Robin Aerts, Xaviera Burón Klose, Faye Hermens in the booklet "METROPOLITAN ENSEMBLE: ANALYSIS OF COLOGNE" made by the students of graduation studio "Metropolitan Ensemble" has been summarized and used with combining conclusions of current writer.

The Rhine River divides the city of Cologne into two parts. Those parts are connected through seven bridges which one of them is 'Deutzer Brücke'. This bridge has a rich history. From a boat-bridge it changed to a suspension bridge and finally to a steel-concrete-bridge. With a traffic flow of approximately 300.000 cars each day, the Deutzer Brücke is the most important bridge to enter the city of Cologne. The current bridgehead on the left riverbank of the Rhine at the Heumarkt consists of the Maritim Hotel and an empty parcel. The location of the Maritim Hotel and the empty parcel in relation to the bridge is an important element to the entrance of Cologne. It is typical for Cologne that the bridges always receive by a public space next to a landmark.

The Deutzer Brücke

Cologne has a rich history of bridges dating back to the roman time.

There were plans to replace the old boat-bridge between Cologne and Deutz with a fixed bridge from 1822 till 1881 but no plans were executed between 1880 and 1890. Finally in early 1990s Deutzer Hängebrücke was constructed as an anchored fake suspension bridge because of the unfavorable ground ratio at both embankments. In 1913 till 1915 Deutzer brücke was praised in terms of its harmonic and elegant shape. The bridge was made completely out of steel, excluding the supports, and had its full focus on the architectonic expression of the construction. It was an early example of the abolition in the 19th century introducing separation of architecture and engineering.

The Deutzer Hängebrücke was bombed during the second World War and the plans to rebuilt it set the mark for a new period in the technology for the construction of bridges. Because of the shortage of raw materials in the post war period, the bridge was rebuilt in 1947 - 1948 using new techniques. With the use of the smallest dimensions possible, the new bridge looks elegant while maintaining the same ratio in crossing the Rhine as the Deutzer Brücke.

Image 3.22

1920 The Deutzer

Hängebrücke

www.bilderbuch-koeln.de

Image 3.23

1950 The Deutzer Brücke

www.koelninside.de



Bridge in the locations

Although the Rhine promenade is an important part of Cologne, a vivid and lively city, it is in contrast by being really calm and quiet which makes it a unique place within the city. This park-like feeling is enhanced by the presence of a generous amount of trees and the wide green strips. The Rhine assures the presence of water, what enhances the calm atmosphere.

Cologne is never far away, not even at the Rhine Promenade. Contrasting the trees and other recreational street furniture, there are still a lot of urban elements that make sure visitors never forget their surroundings.

The bridge leading towards the Cathedral, as well as the Cathedral itself, are visible when walking over the promenade. And the houses of Altstadt North haven a link to the buildings at the Heumarkt by means of their roof landscape.

Connection Rhine promenade and Deutze brücke The green accompanying persons enjoying the Rhine Promenade stops quit abrupt at the Deutze brücke. The Rhine naturally continues its way while the promenade tries a different format going on South.

There is a very typical atmosphere at this collision of the greener part of the promenade, the bridge, the open area between Rhine and Heumarkt and the other end of the Rhine Promenade. This open space underneath the bridge fortunately is not a dark place inviting wanderers or junks.

Quite the contrary, it is a slightly cosy space, which gives a secure feeling for the few minutes passing true it.

Connection Deutze brücke and East-West axe Landing from the sky, the Deutze brücke splits the Heumarkt into two parts. Especially because the busy roads and tram line continue their way forming the East-West axe, this effect is enhanced. The open space between the Heumarkt and the Rhine Promenade is like a public shelter because of the gigantic wall created by the landing of the bridge.

This protective atmosphere is enhanced by the presence of tress and other greenery.



3-6 Bridgehead^{3.7}

3.7

This part of current chapter is taken from chapter 6 “Bridgehead” by Yuri Buteijn and Rik van den Elzen in the booklet “METROPOLITAN ENSEMBLE: ANALYSIS OF COLOGNE” made by the students of graduation studio “Metropolitan Ensemble” This part is summarized. the Drawing and Maps are exactly the same by Yuri Buteijn and Rik van den Elzen.

As it have been explained in last part, ‘Deutzer Brücke’ has always been an strategic point to enter the city.

Through history of last century there were various designs to represent Cologne while people entering it.

This part shows the different strategies that have been proposed in last centuries.



The “Markthalle” was built before the construction of the Deutzer brücke. At the time of the Markthalle and the boat bridge was providing a connection from Deutz to the Heumarkt at Cologne. The Markthalle was a gigantic structure surrounded by urban blocks. Although it was a giant volume in between the finer structure of housing blocks, it did not feel that large. This was mainly because it tried, in a visual way, to present itself as one of the other blocks by putting multiple pitched roofs on top of it. At the time of the Markthalle the municipality of Cologne made a radical decision. Between 1913 and 1915 they have decided to construct a fixed bridge to replace the old boat bridge. This new bridge was the Deutze brücke. There was only one problem. The landing of the new suspension bridge needed space that was not available on the given location. That is when they decided to demolish a complete historical urban block, just to make room for the landing of the bridge.

This radical intervention is the scar that we still see today at the Heumarkt. That action changed the future of the Heumarkt irreversibly. What seemed as a nice impulse to the city at that time grew to an infrastructural vein which processes over 300.000 cars a day in the current time.

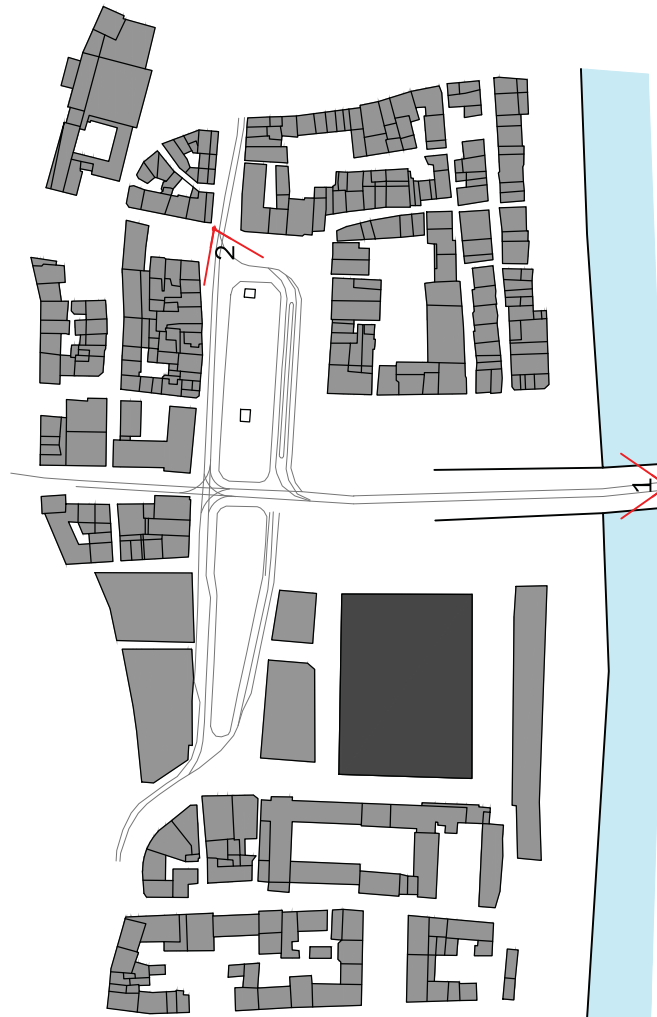
The changed situation regarding the Markthalle did not influence the traffic in an active way. The Markthalle was guiding the traffic at most. It was just a part of a wall made out of urban blocks and did not stand out in any way.

It is clear that the Markthalle only attracts attention because of its small towers and strong pitched roofs at the front side coming from the Rhine over the Deutzer brücke but it does not do anything with the traffic flows other than guiding it city in- and outwards.

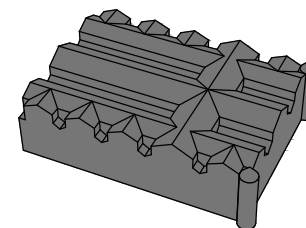
The gap in the boundary and the definition of one large coherent square is completely gone. The traffic tore it apart into two small squares with a large traffic vein in between.

The Markthalle is different by its size in relation to the other urban blocks, but does not do anything more than completing the structure of the urban block of which it is part.

Its size and the visual breakdown of the front into a central part and two wings, make it stand out a bit more than the other buildings. It gives importance to it and works guiding for pedestrians to enter the building at the central part of the building facade.



Scheme 3.8
1921 Map and isometric view
Markthalle by Otto Müller-Jena
and



Scheme 3.9
Perspective view Markthalle
seen from the Heumarkt

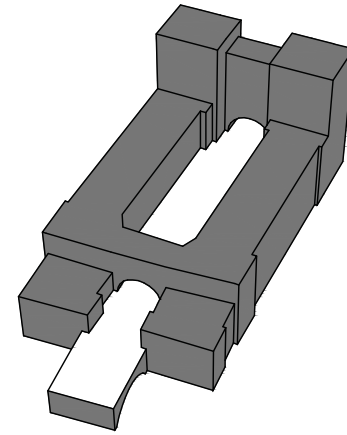
Because of social aspects and need to close down the gap between Rhine and Heumarkt, some plans were developed which none of them has been executed.

Fritz Schumacher and Georg Falck made three plans in 1924 and 1925 with skyscrapers. The idea was to take a business core and to translate that into a building. That is the reason high-rise buildings were popular. Many people thought this would be great for Cologne, but the urban structure of the city cannot cope with a skyscraper.

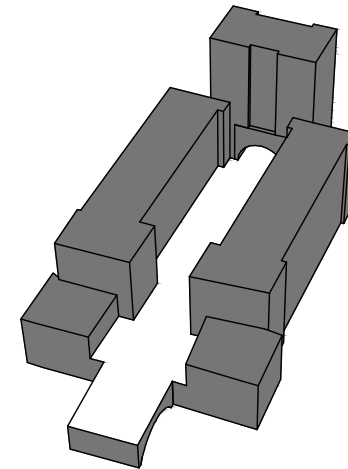
The second design was an alternative version of the previous one. It looks the same approach in many ways and tries to comply with the same set of parameters and the same end result. This time the building is only connected at the side of the Heumarkt.

The third design was the most straightforward approach in closing the gap between the Heumarkt and Rhine. It is a massive and solid structure with an almost fortress like appearance. This volume had no links whatsoever with its surroundings. The only boundaries can be found at the Rhine and Heumarkt side.

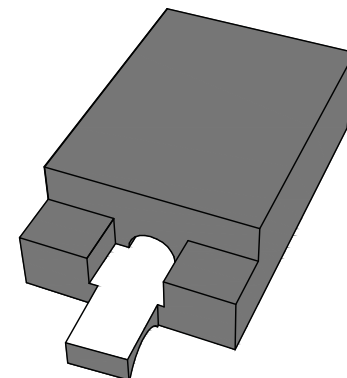
Scheme 3.10
First Design



Scheme 3.11
Second Design



Scheme 3.12
Third Design



Also Wilhelm Riphahn designed three alternatives.

The three proposals for the new bridgehead were made in different periods of time. The first two proposals react on the proposal of Fritz Schumacher for a new bridgehead. The last proposal is made right after the Second World War, in cooperation with Rudolf Schwarz.

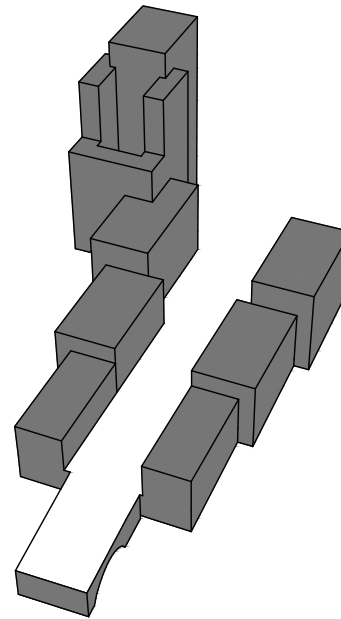
In 1925, he designed a block to intergrade bridge and the road. They work together, and they cannot be seen separately.

In 1926, he made his second design. This proposal was very minimalistic and less dramatic compared to his previous design. Riphahn tried to understand the qualities of the location and the connection with the Heumarkt. With this new design Riphahn also wanted to take the future into account. The new design should not stroke with the romantic medieval Rhine facades anymore, but would represent the future of Cologne for at least the first ten years. This location will be representing the future of Cologne so the design must have an important expression. Especially because the location was one of the most important entrances of the city.

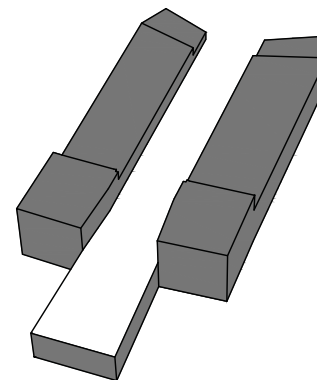
On 1947, he developed another design. It was the time that Cologne was bombed during the Second World War and most part of city was destroyed. Riphahn saw this as an opportunity to give the city some rearrangements of infrastructure and buildings.

Together with Rudolf Schwarz, Riphahn made a third proposal for a new bridgehead. The upcoming high-rise building was not a hot item anymore in this period. Riphahn was again dealing with the Heumarkt in this proposal, searching for new ways to complete the boundaries of the Heumarkt.

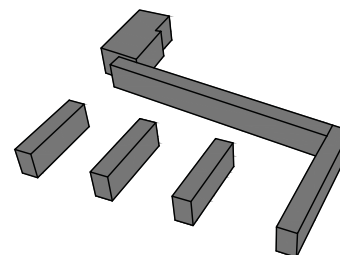
They did research to the possibilities of a new bridgehead. Rudolf Schwarz made a new infrastructural design for the East-West-axis. That will be the most important entrance to the city, and the connection between the right Rhine side and the left Rhine side of the city. It would be a connection between the Innerstadt and Deutz. This would give a positive impulse to the development of the left Rhine side of Cologne.



Scheme 3.13
First Design



Scheme 3.14
Second Design



Scheme 3.15
Third Design



*Scheme 3.16
1980 Map and isometric view
museum by Gottfried Böhm
and Stefan Schmitz*

*Scheme 3.17 and 3.18
Perspective view
seen from the Heumarkt*

None one the plans that are mentioned in last pages were realized. In 1980 Gottfried Böhm designed together with Stefan Schmitz a new plan for the bridgehead. The concept of the proposal had one clear goal. For the connection between the Rhine and the Heumarkt, and the connection between the bridge and the tunnel, it was necessary to have a dominant building that would become a new icon for the location.

Gottfried Böhm made a plan that contained three important elements: A hotel, a museum and a tower. At this point, only the hotel (currently the Maritim Hotel) has been realized.

The volume of the museum has the same dimension of one wing of the hotel. This proportion of the museum creates a natural traffic flow. The function of the museum will have a positive effect on the Heumarkt, because of the public functions at the Heumarkt. The volume of the museum in combination with the tower will create a new boundary for the Heumarkt.

The Heumarkt was, and still is, completely carved up by traffic. The design proposed to retain the present transport routes to knit the area together. The museum should be a large building block, a bit rotated towards the historical building blocks at the north. This rotation in the block helps the flows from the Deutzer Brücke to guide them through the tower. The tower is placed in the middle of the roads and can be seen as an attractive construction that will attract flows. The roads will go below the surface of the Heumarkt at the position of the tower in order to reduce the traffic flows on the square. The Heumarkt will be experienced as an undefined space and will be used as a buffer zone to enter the city.

The part of the design that actually has been built is the hotel, better known as the Maritim Hotel.

The location of the hotel used to be a large parking lot, so the new design had to provide new parking opportunities. The morphology of the hotel is in contrast with the small historical building sizes in its surroundings. The size of the hotel is similar to a complete building block.

The hotel is located at the Heumarkt, filling one of the square's open sides towards the Rhine, and consists of two long drawn wings with a hall of glass in between. The underlying idea is that the ensemble will present itself as a group of houses. The hall between the long blocks is designed to be a public passage. In the two long blocks are hotel rooms and office spaces.

Gottfried Böhm managed to convey the feeling of self-awareness to people, regarding the problems at the Heumarkt. This feeling is evoked through his use of large public spaces and symmetrical forms, like the glaze hall and the big stairways inside the hotel. The contour of the Rhine side of the hotel will represent the historical typology of buildings in front of the Rhine. The building

can be entered from two sides. The interesting part is that a small bridge provides access to the public hallway when entering from the Rhine side.

There is a huge conference building attached to the hotel, which has a dynamic shape. Due to the bridge and its flows, the shape of this particular building could not be square, it had to be something dynamic. Böhm designed this shape that follows the contours of the road to soften the transition from bridge to building. This block has a major importance to the guidance of the intense flows of traffic. A long stair will lead to the roof landscape on top of the congress building.

To reduce the traffic flow of cars on the Heumarkt, Böhm designed a tunnel underneath the hotel. This tunnel is connected to the entrance of the large parking space underneath the hotel.

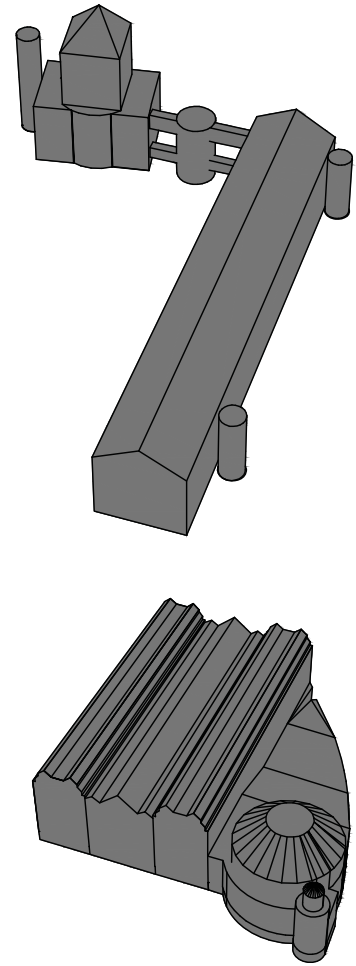
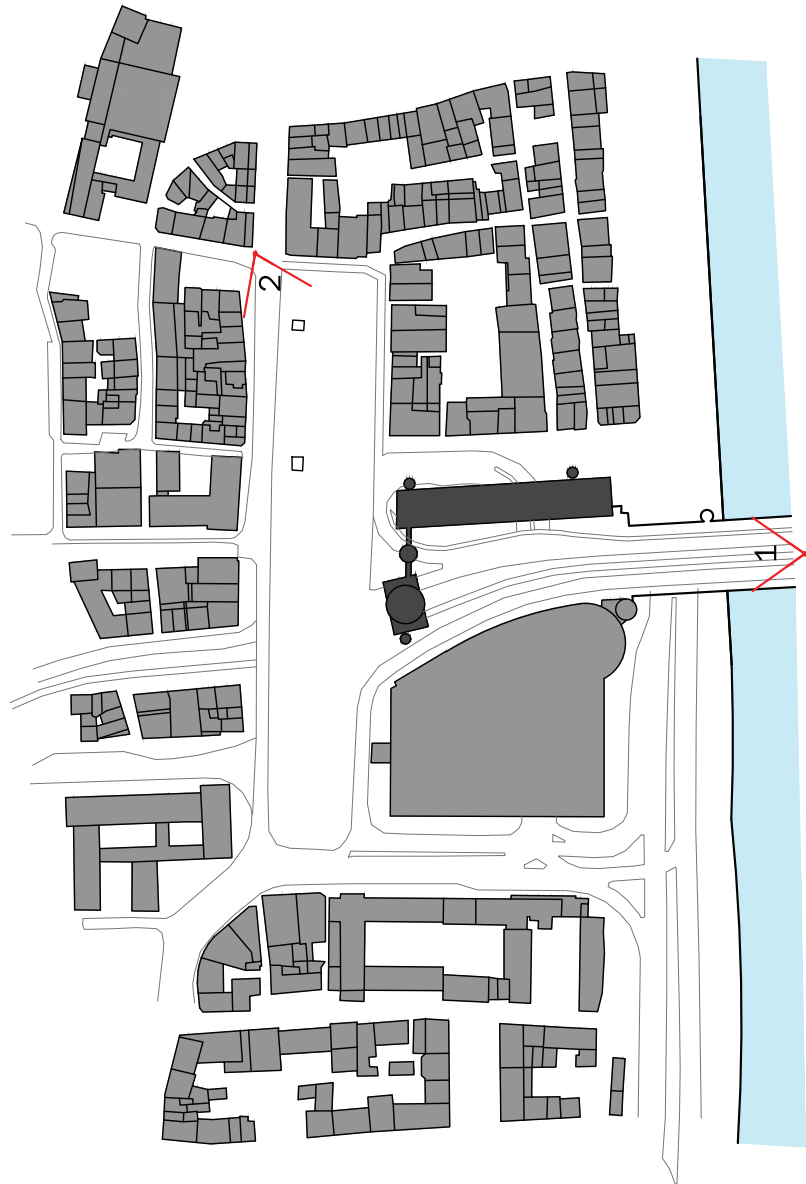
The congress building is round shaped and made of concrete. When entering the city from the Deutzer Brücke the rounded shapes of the congress building will guide the traffic flows to the East-West-axis.

The west side of the Maritim Hotel creates a boundary for the Heumarkt. The scale of the building is too large to cope with some of the separate buildings around the Heumarkt. The human scale, introduced in the building blocks at the Heumarkt, is gone.

There is no connection between the Heumarkt and the hotel. The only connection is the long stairs of the congress building, but nowadays these stairs are closed and people are not allowed to enter them. The manager of the hotel wants to open the stairs in the near future as an experiment to see if the connection will be improved.

It could be said that the Maritim hotel does not work like an entrance to the city. You can hardly see the building from a distance when standing on the bridge. When approaching the building you do not notice that you are approaching a city center. A volume at the other side of the Maritim Hotel, on the location where Böhm planned a museum, is necessary to let the bridgehead function like a gateway to the city.





Scheme 3.19
1998 Map and isometric view
Duftmuseum by LPS+F

But it not the end of story. In 1998 there was a new proposal for a museum on the other side of Hotel.

The Duftmuseum, designed by Lorber Paul Schneider + Fuhrmann, had to become a museum of the senses. Not only for odors but also visual, touchable and auditory. The program includes a historic odor department, an odor garden, and an orangery including odor plants, an odor cinema and an odor canal.

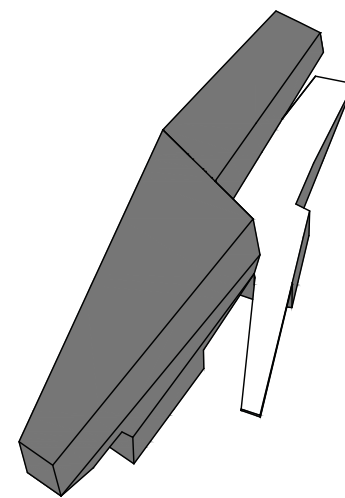
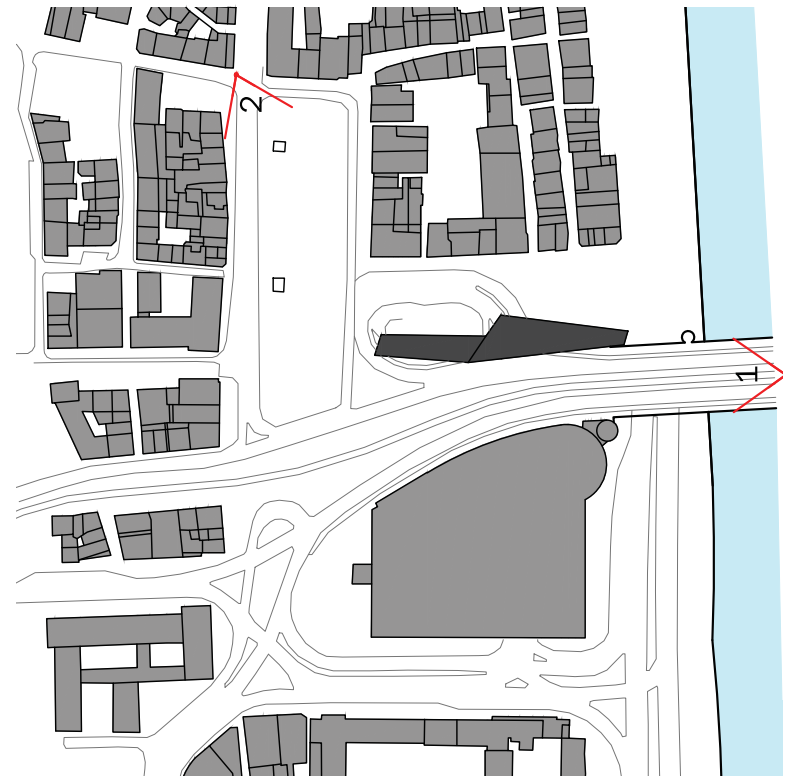
The shape of the Duftmuseum came forth out of several factors. They wanted to make a gesture towards the traffic by shaping the building in the direction of the bridge landing. The shape was also inspired on fragrance vials. The museum had to make a transition between the Heumarkt and the traffic of the Deutzer Brücke. The shape is guiding the traffic from the Deutzer Brücke into the city and it works as a tunnel for traffic leaving the city. Traffic moving from Cologne to Deutz are received by the shape of the museum in cooperation with the shape of the Maritim Hotel across the street and then guided onto the Deutzer Brücke. Raising the museum easily solved the problematic of the traffic flows going underneath the bridge and museum. This was conceptual a nice solution, by putting it on legs it is floating, just like an odor.

The volume is long and small and stands out because of its shape, which is totally different from all the other buildings in the surroundings. In the floor plan it almost looks like an arrow pointing towards the Rhine.

Although it is a new kind of typology, it still has some reference to the direct environment. The height of the museum does not exceed the current building height and it is less tall then the Maritim Hotel. The head of the building on the Rhine and Heumarkt side both seem to complete the line which can be drawn between the Maritim Hotel and the urban blocks on the North.

The building is smaller on the Heumarkt side but compensates it with a ramp for pedestrians leading from the Heumarkt to the museum entrance.

The design was accepted by municipality to be built but because of financial problems it is not realized yet.



Scheme 3.20
Perspective view
seen from the Heumarkt

The current time is the Master Plan designed by Albert Speer in 2008.

His vision was to put a volume on the undeveloped land next to the Deutzer Brücke between the Heumarkt and Rhine.

He did not go into detail regarding the shape, ornaments or function of this volume. The only thing mentioned is that the building should copy the finer structure of the old urban block. These drawings are nothing more than an interpretation of his vision, bound by the rules set by the municipality of Cologne.

The volume should not be higher than the existing building blocks and the shape of the volume comes straight out of the master plan from Speer. This shape is remarkable. Remarkable because in all the other proposals of impulses in his vision for Cologne, straight and simple volumes are drawn to help improve the situation. This volume has a bit more detail in terms of morphology.

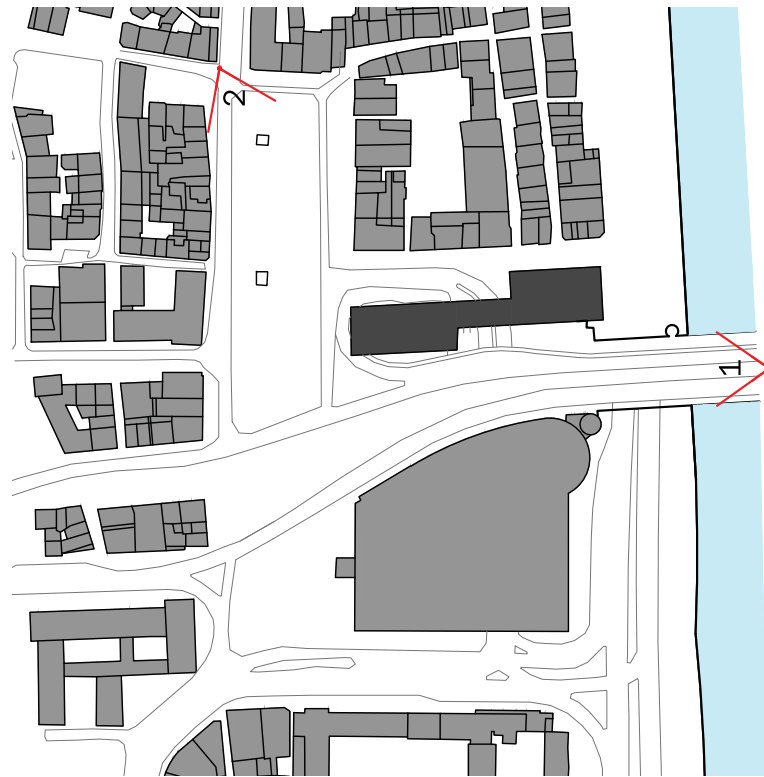
The block seems to be formed according to the traffic flows and can be split up into three blocks. Two head sections to guide the traffic flows and a midsection over the existing road leading into the tunnel beneath the Maritim Hotel.

The first block as seen from the Rhine side creates a small passage from the Rhine promenade to the Heumarkt and clearly provides room for the landing of the Deutzer Brücke.

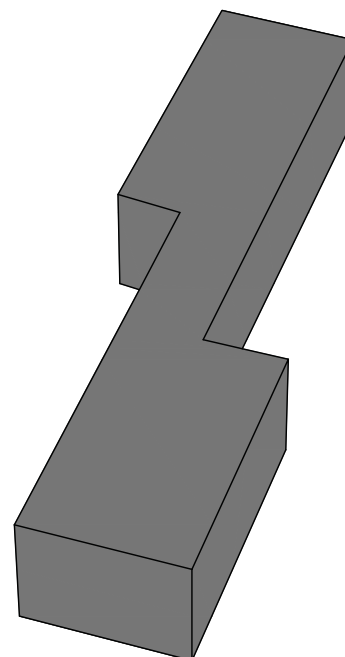
The block on the other side, which interacts with the Heumarkt, is the other way around. It provides more space between the old urban blocks at the Heumarkt and the volume, and seems to push the traffic on the other side of the volume away from the Heumarkt. This plan does nothing to change the current traffic situation. But unlike the Duftmuseum it is a bit more active towards the traffic. If you want to drive into the tunnel underneath the Maritim Hotel, you really have to evade and drive around the volume.

The block in between is nothing more than a bridge between the head and the tail.

The entire volume has a reference to the direct environment by taking over lines of the old urban blocks. The volume is in line with the existing boundaries at the Heumarkt and at the Rhine promenade.



Scheme 3.21
2008 Map and isometric view
Masterplan by Albert Speer



Scheme 3.22
Perspective view
seen from the Heumarkt

Image 3.25
Deutz Bridge
Cologne

Conclusion

Buildings can guide or receive traffic flows. The morphology of buildings is one of the most dominant aspects to guide or receive traffic flows. This is further enhanced by the appearance of the facade in terms of window placement, ornaments and horizontal or vertical orientation.

The Markthalle, and the Maritim Hotel in the current situation, have shown that the use of rounded corners help to form a better transition between the building and the traffic flows, guiding it around the corner.

Typical for Cologne are the bridges that are always received by a public space next to a landmark.

In result, the requirements for the new proposal is that the building should be so significant to be a gate and a public space and welcome people to Cologne.





3-7 Maritim Hotel

Image 3.26
Maritim Hotel
Cologne
1994

<http://www.bilderbuch-koeln.de>

Throughout the centuries, the bridgehead was an important element of entering a city in many countries all over the world. Especially in the history of mankind bridgeheads used to be strategic places where infrastructural flows and important military positions merged. A bridgehead is one of the most important places to cross a river and enter a city. The bridgehead used to be an important and crucial point for trading routes. Nowadays the military position of the bridgehead is not that important anymore, but it still defines the transition in entering a city and it still serves an economic purpose. Although the function of the bridgehead changed throughout the years, it remains to serve a unique role in entering the urban environment over water. These changes ask for a different attitude of architecture regarding bridgeheads.

There is a large amount of traffic which influences the environment and the expression of it.

That is why the Maritim Hotel is quite separated from the city centre whereas the hotel has also a public shopping arcade in the middle of the building. The Maritim Hotel also plays an important part during the Carnival period in Cologne.

Carnival is always celebrated at the Heumarkt, but also in the conference room of the hotel. Furthermore there is a gap at the North side of the Deutzer Brücke which is currently dominated by traffic. The municipality would like to complete this gap placing a building in the future. All these things are good starting points to investigate what is happening and what impact these facts have on the environment.

The Maritim Hotel is almost completely built up of stones which are especially gained nearby the city of Cologne.



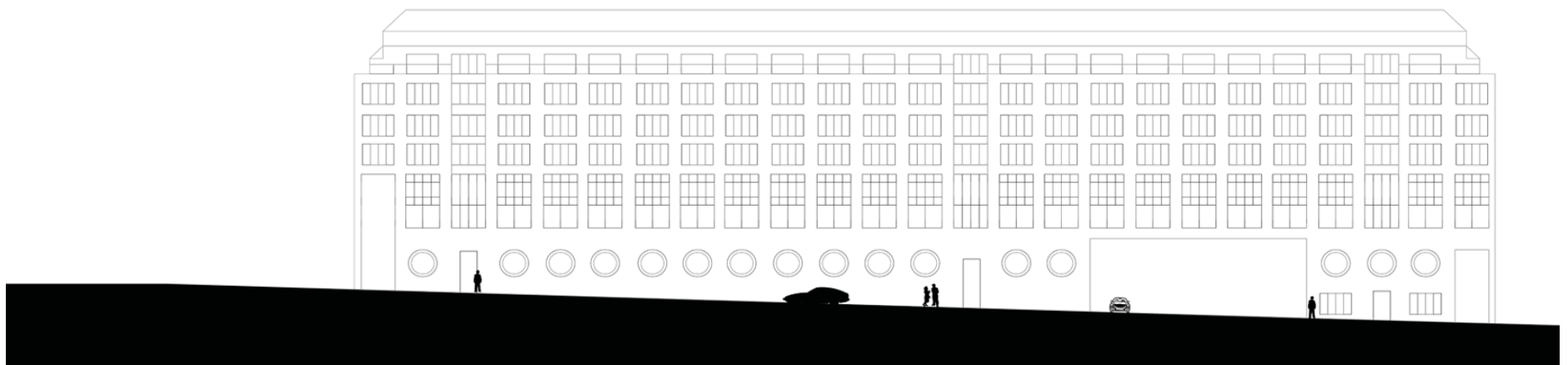


Existing Elevations



Scheme 3.23
North Elevation

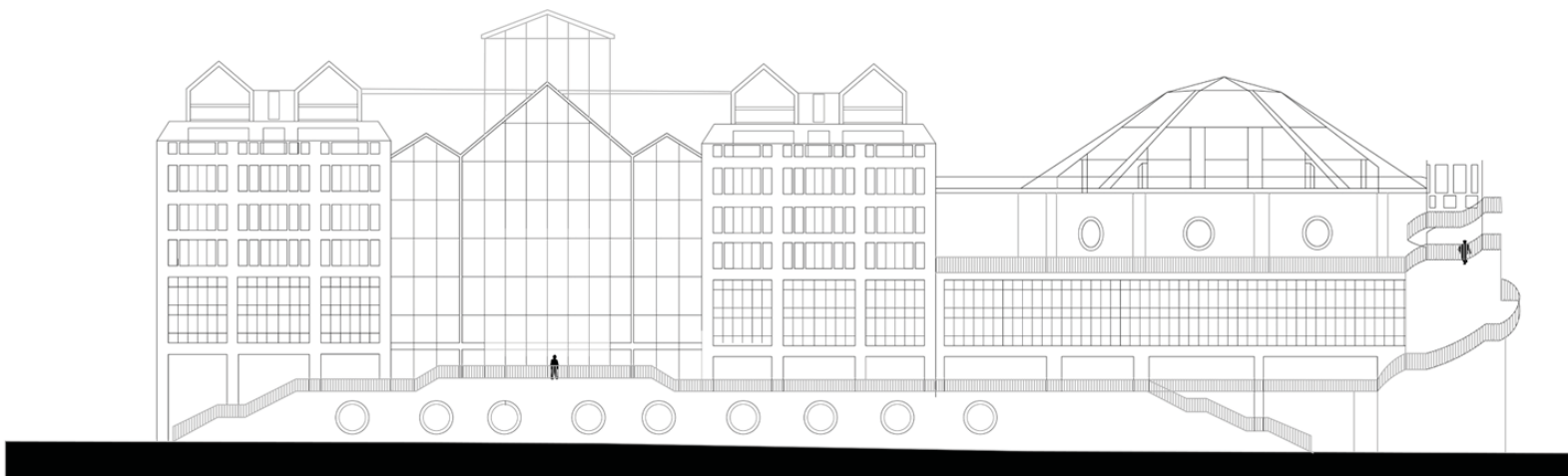
Scheme 3.24
South Elevation





Scheme 3.25
West Elevation

75



Scheme 3.26
East Elevation

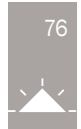
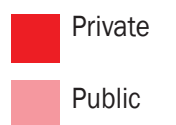
Accessibility to Functions

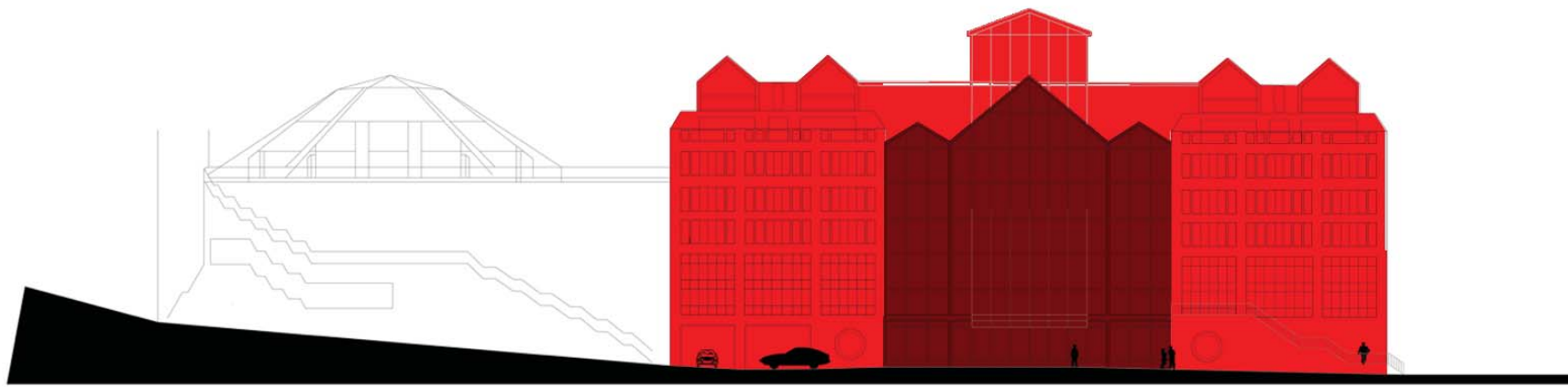


Scheme 3..27
North Elevation

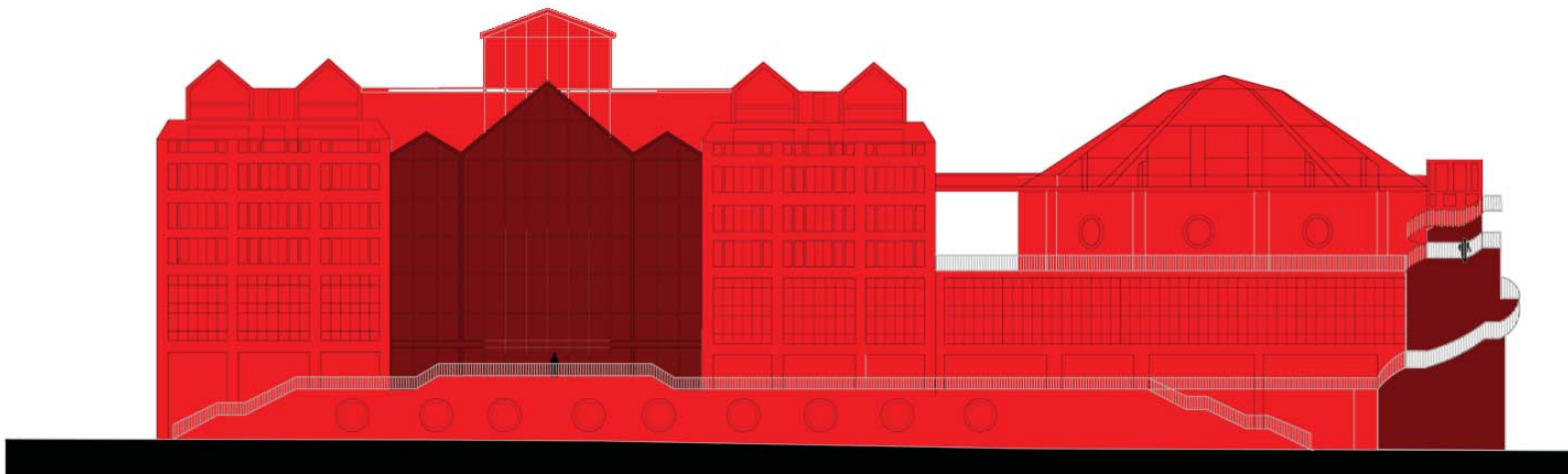


Scheme 3..28
South Elevation





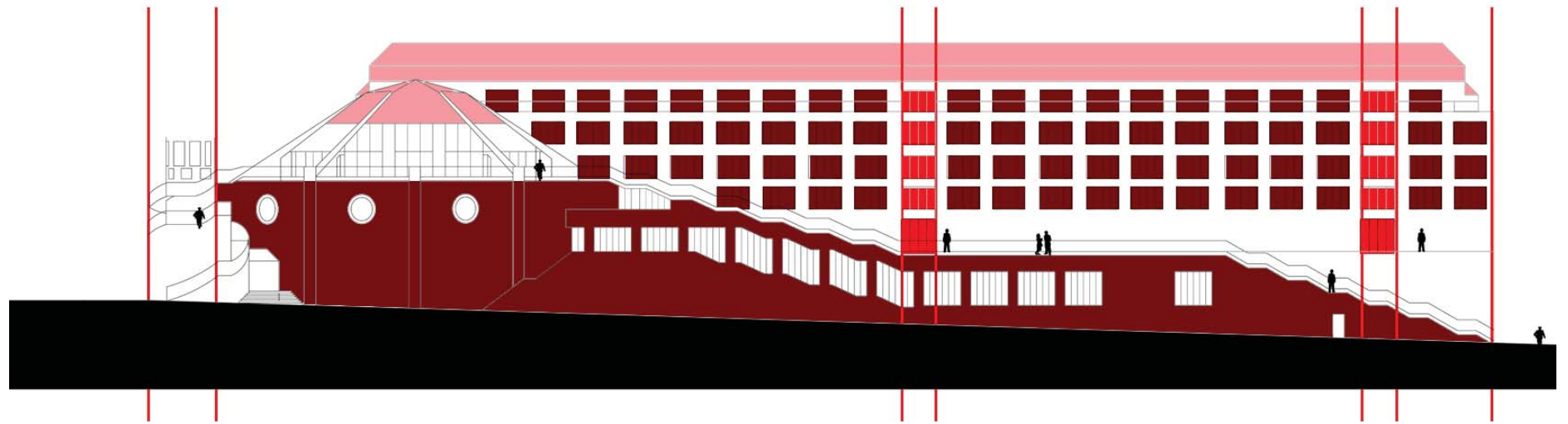
Scheme 3..29
West Elevation



Scheme 3..30
East Elevation

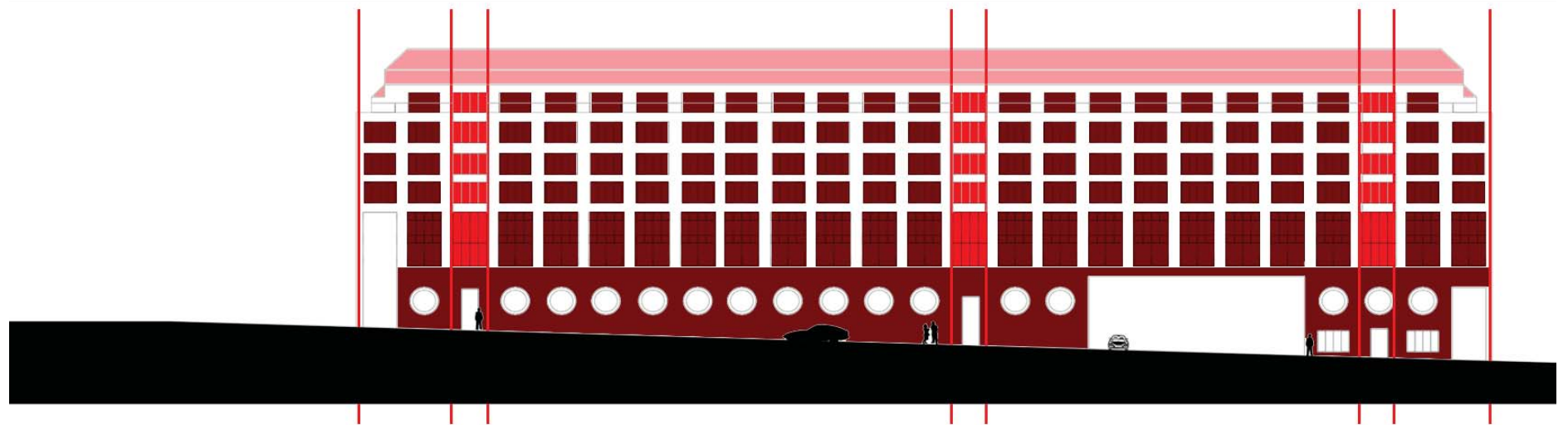
- Semi - Public
- Private
- Public

Arrangement



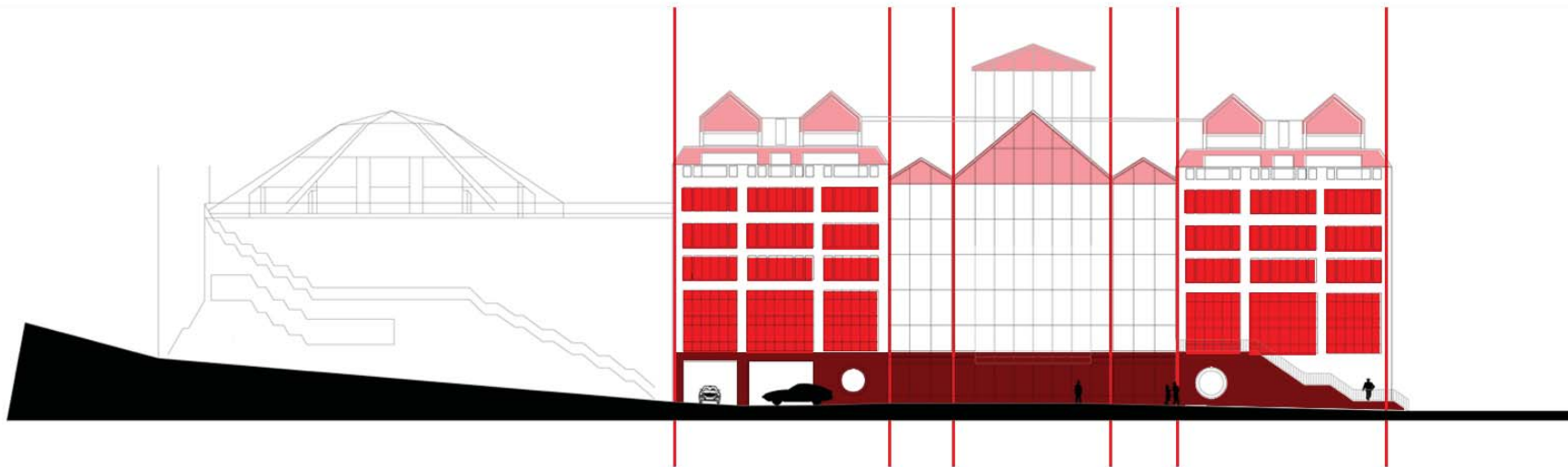
Scheme 3..31
North Elevation

78

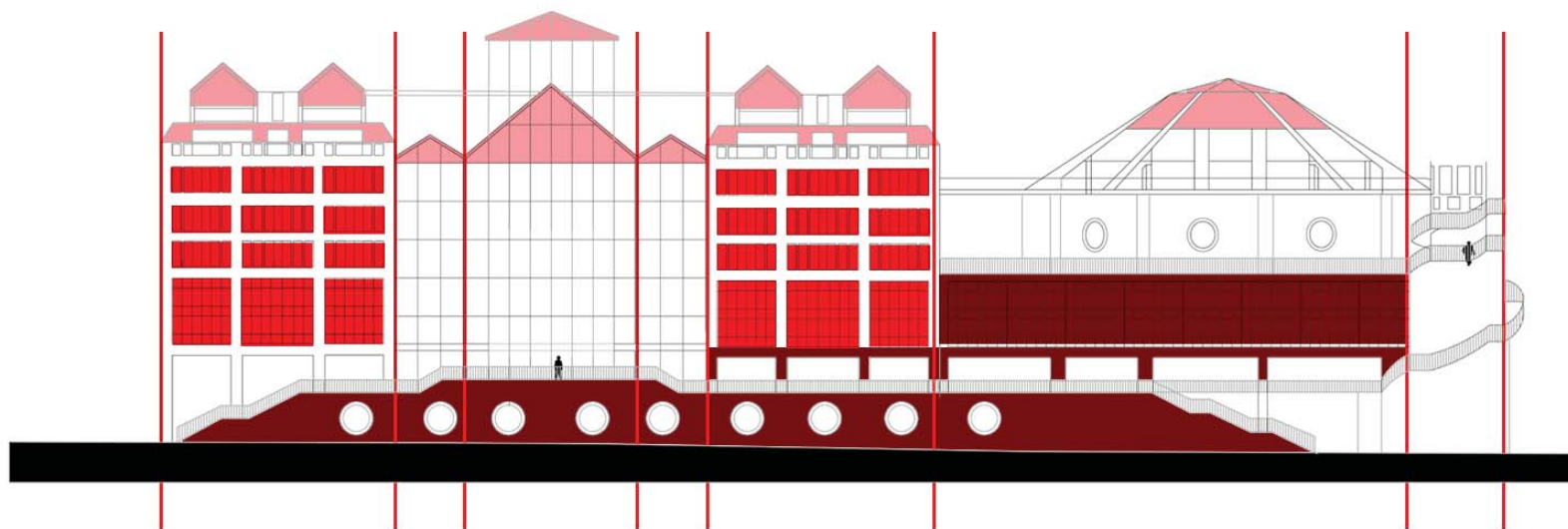


Scheme 3..32
South Elevation




- Vertical Alignment
- Horizontal Alignment
- Roof scape



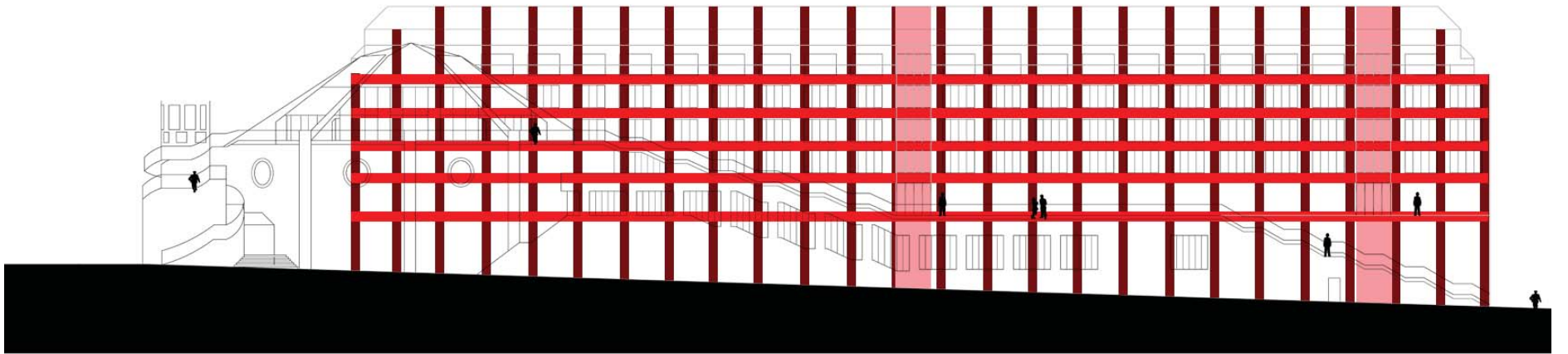
Scheme 3..33
West Elevation



Scheme 3..34
East Elevation

-  Vertical Alignment
-  Horizontal Alignment
-  Roof scape

Structure of Facade



80

Scheme 3..35
North Elevation



Scheme 3..36
South Elevation

- Vertical Structure
- Horizontal Structure
- Stability Element



Scheme 3..37
West Elevation

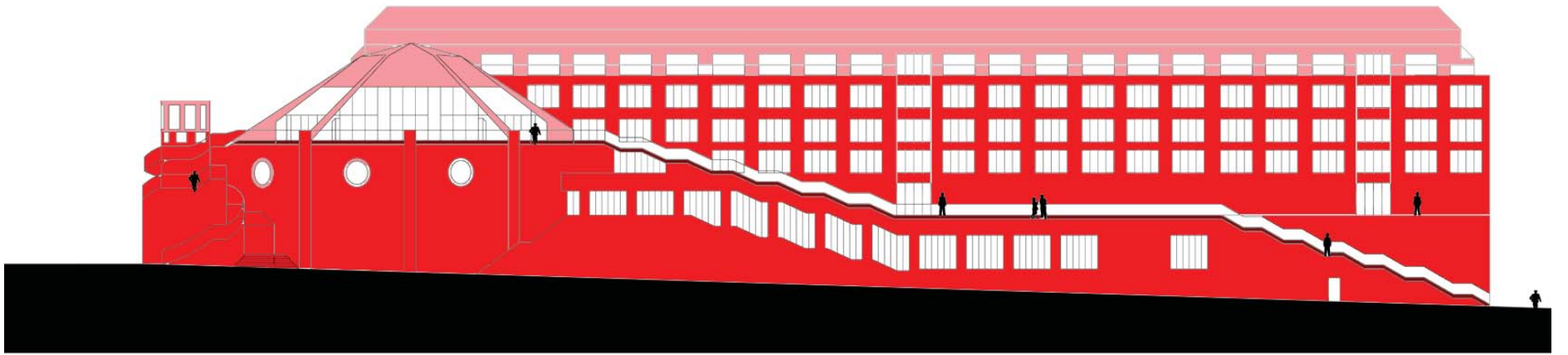
81



Scheme 3..38
East Elevation

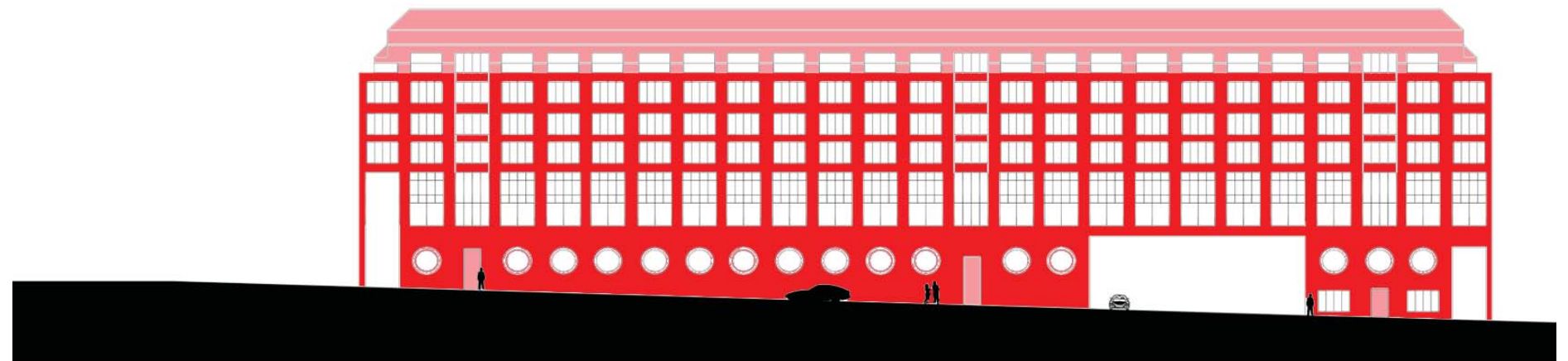
- Vertical Structure
- Horizontal Structure
- Stability Element

Material of Facade



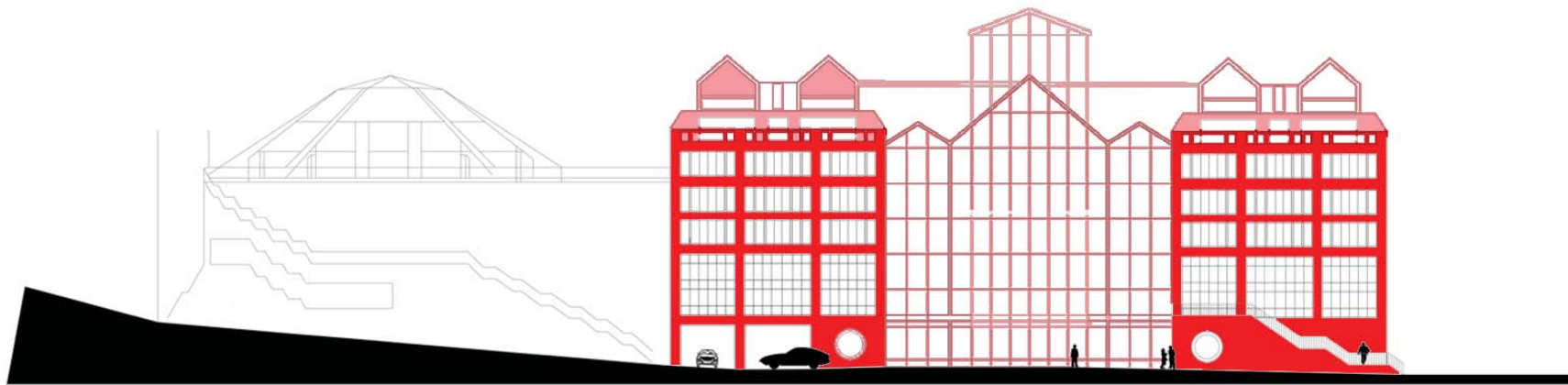
Scheme 3..39
North Elevation

82



Scheme 3..40
South Elevation





Scheme 3..41
West Elevation

83



Scheme 3..42
East Elevation



Scheme 3..43
Exploded view to the building

Functions

The most noticeable point in the function, is the fact that the most public space are on the first floor.

The city represent the most public place in the physical environment. If one wants to create a public building, the point that building and city touch each other, must be as public as possible.

As Maritim wants to present itself as a public atrium, it has push its public space to an unreachable and invisible location.

In order for the building become public, it is necessary to change the order of the functions.

Hotel Rooms



Shops, Restaurant, Offices



Offices, Sport Center, Technical, Storage,
Parking for personnel, Offices, Shops,
Reception, Piano bar, Conference Rooms,
Dressing Rooms

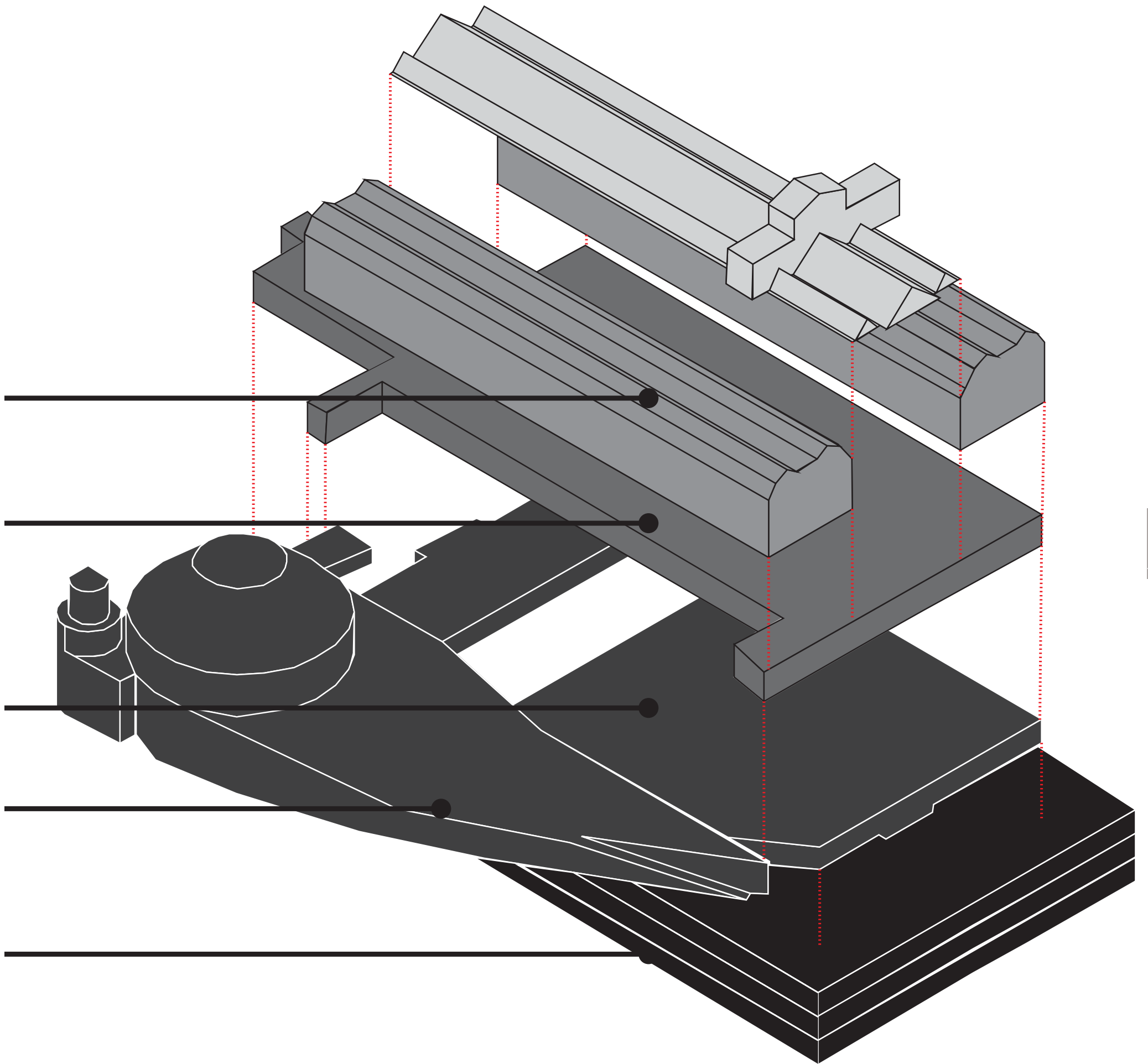


Conference Halls, Foyer



Parking, Technical

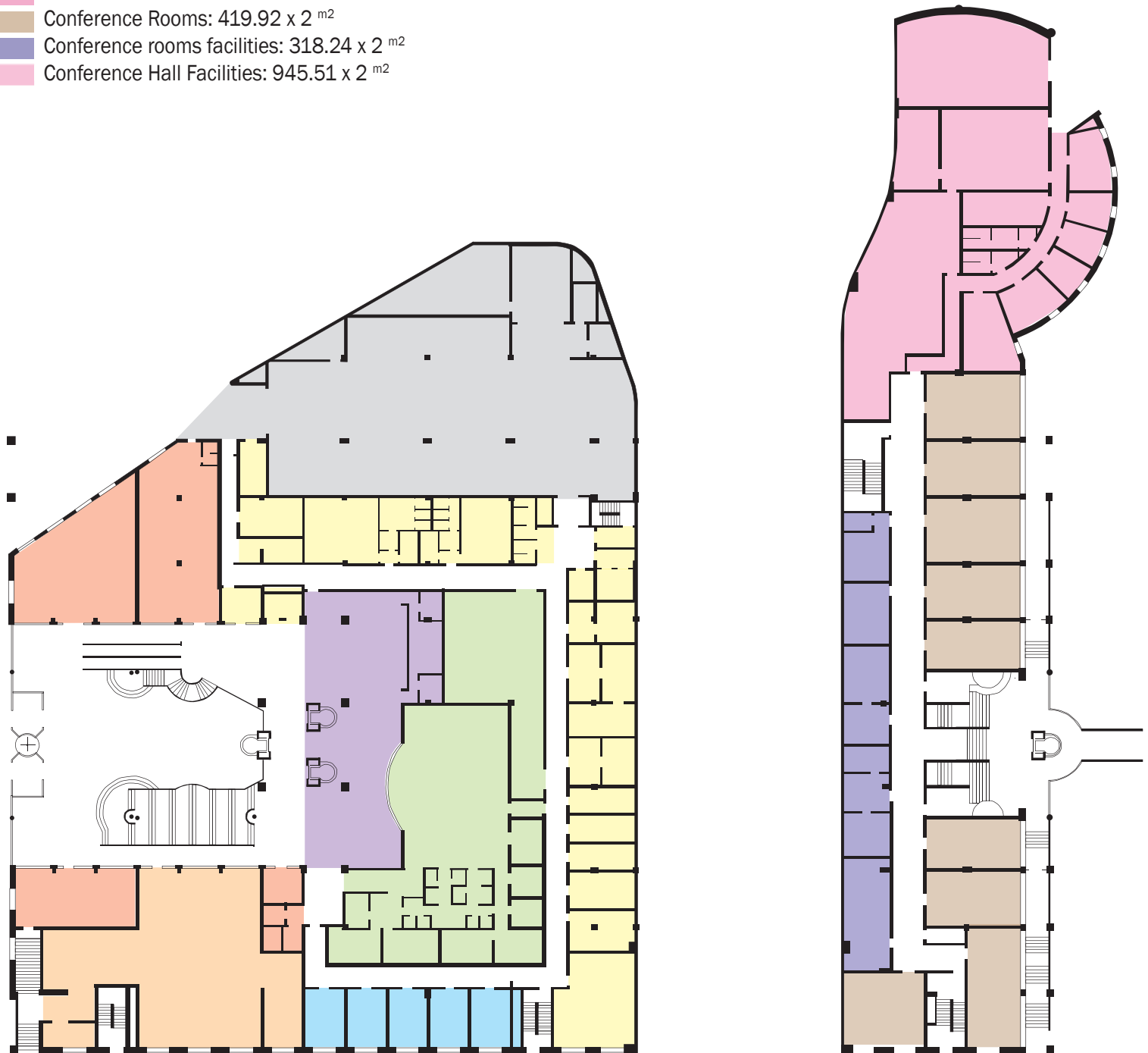




Areas of functions

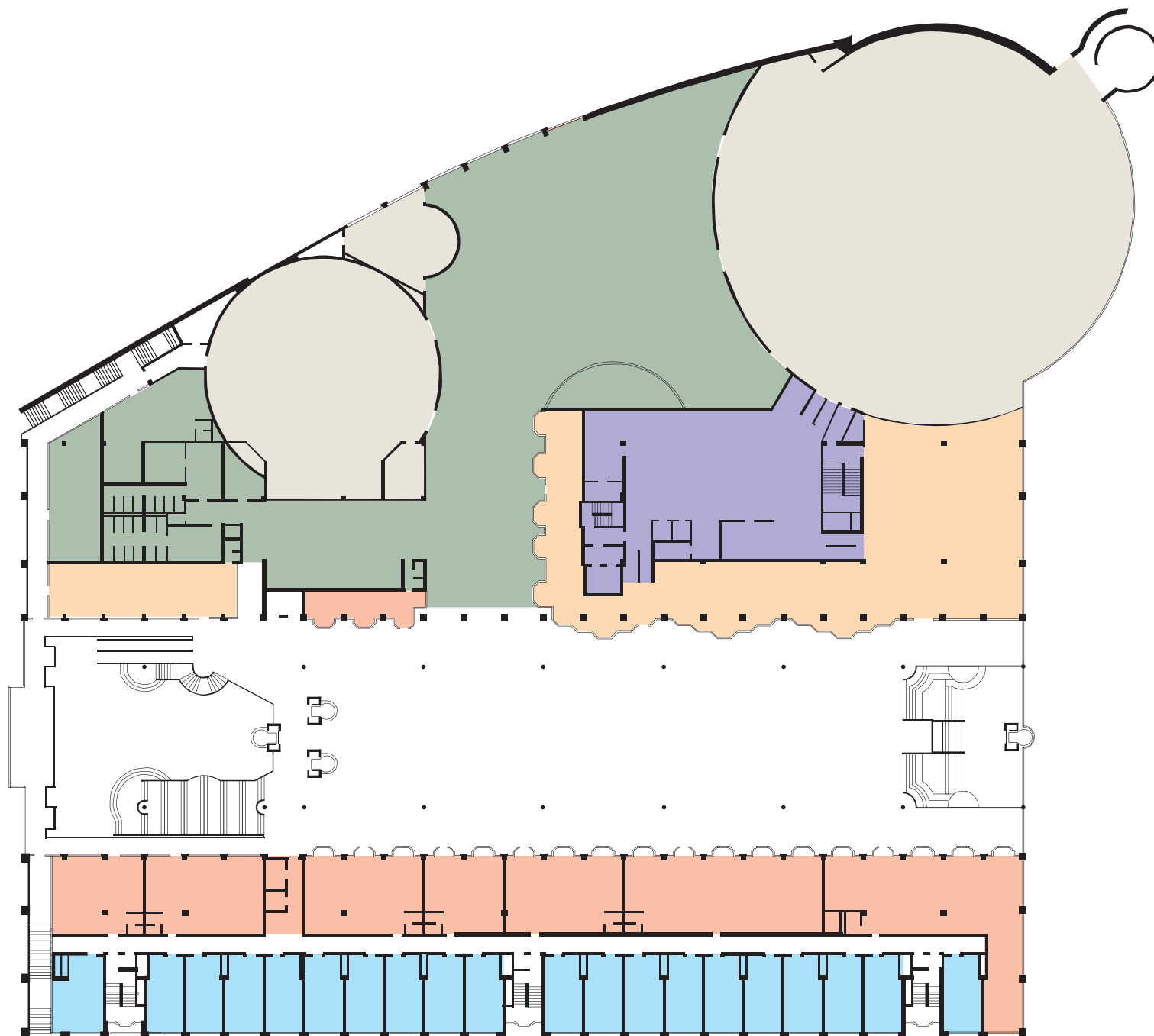
- Shops
- Parking and storage : 1062 m²
- Technical Facilities: 737.18 m²
- Lobby and reception: 960 m²
- Sport center: 573 m²
- Offices
- Piano bar: 337.3 m²
- Conference Rooms: 419.92 x 2 m²
- Conference rooms facilities: 318.24 x 2 m²
- Conference Hall Facilities: 945.51 x 2 m²

Scheme 3..44
Floor plan of ground floor



Areas of functions

- Conference Hall: 1881.26 m²
- Foyer: 1301 m²
- Restaurant: 835.63 m²
- Kitchen: 420.42 m²
- Shops: 627.33 m²
- Offices: 400 m²
- Main area: 2400 m²



Scheme 3..45
Floor plan of first floor



Image 3.51
Structure of building

Structure

The structure of the building looks like a simple system of beams and column. But with studying it carefully, it has resulted that the construction is a stiff wall from 6th floor to ground floor. So the consequence it that it is not easy to remove walls from ground and first floor since they carry a lot of loads. Unless there be a solution as strong as possible to hold the weight of a gigantic wall.

The next page, is the structure in a exploded view per level.





3-8 Conclusion

By knowing the building and context, the new proposal not only can fit perfectly to its environment, but also the main problem and requirements of the design have been diagnosed.

Nevertheless, installing a media feature in a architectural and urban context, must come from the complete knowledge of the element.

Next chapter will introduce “media“ in architecture and all the possibilities in order to by end of it the best method to be used is chosen.







CHAPTER 4: CHAPTER OF POSSIBILITIES

New Form of Architecture



4-1 The beginning of a New Movement^{4.1}

An Archiscientific View of the City as a Living, Breathing Organism

4.1
[http://designmuseum.org/
design/archigram](http://designmuseum.org/design/archigram)

Image 4.1
Ron Herron,
The Walking City
1964
<http://designmuseum.org>

Image 4.2
Dennis Crompton
Computer City Project
1964
<http://designmuseum.org>

Image 4.3
Peter Cook
Plug-in City
1964
<http://designmuseum.org>

ARCHIGRAM dominated the architectural avant garde in the 1960s and early 1970s with its playful, pop-inspired visions of a technocratic future after its formation in 1961 by a group of young London architects – Warren Chalk, Peter Cook, Dennis Crompton, David Greene, Ron Herron and Michael Webb.

It was a time of radical change. Politics had skipped a generation when John F. Kennedy was elected president of the United States in 1960. The theories of Michel Foucault, Roland Barthes and Claude Lévi-Strauss were igniting the intelligentsia; as were the films of Jean-Luc Godard, Federico Fellini and François Truffaut in cinema. It was also a time of extraordinary technological advances when the Soviet cosmonaut Yuri Gagarin became the first man in space and the first weather satellite was launched from Cape Canaveral. The photocopier was invented, as were laser action hologram and the contraceptive pill.

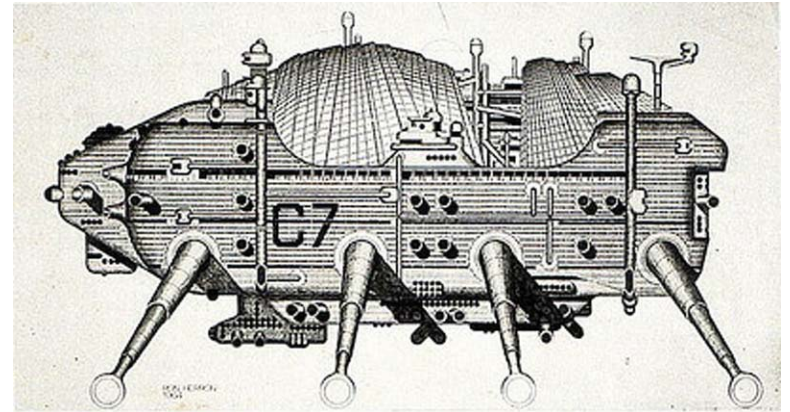
They sold 300 copies of their magazine at nine pence each, mostly to architectural students and assistants in architects' offices. As Cook recalled, it was “brushed off by the few senior architects who saw it as a student joke and...everybody thought it would die a natural death.” The second issue of Archigram came out in 1962.

Cook, Greene, Webb and their new collaborators – Chalk, Crompton and Herron – were invited to produce an exhibition at the Institute of Contemporary Arts in London. It opened in 1963 as *Living City*, a manifesto for their belief “in the city as a unique organism”, which is more than a collection of buildings, but a means of liberating people by embracing technology and empowering them to choose how to lead their lives.

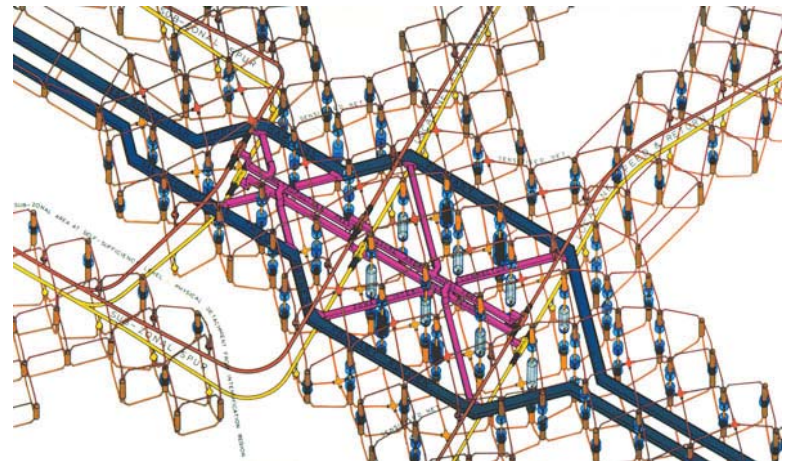
Living City caught the attention of Reyner Banham who, having championed Alison and Peter Smithson, two of the few “senior architects” whom the Archigram group admired, in the 1950s, now hailed Archigram as the pioneers of a new pop architecture in the 1960s. Rather than dying the “natural death” as its critics had expected.

Archigram was defined less by a specific set of principles, than by an optimistic spirit. Its members shared a refusal to be shackled by the past and a belief that the potent combination of social change and technological advance would foster a more humane architecture equipped to embrace the complexities and opportunities of contemporary life. One of its strengths was the diversity of a group in which the six core members and their collaborators came from very different backgrounds with different skills and enthusiasms. “The overlap was an enjoyment of teasing,” wrote Cook, “teasing the architectural extremity, and most of the architectural language.”

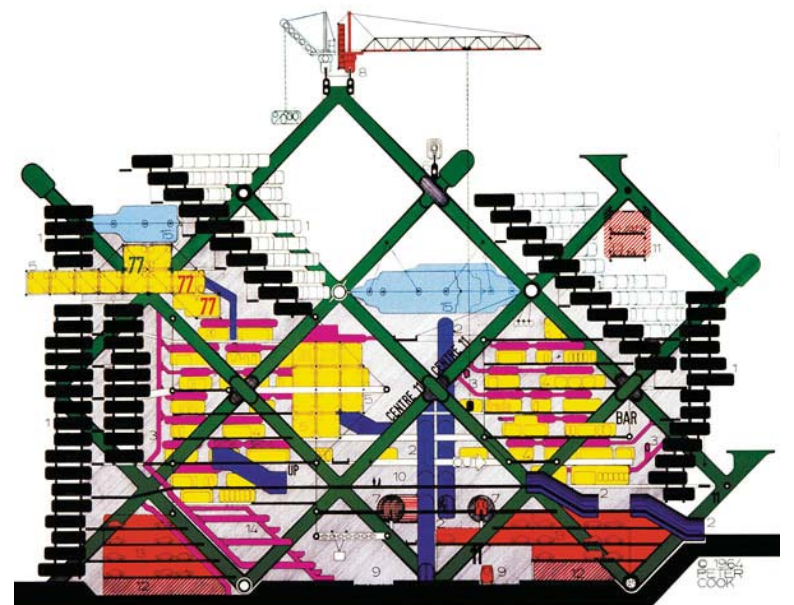
Critically, Archigram’s approach to architecture was fun, as illustrated by two of the group’s most memorable projects: Ron



Ron Herron, *The Walking City*, 1964



Dennis Crompton, *Computer City Project* – Axonometric, 1964.



Peter Cook, *Plug-in City Study* – Overhead view, 1964.

Herron's 1964 cartoon drawings of a Walking City, in which a city of giant, reptilian structures literally glided across the globe on enormous legs until its inhabitants found a place where they wanted to settle; and the crane-mounted living pods that could be plugged in wherever their inhabitants wished in Peter Cook's 1964 Plug-in City.

Equally irreverent were the ingenious devices that Archigram dreamt up to fulfill the functions of traditional buildings from miniaturized capsule homes like Ron Herron and Warren Chalk's 1965 Gasket Homes and David Greene's 1966 Living Pod, or Michael Webb's 1966 Cushicle mobile environment and his 1967 wearable house, the Suitaloon. In 1968, the group proposed to transport all the entertainment and education resources of a metropolis in an Instant City airship, which would fly from place to place and temporarily 'land' in small communities to enable the inhabitants to enjoy the buzz of life in a city.

In 1969, the group opened an architectural practice after winning a competition to design a leisure centre in Monte-Carlo. The design was of an enormous circular dome buried underground by the Mediterranean. The seats, toilets and lights were mounted on wheels to be moved around into new configurations as the use of the building changed.

The funding collapsed and the leisure centre was never built. The cultural climate, once so empathetic to Archigram's technocratic optimism, was darkening as the brutality of the war in Vietnam and civil unrest in Northern Ireland, demonstrated the macabre side of technological advances. Over the next five years, Archigram fragmented as its members left to pursue new interests. When the practise dissolved in 1974, Archigram had realized three projects, all completed in 1973 by Dennis Crompton and Ron Herron: a children's playground in Milton Keynes, an exhibition at the Commonwealth Institute in London and a swimming pool for the singer Rod Stewart. "Archigram gave us a chance to let rip and show what we wanted to do if only anyone would let us," said Ron Herron just before his death in 1994. "They didn't."

Yet Archigram's influence has endured. It is visible not only in the subsequent work of the group's members but in buildings by other architects such as Richard Rogers and Renzo Piano's jubilantly technocratic Centre Georges Pompidou in Paris or Will Alsop's ebullient Peckham Library in south London. It is also acknowledged in the writing of later generations of architects such as Zaha Hadid and Rem Koolhaas who described Archigram in his Report as being among the last "new movements in urbanism". A movement with an archiscientific view of the city as a living, breathing organism.



Warren Chalk and David Greene, Electronic Tomato – Collage, 1969.



Peter Cook, Instant City – Airship M3, 1968

Image 4.4
Warren Chalk
David Greene
Electronic Tomato
1969
<http://designmuseum.org>

Image 4.5
Peter Cook
Instant City
1968
<http://designmuseum.org>

4-2 History of Technology in Architecture^{4.2}

4.2

Interactive architecture
Michael Fox
Miles Kemp
New York
Princeton University Press
2009

and

*Media facades:
history, technology, content*
M. Hank Haeusler
Ludwigsburg
2009

Image 4.6
Projection of the glass window
Cathedral of Cologne
Germany

As it was said in last part, 1960s was a time of radical change; not only in Urbanism but also in Architecture.

Where and when did designers for the first time thought about a mixture of architecture with technology? Maybe it is the right place to point out the glass windows of mediaeval churches which projected an image illuminated from behind by sun and could therefore be considered as a facade being projected; perhaps the first bond between architecture and technology.

However, the focus of this thesis is using promoted technology not daylight, the story here starts in early 1960s when some theoretical works were born by a number of people working on cybernetic.

These early ideas tooted in cybernetics were picked up at the time by a few architects who solidly translated them into the arena of architecture. At that time the computational means were not quite evolved enough that the proliferation of concepts in cybernetics could gain a strong foothold. However, the computational world did begin to advance quite rapidly. Culture and corporate interests played a major role in influencing using of technologies in architecture through the development of numerous market-driven products and systems that directly involved users in the real world.

In 1971, the competition for the Center Pompidou was announced. The competition was about a cultural center cooperating with museum and a creative center that would be modern and evolve continually. The partnership of Renzo Piano, Richard Rogers and Gianfranco Franchini won the competition. The most particular feature in their design was the main facade with a giant screen displaying electronic messages about events at the centre or culture and political news.

This was a reference point of implanting technology for communication in order to improve building and function.

In “Hyper Architecture – Spaces in the Electronic Age”, Luigi Prestinenzza Puglisi implied that the Centre Pompidou is an antecedent of a shift of a space to a communicative space.

In the 1960s, more architects made interest in media and interactive architecture. Gordon Pask, William Brody, Charles Eastman were some active architects in the field who developed ideas and theories.

Cedric Price was perhaps the most influential to the early architects to adopt the seminal theoretical work in cybernetics and extend it to architecture concept of “anticipatory architecture”. Many of his unbuilt projects, such as the Fun Palace in 1961, influenced architecture of process that was indeterminate, flexible and responsive to the changing needs of users and their times.

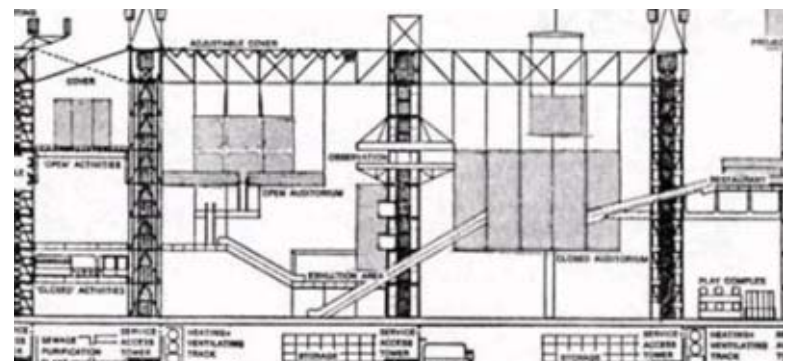


Image 4.8
Fun Palace
Cedric Price
1961

John Frazer, who was a systems consultant on the project, extended Price's ideas, in positing that architecture should be a living "living, evolving thing." This theory is summarized in the book "An Evolutionary Architecture".

By the 1990s, media architecture began to gain a stronger foothold as ideas became both technologically and economically feasible and there were more and more information and built examples. It was also at this time that long history of kinetics in architecture began to be reexamined under the premise that performance could be optimized if it could use computational information and processing to control physical adaptation in new ways to respond to contemporary culture.

It is important also to understand the historical development that was happening, somewhat in parallel, in digital computation and human interaction.

Clearly, corporate and culture interests also played important market. These roles were extremely important, as they directly involved the users out in the real world

In 1990s, a long history of kinetics in architecture began to be reexamined under the premise that performance could be optimized if it could use this newfound computational information and processing to physical adapt.

The driving force behind the renewed interest in adaptable architecture is the technological influenced and changing patterns of human interaction with the built environment. Today's intensification of social and urban change, coupled with concern for issues of sustainability, amplifies the demand for media architecture solutions.

In the future, we will find that architecture can significantly influence our lives by interacting with us and consequently shape the ways in which interact with each other. If architecture is to continue to respond to technology innovation that surrounds it as a profession, then we may no longer ask "what is that building?" or "how was it made?" but rather, "what does that building do?"

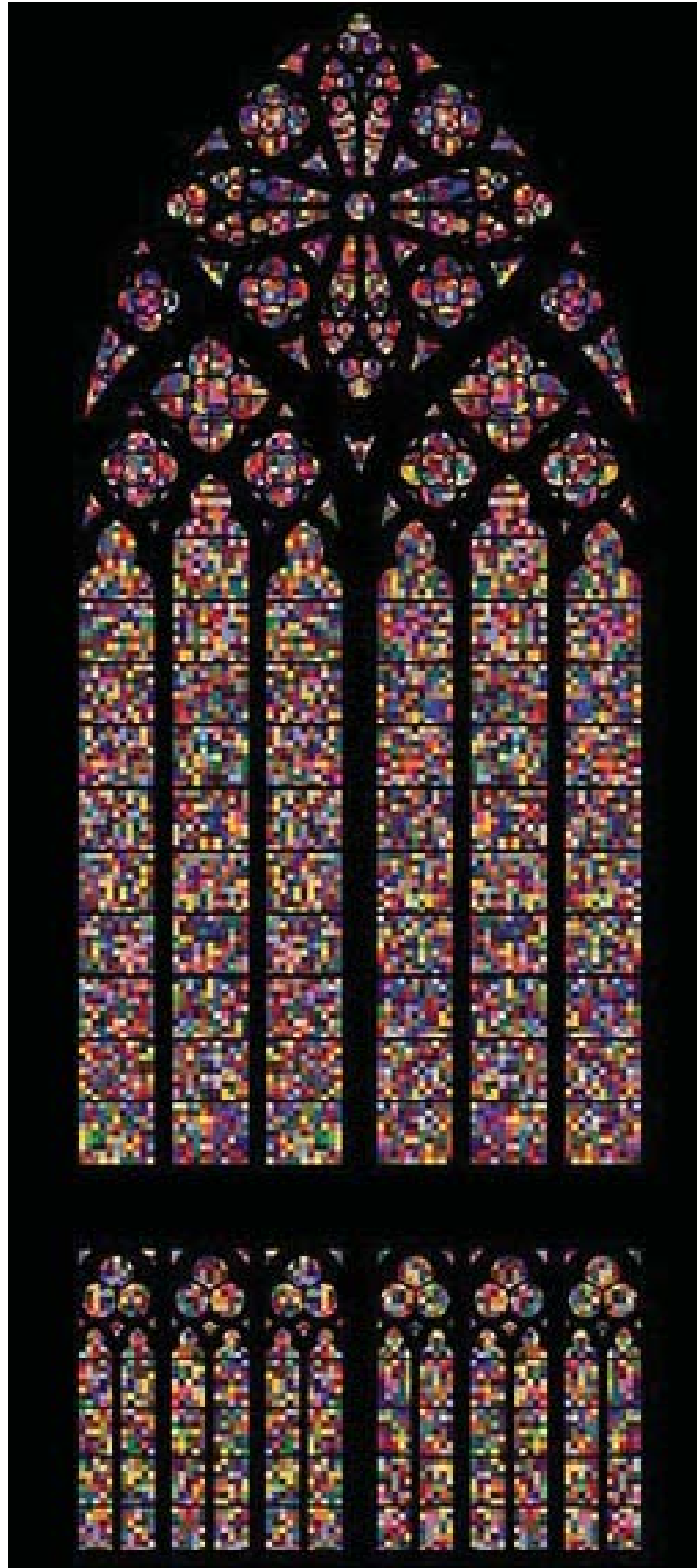


Image 4.9
The glass window
Cathedral of Cologne
Germany



4-3 Introduction to Media Architecture^{4.3}

4.3
Media facades:
history, technology, content
M. Hank Haeusler
Ludwigsburg
2009

Before starting the following chapter, it is necessary that some terms be discussed to define certain terms and clear certain thoughts:

1. Media

The term media (the plural of medium) can be briefly described as a truncation of the term media of communication, referring to those organized means of dissemination of fact opinion, entertainment, and other information, such as newspapers, magazines, cinema films, radio, television, the World Wide Web, billboards, books, CDs, DVDs, video cassettes, computer games and other forms of publishing.

To summarized, media is defined as communication in the visual form of a dynamic text, graphic or image.

2. Light architecture vs. media architecture

Light architecture and therefore the illumination of buildings can be sub classified into illumination with daylight and artificial light. To define the terms easily, there is a simple example: the projection of a light source on a surface, such as lamp, would be classified as light architecture whereas the projection of a moving graphic, text or image as media architecture. Media architecture also includes displaying graphics, dynamic text, dynamic image and spatial movement. The most important principle that differs media architecture from light architecture is the essence of communication in media architecture.

3. Media architecture vs. media facade

When architecture corporate with moving images, text, and graphics could therefore be described as media architecture. Media facade can be defined as the embedding of communication into a facade, mainly in the form of digital media. Media architecture describes culture, social and economic implications of these facade for the immediate environment.

4. Classification of media facades

Media facades can be classified by the technical components and their technology. Different classifications include mechanical, projector, illuminate and display.

5. Questions to be answered

Before selecting and designing a media facade following question should be answered:

- Whether it is to be in indoor or outdoor. Certain system cannot be used in an exterior environment.
- What the media content should be?
- What is the Budget?

- The aspect ratio of the facade should defined. Aspect ratio is defined as distance of the screen to the beholder equals the distance of LED to LED (a distance of 3 meters would mean distance LED to LED 3 mm).

- What kind of installation (fixed display or mobile units) is required?
- The size of the facade
- When will the media facade mainly be used?(In order to adjust the brightness of the system)
- Orientation of the sun
- Viewing angles (not all system can allow a 180 degree view)
- Should a facade allow a close up (resolution)?
- Power consumption of the facade
- Construction of the facade or substructure of the media facade
- Where exactly the media facade is located? Is it exposed to vandalism?
- Protection of the facade
- If load-bearing structure is need in the media facade itself to carry a weight?
- How the media facade can be cleaned because of dust and pollutions?
- Fire resistance
- The life-span of the product

6. Integration of media facade

In order to achieve a successful and sustainable design, media content should be integrated with urban context and the building.” If a media facade is designed in a parallel with the rest of the building, it should be integrated in such a way that it becomes invisible when it is switched off. This will affect the appearance of media facade and at the same time the cost and environmental issues.”

A design of media facade should be therefore strive to develop a non-invasive media facade that blend in with the architecture when switched off, that allows the illumination of pace behind the media facade with daylight is required, while creating a media facade that is bright enough to form a prominent display when in use and at the same time be cost effective to run and maintain throughout its useful life.

7. Resolution

Image resolution describes the detail an image holds and it affects the picture in different distances. Another factor that allows a greater resolution is the enhanced capacity of computer systems to generate the images for media facade.

8. Aspect ratio

Moving images have certain aspect ratio that often does not correspond with the media facade. Architecture limits the media content since it has its own dimensions and shape. In this way, more architectural performance-based media content could be developed where media content and media architecture complement one another.

9. Control of media content

“The visual result of a media facade is mainly driven by the media content”. Regardless of the kind of media facade, they all need media content. A well-designed media content can function both as networking tool for communication with the public while at the same time achieving a balance between commercial, municipal and culture interest.



4-4 Classification of Media Facades by Technology^{4.4}

4.4
Media facades:
history, technology, content
M. Hank Haeusler
Ludwigsburg
2009

A distinction can be made between those media which communicate with their environment using mechanical components, such as moving parts of a facade, and those which use light and color to communicate an image, text or graphic. In a general classification there are two types of media facade: First, mechanical facade that appearances of the facade is changed by hydraulic, pneumatic or engine driven mechanisms. Second, electronically facades that appearance of the facade is changed using light and color.

Mechanical media facade

Change building parts kinetically to transform the facade or even a large part of a building.

Electronic media facade

The communication of an image via an electronic medium can be sub-classified to reflect the range of technologies available. There are essentially three electronic media that can be used to transport a text, graphic or image:

Projector category

This category uses a facade as a projection screen, with the projector on another building or surface. Rear projector facade technology uses a projector behind a translucent projection surface to project images.

Illuminate category

Window raster animation technology uses exciting window grid on buildings. When animated with a lamp, each window functions as a single pixel. Low resolution messages or animations reminiscent of early computer games are possible. Illumination facade technology uses dimmable neon tube or light bulbs to display low-resolution black and white moving images.

Display category

Pixel based display technology used LED technology or other screen technology such as TFT or LCD plasma. With this technology, the facade functions as a large screen. There are several systems available produced. For example, Voxel facades technology uses a 3D matrix of LEDs to allow a 3D representation of media content.

Mechanical

There are three main methods of moving building components to create a media facade. They each use different forms of power to move parts of a facade. The first, the electronically motor, uses electrical power, either in the form of direct current (DC) or alternating current (AC). The other two, pneumatic and hydraulic power, can be grouped under the term fluid power, which describes the technology that deals with generation, control and transmission of pressurized fluids.

The main difference between hydraulics and pneumatics is again the medium they use. While hydraulics power uses a liquid such as mineral oil or water, pneumatics uses gas or air. Which of the two media is used is determined by the designed application. Hydraulics are mainly used to move heavy machinery where common application use 1.000 to 5.000 psi (pounds per square inch) and up to 10.000 psi for specialized applications. With a range of just 500 to 700 psi, pneumatic mechanisms are more suited for moving lighter components.

Projector

DLP (digital light processing) projector

The projector uses one or up to three micro fabricated light valves called digital micro mirrors devices (DMD). The single and doubled DMD version causes a "rainbow" effect, an effect that occurs when the eye moves the projected image and separate colors become visible.

Some advantages of this technology are the size and good contrast. Disadvantages of this method is the fact that some viewers may experience eye strain or headaches when viewing and the noise distribution caused by both the fan used to cool the lamp and the sound of the spinning wheels.

LCoS (Liquid crystal on silicon) projector

A micro projection or micro display technology, often applied in projection television, uses liquid crystals instead of the individual mirrors used in DLP projectors. In LCoS projectors, liquid crystals are applied directly to the surface of the silicon chip coated with highly reflective aluminized layer. In comparison to LCD with liquid crystal display technology and plasma display, LCoS can produce images with a much higher resolution.

In projector method, there is another element which is the way that the projecting takes place. An image can be projected into a screen in two ways. In front projection a screen works diffusely reflecting the light projected onto it. In rear projector, on the other hand, the screen works by diffusely transmitting the light.



Illuminate

There are a few considerations when designing a media facade assembled from illuminates. The media facade can have two appearances: digital (only on or off) or analogue (a gradation between 0% and 100% is possible). Another aspect is that if only one type of light source is applied, the text, graphic or image displayed will stay monochrome, allowing images in just one color. (e. g. white, red, blue).

Arc lamps

In an arc lamp, light is generated by an electric arc, made out of tungsten, embedded in the bulb. The two electrodes of the arc are separated by a noble gas; such as argon, neon, krypton and sodium. For media facade, only gas discharge and high intensity discharge lamp are, however, of interests as they are dimmable and commonly available.

Incandescent lamps

The common light bulb that works by incandescent is still one of the main sources of artificial light. Light bulbs are made in a wide range of sizes and voltages; they require no further equipment and work on either alternating current (AC) or direct current (DC). Although they are used commonly, they are gradually being replaced by another technologies. Conventional incandescent light bulbs are the common light bulb that works by incandescent, a term that describes heat-driven light emission. Their main disadvantage is the amount of heat they produce compare to the light they generate. Indeed, 98% of the energy is wasted on heat production and they life-span of 1.000 hours is short compare to energy saving lamps.

In result, incandescent lamps are being replaced by fluorescent light bulbs, also known as energy saving lamps, high-intensity discharge lamps or LEDs, which give more visible light for the same amount of energy. Their advantage in term of media facade is that they work well with dimmers and they nearly all light fixtures are designed for their size and shape.

Halogen lamps are also incandescent lamps in which a tungsten filament is sealed into a compact transparent envelop. One advantage of halogen lamps is their small size and the fact that they can operate at a higher temperature. The disadvantage lies in the dimming characteristics of them. Depending on the lamp construction, the dimming determines the life span. With a successful dimming, the light might not work as long as predicted.

Electroluminescent (EL) lamps

The phenomenon of electroluminescent is caused by material that emits light respond to an electrical current passed through it. Solid-state lighting or LED lamps are of interest as a medium for an illuminate facade. The advantages of this category are that they create visible light with reduced heat generation or the energy dissipation, they have a greater resistance to shock, vibration and ... which increase their life span up to 60.000 hours. The disadvantage is that they do not produce the same light quality as current technologies such as incandescent bulbs. They are suitable for communication and not illumination.

Gas disc charge lamps

Gas discharge lamps generate light by sending an electrical discharge through an ionized gas. They offer long life and high light efficiency, but are more complicated to manufacture. Fluorescent lamps are the best known example of gas discharge lamps.

One of their advantages is their more efficient use of energy compare to incandescent lamps; another one is their life span. One of their negative side is that they are bulkier, more complex and expensive.

High-intensity discharge

These types of lamps produce visible light by means of an electric arc between tungsten electrodes house inside a tube. Their main advantage is the greater proportion of radiation produced in the form of visible light instead of heat which makes them a higher luminous efficiency. But in general, they are not suitable for media facades.

Display

Crystal layer of the final polarizing filter it then passes through a color filter so that each cell will then represent one of the three primary colors of the light. Displays are whether on Plasma or LED screens.

Advantages of an LCD display are features such as a slim profile, they are higher and less bulky, and they have no burn-in as it used to happen with CRT screen and lower power consumption than plasma or projection systems like CRTs.

But the system has also some disadvantages, one of the main issues here is the poor black level, narrow viewing angles, a slower respond time and higher price due to construction difficulties caused by possible defective pixels during manufacture.



4-5 Project Review

4D Spaces and Objects

The following part of this chapter focuses on built and unbuilt examples.

They are classified in 4 different categories of Projector, Mechanical, Illumination, Display base on the year that project were lunched.

Image 4.10
Scene from the movie
Blade Runner
Directed by Ridley Scott
Written by Hampton Fancher
and David Peoples
1982



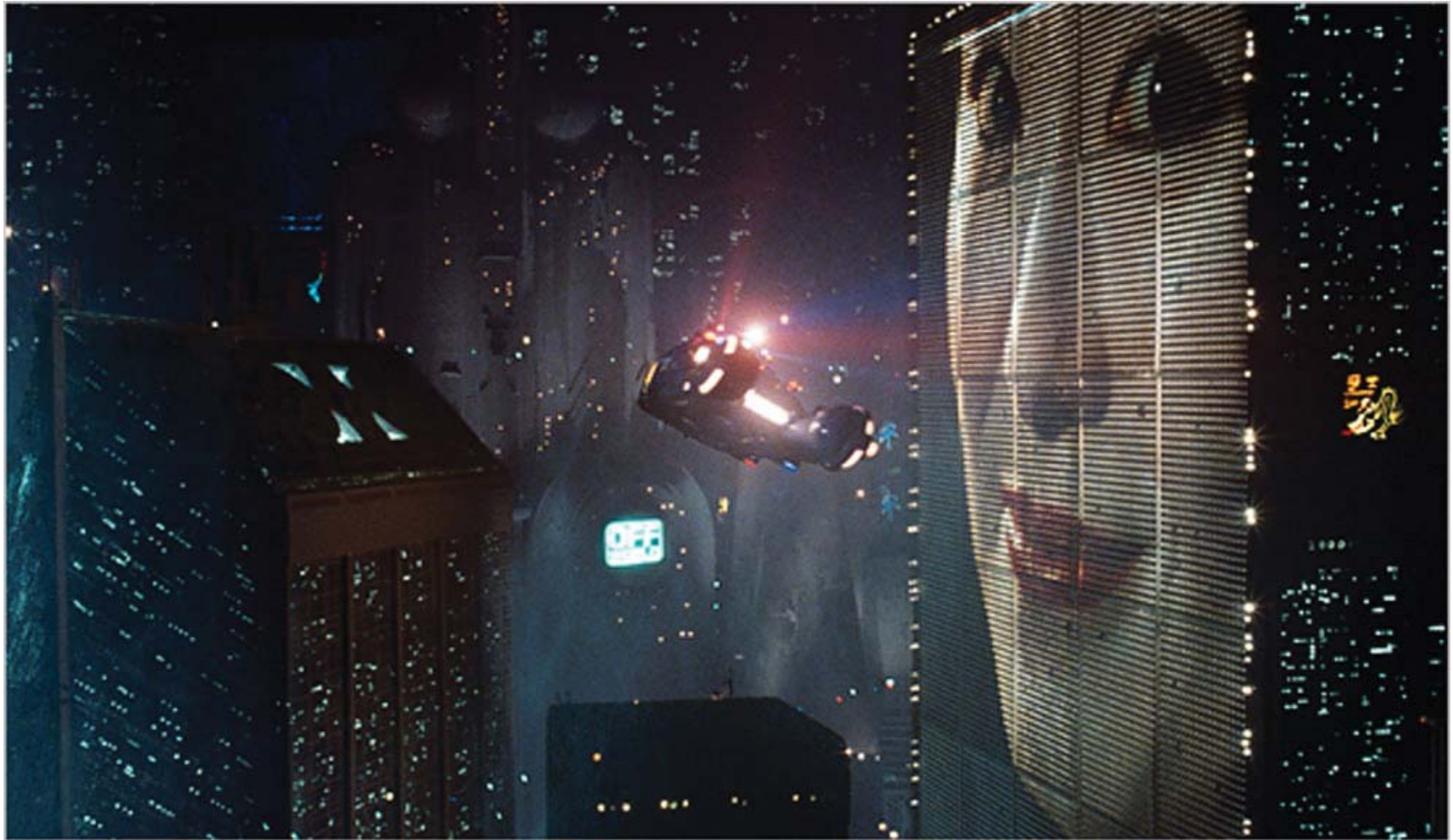


Image 4.11
VIDEOPLACE

4.5
<http://jtnimoy.net/itp/newmediahistory/videoplace/>

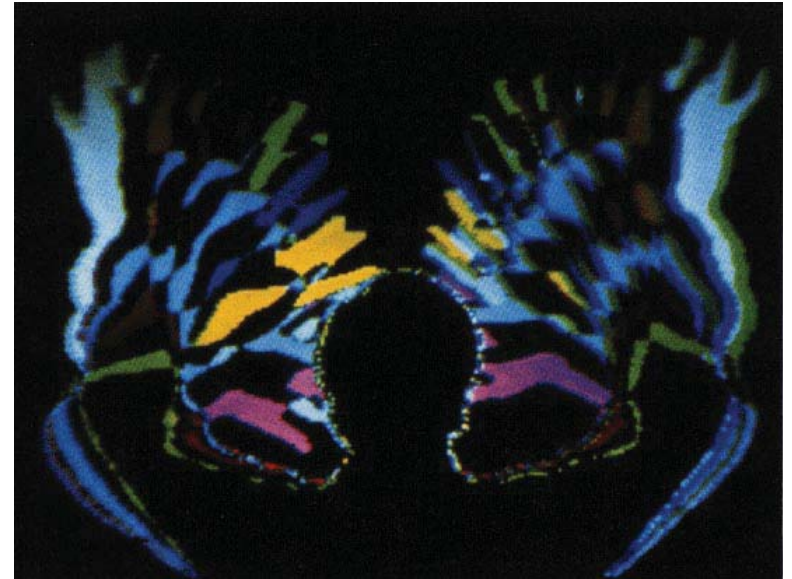
Name
VIDEOPLACE

Category
Projector

Year
1969

Industry
Industrial Design

Designer
Myron Krueger



VIDEOPLACE is an early example of virtual reality art. The installation features computer projection that interacts with the viewer's physical shadow.

This "responsive environment" responds to the gestures of the audience by interpreting, and even anticipating, their actions. Audience members could "touch" each other's video-generated silhouettes, as well as manipulate the odd, playful assortment of graphical objects and animated organisms that appeared on the screen, imbued with the presence of artificial life.

This is done through an elaborate system of sensing floors, graphic tables, and video cameras. Audience members could directly interact with the video projections of others interacted with a shared environment.

In VIDEOPLACE, the computer had control over the relationship between the participant's image and the objects in the graphic scene. It could coordinate the movement of a graphic object with the actions of the participant. While gravity affects the physical body, it may not control or confine the image which could float, if needed. A series of simulations could be programmed based on any action and Videoplace offered over 50 compositions and interactions (including Critter, Individual Medley, Fractal, Finger Painting, Digital Drawing, Body Surfacing, Replay, among others). To illustrate, when the participant's silhouette pushed a graphic object-the computer could choose to move the object or the silhouette. Or, as in Finger Painting where each finger created flowing paint without the distraction of the silhouette.

Watch
<http://www.youtube.com/watch?v=dqZyZrN3PIO>



Name

Water Zone, Acciona Pavilion

Category

Projector

Year

2008

Industry

Architecture

Designer

Tamschick media+space GmbH

Location

Spain

The Acciona Pavilion at the EXPO 2008 in Saragossa based its design on a spiral, the symbol of transformation and change. The pavilion is divided into the zones: earth, water and air. The project is located in the water zone, an open and vast interactive space composed of three projections covering a wall surface of 108 square meters and 10 projections that cover a floor surface of 300 square meters. With these projections, the designers created an immersive environment in which the visitors could experience different scenarios.

The concept behind the space at the water pavilion was to create a design that lent itself to feeling, reflecting on and experimenting with sensations. An environment in which the visitor will be immersed in an imaginary world where each action taken by him, has immediate effect on the environment. The interaction with the projected graphic elements on the floor is done by simple movements of the visitors and it allows them to be involved with the space in a very playful manner. A series of imaginary scenarios give the public the chance to be conscious about the need of each individual, to take action in a collective manner, in order to achieve significant changes in our environment.

By combining projected media content with the participant of the viewer, visitors not only consumed the media content =, they also had the opportunity to alter the appearance of the space by their actions. In a playful way, this form of participant thus allowed visitors to draw conclusions about their own behavior in relation to water consumption.



Watch

<http://www.youtube.com/watch?v=XX9P-1qExnY>

Image 4.12
VIDEOPPLACE

4.6
Media facades:
history, technology, content
M. Hank Haeusler
Ludwigsburg
2009



Image 4.13
Interactive Walkway

4.7
<http://www.ydreams.com>

Name

Barclay's Interactive Walkway

Category

Projector

Year

2008

Industry

Communications

Designer

YDreams & JCDecaux Airports

Location

Portugal

In partnership with JCDecaux Airports, YDreams created a conceptual environment for Barclays Bank at Lisbon International airport employing some of the latest innovative trends in media today.

Barclays Bank wanted to show people the bank is on the crest of technology the world over. The alternative media, consisted of a 32 meter long interactive walkway, displaying the Barclays" logo and colorful welcome messages in 12 different languages, which unravelled as passengers moved along the floor projected runway.

A media impact study conducted during the campaign was conclusive in determining that the walkway"s mix of creativity and technology contributed to higher brand recall amongst passengers.

Watch

<http://www.jorgelino.com/index.php?id=51>



Name

Institute du Monde Arabe

Category

Mechanical

Year

1987

Industry

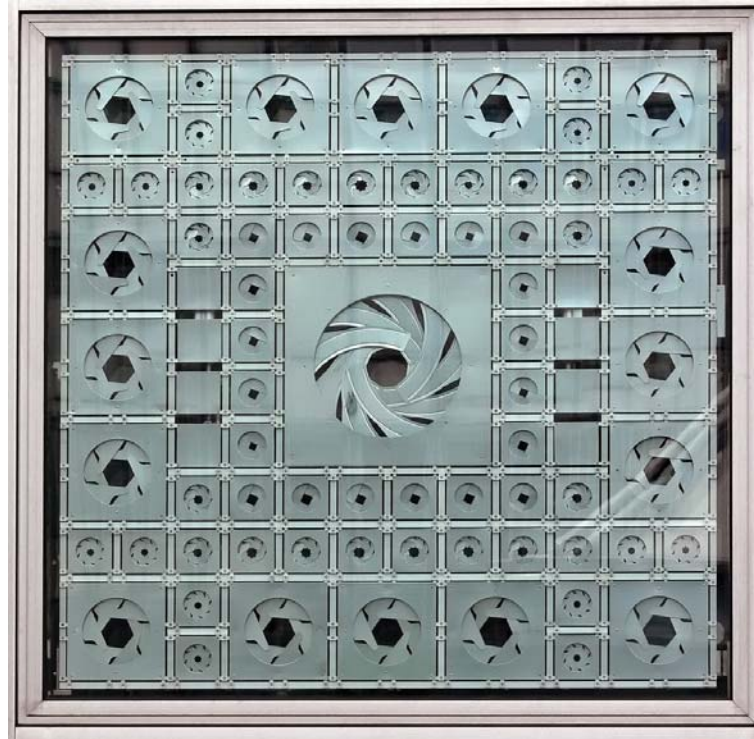
Architecture

Designer

Jean Nouvel

Location

France



The faced system of the Institute du Monde Arabe designed by Jean Nouvel regulates the amount of light entering the building. Small and large diaphragms open and closes throughout the day to adjust the amount of sun light passing through.

Such system is a clear example of how interactive systems can combine the esthetical with the functional and practical reasons. However, the downside of this system proved to be the lifespan of the multiple used parts; malfunctioning almost completely nowadays.

Watch

<http://www.youtube.com/watch?v=wRmE4WnjdKo&feature=related>

Image 4.14
Institute de Monde Arabe

4.8
<http://en.wikipedia.org>

Image 4.15
Audio Grove

4.9
<http://www.christian-moeller.com>

Name
Audio Grove

Category
Mechanical

Year
1997

Industry
Industrial Design

Designer
Christian Moeller

Location
Tokyo

In Audio Grove the installation consists of a circular wooden platform 12 metres in diameter, on which 56 vertical steel posts extend 5.5 metres up toward the ceiling. Each of the steel posts is connected to a touch-sensitive sensor system. This forest of vertical steel posts is an interface through which light and sound can be physically experienced and controlled. Visitors touching the posts can evoke a soundscape which always results in a harmonic whole whatever the conceivable combination of interactions. To accomplish this, the acoustical structures were perfected within a physical modeling system.

The visual component of the installation is a lush, composable texture of light and shadows. Spotlights placed in a circle around the installation project through the structure of steel posts onto the floor of the installation. According to the visitors' interaction with the poles, the spotlights illuminate different positions on the floor and draw shadow line textures onto the installation's "carpet of light".



Name
Muscle

Category
Mechanical

Year
2003

Industry
Architecture

Location
The Netherlands

This programmable prototype can refigure it selves mentally and physically, without considering to completely displacing itself like the Walking City as proposed by Archigram in 1964.

Motions of the individual's muscles change the length height, width and the overall shape of the Muscle prototype by varying the pressure pumped into 94 swarming muscles.

Such method, changing shape according to input from prototypes' surrounding, is the core subject of this project.



Image 4.16
Muscle



Image 4.17
Muscle

4.10
<http://www.smoothware.com>

Name
Shiny Balls Mirror

Category
Mechanical

Year
2003

Industry
Industrial Design

Designer
Daniel Rozin

There are 7 mechanical mirrors designed by Daniel Rozin which are made of various materials but share the same behavior and interaction; any person standing in front of one of these pieces is instantly reflected on its surface. The mechanical mirrors all have video cameras, motors and computers on board and produce a soothing sound as the viewer interacts with them.

The names of the mirrors are Wooden Mirror, Trash Mirror, Shiny Balls Mirror, Circles Mirror, Peg Mirror, Weave Mirror, and Mirrors Mirror

Shiny Balls Mirror consists of 921 hexagonal black-anodized aluminum tube extrusion, 921 chrome-plated plastic balls, 819 motors, control electronics, video camera and a computer. It is a mirror with dimensions of 142cm, 127cm and 50cm (length, width and height).

The third addition to the mechanical mirror group, Shiny Balls Mirror displays a crisp and clean facade of aluminum and chrome utilizing the jewel-like reflections on its balls to form the reflection of the viewer twice: Once on each ball and once on the entire piece.



Name

Aperture

Category

Mechanical

Year

2003

Industry

Architecture

Designer

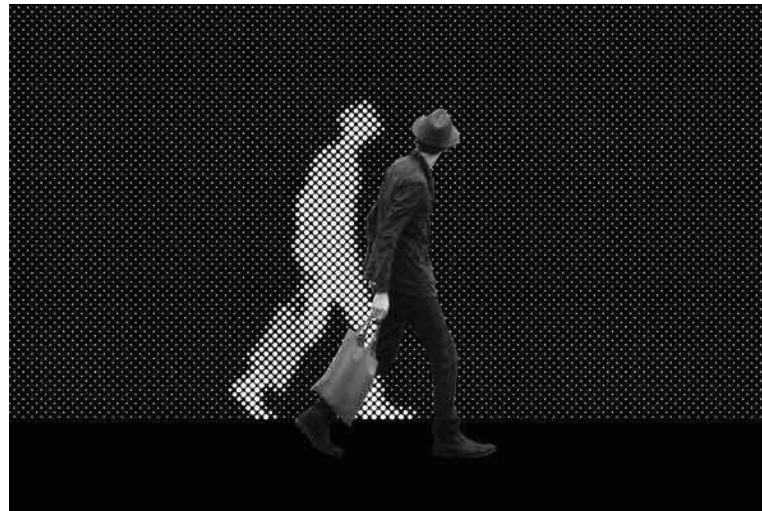
Daniel Rozin

Aperture is a facade installation with interactive and narrative displaying modes. Consisting of an iris diaphragm matrix, the facade's surface with its apertures' variable opening diameters is enriched by a dynamic translucency, that creates new imagery as well as a new channel for communication between inside and outside.

An iris diaphragm is an aperture with a variable opening diameter. The majority of instances of irises can be found in aperture settings in camera lenses as a means of regulating depth of field and the amount of light that is exposed by either film or sensor in capturing an image. aperture, being an array of irises, is part of a building's facade. Composed of single aperture-modules with receptor (LDR—light dependent resistor) and actuator (servo-motor/iris), aperture acts like an autonomous skin, which is also capable of precise external control. Visual information is transmitted from the inside of the building to the outside, the surface permeability is regulated when the aperture's opening diameters are changed. Each of the apertures in the array can be used to represent a pixel of an image.

Set to interactive mode, each single aperture and all the apertures as entity "see" what happens on the inside of the facade and react accordingly: like the human eye's iris and irises in objectives, they react to light, widening and contracting with corresponding increases and decreases in intensity of incoming light. If no human activity is to be distinguished on the inside, a "memory" mode recalls images and abstract animations captured throughout the day and displays them.

Analogously to the process of taking a photograph, people standing in front of the wall are exposed to the aperture grid, just like to photographic film. The duration of the image fading



out, as the apertures close, is itself a reflection of how long a person has been standing in front of aperture.

Reminiscent of motion photography as initially developed by Eadward Muybridge, the single phases of a movement—a person walking along the intelligent surface—the single phases of the movement are captured and displayed by aperture.

Just like in film, the single apertures in the grid react directly to varying intensities of incoming light by altering their diameters correspondingly. The apertures open and close, imitating the movement of a gesticulating person standing in front of them.

aperture, how it would fit in a real-life context: part of a photography-related institution's building like the International Center for Photography in New York City.

Watch

<http://www.youtube.com/watch?v=QWUEPBXyj2E>

Image 4.18
Aperture

4.11

<http://www.smoothware.com>

Image 4.19
Articulated Cloud

4.12
<http://nedkahn.com>

Name
Articulated Cloud

Category
Mechanical

Year
2004

Industry
Architecture

Designer
Ned Kahn

Location
Pittsburgh

Articulated Cloud by Ned Kahn is composed of thousands of translucent, white plastic squares that move in the wind, the artwork is intended to suggest that the building has been enveloped by a digitized cloud. The optical qualities of the skin change dramatically with the weather and the time of day. The articulated skin is supported by an aluminum space frame so it appears to float in front of the building. The design evolved through a collaboration with the architects, Koning / Eizenberg. Artist Ned Kahn collaborated with architects Koning Eizenberg Architecture to create an art piece that transforms the polycarbonate screen on the new building into a giant wind sculpture. Tens of thousands of hinged flaps are attached to the screen and reflect wind currents in a dynamic way, making the building appear to move and shimmer.

Watch
<http://www.youtube.com/watch?v=nvkNdIKVP2Y>



Name
4D Pixel

Category
Mechanical

Year
2005

Industry
Architecture

Designer
Daan Roosegaarde

Location
Netherlands

4D-Pixel is a smart surface that responds to the sounds of the visitors. A wall which moves with you, which is responsive to its environment.

Watch
<http://www.studioroosegaarde.net/project/4d-pixel/>

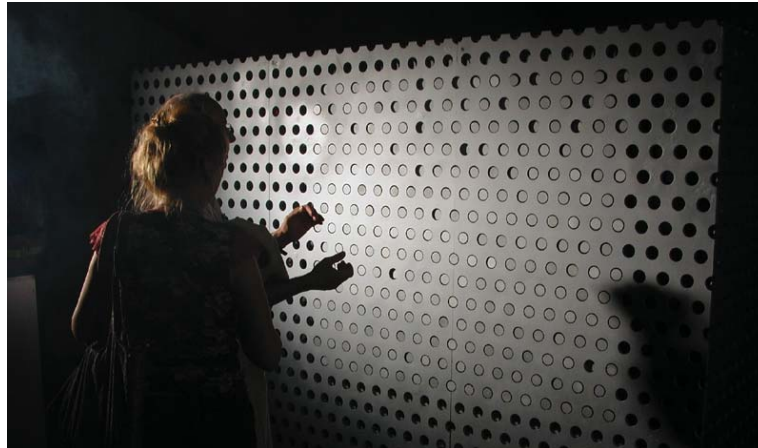


Image 4.20
4D Pixel

4.13
<http://www.studioroosegaarde.net>

Image 4.21
Meta-Morphic

4.14
<http://www.spatialrobots.com>

Name

Meta-Morphic

Category

Mechanical

Year

2006

Industry

Architecture

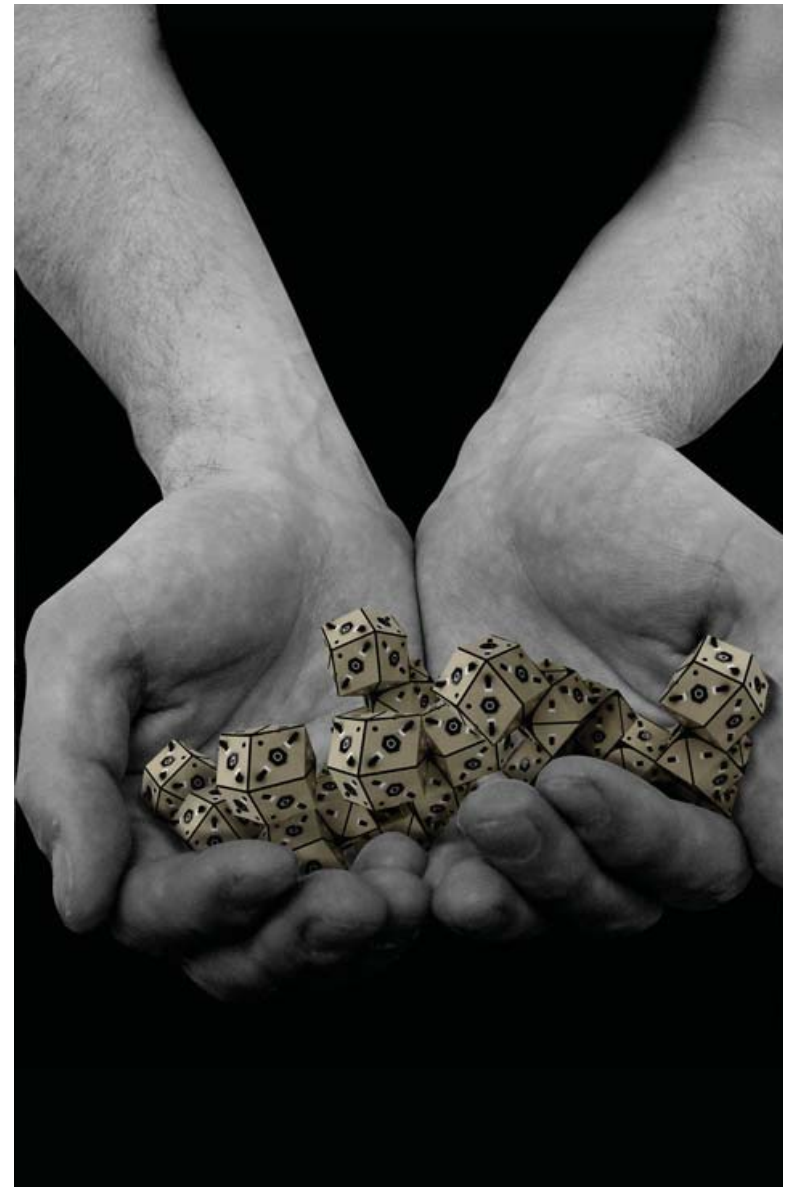
Designer

Miles Kemp

Miles Kemp's Masters Thesis at Southern California Institute of Architecture looked at the logic behind robot precedents at the Cornell and Xerox Parc and developed a series of robot prototypes that related to reconfigurable architectural space.

The main idea behind this project was to develop a series of self-similar nested shapes that have the ability to be reprogrammed by the user post-production to accommodate changing demands. To accomplish this task in architectural terms he developed an entire palette of robots (materials, interactivity, and mechanical) that come together at specific instances to achieve a desired geometry.

The scale of the module was extremely important. With technology getting smaller and smaller (nano scale) this project envisioned that these objects would be the size of a fingernail and have the ability to change location. Self similar modules could make new physical connections and move around each other based on connections of self-similar parts.



Name

Kiefer Technic Showroom

Category

Mechanical

Year

2007

Industry

Architecture

Designer

Ernst Giselbrecht + Partner

Location

Austria

Ernst Giselbrecht + Partner present the Kiefer Technic Showroom, an office building and exhibition space with a dynamic facade that changes to outdoor conditions, optimizing internal climate, while allowing users to personalize their own spaces with user controls.

The shell construction of the facade consists of solid brick walls, reinforced concrete ceilings and floors, and steel encased concrete columns. The facade consist of aluminum posts and transoms with protruding bridges for maintenance, with an EIFS-facade in white plaster. The sun screen operates on electronic shutters of perforated aluminum panels.

The building presents a new facade as the day progresses, defining it as a dynamic sculpture that regulates the internal environment of the building. Check out this video to see how the facade actually operates:

In earlier times, facades were characterized by window arrangements and axes. They often featured surface relief with architectural elements from the relevant period or style. The structure of the facade also determined the ground plan; the greater the number of window axes in a room, the more important the function of the user.

Not long ago office buildings had a clear structure and the number of axes was predetermined - e.g. how many for a director or high-ranking counsellor and how many for a mere civil servant.

With the introduction of window strips, these hierarchies were abandoned. Today it is possible that the complete exterior facade is transparent, and this very transparency indicates a modern character. At the same time, individual requirements



escalate and need to be reconciled with the desire for comfort.

For this reason, dynamic facades is useful since it can be adapted individually to changing conditions and needs. Of course they can also be controlled by optimizing programs if users are not present in the rooms behind. Thus it is possible to realize these new transparent facades and yet still maintain a cosy atmosphere in the rooms.

These facades change continuously; each day, each hour shows a new "face" - the facade is turning into a dynamic sculpture.

Watch

<http://www.youtube.com/watch?v=rAn4ldWjw2w>

Image 4.22
Kiefer Technic Showroom

4.15
<http://www.archdaily.com>



Image 4.23
GINA

4.16

<http://www.archdaily.com>

Name

GINA

Category

Mechanical

Year

2008

Industry

Automotive

Designer

Chris Bangle

Location

Germany

This concept car is the first to introduce a dynamic designed skin. The few flexible steel and carbon fibre wires shape the car and provide the necessary movement for some parts; the hood, the lights, the doors and the rear spoiler. This car has a skin which is able of constant adjustment, within certain borders, related to the context of use. In this way, parts of the car remain useful while the context changes.

Watch

<http://www.youtube.com/watch?v=OpwabDeqVi8>



Name

Dynamic Skyscraper

Category

Mechanical

Year

2008

Industry

Architecture

Designer

David Fischer

Location

Dubai



The enormous building project by David Fischer consists of stacked prefabricated rotating elements. This project is an example of how the dynamics of a building are not interactively related to its environment.

This building concept, with passive dynamics, display a certain degree of dynamics but does not incorporate any interactivity towards its surrounding; rendering the dynamics less useful for future adaptations.

Watch

<http://www.youtube.com/watch?v=ZNSDUcVrrKM>

<http://www.youtube.com/watch?v=Bq-QUkE1DGm>

Image 4.24
Dynamic Skyscraper

4.17
<http://www.dynamicarchitecture.net/>



Image 4.25
Tipping Wall

4.18

<http://nedkahn.com/>

Name
Tipping Wall

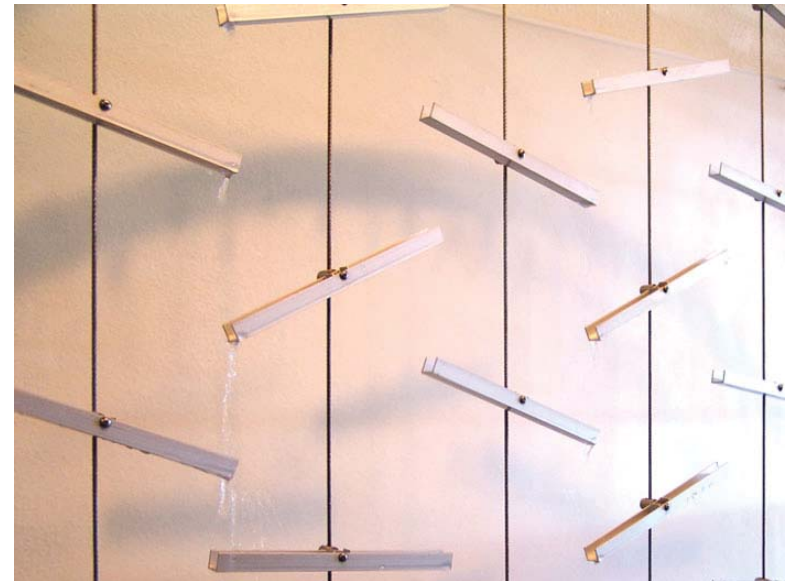
Category
Mechanical

Year
2008

Industry
Architecture

Designer
Ned Kahn

Location
United States of America



Water running down stainless steel cables fills a series of aluminum channels. The channels are supported by ball bearing so that they can tip. As each channel fills with water, it must “decide” to tip either left or right and spill water into either of the two channels below. Thus the entire array becomes an interrelated web of water decisions. The artwork is a prototype for a surface treatment on a cooling tower in Singapore at the Marina Bay Sands that is currently under construction. At night, lights bouncing off of the water will animate the facade with shifting patterns of shadows from the tilting channels.

Watch
<http://www.youtube.com/watch?v=-hu2PHaPcLw>



Name

L'Eclaireur Sevigné Project

Category

Mechanical

Year

2009

Industry

Architecture

Designer

Arne Quinze Location

Location

Paris, France

Arne Quinze, the designer of the conceptual architecture and design platform, is a self-taught man who's talent manifests in multiple disciplines: contemporary art, video installations, modern transpirations techniques and spaces like Square Brussels Meeting Centre (2009), die kunstbar in Cologne (2008) and upcoming a grand conceptual architecture masterplan for Belair, a 100000 square metres location in Brussels.

Quinze is intrigued by ongoing rhythms in cities and people's lives. In every culture he comes across he unravels these physical processes drawing inspiration for his oeuvre that is fuelled by overwhelming positivism.

In this concept store to open in Paris, there are more than 120 screens and sliding panels to dissimulate the clothes...the Rue de Sévigné store is an installation where reality and illusion inter-play constantly.

Arne Quinze was saying about L'Eclaireur Rue de Sévigné: "This is not just a shop, it's an experience. The project grew as a dream fed by emotions, history and memories. It is a fantasy in which I hope everyone will find a story for themselves. We invite you to discover your story."

Watch

<http://www.youtube.com/watch?v=gU2PLWmtRcw>



Image 4.26
L'Eclaireur Sevigné Project

4.19
www.hipshops.com



Image 4.27
Prada Transformer

4.20
<http://prada-transformer.com/>

Name

Prada Transformer

Category

Mechanical

Year

2009

Industry

Architecture

Designer

Rem Koolhaas & OMA Architects

Location

Seoul

Prada Transformer pavilion by Rem Koolhaas and OMA is a pioneering temporary structure that will be picked up by cranes and rotated to accommodate a variety of cultural events.

The 20-metre high Prada Transformer is located adjacent to the 16th Century Gyeonghui Palace in the centre of Seoul. The pavilion consists of four basic geometric shapes – a circle, a cross, a hexagon, a rectangle – leaning together and wrapped in a translucent membrane. Each shape is a potential floor plan designed to be ideal for the cultural. In the pavilion walls will become floors and floors will become walls as the pavilion is flipped over by three cranes after each event to accommodate the next.

Rem Koolhaas explained the idea behind the Prada Transformer: “Rather than having one average condition, we conceived a pavilion that, by simply rotating it, acquires a different character and accommodates different needs.”

Watch:

<http://www.jorgelino.com/index.php?id=46>



Name

Kinetic Wall

Category

Mechanical

Year

2010

Industry

Architecture

Designer

The Hyperbody Group & Festo

Location

The Netherlands

This wall system is composed of several moving wall elements. Every element consists of a large moving actuator reacting according to the input and transcription the software system in the element receives.

This interactive wall is a good example of a possible way to translate the presence of persons into a reacting system. This design would be more interesting if combine with constructional demands.

Watch

<http://www.youtube.com/watch?v=PVz2LlxdKc>



Image 4.28
Kinetic Wall

Image 4.27
Prada Soho Store

Name
Prada Soho Store

Category
Display

Year
2001

Industry
Architecture

Designer
IDEO, Rem Koolhaas & OMA Architects

Location
New York

Rem Koolhaas designed Prada Soho Store with interactive dressing rooms. These dressing rooms augment the experience of trying on clothes for the customer and enhances the relationship between the sales assistant and the customer. It is presented as a simple eight-foot-square glass booth.

This project represents the innovative use of technology in a fashion retail environment. Dressing room doors that goes opaque at the touch of a button. There are mirrors made with cameras and plasma displays. As the customer begins to turn in front of the mirror the image becomes delayed, allowing the customer to view themselves in slow motion from all angles.

The opposite wall has two interactive closets, As garments are hung in the closet their tags are automatically scanned and detected via RFID antennae embedded in the closet. Once registered, the information is automatically displayed on an interactive touch screen, enabling the customer to select alternative sizes, colors, fabrics, and styles, or see the garment worn on the PRADA catwalk as slow-motion video clip.

But less than a year later the first signs emerged that all was not working to plan. This project could be a big turn off to customers who do not want clerks to know too much about them. Nevertheless, this experience is not accessible for everyone since the vision was to have a high-end fashion store sales environment and adapt useful technologies to create a luxurious customer experience.

Watch
<http://www.jorgelino.com/index.php?id=56>



Name

Ada Experience

Category

Display

Year

2002

Industry

Architecture

Designer

Paul Verschure

Location

Switzerland

Ada, created by a team led by Paul Verschure, was a direct result of the link between physical and psychological realms. The room tries to make contact with visitors and communicate through sound, lights and visuals.

Ada is one of the first real-world systems to attempt to replicate brain-like functions on a large scale, in terms of physical size, number of sensors and effectors, and animal-like behavioral integration. She is a convergence of multiple interests from many different parts of society, most of whom are not neuroscience experts. Nevertheless, they have an equally legitimate interest in the project since they are collectively paying for it, and the technologies Ada is based on will directly affect their future. Ada is intended to be a public statement of the state of the art in real-world autonomous system development, and a stepping stone on the way to more effective systems. It is hoped that she will be used as a benchmark against which future systems can be compared.

The examples from the history of installation art and recent developments in architectural design show that there is much to learn for game developers interested in presenting games “outside the box” in terms of interface design, audience participation and the use of spaces. This is not to suggest that there are no interesting games at the moment, but...

If the gaming industry doesn't pick up from this, in the end it will be left behind by the new art of gaming born from installation art and architectural design.

**Watch**

http://www.youtube.com/watch?v=6R9624xV7JM&feature=player_embedded

Image 4.28
Prada Soho Store

4.22
www.festo.nl citeseerx.ist.psu.edu/viewdoc/



Image 4.29
Scents of Space

Name
Scents of Space

Category
Display

Year
2002

Industry
Architecture

Designer
Pletts Hague

Scents of Space is an interactive smell system that allows for three-dimensional placement of fragrances without dispersion. The study of the human olfactory system has progressed rapidly in recent years. However, when architects use fragrance in spatial designs, they tend to do so merely for branding purposes or for suggestive advertising (e.g. pumping the smell of coffee out onto a street to attract people into a store). Such designs fail to pick up on the potentials for developing evocative and memorable experiences using the sense of smell. This project demonstrates how smell can be used spatially to create fragrance collages that form soft zones and boundaries that are configurable on-the-fly.

Airflow within the space is generated by an array of fans. Moving air is then controlled by a series of diffusion screens to provide smooth and continuous laminar airflow. Computer-controlled fragrance dispensers and careful air control enable parts of the space to be selectively scented without dispersing through the entire space.

Vent-Axia generously supplied fans and control equipment for the Pavilion. Oxford Chemicals and International Flavours and Fragrances supplied smell sources. Max Fordham provided design advice for air movement and control.



Name

Philips Shop Lab

Category

Display

Year

2006

Industry

Architecture

Location

The Netherlands

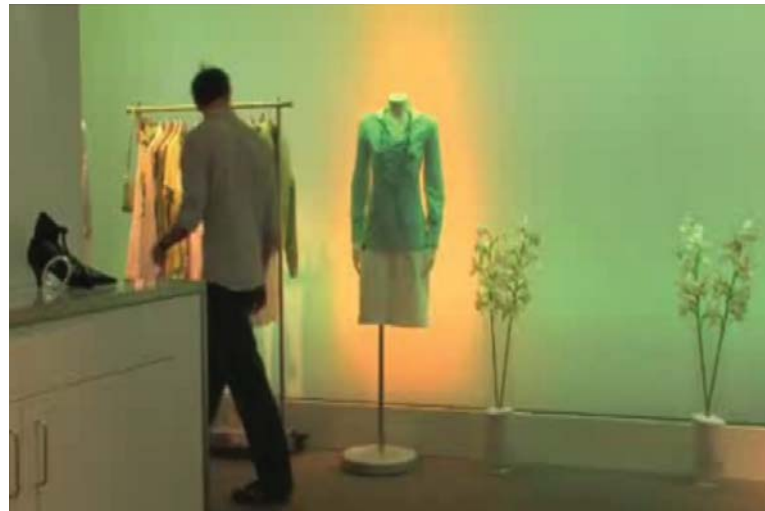
The Shop Lab at the Philips research center is a prototype retail store room used to test lighting technology to improve the sales experience for both the establishment and the customer. Focus is given to the functionality, which in this case is to display and identify items that the user might be interested in buying. In fact, while visiting the shop, the user could act as if it was a technology space, where the goal is to explore the different features and services provided, rather than getting to know the products that are being displayed themselves.

First up is the Show Window, a series of projectors displaying on the exterior showcase windows. These projectors show a rotating collection of images on the glass, behind which sits the showcase products. As passers-by stop at the window, the projectors switch to displaying an invitation to the user to simply look at the product about which they would like to know more. Infrared cameras track the person's gaze, and as they look at the various products the projectors display additional information or recommended accessories.

The projectors can also display a completely interactive user interface onto the window, relying on motion sensing cameras to detect which navigation control the person might point to. Entire interactive catalogs can be put on the show window, allowing folks to get product information simply by walking up to the window.

The wall works exactly as advertised when in the lab, though a few challenges remain before it's ready for the real world (i.e. who's eyes to follow when multiple people are pressed up to the window simultaneously?). Also there are other technics such as lighting solution that matches with items and walls are bathed in the dominant colors, along with LED-embedded ceiling tiles, and specific areas can be given highlight colors.

The suggested use for this system is to allow retailers to more



quickly adjust their interiors to the color schemes of the season or the products; and to create more inviting environments that encourage shoppers to feel good about the products on display. It can also be used to show how specific products look in certain environments.

Watch

<http://www.jorgelino.com/index.php?id=52>

Image 4.30
Philips Shop Lab

4.24

<http://techcrunch.com/>

Image 4.31
Dune

4.25

www.studioroosegaarde.net/

Name

Dune

Category

Display

Year

2007

Industry

Industrial Design

Designer

Daan Roosegaarde

Location

Netherlands

Dune 4.0 by Daan Roosegaarde is an interactive landscape which physically changes its appearance in accordance to human presence. Placed in the main corridor of Montevideo, Dune 4.0 is composed of hundreds of fibers which react in correspondence to the movements and sounds of the visitors. Daan described this as a “hybrid of nature and technology “which“ functions as a platform on which the relationship between visitor and the existing architecture is enhanced. By means of looking, walking and interacting, visitor and space merge into one coherent environment which could be best interpreted as a kind of Alice in Technoland”.

Dune 4.0 is part of a series interactive installations which called ‘Liquid constructions’. There is Liquid Space, 4D-Pixel, Liquid 2.0, Wind 3.0, Dune 4.0.

Watch:

<http://www.studioroosegaarde.net/project/dune/>



Name

Interactive

Category

Display

Year

2008

Industry

Architecture

Designer

SEGD

Location

Los Angeles

The goal of Interactive, an interactive installation located at 11th and Flower streets in downtown Los Angeles, was not only to enliven a public space and create a unique sense of place, but to create an experience that allows people to relate to architecture on a human scale.

A Percent for Art project incorporated into the new Metropolitan Lofts apartment building, Interactive consists of a large “interactive carpet” of LED tiles in the building’s public entryway. When visitors walk on the 16-in.-square tiles, they light up. At the same time, corresponding large squares on the building’s facade light up in the same pattern, tracking human activity and, symbolically, the pulse of the city’s inhabitants.

Visitors on the carpet can simultaneously see the effects of their actions beneath their feet and in a view of the building facade via a video transmission from across the street.

The 176 LED tiles in the electronic carpet are each 16-in. square. Weight sensors under each corner of the tiles are read 30 times per second by a master CPU, activating LED lights. Custom software analyzes the weight data in real time to determine where people are standing and what direction they are moving in. The software generates light patterns based on these data and scales the patterns and interaction according to levels of activity on the carpet. As a result, different visitors may experience different patterns, and the experience changes throughout the day. When the carpet is unoccupied, echoes of previous participants play on the carpet and building face.

The building face features 18 red square fixtures in six rows, corresponding to each floor of the building. The total of 18,000 LEDs are programmed to project extremely bright light toward



the west, but reside in carefully designed “U” channels so that light will not project back into tenant units.

Jury Comment

“The heart of a city beats with the movement and interaction of its inhabitants. This project takes this timeless concept and transforms it into a mechanism for creating a distinctive sense of place in this downtown LA neighborhood. The linking of the floor sensors and facade lighting add a temporal aspect to the installation that I find quite fascinating. Each of the pieces is complete by itself but is made richer through the ultimate understanding of the linking that is made over time.”

Watch

http://www.youtube.com/watch?v=z_ISrvLN5UE

Image 4.32
Interactive

4.26

<http://www.segd.org/>

Image 4.33
BIX

4.27

www.realities-united.de/

Name

BIX

Category

Illuminate

Year

2003

Industry

Architecture

Designer

United Architects

Location

Austria

BIX by United Architects is a communicative display skin for the Kunsthaus Graz.

The idea of the media installation BIX arose out of considerations on how to equip the interior of the Kunsthaus in Graz with media. BIX was created as an additional feature at a time when overall planning of the Kunsthaus had already reached an advanced stage. Because of the late date and technical complexity of the project, it was also a challenge to integrate an architectural concept of foreign authorship into the expressive building. After all, BIX was a new element designed to entirely dominate the building's riverside frontage, thereby radically redefining the architectural concept of the building's skin. It received approval from the client and the architects because it was based on the architect's original ideas for the sleek, blue, shimmering facade: Constructed from about 1,300 individually shaped, translucent Plexiglas panels covering the biomorphic building, the so-called skin was intended to feature different nuances of transparency, which would have created varying communicative relationships between interior and exterior.

The media facade extends the communication range of the Kunsthaus Graz, complementing its programmatically formulated communicative purpose and becomes an important factor for the identity and image of the Kunsthaus. If a cultural institution like this is a tool for artistic articulation, the BIX installation multiplies its power by turning the Kunsthaus Graz into a "power tool", where the power is not defined in a physical sense but above all by a capacity to articulate and broadcast meaning. With BIX, artists can explore alternative cultural and artistic modes of production, whose implementation on



commercially used "propaganda" surfaces is widely excluded. The introduction of BIX revived the communicative conception of the facade, even if in a mediated way, at the same time delivering the required political arguments for the use of Plexiglas for the final construction of the skin. BIX consists of a matrix of 930 conventional circular fluorescent light tubes integrated into 900 square meters of the Plexiglas facade on the east side of the Kunsthaus. The individual, continuous adjustability of the lamps' brightness with a frequency of 18 frames per second makes it possible to display images, films, and animations. BIX constitutes an amorphous light matrix tailored to the complex shape of the building and gradually fading away toward the edges, instead of offering straight and clearly visible borders. The installation's edges are hardly perceptible, as if the light patterns could dance freely on the building's outer skin, and the 930 lights seem to be rather "tattooed" into the skin of the building like individual spots of pigment. BIX remains an experimental laboratory until today. As the content producer, the Kunsthaus has the chance to continuously explore and develop methods for a dynamic communication between building and surroundings, between content and outside perception.

Watch

http://www.youtube.com/watch?v=Uq1IkrtAJ_0



Name

Iluma

Category

Illuminate

Year

2009

Industry

Architecture

Designer

WOHA

Location

Singapor



iluma is a complete entertainment district incorporating theatres, clubs, bars, shopping and public space stacked up into a cube 80m x 80m x 80m. The concept was an Ibiza-Bali club sandwich, with various programmatic levels linked by “tornadoes” – vertical circulation voids that transport people quickly to their destination.

The tornadoes also gather the connection threads leading from the surrounding fabric, sweeping patrons into the building – first into the public plaza which is designed as a warped ground plane that creates spaces for busking, markets and events, and then up through layers of shopping and entertainment. The tornadoes burst out onto the rooftop, where indoor-outdoor venues for drinking, eating and performances are housed.

The building incorporates an interactive facade, where visitors can use mobile phone technology to send messages, images and graphics onto the building, an electronic version of the concrete and glass pixels of the Duxton Plain facade.

Watch

<http://www.youtube.com/watch?v=r5CQWv3HfSY>

Image 4.34
Iluma

4.28

www.archdaily.com



4-6 Conclusion

4.29
*Media facades:
history, technology, content*
M. Hank Haeusler
Ludwigsburg
2009

The media content is what the beholder will notice first when looking at a media facade. In any media architecture, there are four groups of display and expression, communication, positioning and documentation frame the technical equipment. Not always, all the four groups are present, but they offer compelling evidence of synergies that are possible when two or more of these “technologies are combined to provide new flexibility and capability to human-environmental interaction.”

Toyo Ito^{3,30}, a Japanese architect, offers 3 points of reference in the architecture in electronic age.

One of the points is the “information” that can be shared through architecture. For him, contemporary architecture, “must link us with electronic environment through figuration of information vortices”; just like in the primitive age that human body was linked with nature.

Second point, as he describes, is:

“The contemporary architecture needs to function, in addition, as a means to adjust ourselves to the information environment. It must function as the extended form of skin in relation both to nature and information at once. Architecture today must be a media suite.”

In his last point, he implies that architecture in electronic age is architecture that designs time:

“Design in architecture will refer not only to traditional hardware design but also to a more flexible software design that includes programs. We will be designing the time just as we design the space.”

The points above, describe the feature that media facade offers. They also set a frame work for content could be to display on a facade.

These characteristics make three different contents^{3,30}.

Pre-recorded media content

Any form of media content where data has been collected and then stored and replayed at any other time.

Live media content

Any form of media content which is recorded and displayed at the same time, without having the option of creating a back loop from display to environment and back again.

Interactive media content

A simultaneously recorded and displayed media content, here with the possibility of creating a loop between environment and user and display. The interactive media content could also be defined as a living media content where content is related to number of previous contents and the relationship between them.

In this chapter everything about media facade was presented in a summarized way. The history, meaning, technologies, example and what they are about.

All the four groups that were mention above (display and expression, communication, positioning and documentation frame the technical equipment) need a complete analysis on the building, context and culture that the designing of media architecture is taking place in order to present a successful media architecture to any city.

For this purpose the next chapter is devoted to analysis of Maritim Hotel, the context of the building and the culture of cologne.







CHAPTER 5: TO LUNCH...

Concept Developments, Strategies
Where, What, Why, How



5-1 Master Plans

The last chapters resulted that the main problems in the area of design and requirements for the new design. Nevertheless, by a detailed research over Media in architecture, an in depth vision is born.

This chapter is about the master plan, concepts of the design and the final design.

So as result of analysis, there can be four scenarios to solve the urban problem in the master plan. .

Firstly, Heumarkt be one complete square again as a reminder what it used to be. In this master plan, the comments of Alber Speer is followed.

Secondly, accept the fragmentation and make a new identity for it. In this master plan, comments of Albert Speer is denied.

Third and fourth option imply that maybe it is no longer possible to make one unity in Heumarkt but we can make unity is micro scale. In this master plan, the general idea of Albert Speer is followed but with more urban aspect it has been changed.

In the third one the unity is created by making a cover on roads and in the fourth solution, Heumarkt is separated in two smaller squares with different potentials,

In the opposite page, there is a diagram of causes and consequences in Heumarkt. The diagram start by analyzing the reason of fragmentation while introducing new opportunities by looking over their consequences.

The master plans are the results of diagram.



Scheme 5.2
First master plan



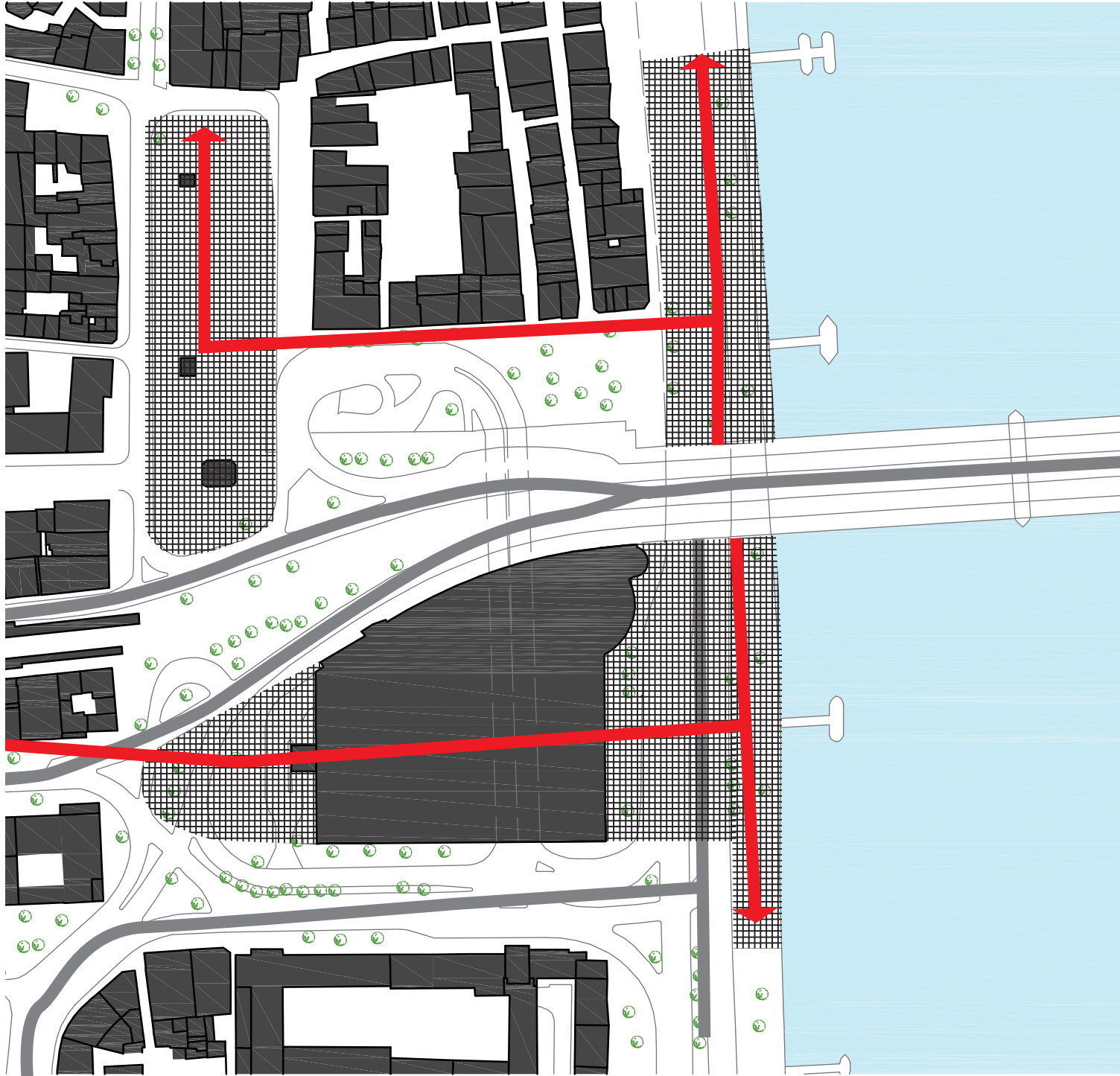


Scheme 5.3
Second master plan



Scheme 5.4
Third master plan





Scheme 5.5
Fourth master plan



Scheme 5.6
Meaning of elements

The chosen master plan is the fourth one because of the possibilities it offers:

It will bond new with old,
Does not deny pedestrians or cars and makes the least changes on their route,
Creates the connectivity,
Creates a stage for the hotel,
Creates a gate with unique identity which in the same time is local,
Creates an environment which both is introverted and extroverted,
And most importantly, it generates life around and within it, and is flexible and open to change.

In the current situation there is a tension between traffic, Heumarkt, hotel and promenade. The shape of Heumarkt is gone and no longer is as a complete square, Function of promenade is lost, Traffic does not create an appealing urban environment, Hotel represents a huge scale in its context which currently is not fitting and also the function seems more semi-private than public.

The most important question in creating master plan is how to build a city in relation to memory; especially in and around a square such as Heumarkt with many weight of history? Heumarkt being in two parts, has been created a new element there. This element has changed the character, form, function of Heumarkt so much that actually it has become a new identity for it. But in order to make a unity, it is possible to break the square in two parts and create unity in micro scale and contrast in big scale. This way the square can be still conceive as one part.

Meaning of Maritim Hotel

Maritim hotel more present another function rather a hotel. There is no hospitality and instead there is a sense of distance between the hotel and people (scale, function, material and traffic). In order to solve the problem, all the disadvantage should be guided in one direction. The hotel should bring something extra to the context that the second square be defined with. It should represent a surprise, have a inviting gesture and appealing functions. Nevertheless, Maritim will dominate the context by the media feature to create a gate for the city. Maritim in order to become a gate should become more separated.

Meaning of Passage

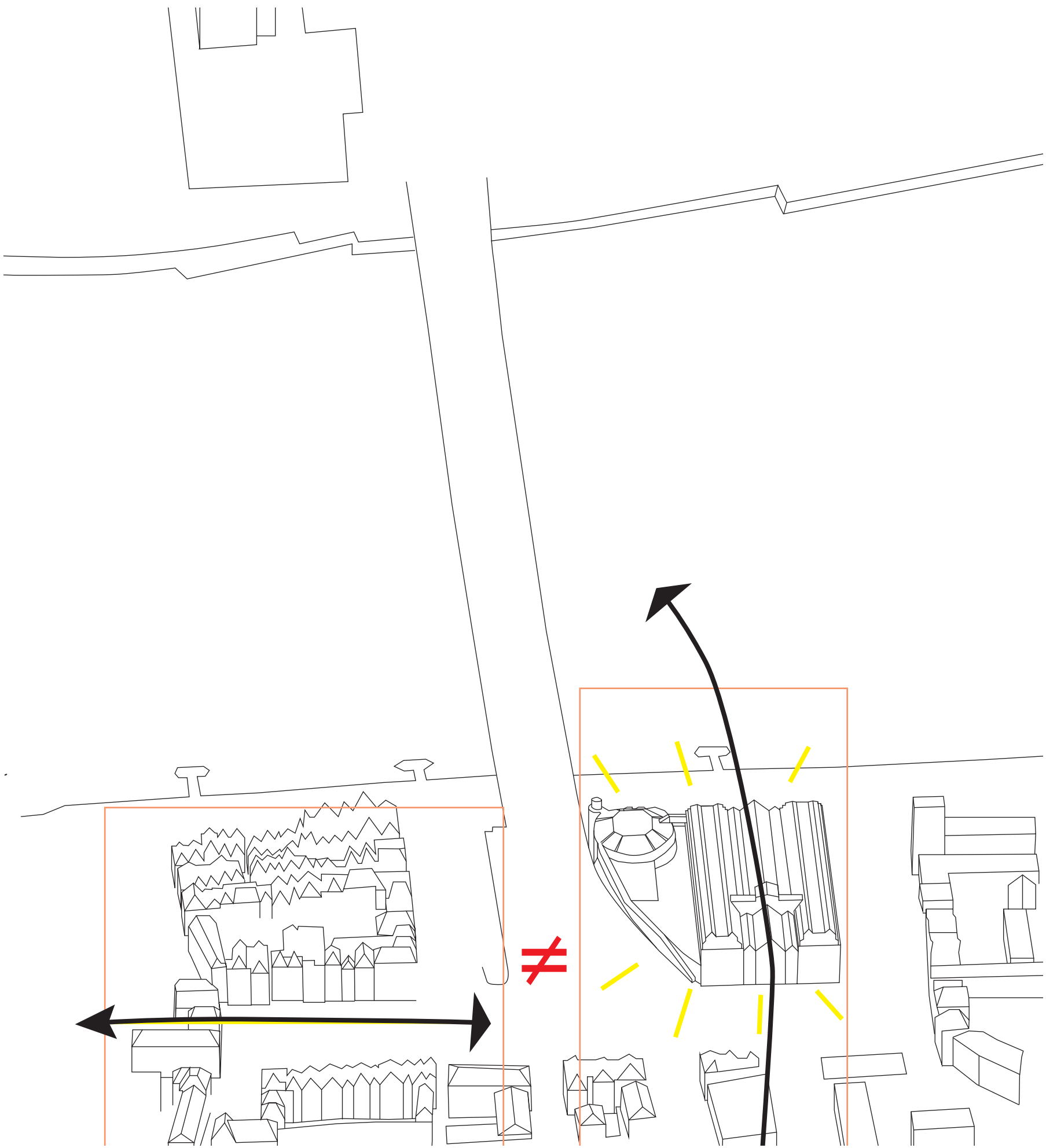
There are two type of public spaces. Heumarkt north and Heumarkt south. In Heumarkt north the activities flows from the river side to the old part of square which give a nostalgic feeling while Heumarkt south does the oppisite; creates a modern gate. The new passage will start at the Huemarkt south and creates a connectivity between utilities inside the hotel and river side. Better accessibility for pedestrian will attract more people and increase the safety, accessibility and less interruption (traffic lights) for both of them and in result less traffic. Location creates both introvert and extrovert spaces. Promenade and square acts more as an extroverted space while the passage in the hotel is a introverted space. This characteristic makes the contrast which gives more options, freedom and choices how people use their spaces and move from one point to another point.

Meaning of square

In the Huemarkt there is a situation which focusing only on one part will not solve any problem but there should be hierarchy of element and connection and relation of them with each other to build up a successful design. Four hierarchy of building, square, roads and river exist in the context.

Base on the new master plan, buidling should be the main element, and act as a connector with other sectors. road and river plays the same role as a trasportation and a border with the differenct of a natural one and man made. They also make a favour to the design to bring to different element of nature and busy city in a transformation of the building. The last and not least is the squere which comeplete the image.

The squere is creating a normal urban life. a save place to pass or relax and get in touch with the spriti of people and city. The squere also is the main enterence for the new building as it is a stage to view the Huemarkt and Maritim.



5-2 Movements - Where

The movements is one of the most amazing characters of the location.

By coming the new metro station, Heumarkt is receiving more audience.

The roads that flow on top and under the ground to guide the traffic around the Maritime Hotel.

And ships which float over the Rhine.

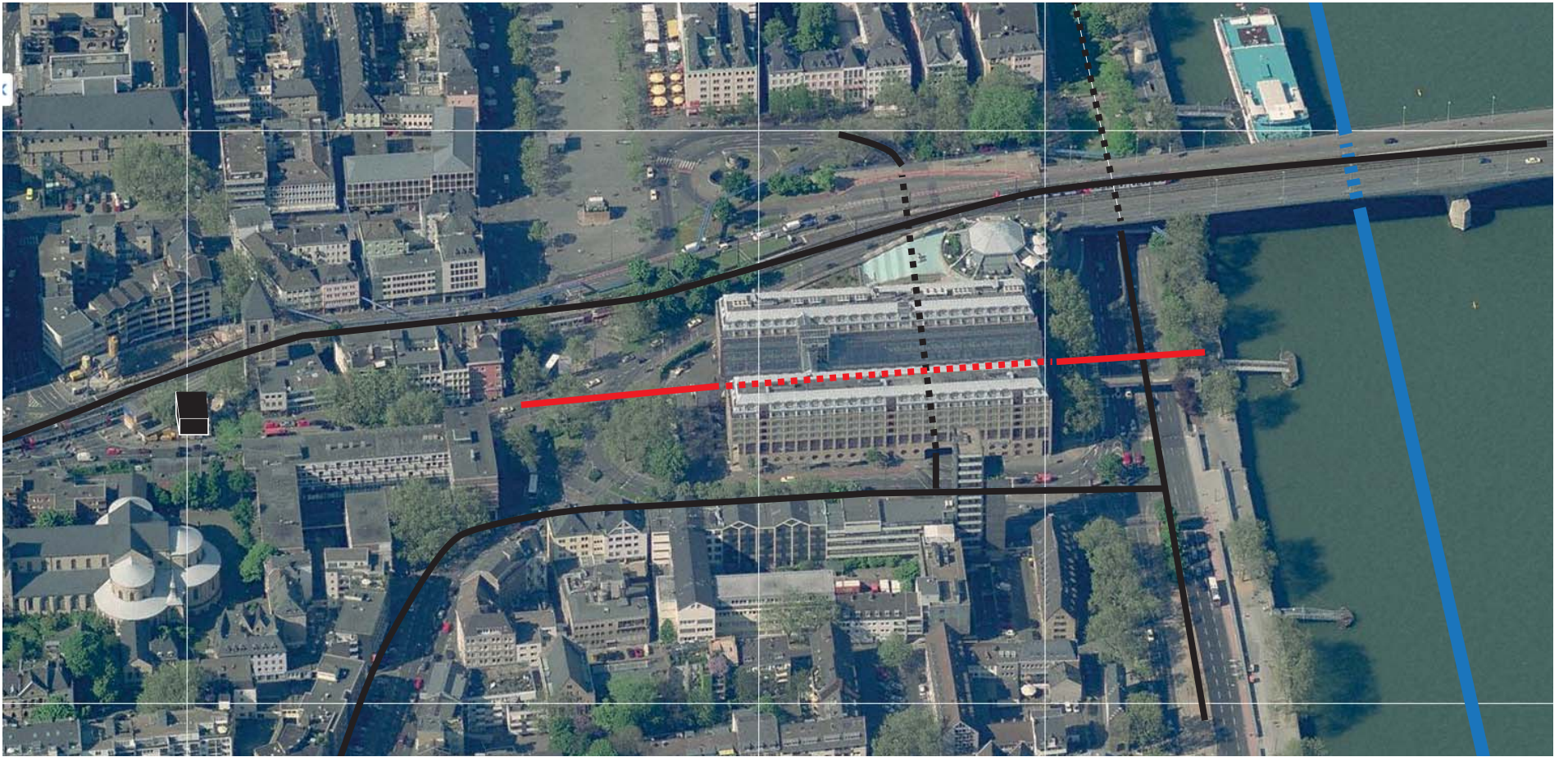
The missing movement is the link between all of these which the red arrow indicating to it.

Maritim Hotel is a straight line to connect these movements together for pedestrians.

Image 5.1

Movements in the location





Scheme 5.7
Volume for redesigning

The atrium is emerging as one of the most versatile and useful urban design elements available to contemporary architects and urban planners. Moreover, atria have the capacity to integrate old and new buildings, thus playing an active role in historical preservation strategies. One of the great adventures of atrium concept is that designer is able to accurately restore the exterior of a building a new interior. Most important, atria add to the inventory of public spaces available to the pedestrian, joining inside and outside and enriching the urban and architectural experience.

The two volumes that are indicated with red colors are the part need to be redesign which need to be public as possible but are too isolated.

The black volume contain the conference rooms and hotel rooms which would stay untouched for the advantages of the hotel.

The dark red is the Atrium and the passage and public space that need to become more expressive and comes out of it context which the light red is the urban part which becomes the city forum with roof garden to add to the value of the hotel.

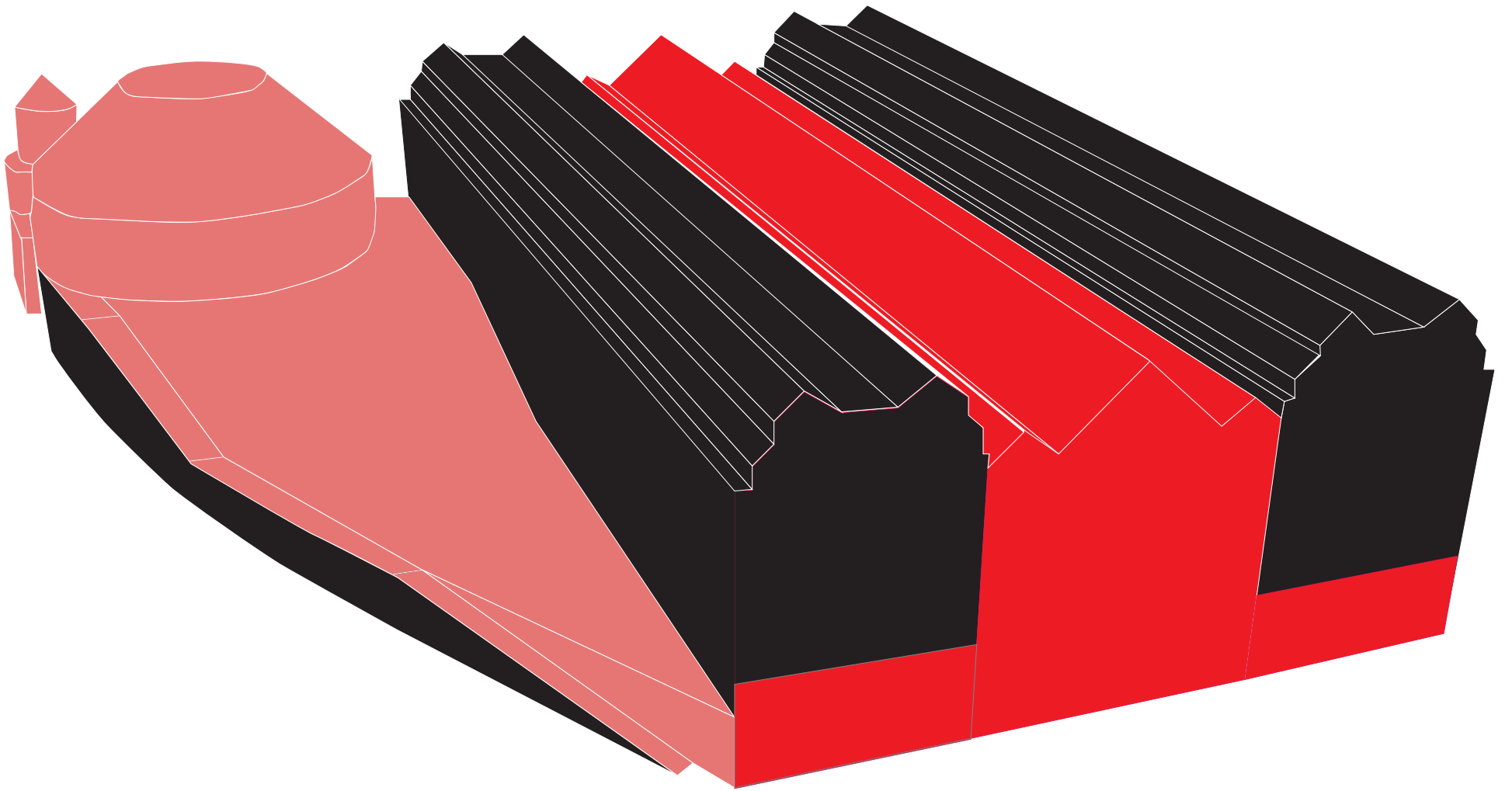
Hotel rooms block will have no change, not in interior and not exterior.

Interior will be saved because it is the most important part of the business. And the exterior will be kept (not cleaning or fixing) to create a contrast.

Nevertheless, as a landmark is the main topic of discussion, it deals with memory.

This building should deal with exciting memory and new memory and blend them together. Keeping some part to respect the new memory and bringing a new opportunities for the new memory.





5-3 Solution to a Big Problem - Why

As it has been said in the end part of the last chapter, the problems are:

Big scale of building
Detach from the surrounding
Lost of identity
Fragmentation

The identity and fragmentation has been discussed.
By zooming in more to a smaller scale, problems show their origins better.

By analyzing the building there can be two sides: functional problem or architecture problem. It has been understood that the main problem is an architectural problem of exterior and functions play a little role here. The hotel has a successful rank of being book for rooms, conference rooms and restaurants. What makes a problem is an exterior of the building. A prison like, repetitive, big and close features, makes it less than a public passage and just a private building with an unknown function for the first time visitors. This over size volume do not bring a new value to the historical square and just creating a border.

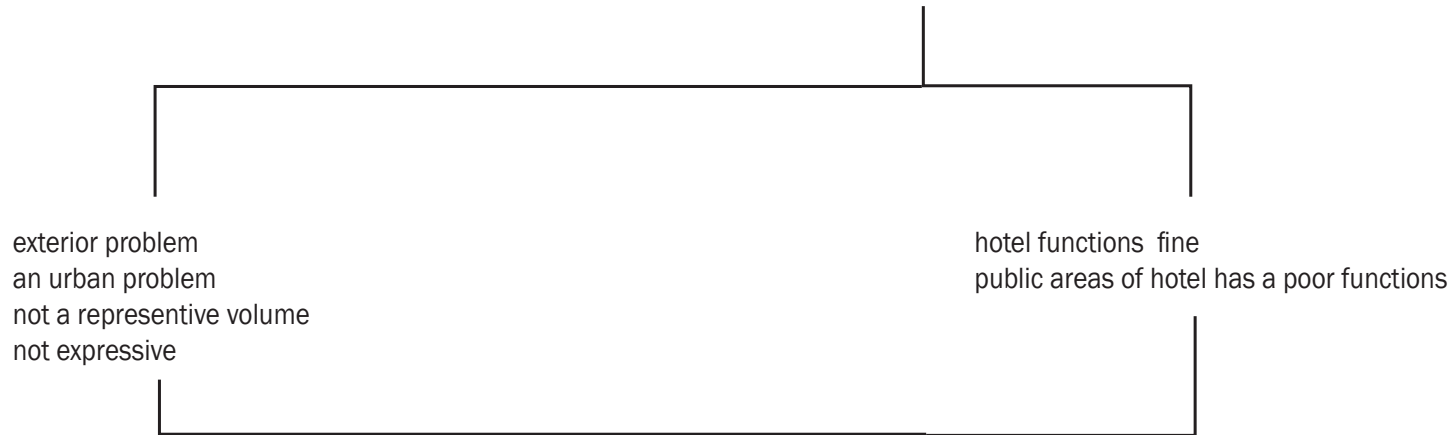
Simply the building is asking for a exterior change to accommodate public.

There are two strategies for redesigning the building:

- Draw public inside with a more approachable design
- Creating a landmark

Each of these point will be discussed more specific now.

big scal building → representative
deattached from its surroundings → connection to context
fragmentation → unity in mircro scale
lost of identity → add a new identity



demands for exterior change to accomodate the public

↓
Create a surprise

↓
Radical Renewal for the atrium

↓
Different form
contrast between old and new

↓
a new space, exprience
a new creative economy
a new identity
a new memory



5-4 Design Strategy - What

Is it possible for Maritim to be a center point of traffic and at the same time an urban leisure zone?

Map 5.1
Maritim Hotel in its context

Maritim hotel is one of the traffic centers of Cologne which horizontally connects two side of Rhine and vertically connects the old center to new parts of Cologne. It is connected to city by Tramway, bus, metro, ferry terminal and pedestrian and cyclist path. Today however the exciting structure is about to collapse under the weight of traffic; since it no longer appealing. Its public place is surrounded by traffic and making the water front inaccessible for the people.

The location of Maritim is a three level intersection of traffic. The roads and specially the bridge work as physical and visual barriers between the surrounding neighborhood and divide the area into four parts; Maritim Hotel, traffic roads, promenade and Heumarkt.

Maritim hotel connects these parts with a media interactive surface. The building creates a diverse experience when moving in or around the building. What is a gate, but a significant point you pass? Here that point is turned to a big screen, reflecting its environment and events.

Cologne already has its landmarks; Cathedral by a master. No need for a Bilbao or more master pieces. What I want to contribute is new connectivity and activity at human eye height. As well as a big idea and long term vision to turn Maritime hotel to a media center, the aim is to show the identity of Cologne.

I propose to convert the "no man's land" that currently is an island shaping the traffic roads to a new way of active and public life. This time not through outlining each of them, in reverse to expand the public activities to the city, creating a blurred transformation from urbanity to architecture and landscape.

As a solution for traffic, I suggest an inversion. Why not do the opposite. The suggestion is to make it fun to be in traffic. Let the public place surround by traffic and provide an easy access for pedestrian and bikers to the building.

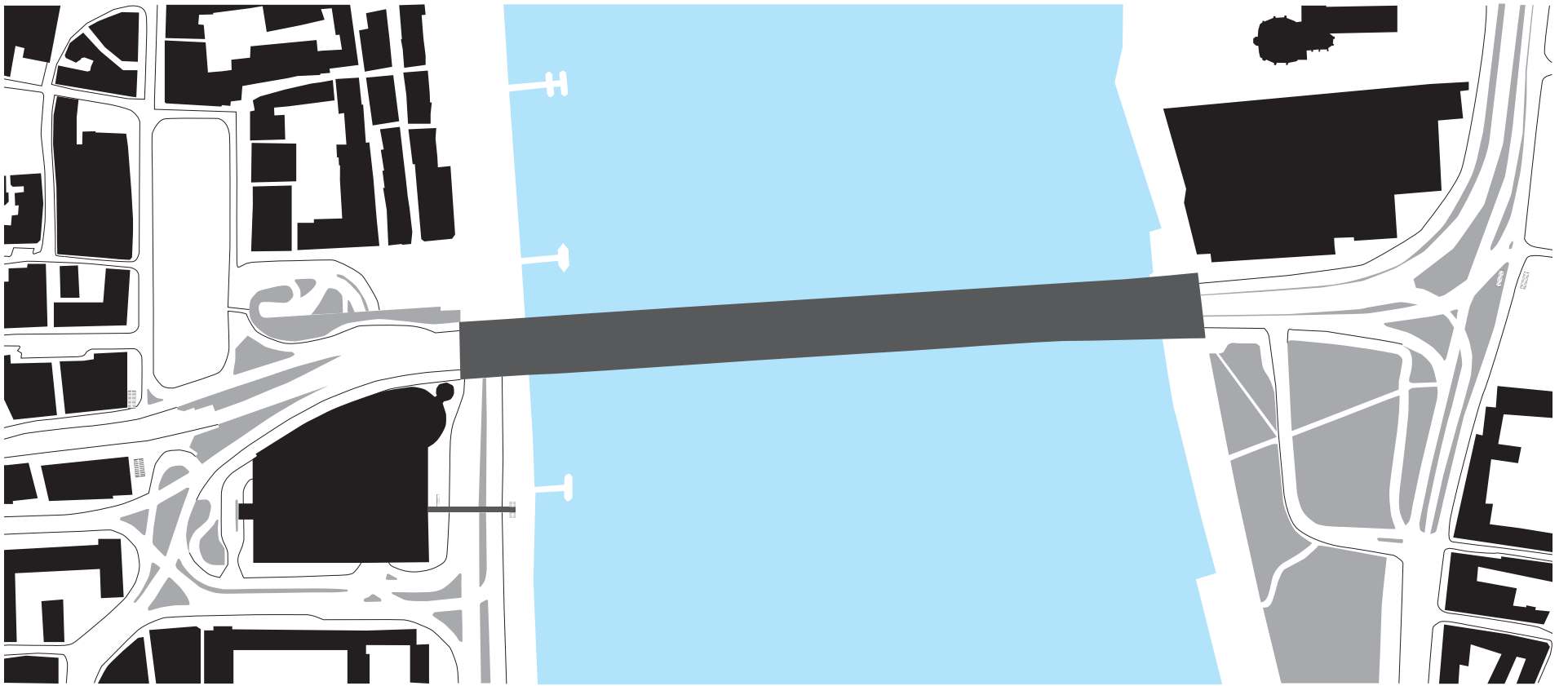
The hotel, roads, metro and river will allow the site for a multi programming, hybrid activities and most importantly increased interaction between people and programs. We propose multitude functions, combing public and private, visitor and residents, commercial and culture function is a single location in heart of cologne.

Shops, restaurant, cultural events on the ground level of hotel bonded with to Rhine River from of one side and the other side a public plaza and connection between metro station, hotel and parking. Hotel rooms and exhibition spaces will be on the higher levels expending out to the roof garden and outdoor traces for visitors. Like a contemporary interpretation of the archway

or passage, the hotel forms a generous cover for the public life beneath.

The building is an urban space, rather than a building. The building is a shelter from weather surrounded inside out with public uses and indoor and outdoor activities. The building will be bold and well-adjusted, unique and local at the same time through media. This way building will act as a point of reference and a gathering point for the people of city and visitors. The building is a view point, a pavilion, a market place, an exhibition space, a conference room, a river side, a boardwalk, a stage and an audience. But most importantly building generates life around and within it, and is flexible and open to change. As life in city evolves so will the Maritime hotel.





5-5 Approaches of Design - How

“ The project reflects the place and functioning of the existing Maritim Hotel in Cologne at the base of programmatic, typological and morphological analysis, in order to develop new architectural concepts that allow for radically removing and replacing parts of the existing structure of the gigantic hotel, in order to recreate it in both a hotel and display window of the creative economy.

The size of the complex is as such, that ‘reuse’ is not the appropriate name for the operation, as it concerns rather radical renewal. Even when redeveloping into detail just a part of it, such part easily reaches the maximum size of a thesis project architectural design. The new design will situate the ensemble in a more convincing way, in comparison to the existing situation, as a combination of ‘bridge head’ and plaza in the given place of the city. “

Metropolitan ensemble at the Rhine in Cologne
Chair Architectural Design and Urban Cultures
By Jos Bosman

Base on the diagram of page there is a clear demand for exterior change.

This change can be in three ways:

- Resuse
- Resuse and Renewal
- Radical Renewal.



Reuse

Although the building exterior has many problems, but respecting the building is also important since it has gained an identity, even though it might be negative.

The only aspect that will change in the exterior is the entrance to make it more inviting, and the bridge at the end of the building to make more part of the building and less as a street pedestrian bridge.

The solution to solve the exterior problem is to add the media facade, it can decorate the building and create a new image for the building to show the events inside and give motivation to public to experience those.

Reuse + Renewal

This is a middle solution to create the surprise while respecting the building.

This solution can be two different varieties:

1. A light structural surrounding the buildings and embrace the whole building.
2. A light structural as a sculpture coming out the building in this solution the different parts of building come together and creates a whole but still it is more a decoration than a solution. The only aspect that will change in the exterior is the entrance to make it more inviting, and the bridge at the end of the building to make more part of the building and less as a street pedestrian bridge.

Also a media facade will be added, it can decorate the building and create a new image for the building to show the events inside and give motivation to public to experience those.

Radical Renewal

The problem of the exterior is so big that decoration will not solve it. So this demands for a radical renewal in atrium. This radical renewal bring a change and great surprise with a complete contrast to what exists there.

The atrium will replace by a new one so create a new space, experience and representative.

The structure will be kept as much as possible (column and beam) the roof structure will partly used but not completely since it does not have natural form and cannot be translate to the new form.

The form will call for a new creative economy in hotel business and public to go there any time, any day.

Also a media facade will be added, it can decorate the building and create a new image for the building to show the events inside and give motivation to public to experience those and create a pleasant atmosphere by controlling the colours.

Since all the options beside "Radical Renewal" are decoration, not the ultimate solution to the problem, it is decided to take the approach.



5-6 Creating Landmark - How

Landmarks are buildings which all are different from each other. But at the same time they have all one thing in common. They always try to out shine the context.

If it is in a high rise area, it should be even taller. Being representative is the most important element in the essence of landmarks. This mean that the size of Maritim hotel can work in the advantages of the design. it is already representative in diifferent way and it is hard to ignore it. Also the location of the hotel with all the roads sourrounding can goes with the goal. Not only they provide the best connectivity to the city (tram, bus, parking, pedestrian, bike and boat) they create an island for a free standing building.

As we look at the building closer, we see that it follows certain rules: material, structure, rhythem and etc. These elements also repeat in all of Huemarkt. In result, the new volume requires to break these rules and becomes a contrast.

With all these materials buidling that is ordinary, repetitive and boring will become a surprise. a surprise which appears unusal and evoke people to experience the building.

Urban Scale:

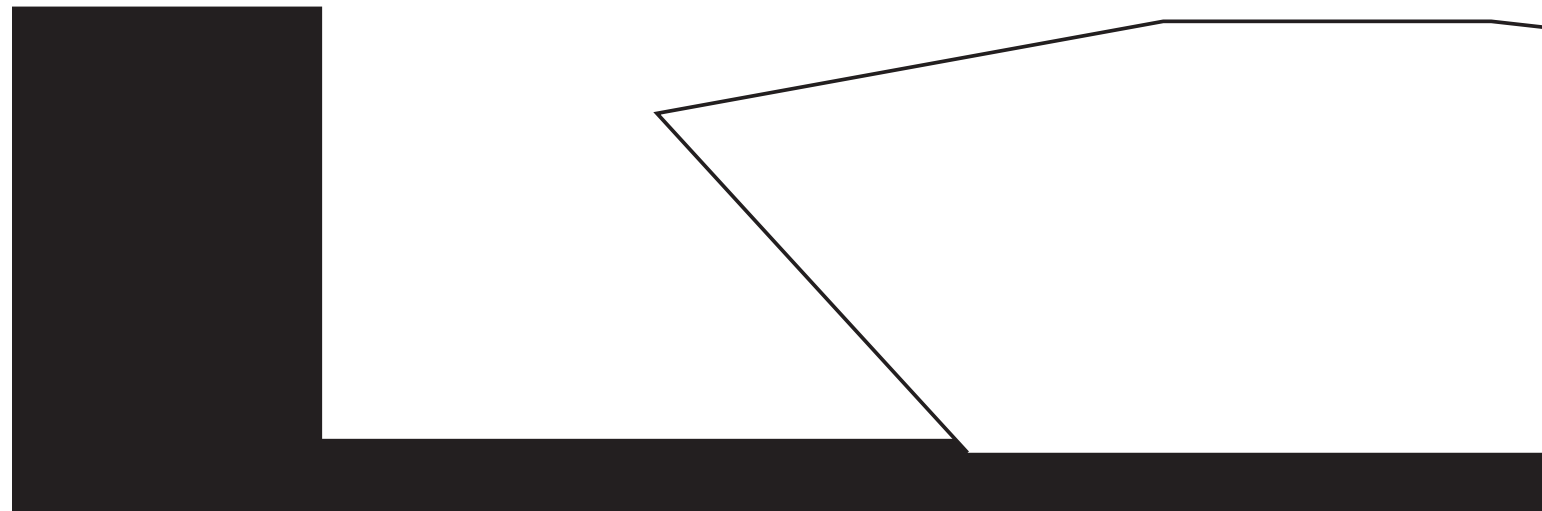
- Creating two smaller squeres and stop pionts that the public enter the building thourgh them and they represent a space that is not entirely architectural nor urban.

- These square create the exit and enterance of the autrium and a passage of 100 meter long to connect river to Heumarkt.

- As a exprinece piont of view, the most memorable part are beginning and the end. So the volume and media should give the opporitinuty for a surprise.

- the exit and entrance will have dramatic shape and media facade as a reminder of identity and sense of place.

Scheme 5.9
Sketch of new volume



The goal of new volume is to create connectivity, identity and more public spaces in the urban level.

Expression:

- The building should have a dynamic shape which goes with the definition of city and capture the life of it in itself.

- At the city side the building should have dynamic shape which creates a space between urban and architecture. In the same time it tries to calm the city down at the location and make a shelter and remind public that there is calmness on the other side.

- At the river side building should have a more dynamic movement to capture the water's shape. And in the same time break the calmness and bring the excitement of the city, busy side.

The other element that plays an important role for redesigning is the building itself. The form, typology, structure, meaning and scale of the building send a message.

The new design, in order to create a landmark, should be contrast to the form, typology or structure and exaggerate that character.

The new design is by changing form because it can be more expressive and contrast to the other parts of the building.

By this approach, the whole building can look as a one but not part of it and be free standing.

Architectural scale:

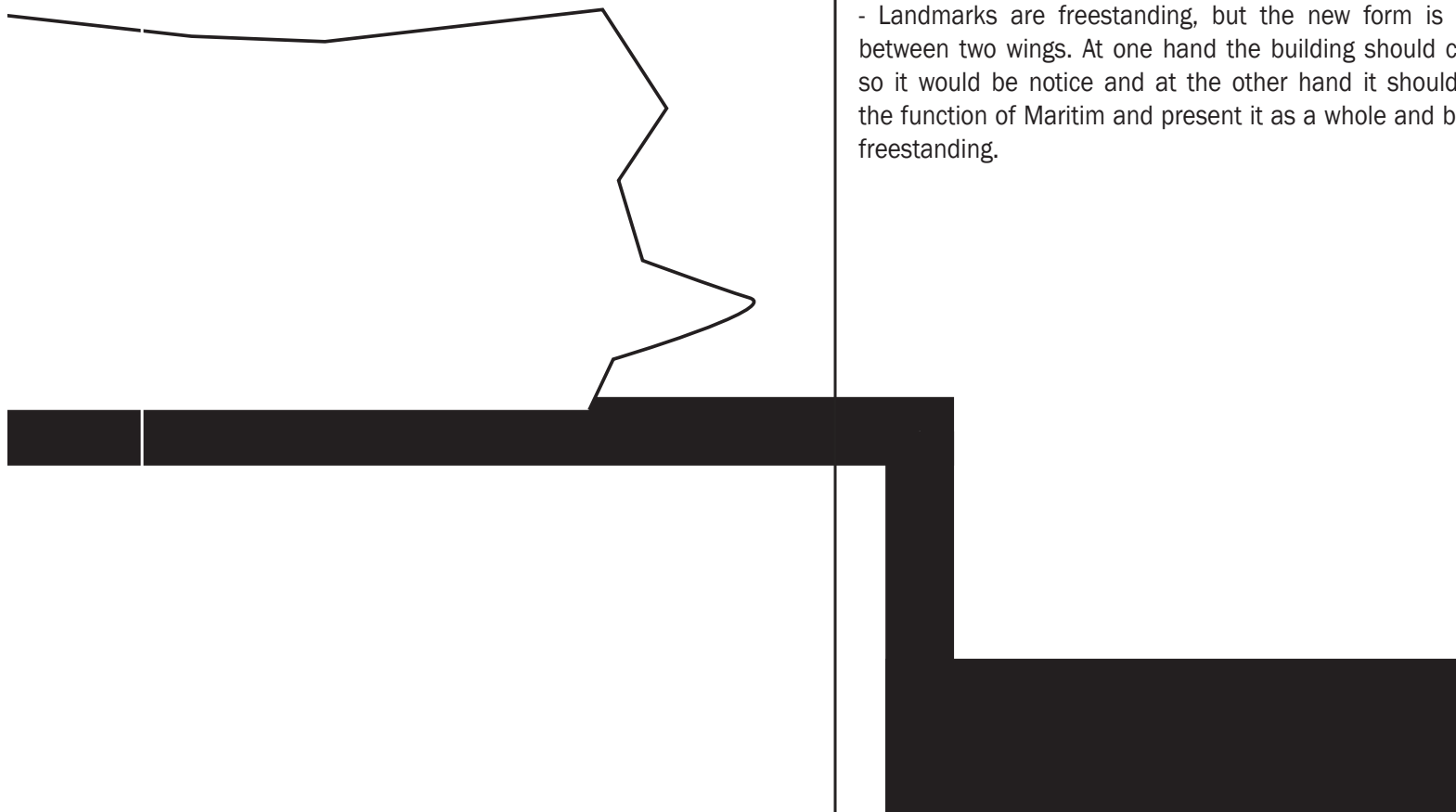
- Creating form to create a dynamic sense to the place since it is really solid and bring a contrast to make a surprise.

- Typology will be shown in the structure not the form.

- Reuse the structure as much as possible but since the goal is to create a landmark, it should also not compromise.

- Building is connecting two different parts: city side, natural side
The form should have a dialogue with both part and at the same time have a coherence.

- Landmarks are freestanding, but the new form is imprisoned between two wings. At one hand the building should come out so it would be notice and at the other hand it should respect the function of Maritim and present it as a whole and become a freestanding.



5-7 Spatial Typology and Functional Role

Spatial Typology of Atrium

Atrium buildings have proven to be very useful in carrying out certain urban design strategies. As a public places they add immeasurably to the repertoire of available urban space types. Atria in retail developments provide safe, comfortable areas for shopping, with user amenities intended to give shopping a recreational air. The urban space has been greatly enriched by atria because of the many ways in which they contribute to sensitive and innovative urban redevelopment.

Economics is always a factor when speaking of atria. In commercial centers atria provide occasions for public gathering, events and exhibitions, there by attracting shoppers. In hotels atrium spaces lend drama and excitement to travel and conventions, thereby increasing occupancy rates.

Energy consciousness is certainly, another factor which has economic overtones. Sky lighted atria bring daylight which is useful in offsetting electrical lighting costs in offices and commercial buildings.

Communication is eased through frequent visual contact and informs meetings; the users get to know each other the atrium floor provides a requisite program space which functionally bonds the plan together.

The presence of art, water and plants all bathed in abundant daylight establishes a pleasant ambience.

The goal is to explode the hotel; to open it up; to create grandeur of space, almost a resort, in the center of the city. The whole idea is to open everything up; take the hotel from its closed, tight position and explode it; take the normal architectural elements in atrium like circulations elements and let them become an experience within themselves, let them become giant kinetic sculpture.

On the exterior hotel will appear to be a rather subdued modern building with sharp edges and transparency. The building is exploding inside out and outside in.

The stairs and elevator will the major elements of the atrium, from one side it will have a dialogue with city and other side, and they zoom up and down to the space inside, adding mechanical animation to this grand space.

Perhaps the greatest benefit is the capacity of atria to bring spatial orientation, drama and excitement to architecture. Atrium buildings are indeed memorable.

Functional Role

The atrium has a dual role: as a communal social space and a place of orientation; as a common living room for the city. As Cologne is the city of courtyards, transformation of the hotel will make it fit in the context by making a courtyard for the city not only a building. Moreover, orientation within the hotel is excellent, lending a degree of security to the transient visitors. Circulation within the hotel, which is explicitly related to the atrium, makes movement an enjoyable procession.

Nevertheless, the atrium will be a flexible space with the aim of a commercial area to capture the soul of market hall. The atrium can change the function from the showroom, to exhibition, social events and theater presentations; which hotel can host the people involves too. By encouraging communication and interaction between people of the city and guest of the city, the atrium fosters a sense of unity and identity.

As it can be seen in the plans and scheme in following pages, the most public functions of the hotel are on the first floor. The ground floor have secondary functions as technical parts, and parking and sport facilities.

As for a building aiming to become as public as possible the ground level is a conventional space for design. Ground floor is where a building touches the city. The public whether finds it as a block or as a big door.

The strategies are to either bring the public functions on the ground level or create ground level as a big entrance leading audience to the first floor.

As the design intends to engage people with the building, the ground floor becomes a huge entrances in order to guide people to other functions on First floor.

In result the parking for personnel and technical part are moved to the parking space in floor -1, -2 and -3.

Offices, Sport center and hotel functions will push to sides and leave the central part (which was the technical rooms) as a big empty space leading people to higher level.

This way a 24 meter wide and 60 meter long entrance and longue is created with security and information desk, while the function of hotel are pushed to the side and have their own privacy and space.

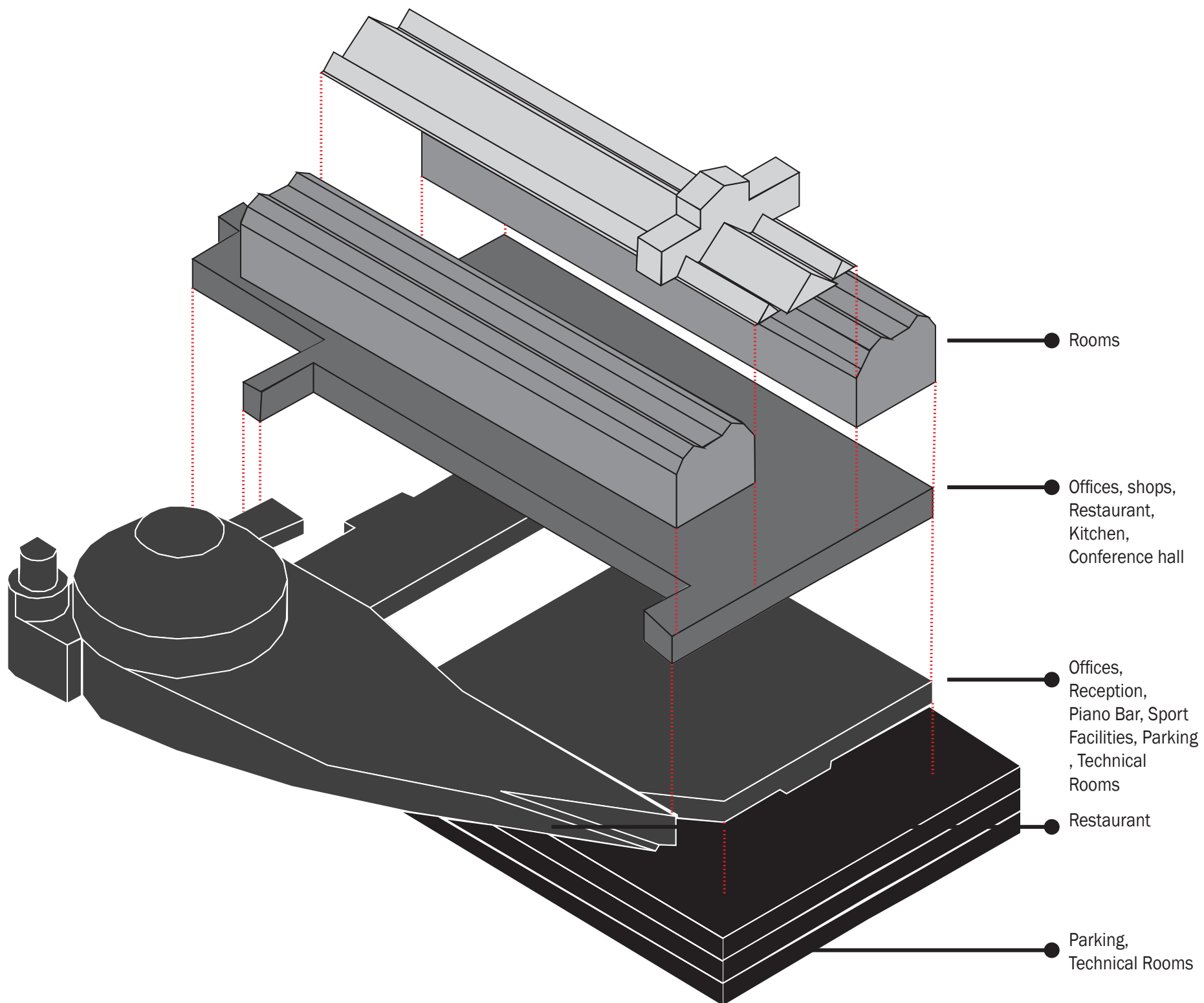
The first floor becomes the main focus of events and happenings with exhibitions, shows, shops, cafes, bars and restaurant. The upper floor with the hotel rooms all will be kept the same.

Scheme 5.10
Exciting Functionality of levels

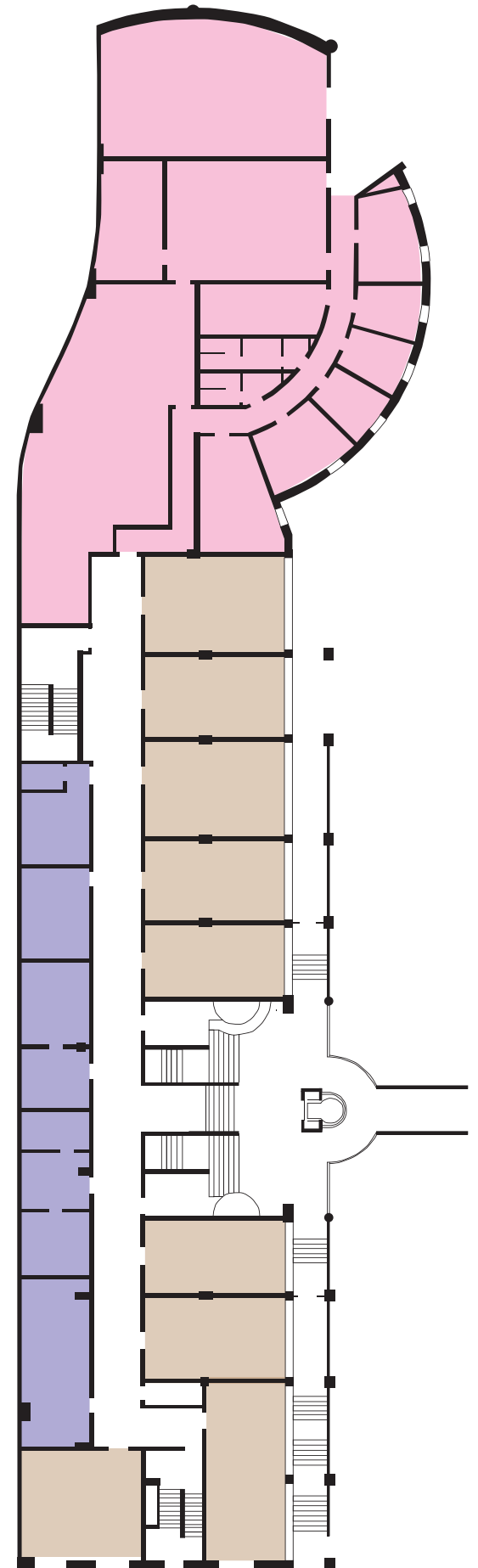
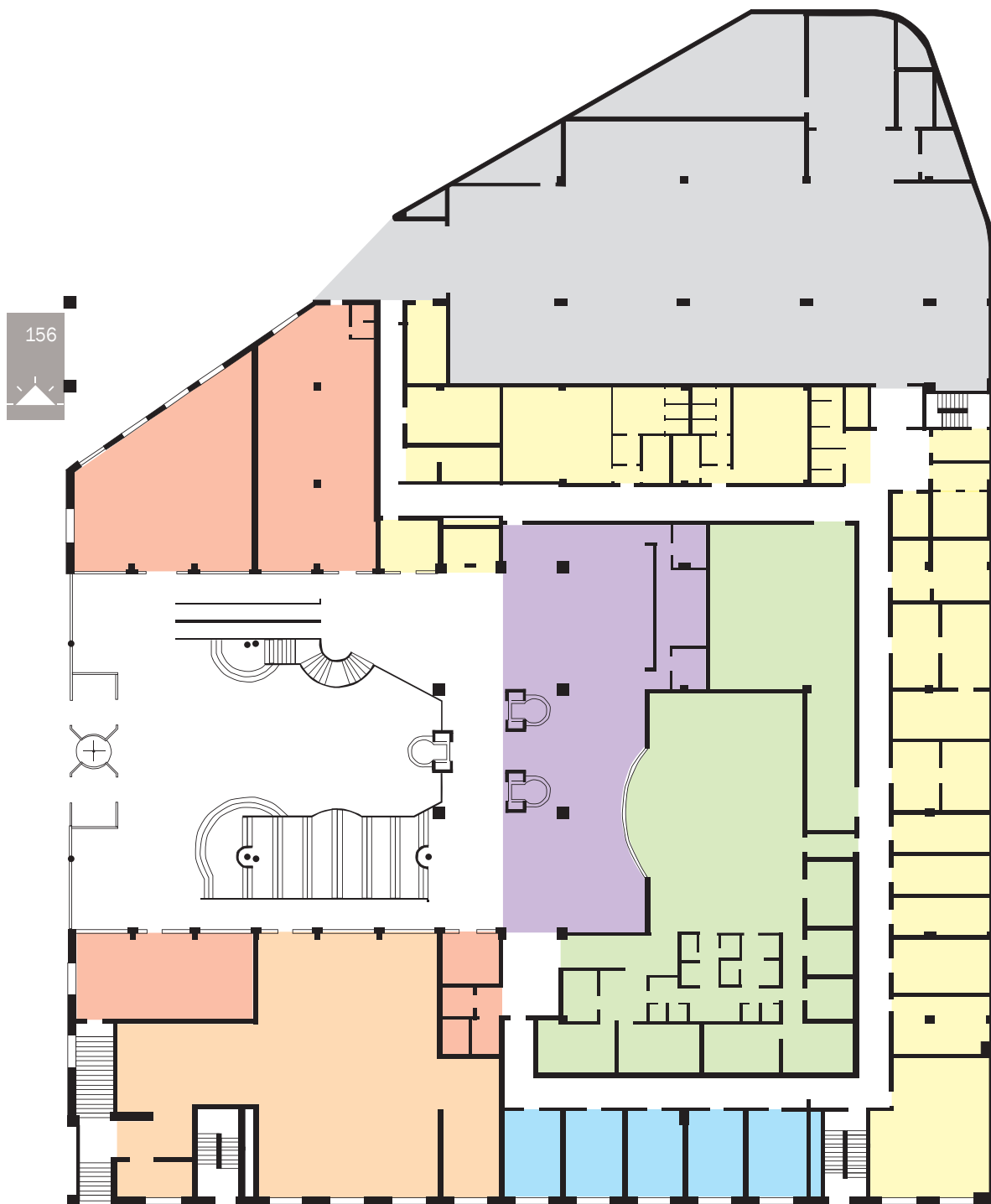
Scheme 5.11
*Exciting Areas of functions
on the Ground floor*

Scheme 5.12
*Exciting Areas of functions
on the first floor*

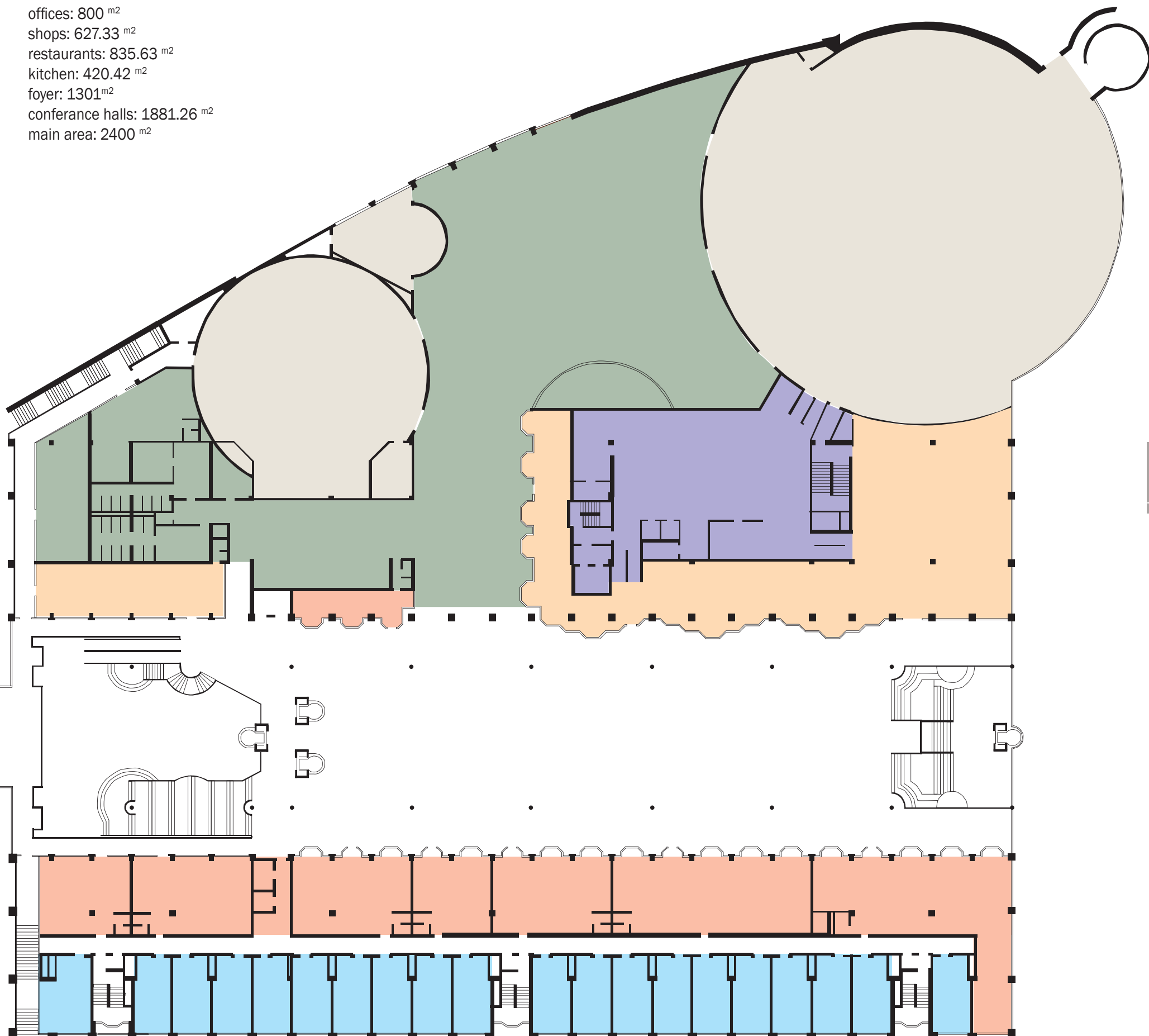




facilities for confereance hall: 945.516 x 2 m²
facilities for conference rooms: 318.24 x 2 m²
conference rooms: 419.92 x 2 m²
parking for personeel adn storage: 1062 m²
lobby: 960 m²
piano bar: 337.3 m²
sport facilities: 573 m²
techincal rooms: 737.18 m²



offices: 800 m²
shops: 627.33 m²
restaurants: 835.63 m²
kitchen: 420.42 m²
foyer: 1301 m²
conference halls: 1881.26 m²
main area: 2400 m²





CHAPTER 6: Diamond in the Heart

The Rise of Public Man

The Final Design



6-1 Scenario

Tourist

Mike is a 25 years old student in Eindhoven University. For his summer vacation, he is visiting a few cities in Germany and Cologne is them. One of the days, he goes to the old center of cologne and continues his walk along the promenade. He arrives to a building with an entrance that coming out of the building with a shape that you don't expect to see. People are going in and coming out of the building continuously. Easily he passes a bridge to reach the building. Inside, he finds a sculpture exhibition which it is possible to meet the artist since he is staying in the same place. On the information boards, he also sees that in the evening there would be party by "Modaselektor" (a band from Berlin) and there are still tickets available. He goes downstairs, to the information desk and buys his ticket.

He continues his way to the main area and goes through the stairs from middle of Atrium. The stairs have light and floors which keep records of his movements. He finds this nice since he feels he has something in Cologne from himself, something personal. In the end of the stairs he passes a corridor with all the pictures of famous people who stayed in this hotel and finally he get to the café and restaurant on top.

He grab a drink and go out and sit on the stairs which he can view the old city and Rhine. He feels right in the heart of Cologne. Later in the night, he goes back to the hotel for the concert and suddenly the whole building looks different, it looks like a big show with the lights dancing on the facade. He goes to the huge conference room for the party. After the party is finished, he exits from the foyer of the conference rooms without disturbing the hotel. He fined himself in the same stairs that he had a drink earlier. He sits there for a moment and enjoys the same view in the night. He easily gets to his hostel since the hotel is in the center of the city.

He thinks with himself that it is so impressive to have such center in middle of the city that a huge party can happened while in the day it is a completely different experience with shopping, restaurant, cafe and meeting people.

Citizen of Cologne

Jana and Christian live in Cologne for a long time now. They both work and they are 40 and 36 years old with two kids of age 7 and 9. All the family member are busy during the week and cannot have a family time that much.

Usually in the weekend they go to Maritim Hotel. They can go there with car to the parking of the hotel with public fee, leave their car in the hotel or go by bus/tram or metro if they want to avoid the traffic.

Once they are there, they can shop, eat and sit indoors the atrium or go to roof top. Jana and Christian sit and drink, whether it is inside or outside, kids can play in a safe environment or in the green roof. Sometimes they come here and spend the whole day here... even in the night there are events such as a show, concert or etc, while in the daytime they can shop or visit a exhibition. Most of the time, they even meet friends or family members here since it is in the center of city and you can easily reach it. You can whether go to the events or have a dinner and drinks while kids can play... according to them it is one of the best places for families where they can relax/shop/ have fun/ meet and it is suitable for everyone.

Guest of Hotel

Emre is a sculpture from turkey, he recently getting a lot of attention and success. He is trying to bring his art to another level and make it more known in the international market. Therefore, he is looking for extreme places in Europe that a lot of people can pass by his exhibition in their daily routine and visit his work for free in a friendly and popular place.

In city of Cologne, located in Germany, he found Maritim hotel. Where he can stay there and in the same time have his exhibition, be available most of the time to meet and answer the questions of visitors and have meetings with sponsors. He sees this a good opportunity for his career since Maritime hotel is located in a traffic joint that a lot of people pass through it or use it as gathering and reference point.

Nevertheless, the building is a hot place to visit for tourists. So he can even have multinational audience. He also can even arrange meeting with his sponsors and exhibitor with reserving a small conference room in the same place to have meeting with them.

He thinks that this a strategic place to show his product for maximum numbers of audience while he can stay there, have official and unofficial meetings.

The best business plan is that to stay there while you can get discount to have conferences and also have discount to put your entire guests list with a good price.

Beside the business part, he enjoys his stay there. As an artist the building is like a sculpture itself which provides a lot of light opportunities to show you product or fashion show right in the heart of Cologne. You can walk anywhere and shop and visit landmarks and make it in time for your meetings.

Hotel Employee

Barbara is a 40 years old and she works by the information desk Maritim for a few years now. Because of her position, she meets a lot of people every day. She thinks that the hotel is one of the hot spot for any business, show or exhibition. They can almost accommodate any number of people for any purpose and arrange meeting place.

Hotel itself is like a small city. This makes it suitable for people that have a short stay in order to actually enjoy themselves. There are shops, show rooms, exhibitions, shows, hairdresser, restaurants, sport center, spa, cafes and bars.

The building itself is nice place just to visit. It encourages you to meet people. From evenings, the hotel shines which makes it really hard to ignore. Therefore, there is an enthusiastic audience with a adventures senses. This makes it really easy to have main extreme shows and exhibitions here.

Once you are inside you cannot resist but take the stairs which looks like going nowhere, but actually you can have a unique experience while going up.

The business of the hotel has never been better although there are some worries sometime that public would disturb the guests. Since the hotel offers more, they have more activities in day and night and actually more guests.

6-2 Requirements

The results of scenario's and analysis in chapter 3 are the requirements of the new design to improve the situation. Here is the summery of all:

- Bring an attractive function
- Make a good connection to river
- Upgrade the green spaces
- Any design for the location should consider the roads. The perfect solution is to get some spaces from roads without interrupting the traffic and turn them to a public space.
- Find a solution for the Heumarkt. It means whether it must connect as big square again or accept the fragmentation.
- Building should be so significant to be a gate and a public space and welcome people to Cologne.

Base on scenario's:

Tourist:
Good link to the city
Surprise
Busy
Reachable
Unexpected events: concerts, exhibitions
Meet people
Proper Information system
Adventurous aspects
Effecting building
View
Functions
Different in nigh
Location

Citizen :
Reachable with public transport
Parking
In door activities and outdoor activities
Nice to spend time
Playful for kids
Gathering point
Events such as exhibitions and shows
Meeting place
Suitable for family

Guest:
Meeting people
Friendly place
Stay, meet, shops and ... in the same place
Located in the center
Proper for business
Strategic location to show products
Enjoying your stay

Employee:
Hot spot for any event
Accomodate almost any event and number of people
Reference and gathering point
Suitable for short and long stay
Extra function like show rooms, shows, exhibition, bars, hairdresser
beside the normal function like spa, sport center, restaurant
Different in day and night
Irresistible
Place to visit, place to be





6-3 Urban Relation

The roads will stay the same in the new proposal, since any change in the roads will have more damage. Only the road for cars to stop by the entrance will become the same material as the pavement. Therefore, the street becomes an unofficial one which will be used only for the cars stop by for a few seconds in order to drop or pick up passengers.

While the roads will become more friendly, The trees need to be removed. Although it is not environmental friendly, it is necessary in order to clear the visual barriers for the landmarks. But a new Green space will be added on top of the conference side.

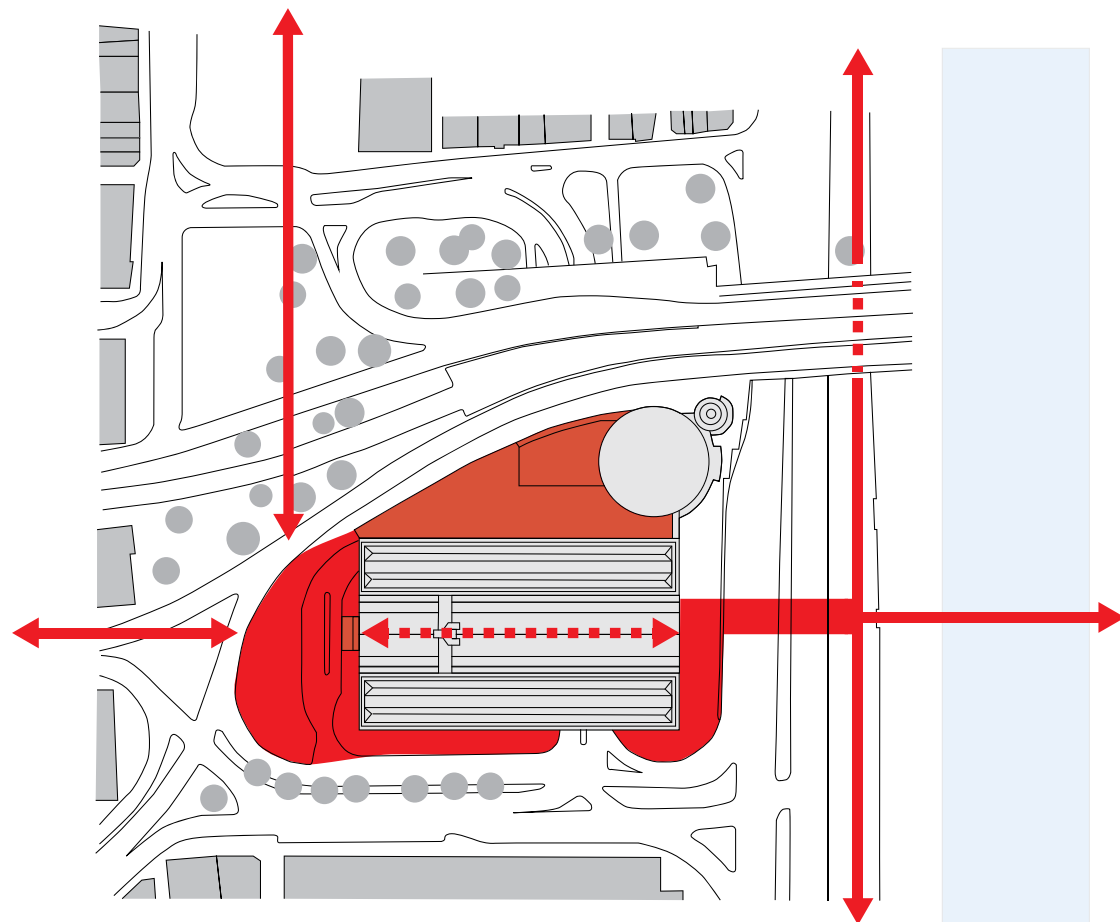
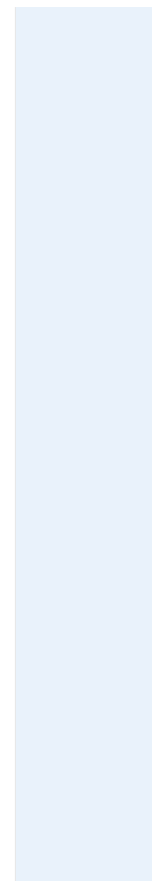
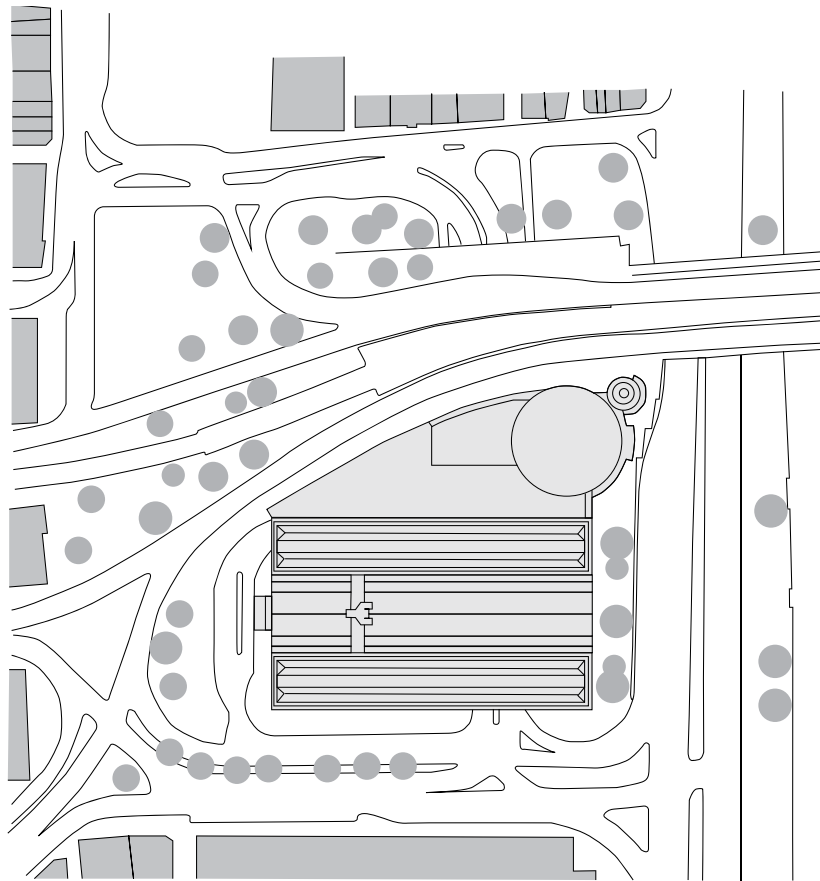
By the attraction of design and functions, will shape a cross like passage way connecting metro station to Rhine and promenade to south or north while passing from middle of Maritime hotel.

The connection to the Heumarkt north is shaped with high respect to it. Heumarkt south tries to have its own character with traffic and roads while creating a public center in middle of it. Also having cars flowing around hotel and free of any building but Maritim hotel and no visual barrier, makes it perfect situation for the landmark.

A pedestrian road will surround the building going to the Rhine, and around to green roof and to the hotel without any interruption by cars.

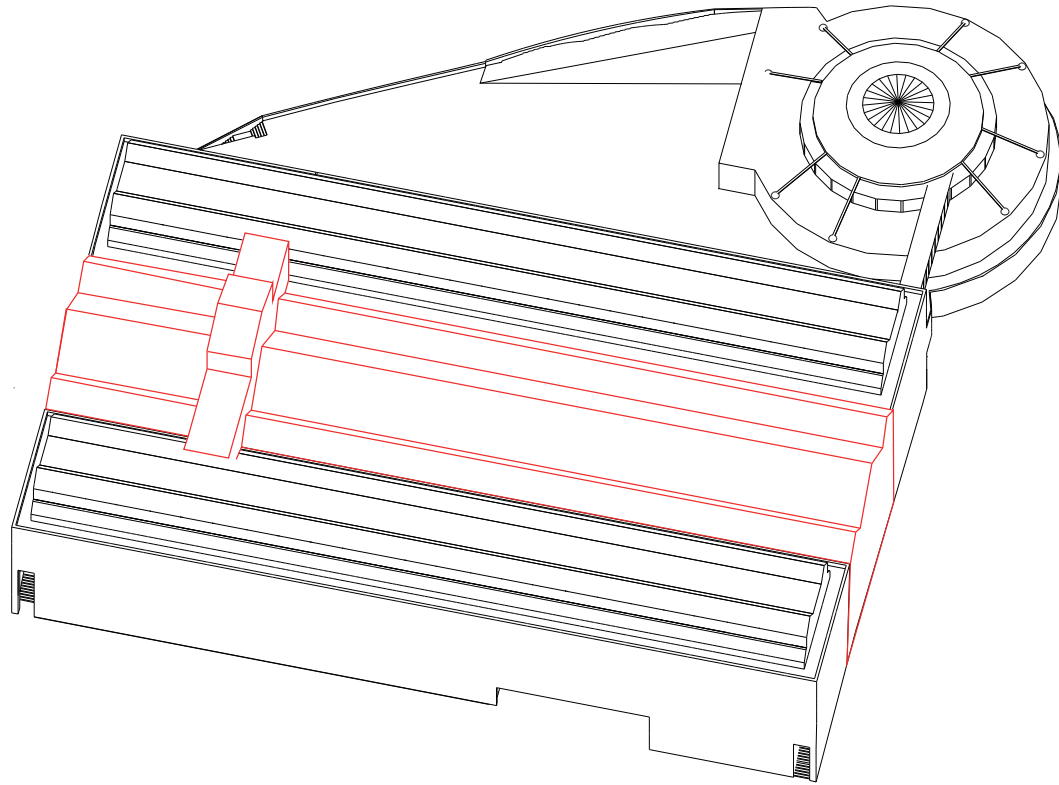
Scheme 6.1 (top)
Existing South Heumarkt

Scheme 6.2 (down)
New Heumarkt South

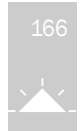
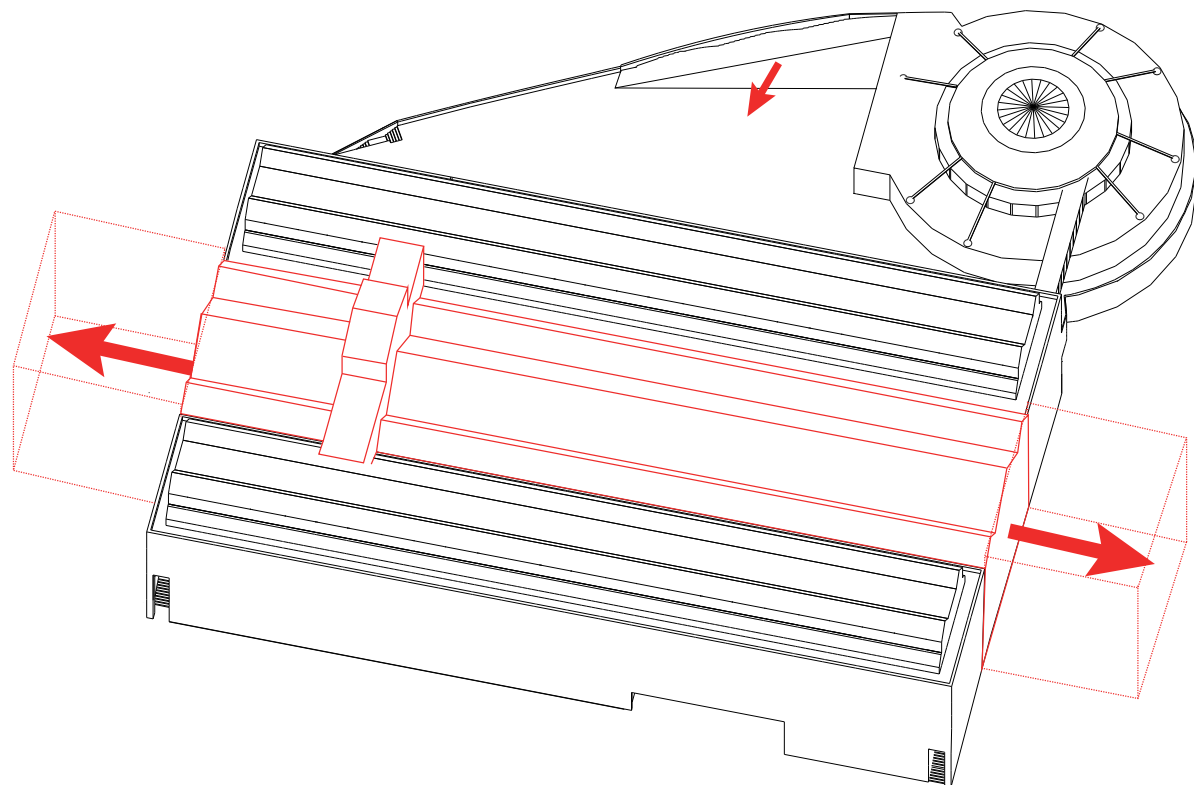


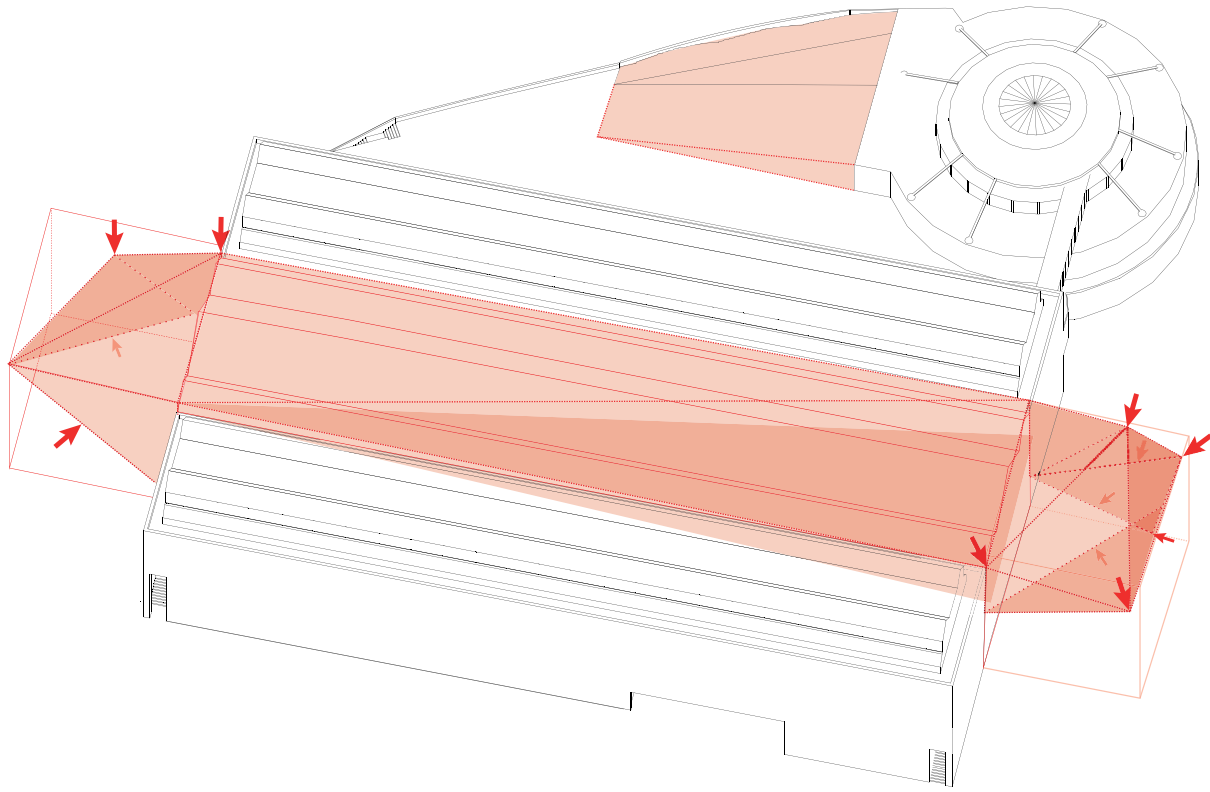
6-4 Development of Volume

Scheme 6.3
Exciting Building

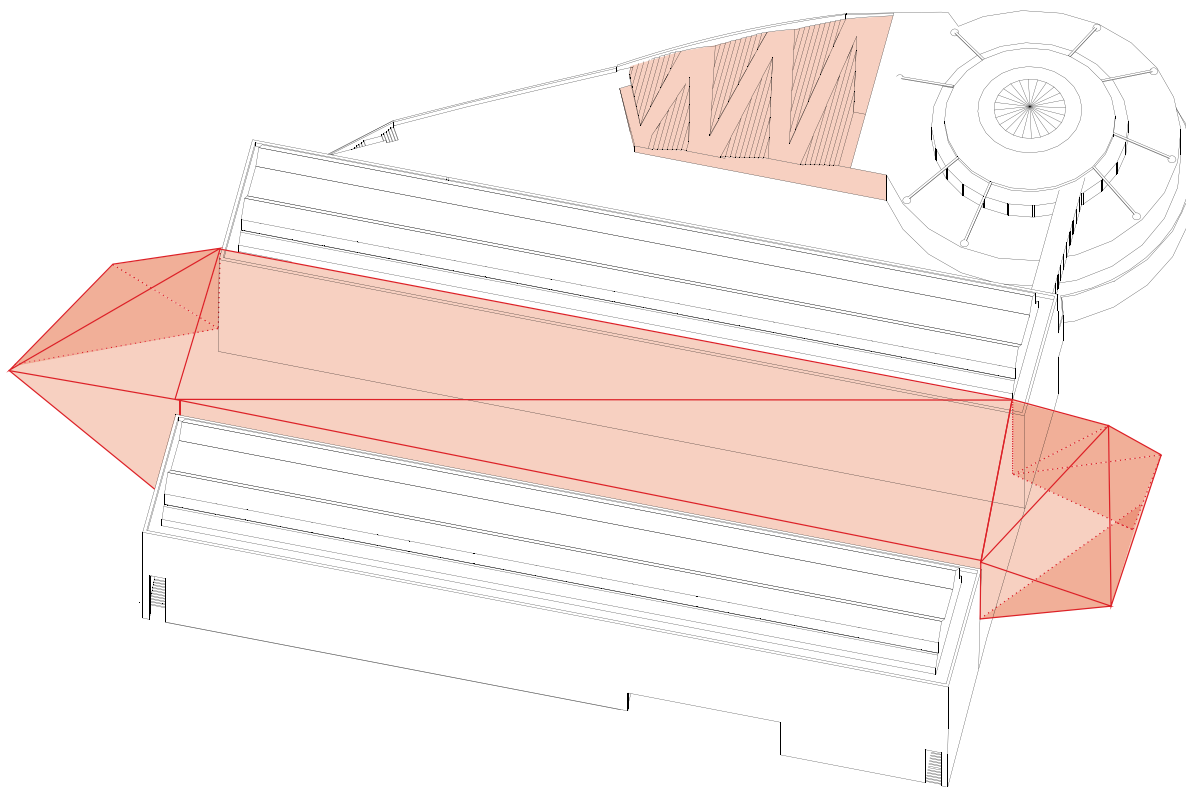


Scheme 6.4
Changes of Volume





Scheme 6.5
Creating the new entrances



Scheme 6.6
The final Volume



6-5 Development of Stairs

Scheme 6.7
Components of Stairs

By changing the floor plans of the building, there is a urgent need of a sculpture in the atrium. Nevertheless, circulation looks apart. The two different public spaces (introverted and extroverted) do not instantly connect to each other.

Therefore, it is tended to make a stairs and levels to go all the way to the three floors up with a sculptural stairs. BUT, the stairs should not only connect A to B only. The stairs should be something more than stairs; an experience and a non space but flexible to different functions.

The stairs are the diamond in the heart of the building.

The stairs rise high, there are spaces on top and below.

The stairs divide spaces, create space and connect spaces.

Therefore, experiences and flexibility are the key factors.

Top will be more connected to experience, with media or material.

Below the stairs, a separated room is created which they semi open, semi close, without getting much natural light. This place can be empty as a non space and transition space. They also can turn to exhibition area or they can be a lounge area, away from the rush of public, private and dark.

Also on top of stairs, one needs a stop point, a check point. There are three check point which they can also be turn to small lounge areas or play grounds.

As it has been said, structure of the stairs is simple, it is series of narrow column of stainless steel, polished and shining. While they continue to top and create the rails of stairs. As a requirement for media, there is a hook added in the bars which carries the LED lights.

The LED light will be have a sensor of approximately which can be programmed differently to get different effects with light.

The first half of stairs evoke the sense of mystery and curiosity.

The middle of the way it is the most special point. It is a turning point to continue or go back. This part can be turn to a lounge area or a playground. The floor will simply keep a record of movements of people.

The last part of stairs becomes more about seeing the whole vision after experiencing it. Experiencing the perspective of atrium and stairs, the entrance with light, the architecture and urban, the structure of the roof, to the inner facades, and the media facade of the opposite side. Nevertheless, it is more impressive to look at all these elements from top.

In the end of the journey, there is a corridor that leads to

extroverted public space and the restaurant, and there is a elevator to bring visitor to the entrance of the Rhine side.

The goal of the stairs is to bring people together and encourage group activities.

It is done by installing media features and material.

Through a virtual experience people can meet and the stairs become a playground.





6-6 Design of Media

As it has been mentioned, the media content is what the beholder will notice first when

Looking at a media facade, in any media architecture, there are four groups of display and expression, communication, positioning and documentation frame the technical equipment.

Display: Display is with projection. A simple system of projection and laser projectors. The technical details of the devices are explained later in this chapter.

Communication: The media communicates with two different goals. One is to give information about happenings in the hotel and acting as a big billboard. Second, is the time of no events, media upgrade the mood of users by sensoring the amount of light and weather conditions.

Positioning: There are 17 devices in general in each side of the entrances. The devices are attached to the beams on the top of the building by approx. distance of 20 meter to the surface of facades.

Documentation: The facade can be different everyday since it can be easily programmed. It is mainly pre-recorded media content since there would be special design for each event. But also an interactive media content, which is sensitive to light and temperature to create a virtual experience of a better place.

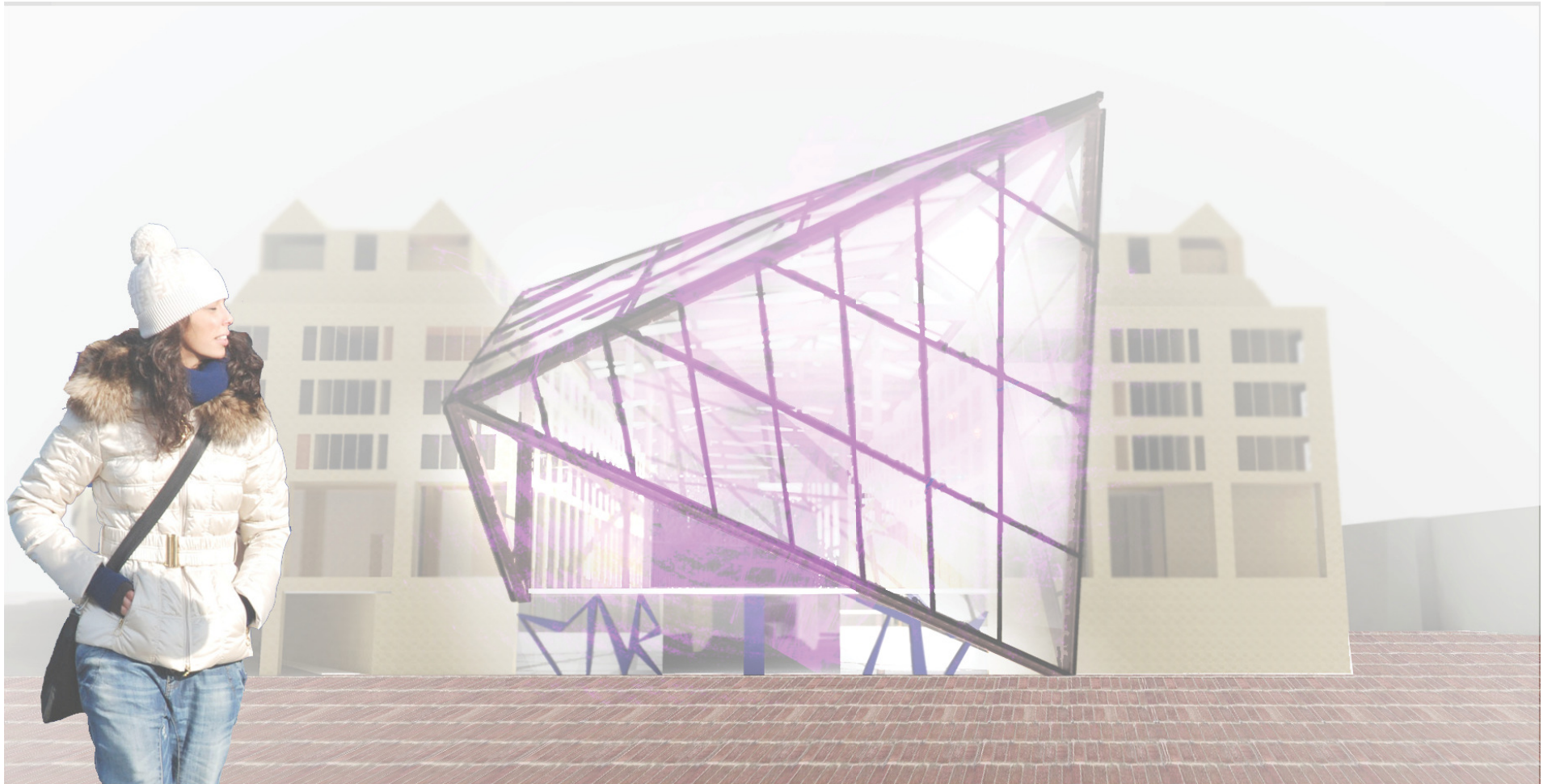
The media is functioning as the extended from skin of architecture in relation both nature and information at once.

The design of the media itself compliment the architecture. The different angels with abstract dancing light, make it as a 3D screen and light being projecting, fills the whole entrance and create a gate of light to make you become part of the media architecture.

Render 6.1

Entrance - Heumarkt
Upgrading mood by the media
facade





6-7 Coherency of Elements

It is tended to upgrade the hotel. Hotel is a place for events, gatherings and public activities. There would be more occasions than fix functions for public. There are non functional spaces, left empty for people to meet each other. The hotel's functions stay the same. Media gives information and improve a person's mood and in a playful manner tries to get them together. Media will be adjusted to events and weather in order to upgrade the spaces for people. There are three elements in the new design. Atrium, Stairs and existing part. Each of these elements have their own special identity but in the same time relate to each other. In this manner, they will look coherent and part of a big image,

1. Approach of Design:

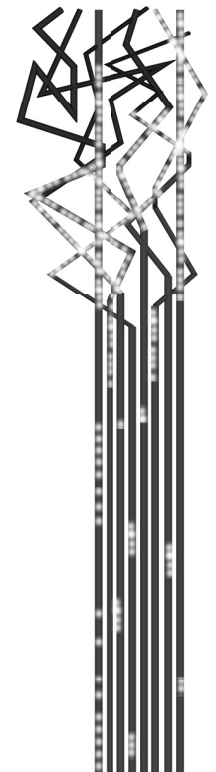
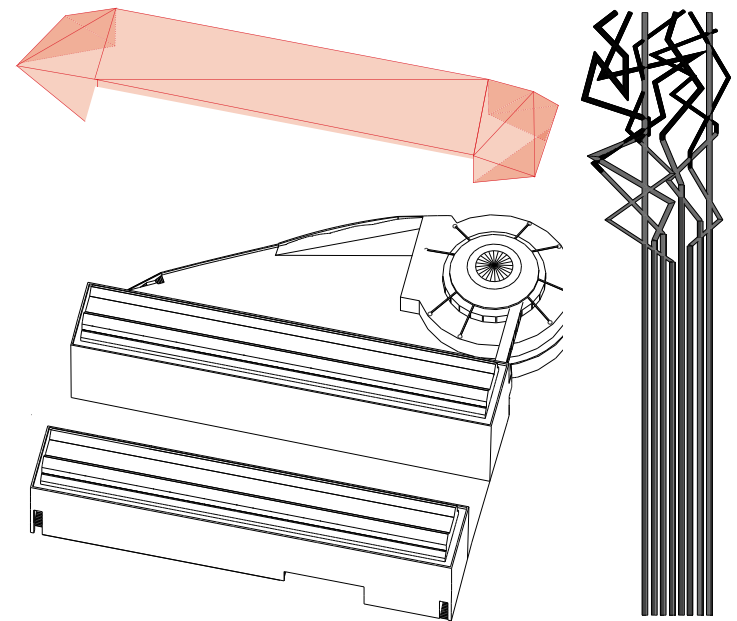
The atrium and exciting building bond with one another by contrast since it is more impressive to look at. Once inside the stairs will have the same dialogue with the atrium, through the form, edges and media. In exciting building there are squares and rectangular spaces with strike lines. The new components keep the strike lines as a coherent part but make sharp edges. In result, although they are following the same rules, they will look apart.

2. Functions:

The exciting building host the spaces with functions, for public and hotel. The new parts are non spaces. A space blurred between urban and architecture; nor out side neither inside, a floating space and a transition space, non spaces which can be flexible for temporary uses but by it self it is just a space to pause.

3. Media:

There are three factors in media, form, colours, content. Each media contain two forms, there is a vague surface which pointed light float in them. Colours and rhythms of colours are adjust to the events of hotel by considering promoting the mood and feelings of users. Content is the most important part of the media which makes it suitable for the specific location. Media is designed in a way that while outside gives information about happening in hotel , inside it will upgrade the mood of users. Also media create a gate of light as dramatic entrance to the building. The stairs complete the experience. It illustrate the events or contrast of weather to give a specific feeling.



Scheme 6.8
Form of exciting building, new
atrium and stairs

Scheme 6.9
Media of stairs and facade,
living floor as the material for
the stairs

6-8 Technical Drawings

In the following pages, technical plans are presented. They include Floor plans, elevations and section.

Technical plans will be followed by structure diagrams and detail.

The references of the plans are:

Plan 6.1 - Existing Floor plan - Ground Floor

Plan 6.2 - proposal Floor plan- Ground floor

Plan 6.3 - Existing Floor plan - First Floor

Plan 6.4 - proposal Floor plan- First floor

Plan 6.5 - proposal floor plan - second floor

Plan 6.6 - proposal Floor plans- Forth floor

Plan 6.7 - Existing Floor plan - Fifth Floor

Plan 6.8 - proposal Floor plans- Fifth floor

Plan 6.9 - Existing West Elevation

Plan 6.10 - proposal West Elevation

Plan 6.11 - Existing East Elevation

Plan 6.12 - proposal East Elevation

Plan 6.13 - Existing North Elevation

Plan 6.14 - proposal North Elevation

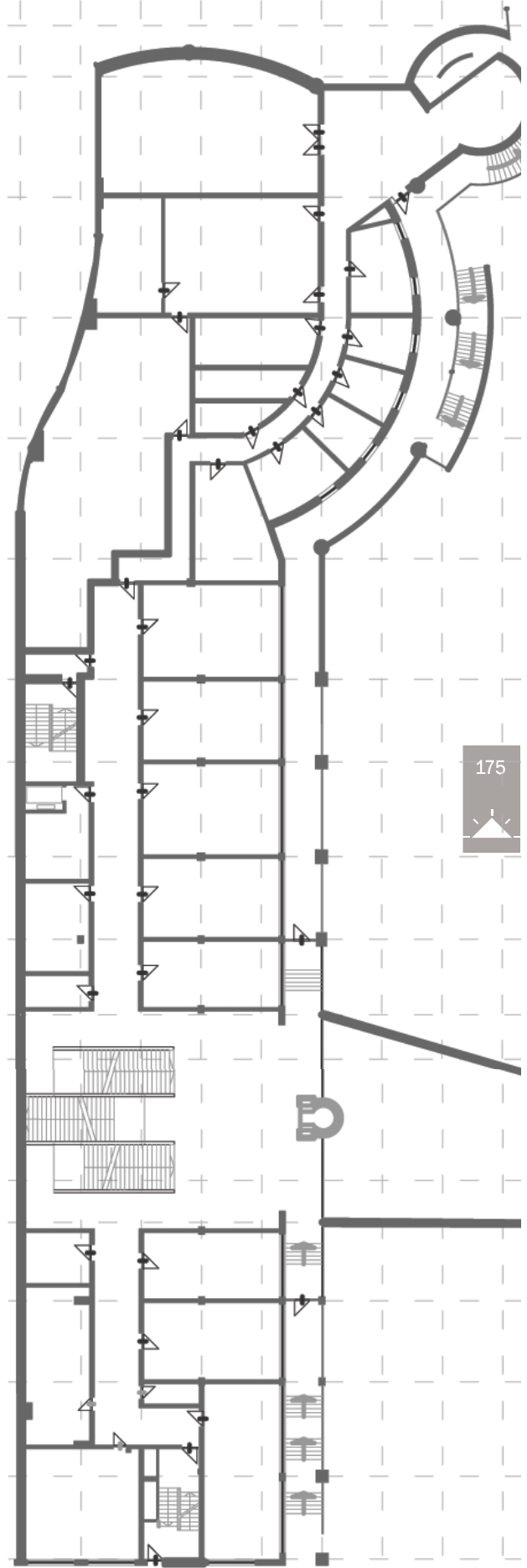
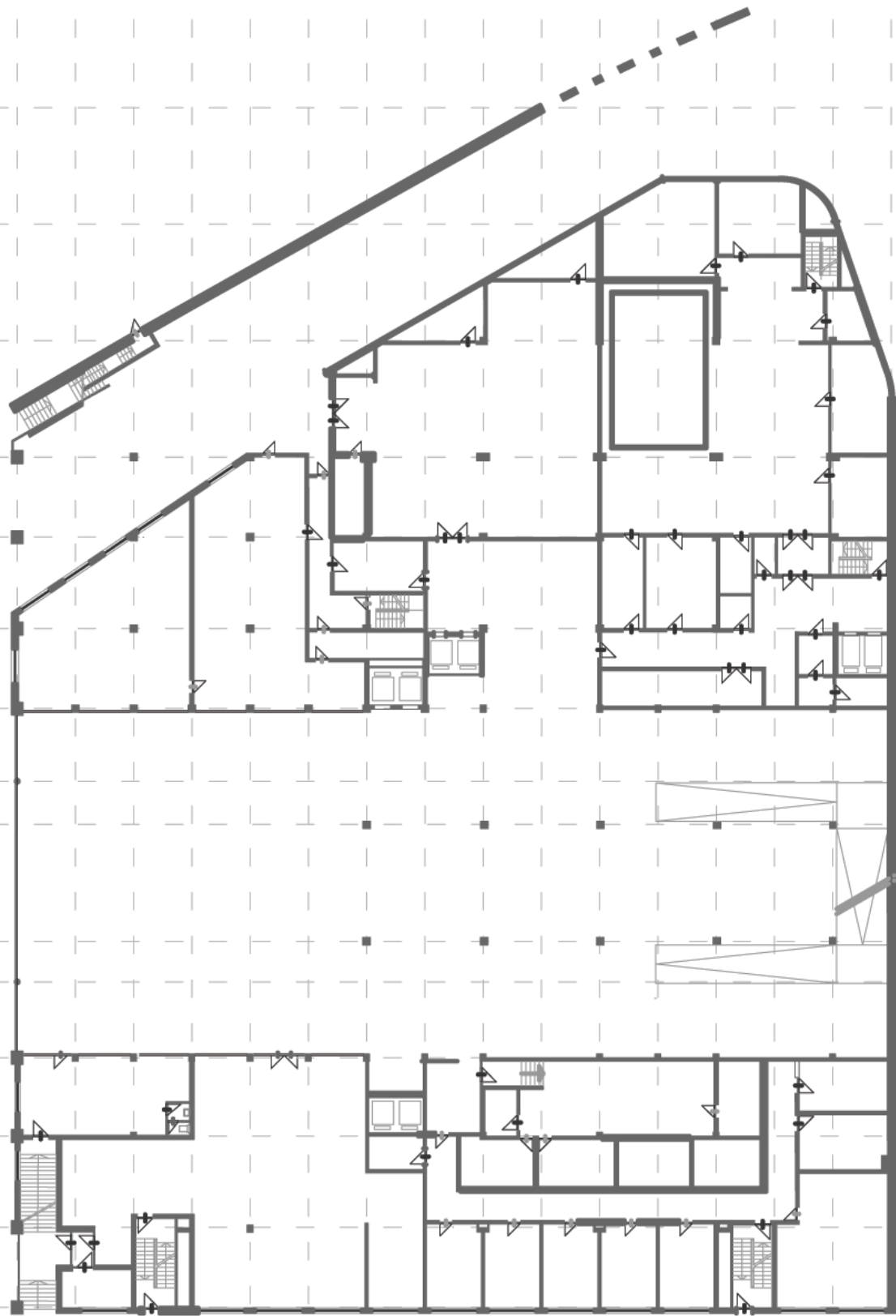
Plan 6.15 - proposal South Elevation

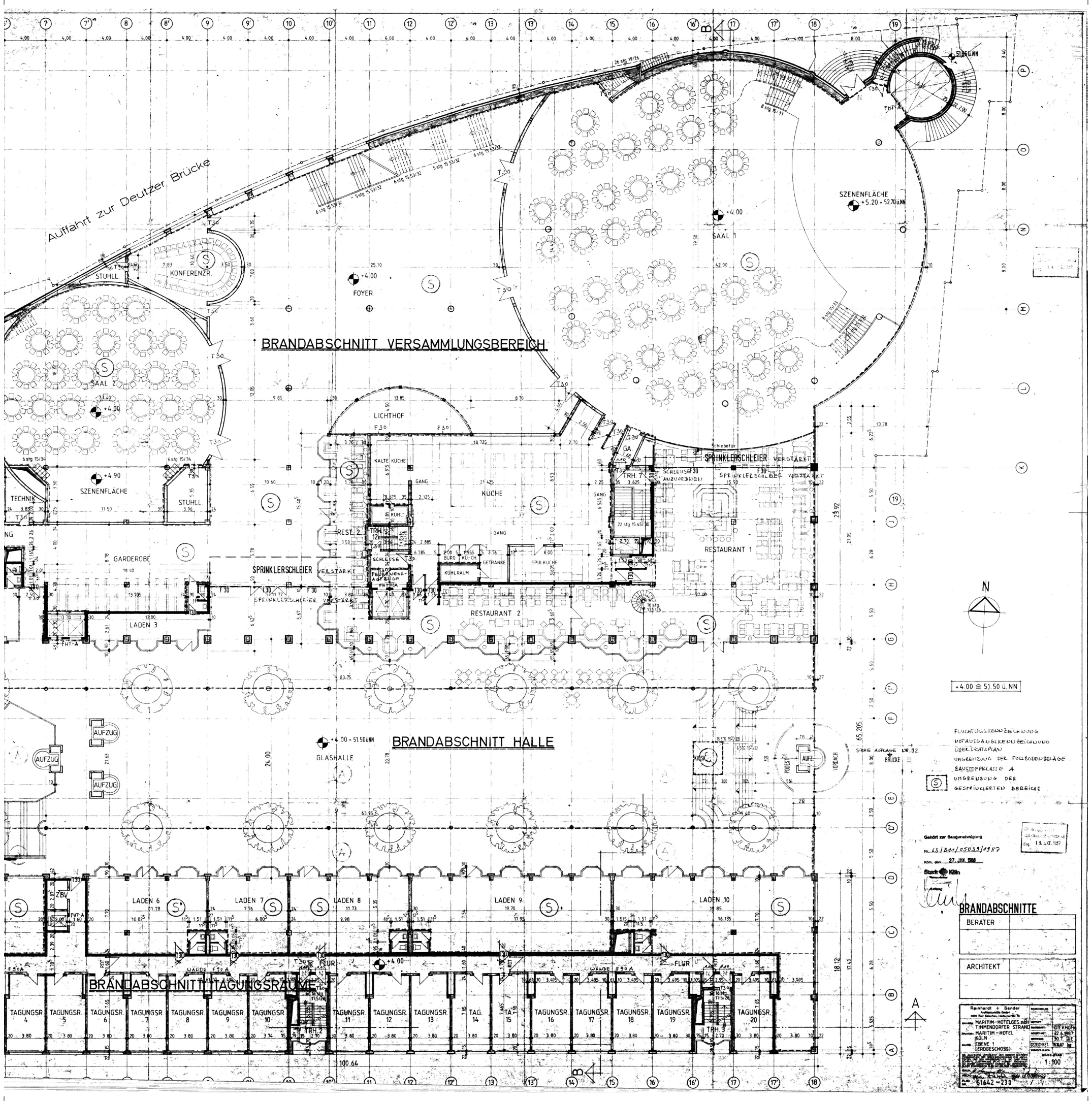
Plan 6.16 - Existing Section

Plan 6.17 - New Section

Plan 6.18 - 3D Section







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BRANDABSCHNITT HALLE

BRANDABSCHNITT TAGUNGSRÄUME

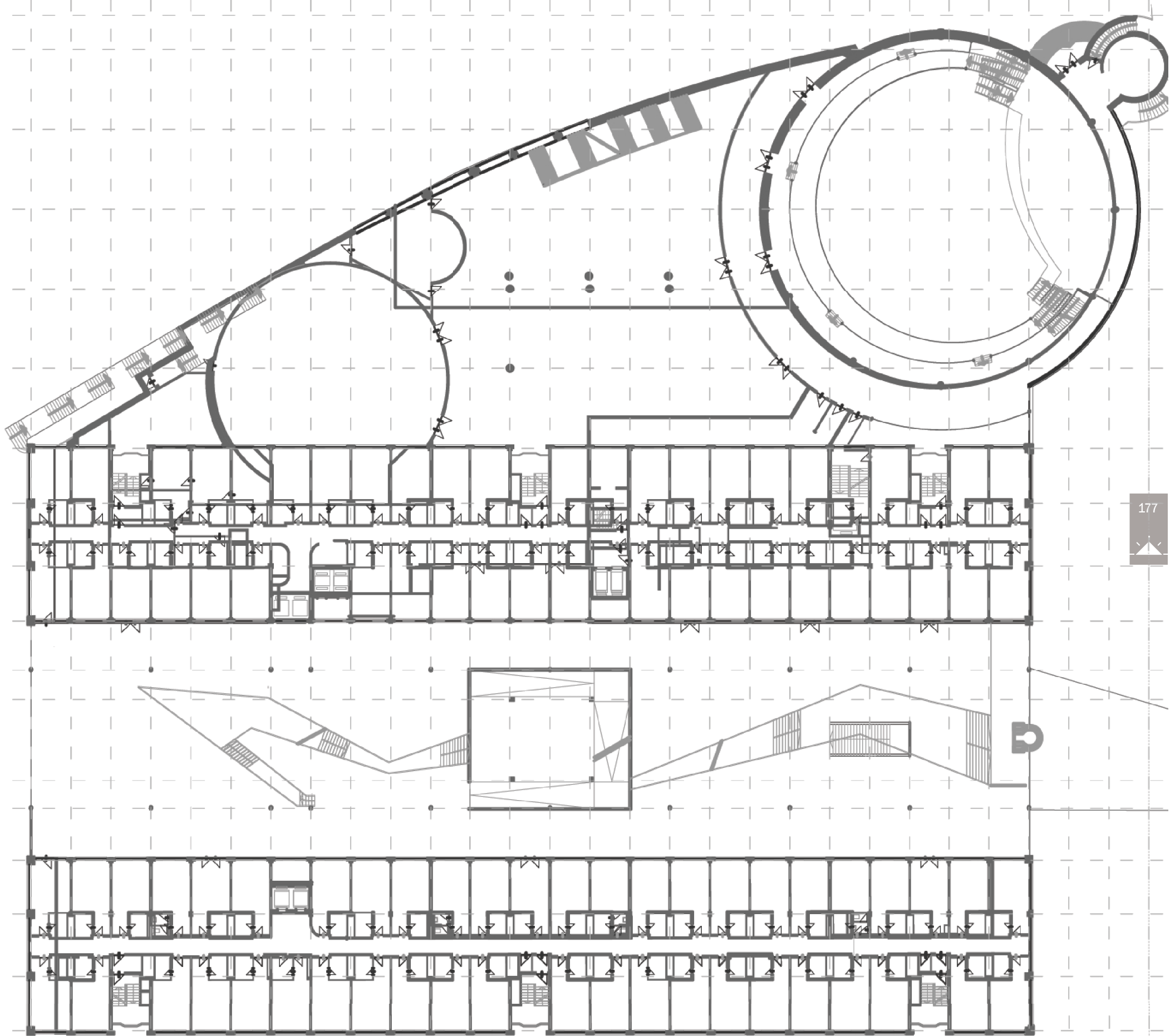
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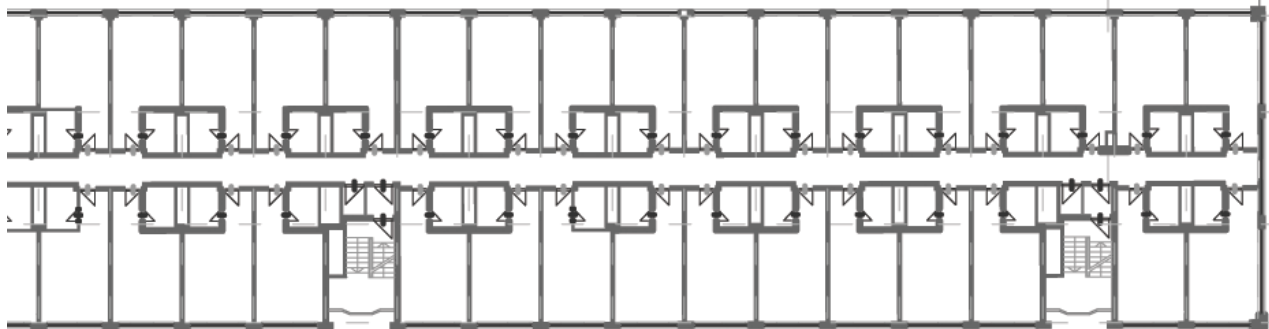
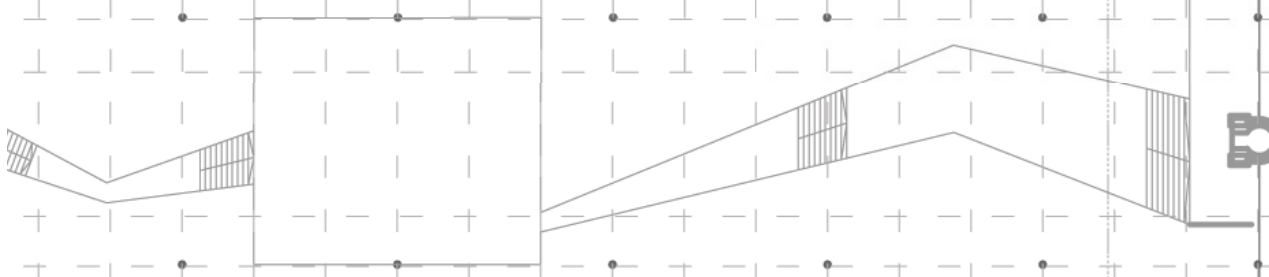
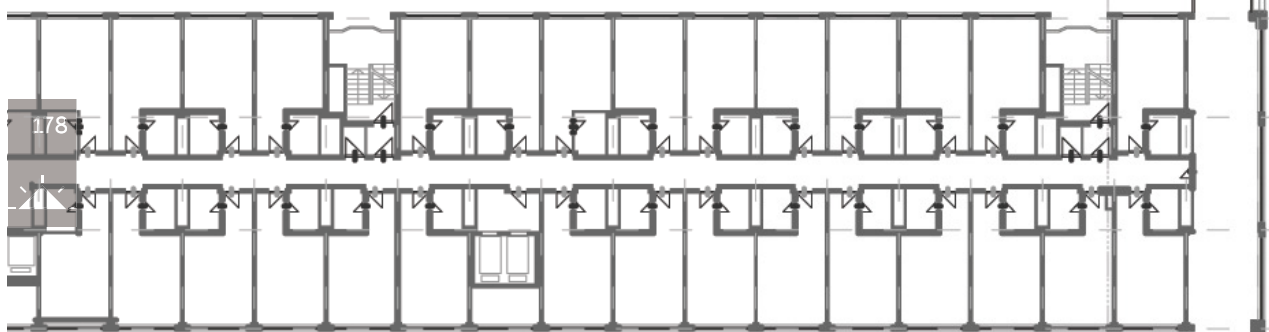
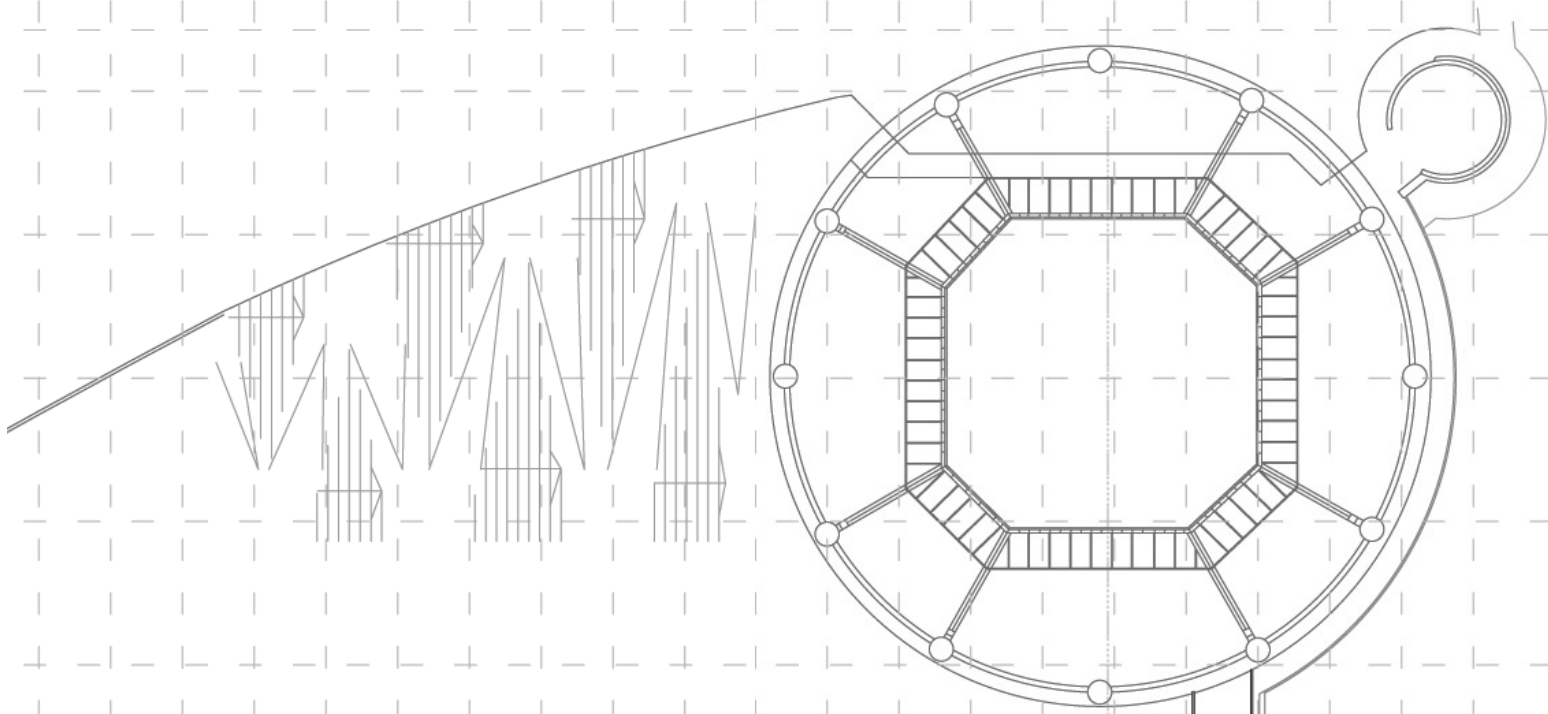
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 NOTAUSGANGSWEISE
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 SAALSTUFENKASSE A
 UMGEBUNG DER
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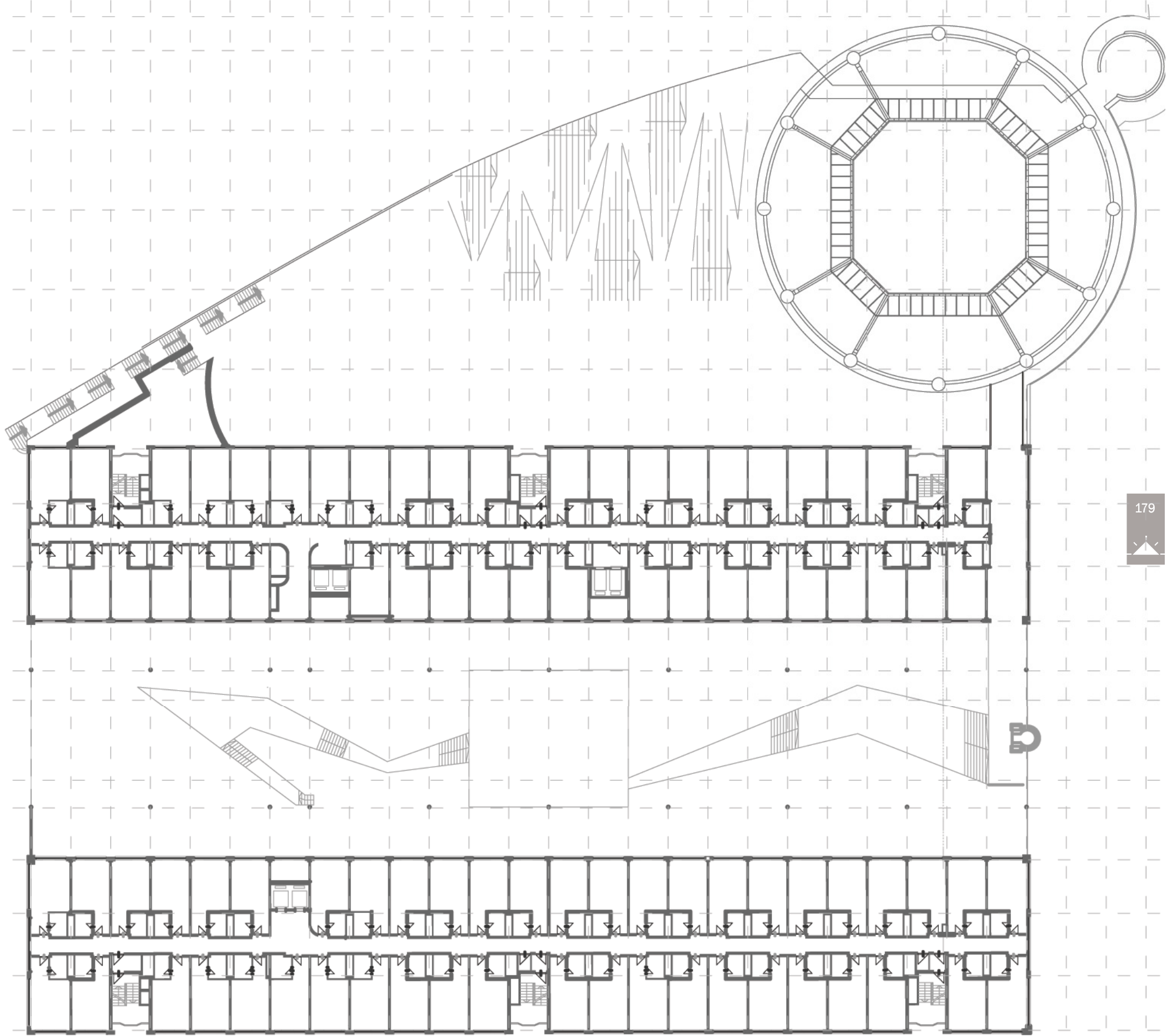
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 vom dem 27. JAN. 1988
 Stadt Köln
 Amt für Bauwesen

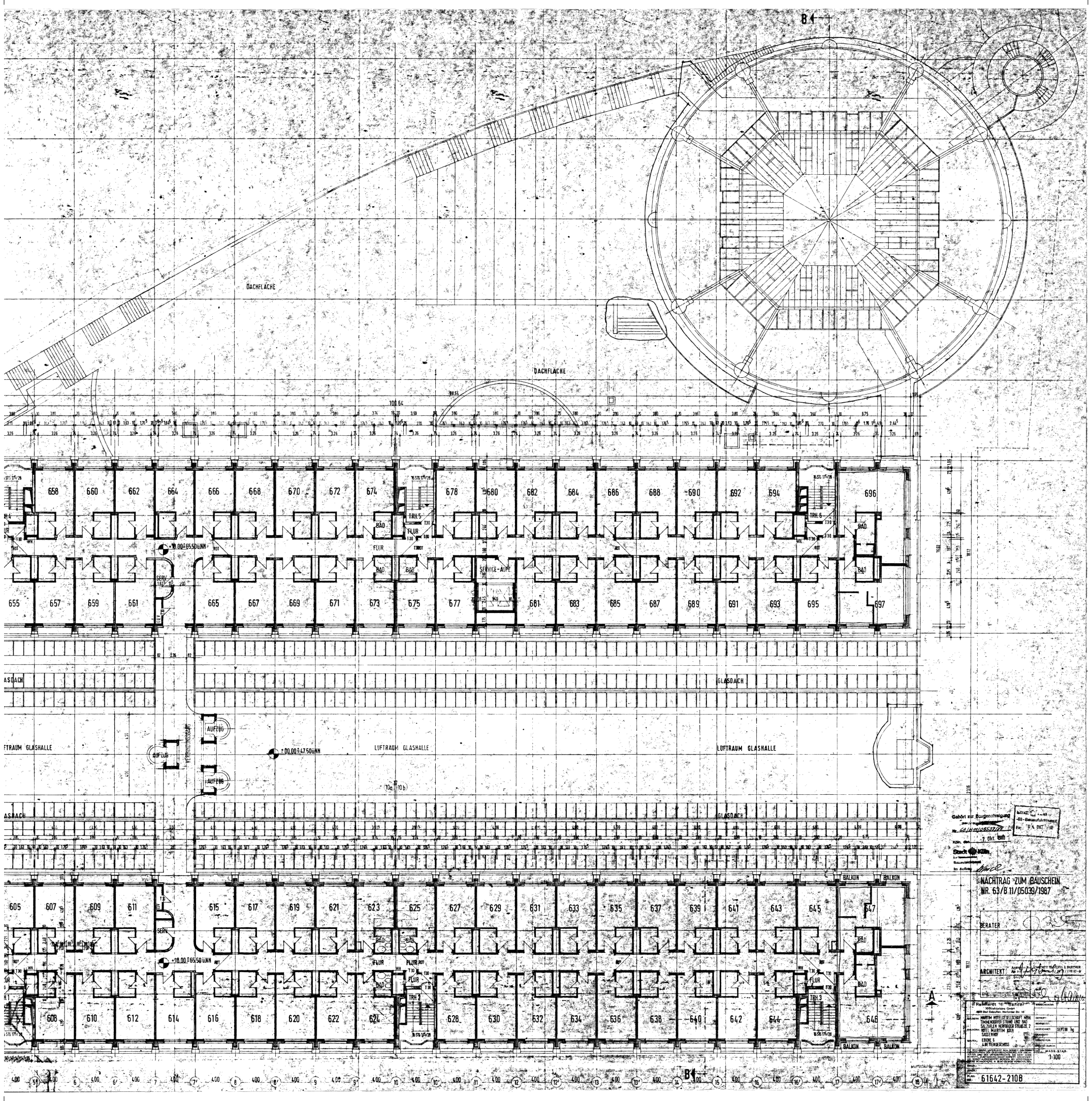
BRANDABSCHNITTE

BERATER	
ARCHITEKT	
Reinhardt + Sander am Markt 10 50667 Köln Telefon 22 6 1967 Telefax 22 6 1967 Telex 920 700 Fernschreiber 920 700 51642-230	









Gebäude zur Baugenehmigung
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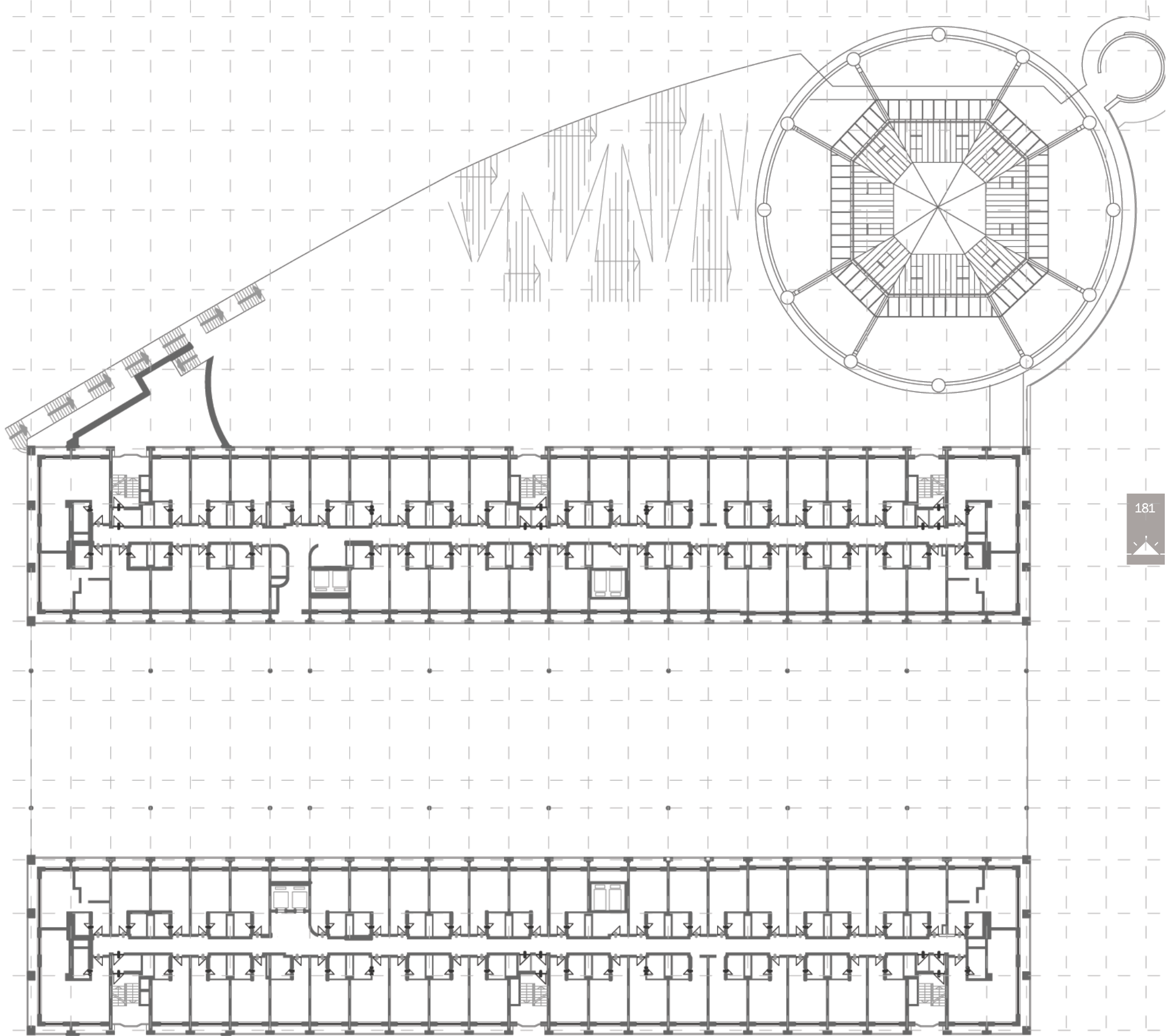
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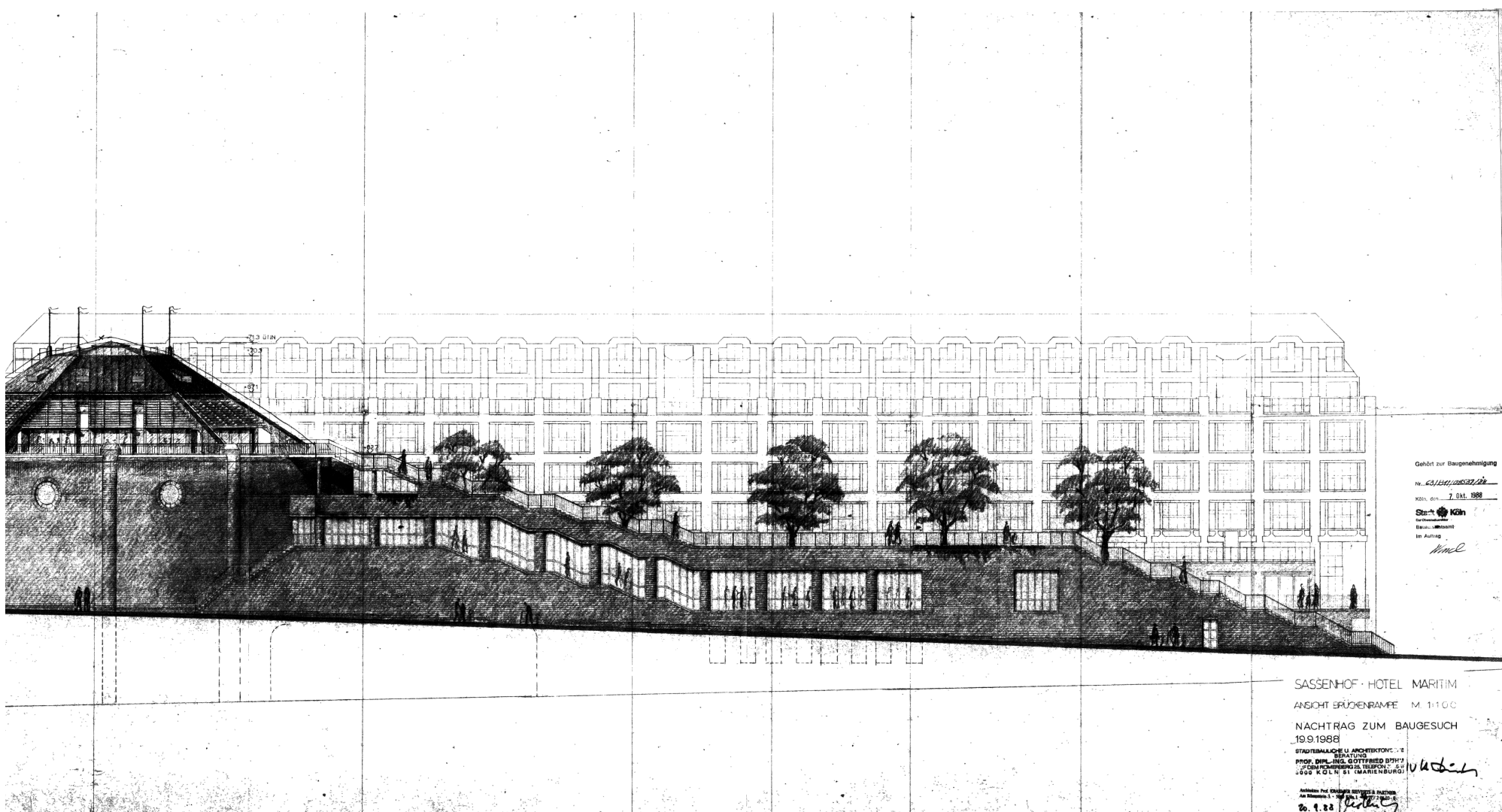
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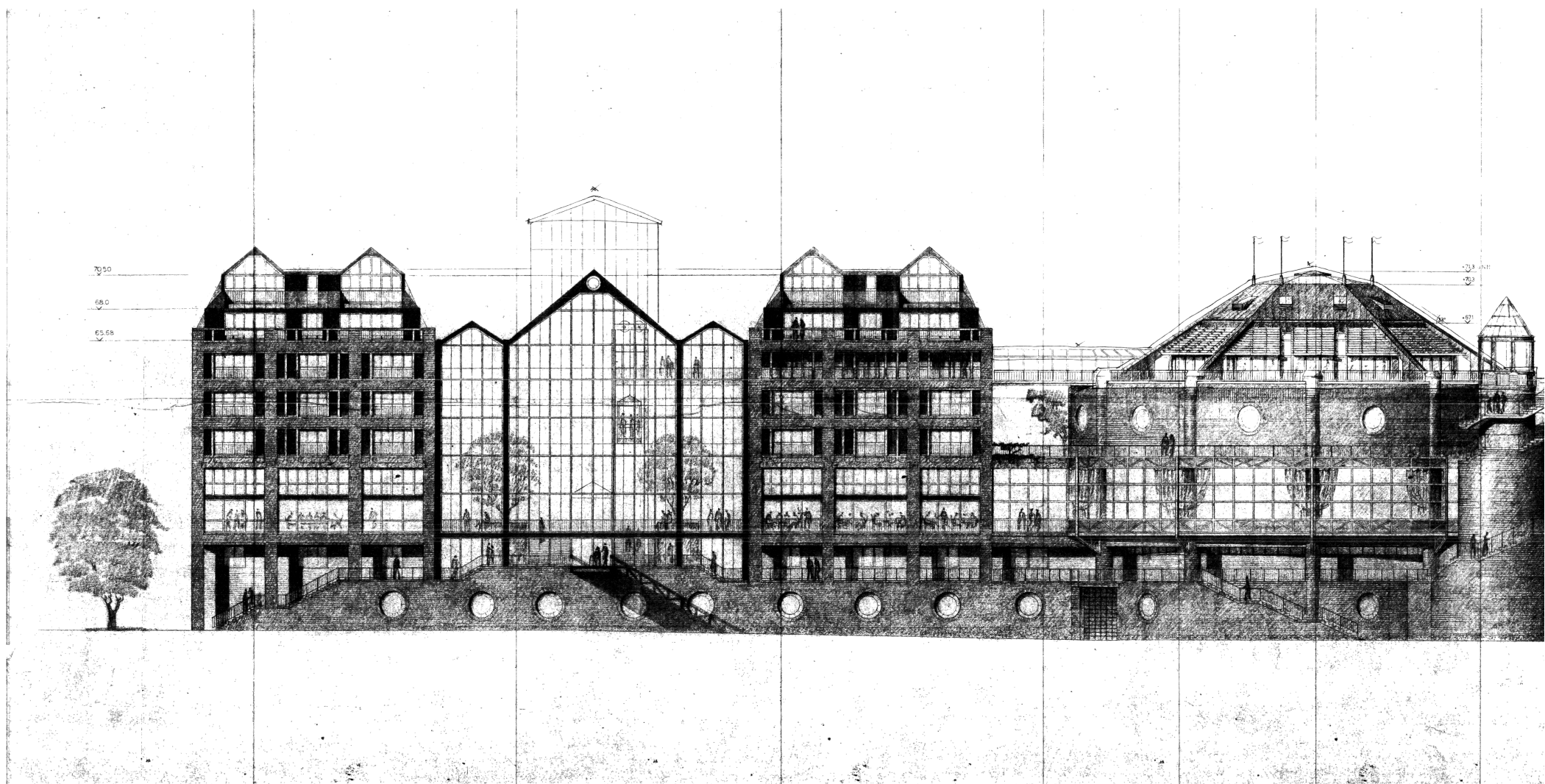
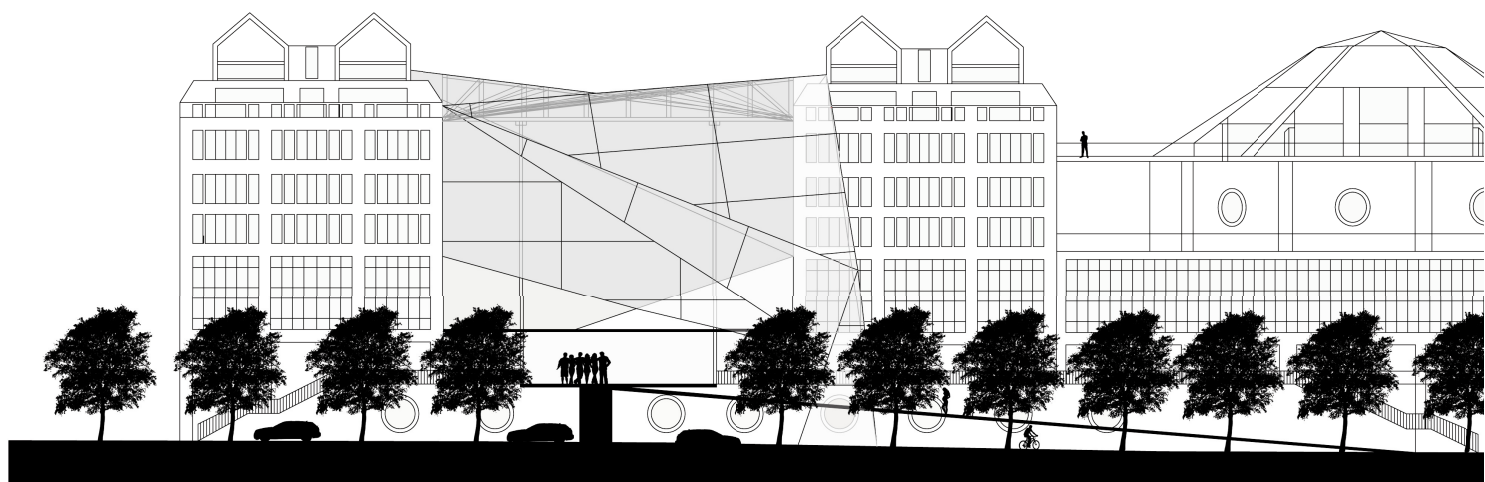
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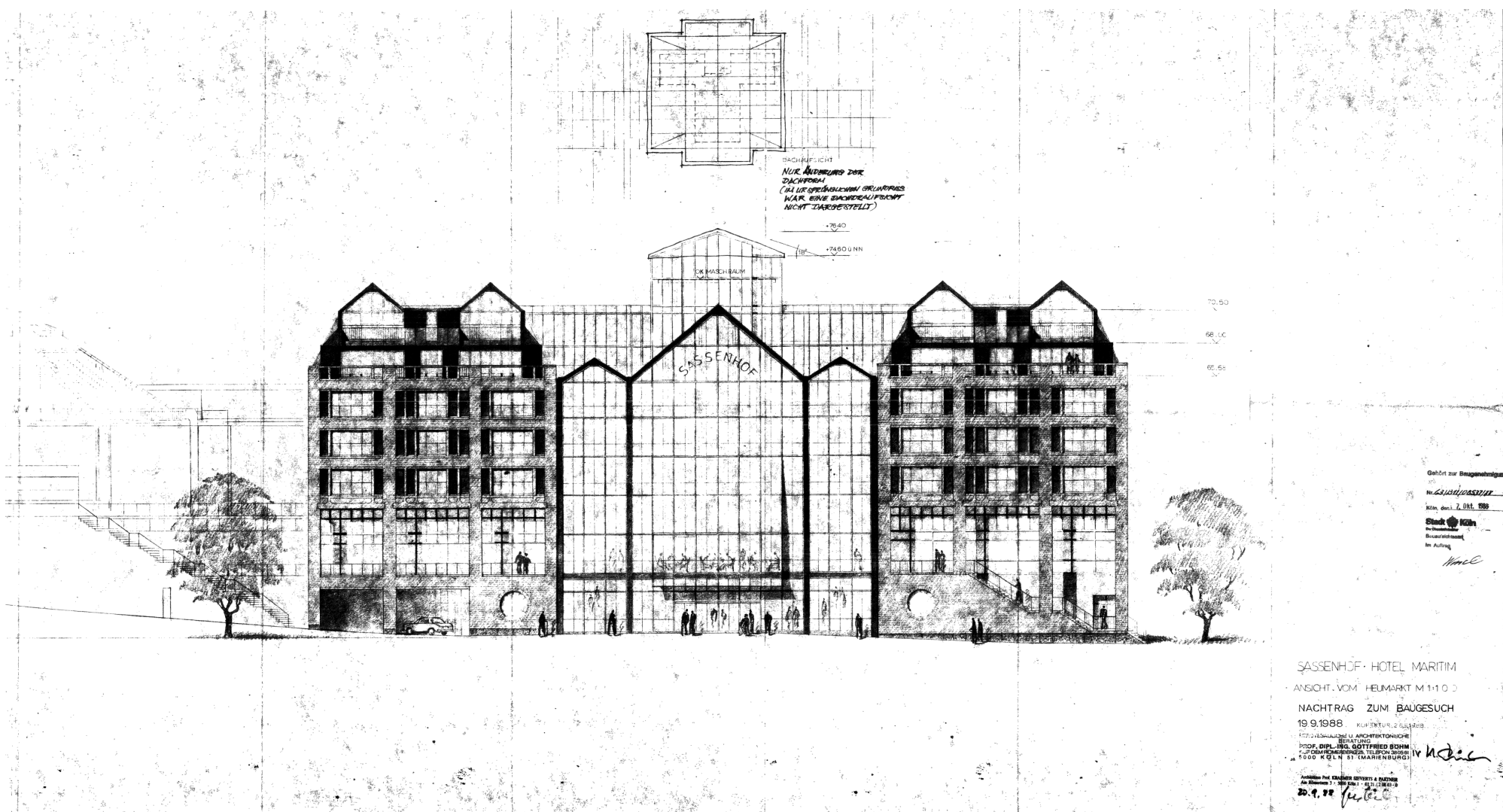
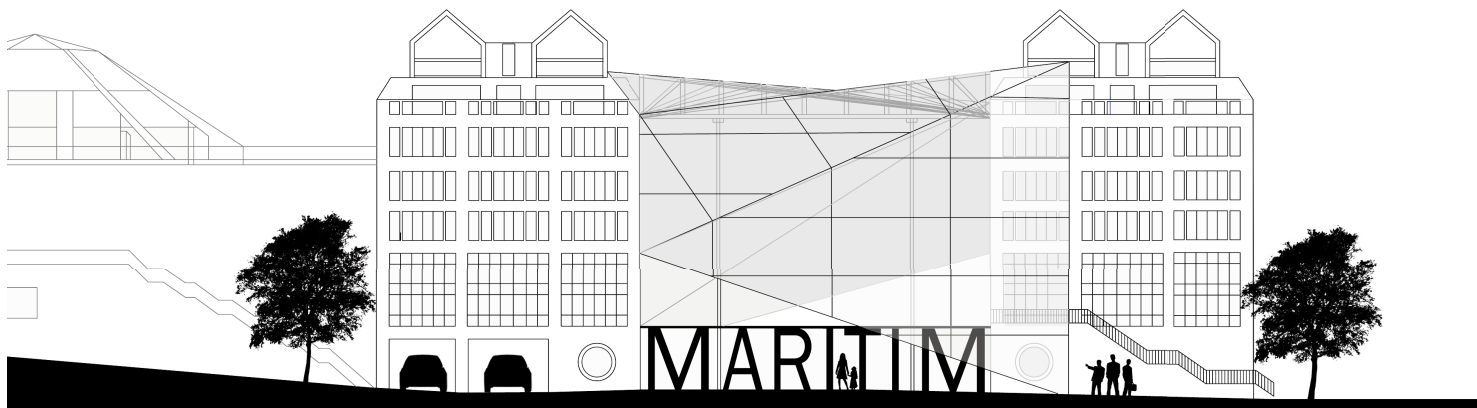
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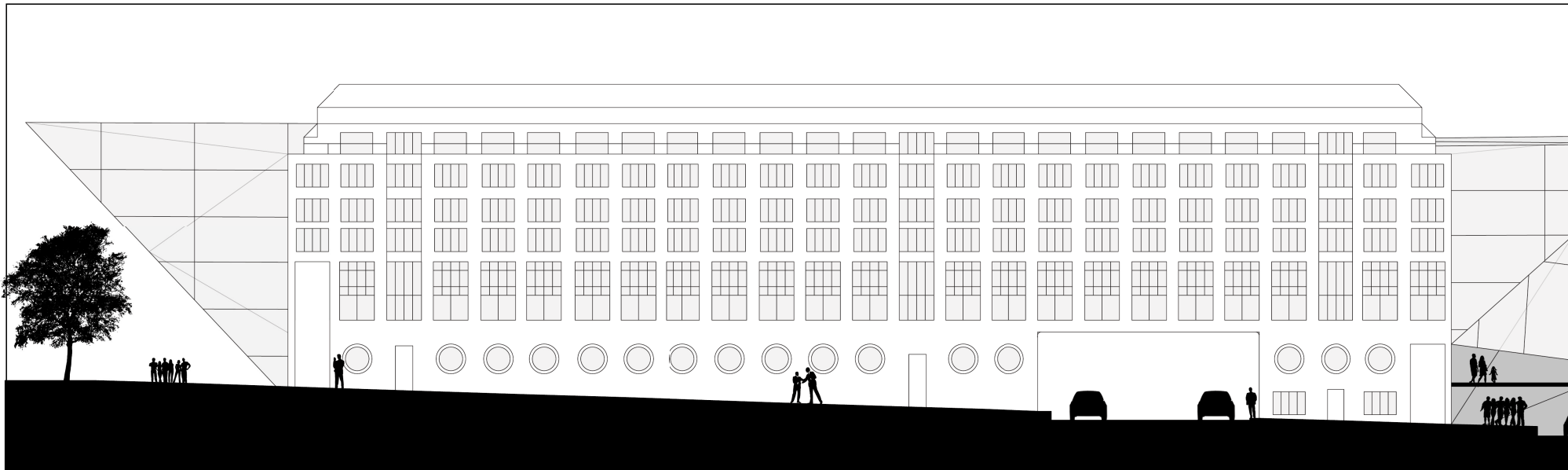
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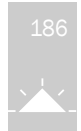








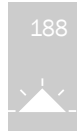
6-7 Sections



6-7 Sections



6-7 Sections





6-9 Structure and Details of Atrium

The facade of Maritim Hotel is a critical urban and cultural boundary for the revitalization of the building. This boundary shapes how the public views the building, how the visitors inside visit the city, and how ever-changing reflection are created on both side of the wall.

The glass and steel facade effectively provides the required structural properties with minimum visual obstruction, resulting in a light and delicate enclosure. The facade should be open as possible and visual as much of possible to erase the boundaries between inside and outside and create a transit space. For the security and controlling the heat and light, a floating curtain can be used not a solid wall.

Materiality

As main structure combine of series of columns. Existing horizontal beam are attached to the columns and provide the base for the new structure, new diagonal beams and beams for the pitched roof are out of stainless steel that span from one side to the other.

The beams in the entrances shape a three dimensional frames for the glass which through the tensile structure, the pressure is broken and transferred to the ground.

The goals is to reduce the mass and presence of the literal enclosure system. The only completely opaque material in the elevation beside the beams, is the slender beads of silicon caulk between glass panels. As the design evolved, the number of elements in the facade and complexity of their assembly are reduced in order to maximize the transparency of the enclosure system.

Technical

The facade is a variation of tensile structures, consisting of continuous tension and discontinues compression systems.

The new beams to support the weight are much like rope, running from a joint to another. The space between beams can be covered with conventional materials such glass.

This system attach to the main existing structure which contains beams and columns and the two wings to play the stability role.

The glass that is used is a glass to fit for the building and the functions while bringing the suitability to design. Glass generates energy. The ASI® THRU by SCHOTT company in Germany, are known for their long life expectancy, consistently high performance and low investment cost. Once they have been integrated into the building shell in a functional and artistic manner, they deliver dependable performance – even for decades.

The result is a low-maintenance building shell that also features excellent solar and thermal insulation. ASI® THRU insulating glass elements achieve the same G-values as high-quality sun protection systems installed on the outside. Furthermore, at 1.1 W/m²K, their U-value equates to that of an insulating glass unit that features a Low-E thermal insulation coating.

The key fact for the glass is:

- High-performance photovoltaic modules
- Amorphous thin-film silicon layer
- Service lifetime of at least 20 years
- Laminated or insulating glass structures
- Fully building-integrated
- High-performance semi-conductors

ASI® building integrated photovoltaic modules use the most successful thin-film technology based on

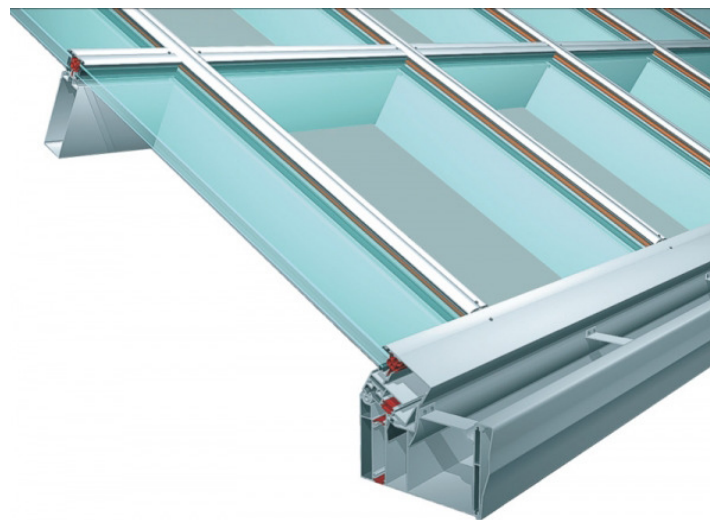


amorphous silicon. ASI® modules not only ensure high energy output, even during overcast conditions or when the building is partly in the shade, but they also stand up to the high temperatures that are quite common in building-integrated applications. Solar modules from SCHOTT are free from toxic additive arsenic and heavy metals like cadmium or indium and have an impressive appearance thanks to their homogeneous surface..

The glass between the beams is double glazed. The result is a facade and roof that balance functional illumination but also sustainable, produce energy and animate the spaces with subtle changes in the levels and color of light.

The main beams using as the base are the HEA have 80 cm thickness. The secondary HEA have the thickness of 60 cm which shape the pitched roof and the silicon caulk have the thickness of 20 cm.

In the following pages, the exploded view of the structure and technical details is represented.



Scheme 6.10
Exploded view of New structure

Detail 6.1
3D Section of glass roof

Detail 6.2
Section of glass detail for roof

Detail 6.3
3D section of glass detail facade

Detail 6.4
Order of beams





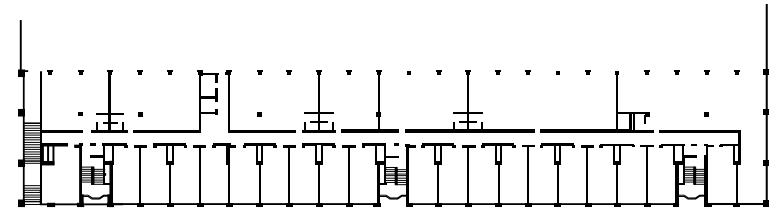


6-10 Circulation

For the best circulation option, different designs are examined.

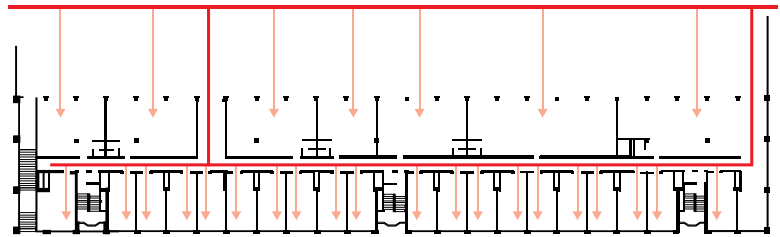
Scheme 6.11
Existing situation

The in front is showing the south wings with shops and offices.



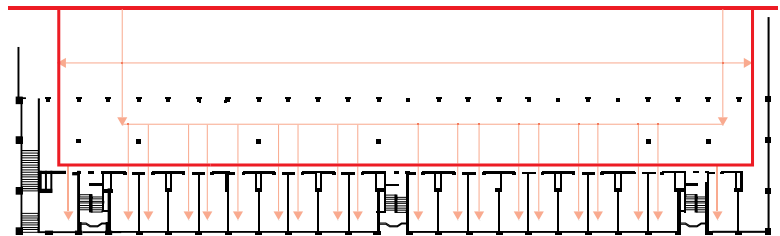
Scheme 6.12
First solution for circulation

With drawing the circulation, it is cleared that rooms in the back, have not much accessibility. Now the rooms in the back are offices but with the proposals, they will be shops which means they should be more accessible visually and physically.



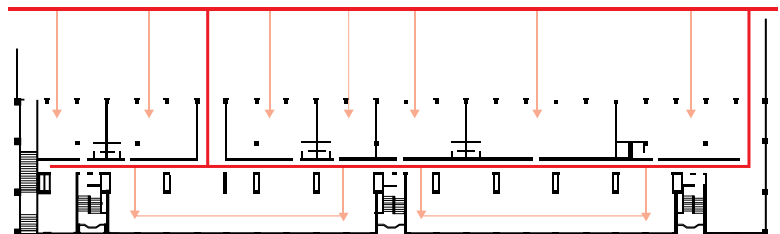
Scheme 6.13
Second solution for circulation

One of the options is to remove the rooms in the front. In this option there is more open space than close and functional space.



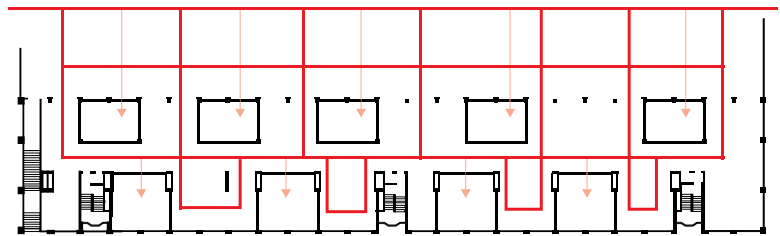
Scheme 6.14
Third solution for circulation

Another option is to remove the rooms in the back and have a non functional space in the back with the view to outside. The disadvantages is the space in the back can be not so vivid since it is still block with the walls in front of it.



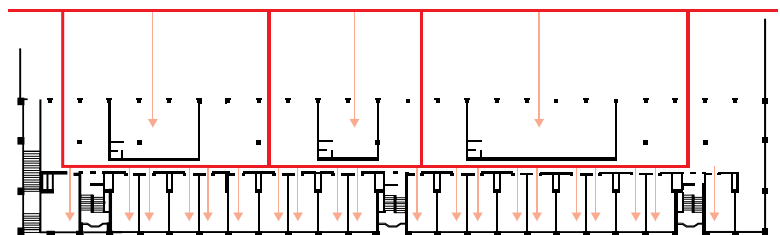
Scheme 6.15
Forth solution for circulation

The next solution is to partly remove some walls and created smaller rooms in the front. This option gives more accessible rooms. This advantage is that all the rooms are small for restaurant.



Scheme 6.16
Fifth solution for circulation

The final and chosen option is the option to have bigger rooms that can have functions like restaurant, bars and cafe. While the rooms area at the back which are smaller, will be shops and show rooms.



Scheme 6.17
Exploded view to circulation

The opposite page is the diagram of circulation in all the building.



6.11 Areas

In the last chapter the areas of each functions was presented. The new design has changed the order and areas of function. The new plans are presented in the opposite page.

The next two pages are the exciting situation and the then the diagram of all the function is presented.

For a better comparison the old and new areas will be added here:

Scheme 6.18
New areas Ground Floor

Facilities for conference hall: 945.516 x 2 m²
Facilities for conference rooms: 318.24 x 2 m²
Conference rooms: 419.92 x 2 m²

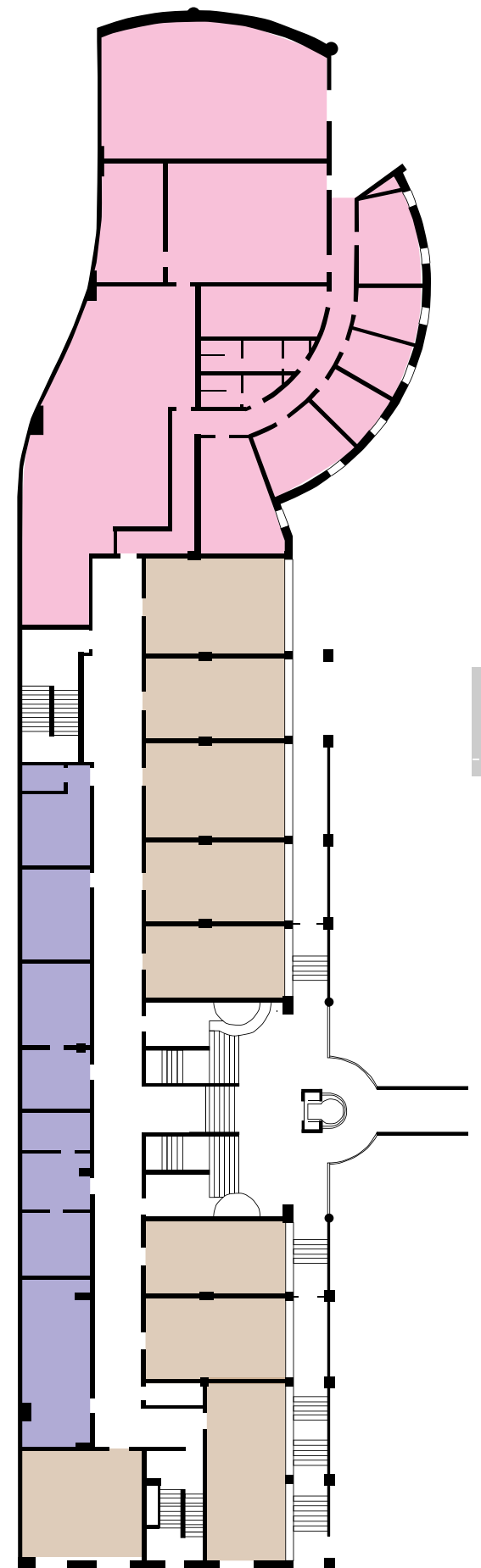
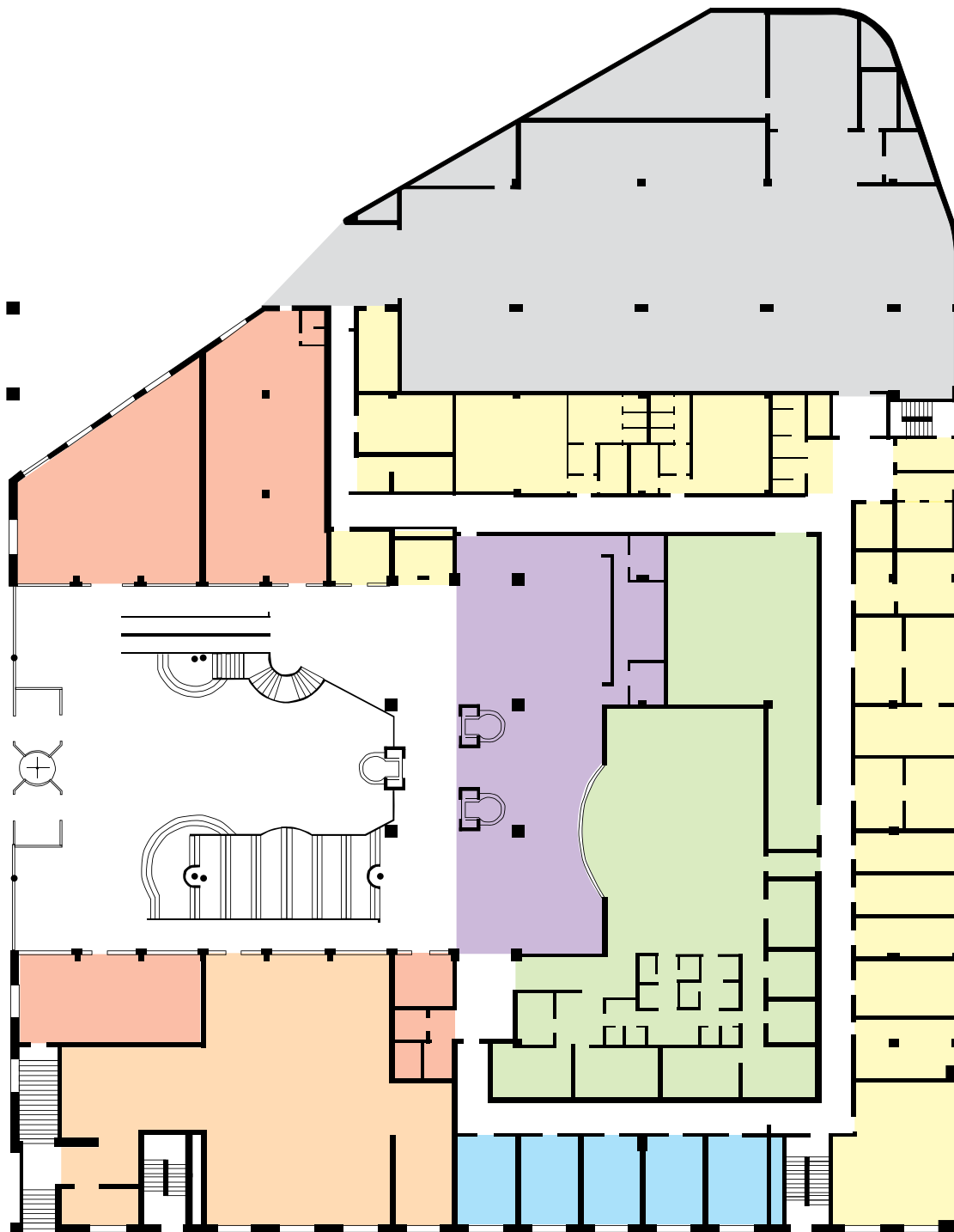
Scheme 6.19
New areas First floor.

Parking for personnel and storage: 1062 m²
Lobby: 960 m²
Piano bar: 337.3 m²
Sport facilities: 573 m²
Technical rooms: 737.18 m²
Offices: 800 m²
Shops: 627.33 m²
Restaurants: 835.63 m²
Kitchen: 420.42 m²
Foyer: 1301 m²
Conference halls: 1881.26 m²
Main area: 2400 m²

The new ares include:

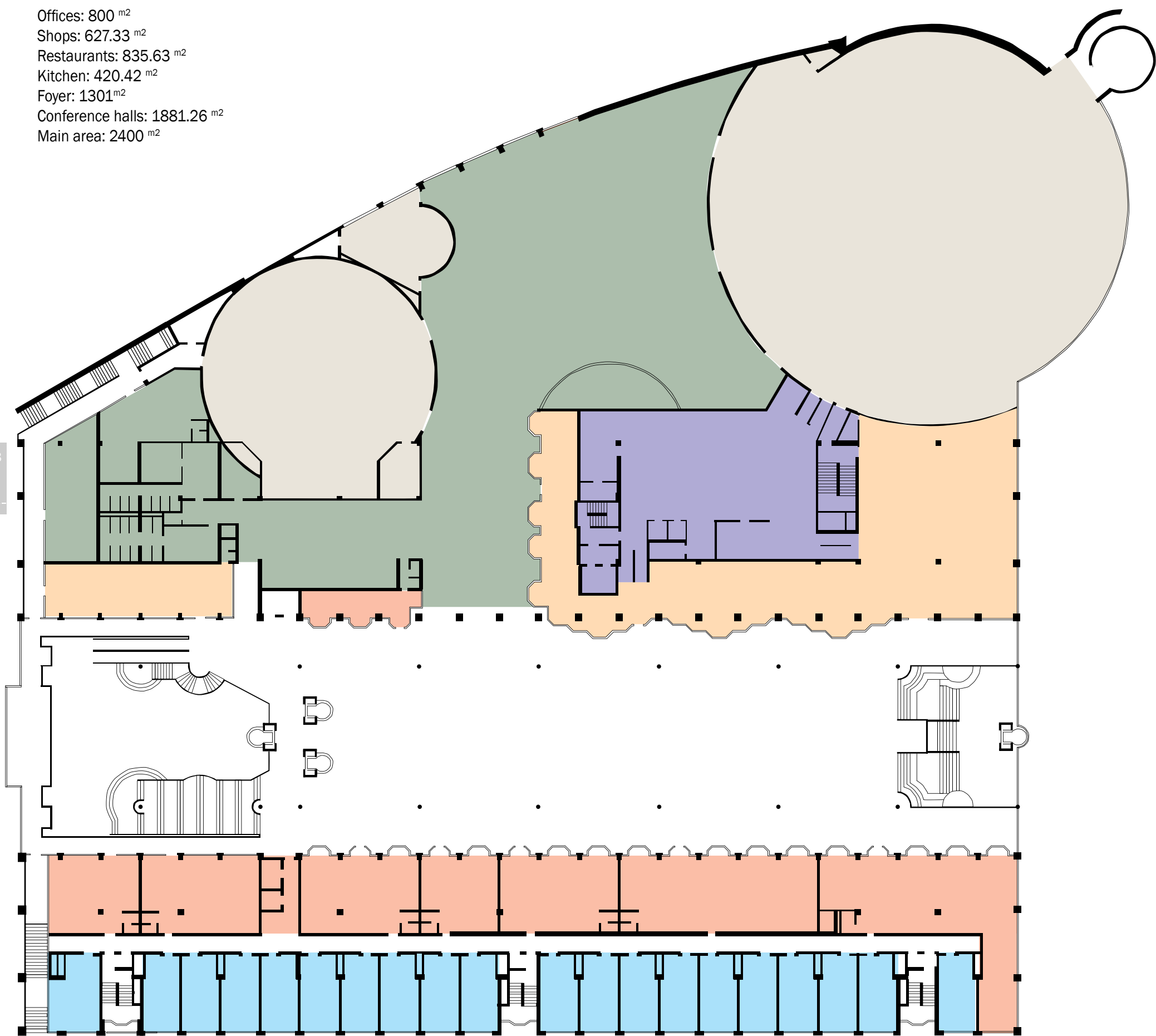
Facilities for conference hall: 945.516 x 2 m²
Facilities for conference rooms: 318.24 x 2 m²
Conference rooms: 419.92 x 2 m²
Offices: 661.84 m²
Lobby: 136 m²
Piano bar: 337.3 m²
Sport facilities: 489.5 m²
Storage: 267.147 m²
Security: 44 m²
Shops: 1397.2 m²
Restaurants: 886.94 m²
Kitchen: 420.42 m²
Foyer: 1301 m²
Conference halls: 1881.26 m²
Main area: <2400 m²

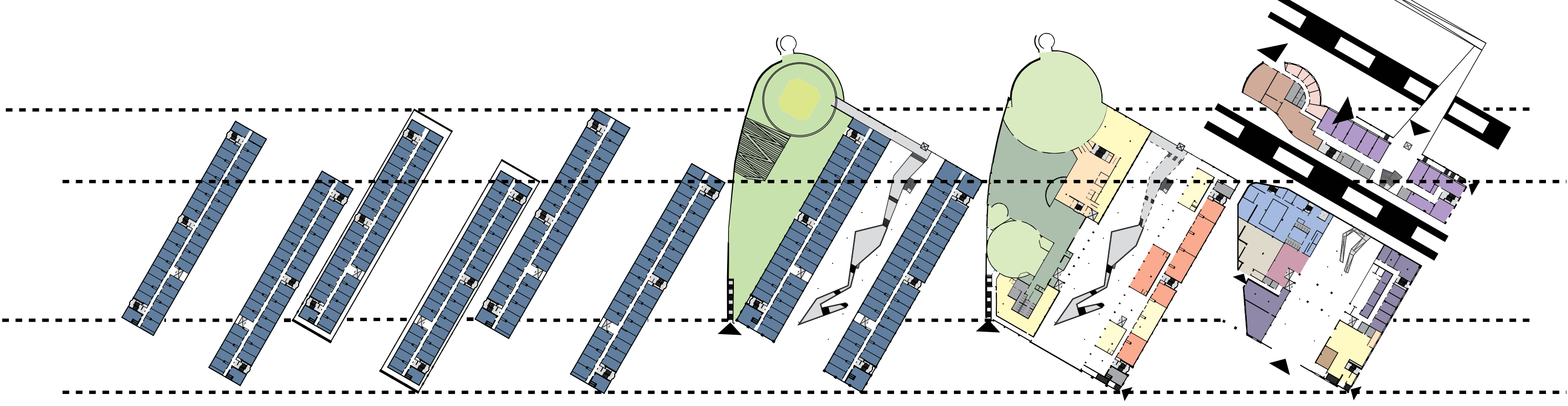
Facilities for conference hall: 945.516 x 2 m²
Facilities for conference rooms: 318.24 x 2 m²
Conference rooms: 419.92 x 2 m²
Parking for personnel and storage: 1062 m²
Lobby: 960 m²
Piano bar: 337.3 m²
Sport facilities: 573 m²
Technical rooms: 737.18 m²



Offices: 800 m²
Shops: 627.33 m²
Restaurants: 835.63 m²
Kitchen: 420.42 m²
Foyer: 1301 m²
Conference halls: 1881.26 m²
Main area: 2400 m²

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6-12 Material

As the building aims to be special, the material should be chosen carefully.

Image 6.1
ASI THRU Glass

- For the atrium, as it has been explained completely, SCHOTT ASI® THRU Glass is used. Photovoltaic modules from SCHOTT are known for their long life expectancy, consistently high performance and low investment cost. Once they have been integrated into the building shell in a functional and artistic manner, they deliver dependable performance – even for decades. Nevertheless, this glass can turn the solar energy into electricity:

- High-performance photovoltaic modules
- Amorphous thin-film silicon layer
- Service lifetime of at least 20 years
- Laminated or insulating glass structures
- Fully building integrated



- The ground floor with the main entrance (Heumarkt side) will be with materials of the street side. Therefore, the walls of gallery for the entrance will have the same stones of the exterior walls and the floors will be brick. The effect of the material is the half way house, something that is not inside but not entirely outside.

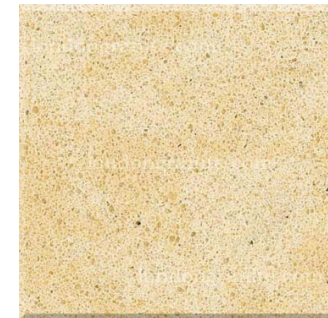


Image 6.2
Exterior Stone

- Venule Glassor used for ramp and stairs at both of entrance: Nippon Electric Glass has managed to fuse phosphorescent pigments which are averse to heat, in melted glass. Vluna's glow in the dark and suspended in glass bricks and panels, emit a bluish/white light for an hour or so after being exposed to light for 20 minutes. Brick dimensions: approximate. 97x197x50 mm and panel dimensions: approximate. 447x447x18 mm. The manufacturer of this product is Nippon Electric Glass.



Image 6.3
Veluna

Image 6.4
Chrome Waxed Leather

- Chrome Waxed Leather used as Curtain and facade: No other material tops the ability of chrome waxed leather to meet and to adapt the demands of extreme industrial applications. Its resistance to oil, exhaust gases, antifreeze agents and temperature variations make this leather the ideal solution for industries.



- Optical Mesh use for the stairs: Optical mesh is a translucent woven material that combines plastic with light diffusing glass fibres and standards stainless-steel wire. Thanks to light generation programming, the right achieved can be stationary, kinetic, soft, Colored, rhythmic, pulsing or a combination of these. Various woven patterns and densities are available by GKD. Maximum dimensions: 8x40 m. The manufacturer of this product is Philips Eclairage

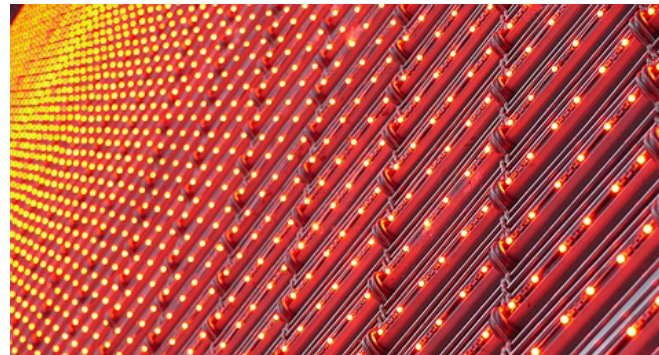


Image 6.5
Optical Mesh

- Living Floor used for the finish of the stairs: Two sturdy sheets of flexible PVC, welded at the edges and encapsulated one or two Colored fluids between the two. The resulting product features chromatic and lighting effect that respond to pressure. The immiscible colours create an endless range of pattern while temporary preserving footprints and conveying printed messages. The manufacturer of this product, B. Lab, offers a rainbow colours set of this floor. Tiles are 7 mm thick and 50 to 100 cm wide.

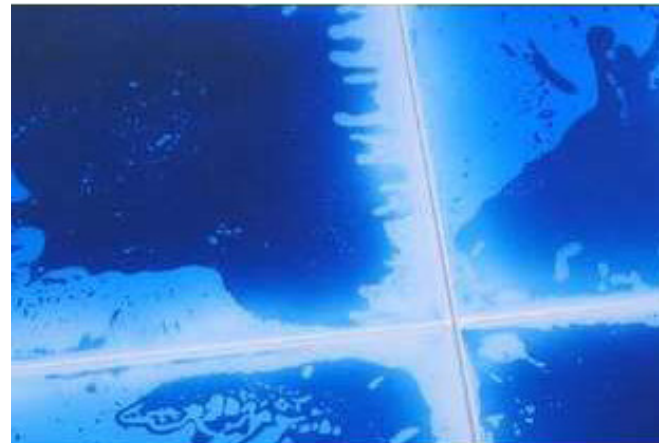


Image 6.6
Living Floor

- Concrete has use for the bridge connecting the Rhine promenade to building.



Image 6.8
Concrete

- Double sided metallic polyester used as a second option for curtain and facade:
The reversible fabric is gold on one side to protect against the cold, and silver on the other side to insulate against heat.

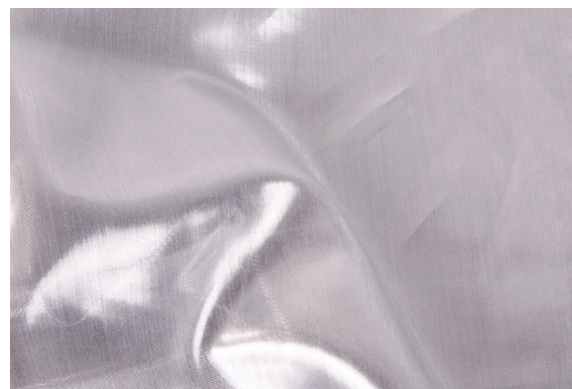


Image 6.8
Double Sided Metallic Polyester

6-13 Media

Design Intentions

Cologne is famous for its media, which as a landmark and a gate, the building is trying to illustrate that.

The media is not only give information about the events that happening in the hotel, but also is interactive with the weather in order to create a certain mood and feeling for the people.

In the cold or cloudy day, the colours become brighter and warmer with more rhythms to make people a certain experience both outsiders and insiders.

In the warm day, it tries to cool down the space.

In the event, media facade tries to illustrate information in a abstract way with colours, shapes and rhythms.

The device below give the effect in the most efficient way for achieving the desired effect by simplicity, energy consumption, repair and flexibility.



LED PAR Cans:

Creates a vague light on a screen as a basic colours.

With average of 20 meter distance 8 is needed. It has more variety of colours but less brightness for daytimes.

This unit is compact & light weight and offers plenty of pro features such as: 2 DMX Channels modes for programming, 33 built-in colour macros and a 4-Button LED DMX Menu.

Specifications:

- Dimming: 0% - 100%
- 13.5-degree beam angle
- 33 built-in colour macros
- Fan cooled
- Strobe/Pulse effect; random strobe slow to fast
- Extreme long lifetime of the LED (50,000 hr. Rating)
- Power Consumption: 110W Max
- Light source: 36x 3-Watt high quality CREE LEDs (8x Red, 10x Green, 10x Blue & 8x White)
- Dimensions (LxWxH): 12"x10.5"x6.75" / 304x262x168mm
- Weight: 13 lbs. / 5.8kg.

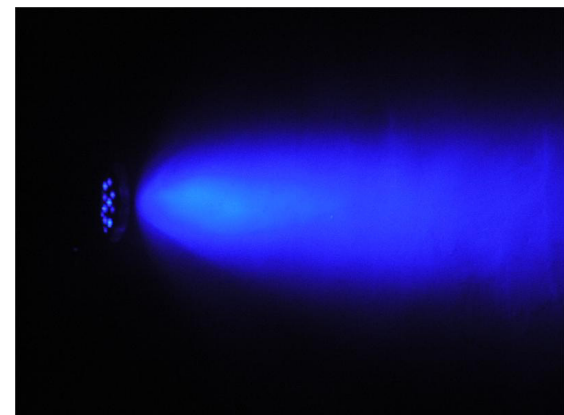


Image 6.9
LED PAR Cans

Image 6.10
The Effect of LED PAR Cans

PAR 64 Cans:

This machine also provide the facade with basic light as back ground with one difference. PAR 64 Cans have more bright lights, therefore, it is more visible when there is light. It has less variety of colours (only three basic colours) but has more level of brightness for the light and consume less power. With average of 20 meter distance 4 is needed. It has less variety of colours but is bright enough for daytime.

Specifications:

- Light weight and durable design makes it ideal for touring or permanent installations
- Available models: High Polish (PAR-64A) or Black (PAR-64B)
- Dimensions: 16.5”L x 10.5”D
- Weight: 3.6 lbs.



Image 6.11
PAR 64 Cans

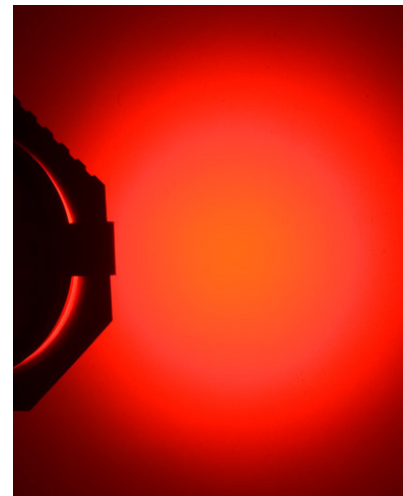


Image 6.12
Effect of PAR 64 Cans

Laser Light:

The real show will be happening by a laser machine. Laser light can create different shapes and colours with different rhythms to give information in a abstract way.

Base on the amount of pattern can be more or less. Approximate. 5 is needed to get the average effect.

Specifications:

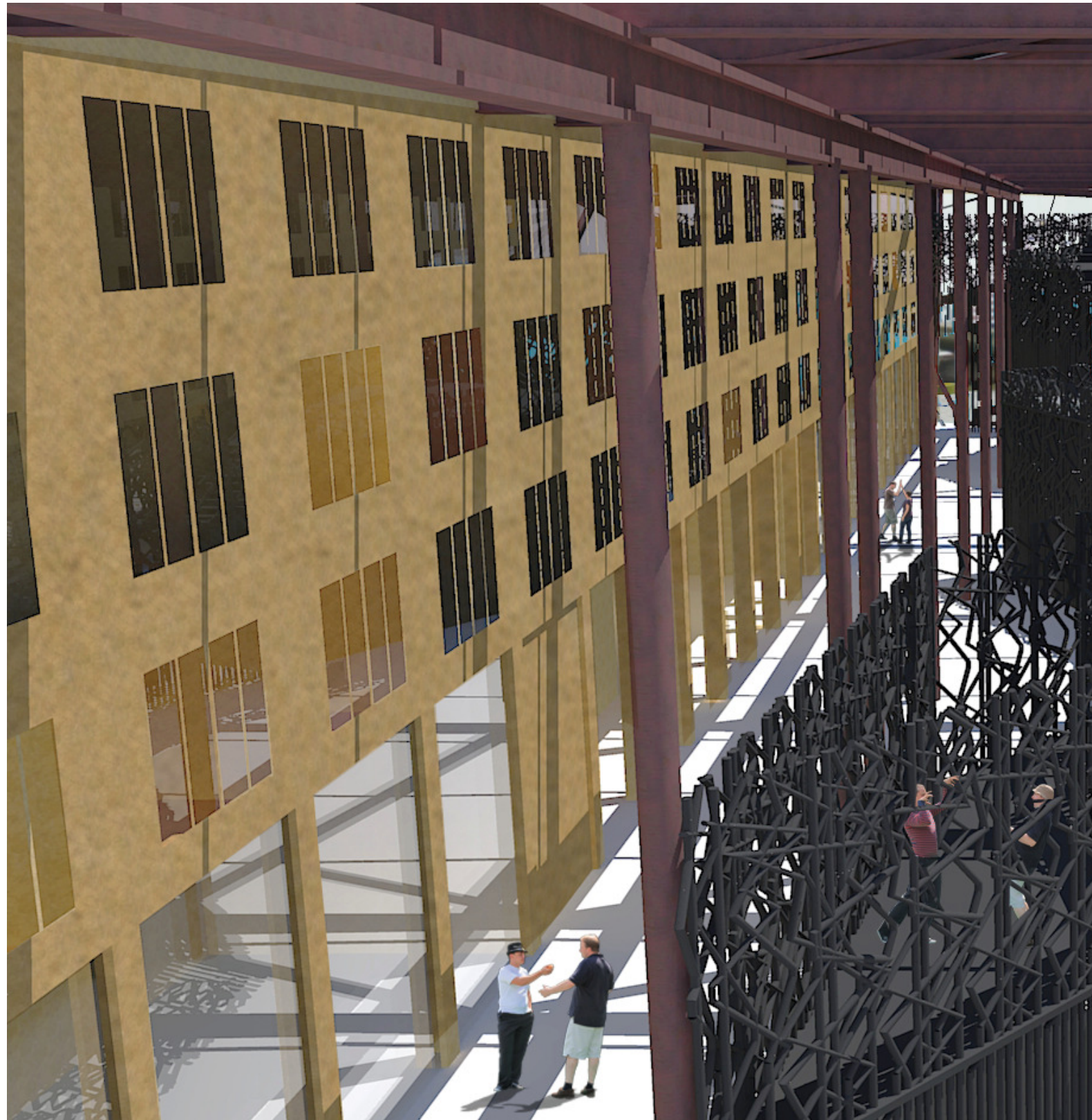
- 8 colours + white
- Built-in lighting programs
- Sound Active
- Manual focusing lens
- LED Strobe and Pulse effect
- 9-degree beam angle
- X/Y mirror movement
- Fan cooled
- Hanging Bracket + safety hook included
- Power consumption: 103W
- LED life rating: 30,000 hours
- Dimensions (LxWxH): 11” x 8.25” x 22” / 274x208x555mm
- Weight: 14 lbs. / 6.3 kgs.



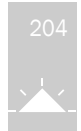
Image 6.13
Laser Light Device

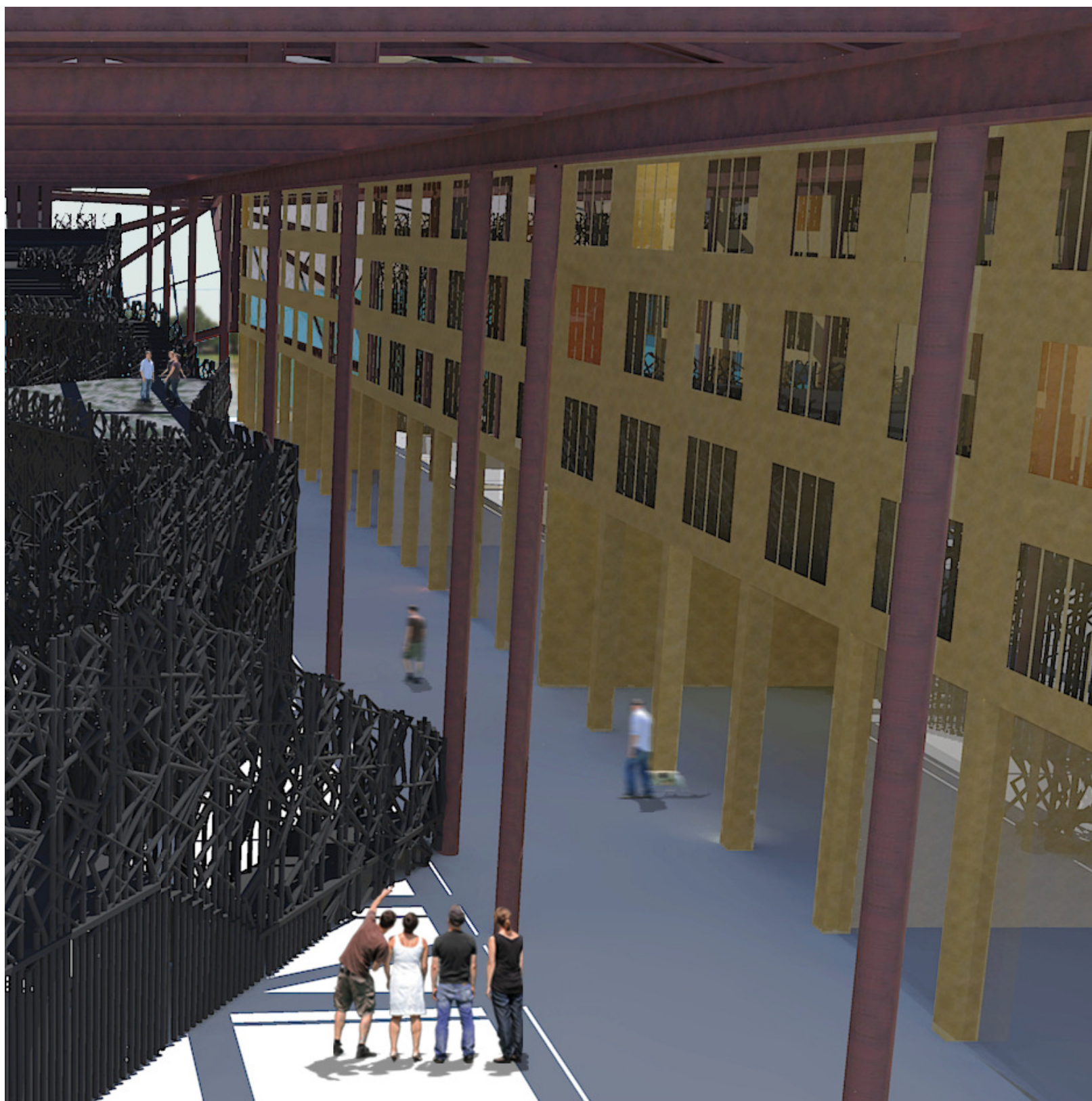
Image 6.14
Possible effect of laser Light

6-14 Renders and Story



Render 6.2
Perspective of Atrium





Render 6.3
Pipinstraße axe - entrance in
daytime



In the center of Cologne, lies Heumarkt, a square with a rich history. Between Heumarkt and Rhine, Maritime Hotel is located.

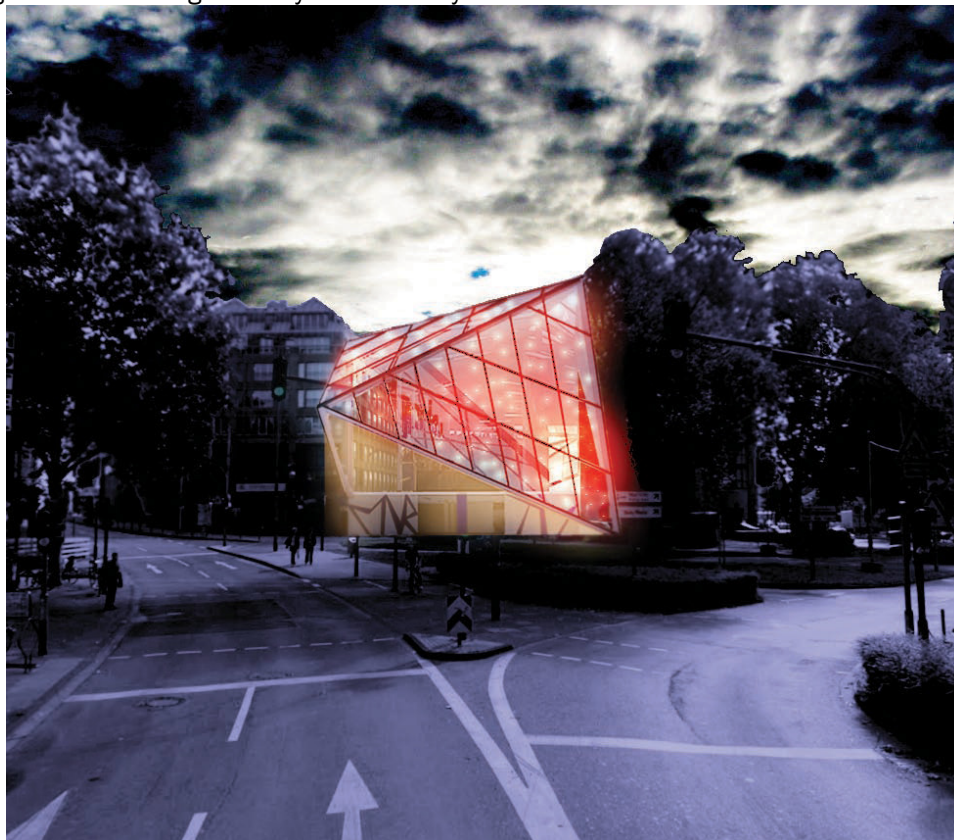
Maritim hotel is an urban leisure zone in the centre point of traffic which horizontally connects two side of Rhine and vertically connects the old centre to new parts of Cologne.

The design of the building also represent attachment of new and old; new building with old building - old city with new city -

old Heumarkt with new Heumarkt. The building creates a diverse experience when moving in or around the building that is hard to ignore.

Roads, metro, parking, bridge and river allows a multi-programming, combining public and private, visitor and residents, commercial and culture function is a single location in heart of Cologne.

Render 6.4
Pipinstraße axe - entrance in
night





The shape created by the material and structure is impressive for a public place since there is no privacy. You don't look at the small square windows. Everything is windows, everything is solid, and everything is structural.

The structure is simple and repetitive but it has been dress to shock.

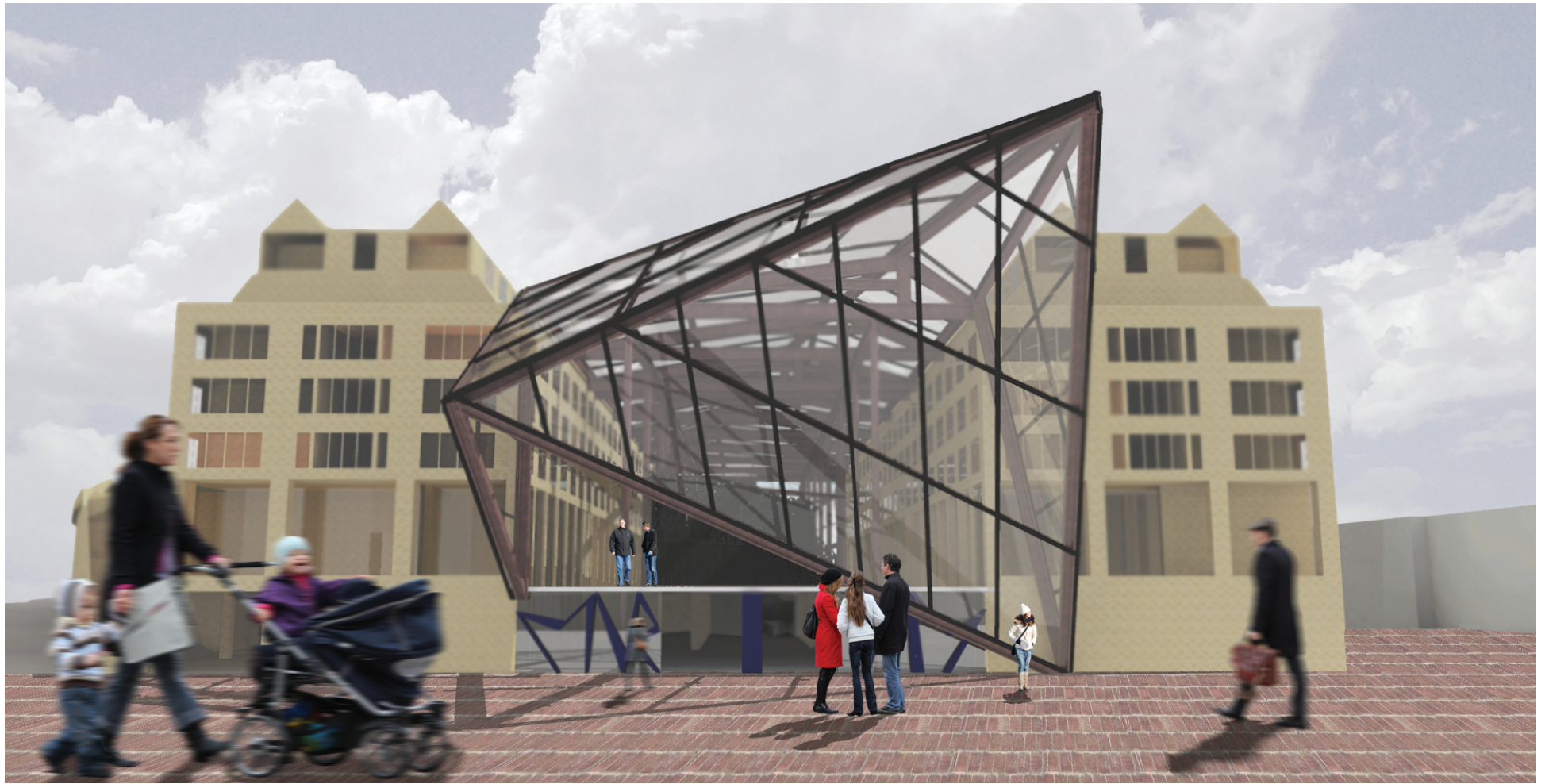
During the daytime you can get surprise by the architecture but in the night it shines, without being expected.

There are projectors and laser projector attach to the beams which will be used in the evening to show events and create a playful spaces.

Render 6.5
Am Malzbüchel axe
Entrance in daytime



Render 6.6
Am Malzbüchel axe
Entrance in night



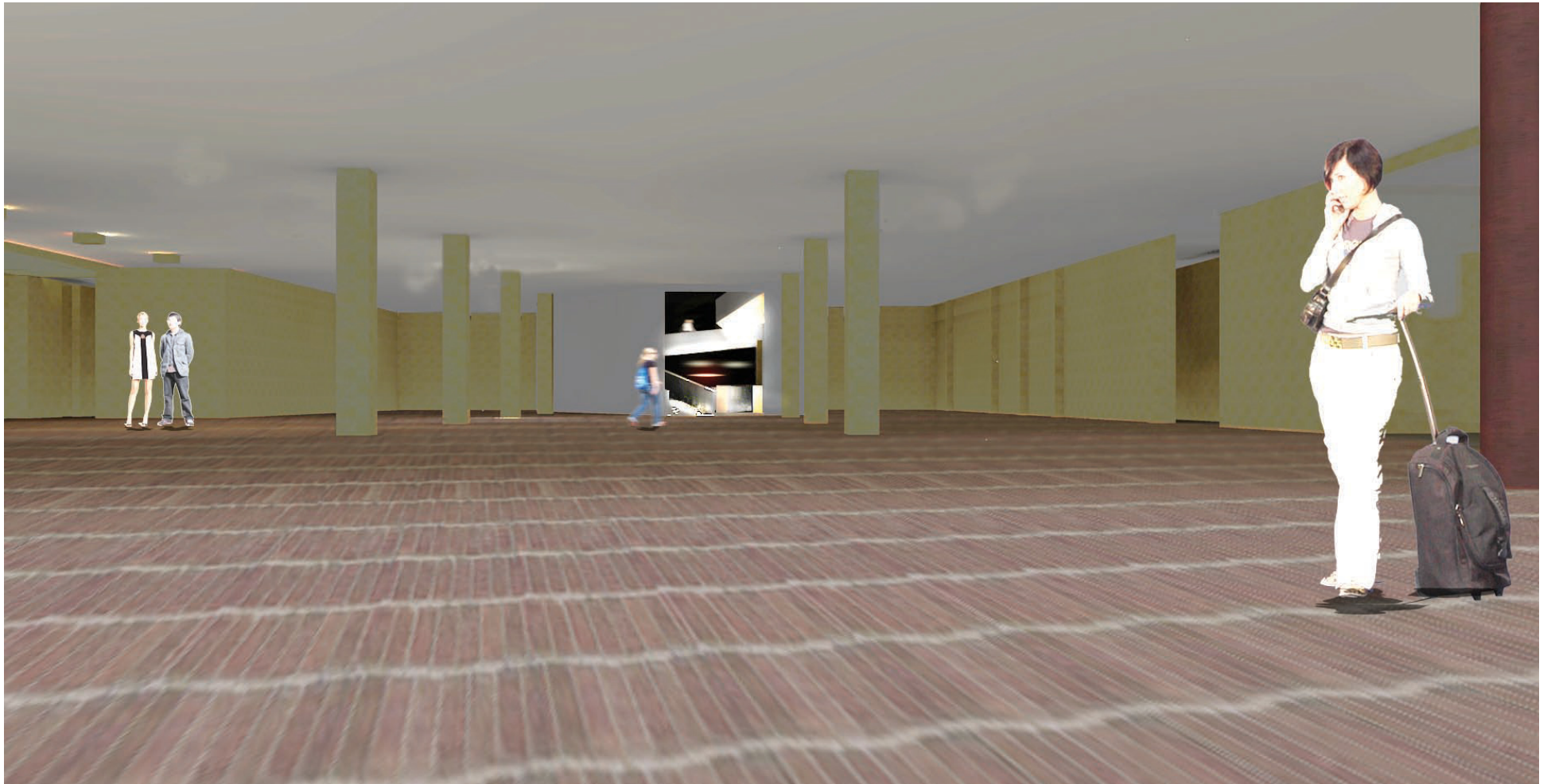
Render 6.7
Heumarkt entrance

The building is a blurred space between architecture and urban-public and private. It is the forth court that is the real urban space. Thanks to the forth court the building starts to belong to the city. The forth court is an empty space. There is no separation between forth court and entrance but the label of center and a transparent glass doors. From the first floor to top, levels are open to city with a grand gesture.



Forth court introduces the city to building while ground floor is the continuation of the city. Forth court exhibits the life of the city. It is a meeting point between monument and the city; blurred between them, floated in the light during the night tome ... leading you to enter the building and became part of experience.

Render 6.8
Heumarkt entrance



Render 6.9
Ground floor

Once inside, the architecture of the atrium fades away. The design is with straight lines and clear. The material is the urban material, brick and stone.

The entrance is an empty space. It is a hybrid area... It is not really outside but not entirely inside either. It is public space opens up to the city to make connection to it; a big half way house between inside and outside.

Around the entrance the areas can be easily read. The gallery is in between, as a primary circulation line to spread the secondary routes.

Each space is independent. The ground floor resembles the urban street and distributes functions from public to private.



Since the functionality here should be clear, architecture becomes simple. It acts as a filter and clarity make no place to hide.

The ground floor is a waiting area and a passage.

The offices are located in the back, with privacy and natural light. But for the gallery, natural light comes only from the main entrance. The place tends to be darker and have two light effects in beginning and the end to evoke the sense of curiosity. This way the high light of the cars and media facade grabs more attention.

Ground floor is like a transmit space. It make the audience to forget the surprise of outer facade and make them ready for another surprise.

Render 6.10
Ramp from ground floor to
first floor





Render 6.11
First floor
First view after arriving

The gallery is a floating zone, in movement and in function. A rectangular area of 2400 square meter which around it the whole building is organized.

Where one can stop to shop, drink, eat, work, for entertainment or just simply benefits from architecture and city. There is a diversity of function and activities to offer variety of experience.

Render 6.12
First floor
Foyer in between restaurants





Render 6.13
First floor
Shops
Perspective of atrium and stairs

Here, the emphasis is not on the spaces with function but blank space; areas without signs. In the language of architecture means corridors, foyer, lobby and stairs. These areas can gain maximum definite function, for ordinary uses, specifics or even events for future uses that nobody thought about.

The hotel rooms are over looking to the atrium. An atrium with high columns where breathing the good air and bath in light in a sealed building.


Render 6.14
First floor
Shops
Perspective of atrium and stairs



Render 6.15
Atrium
Stairways
Beginning of the route



214



Render 6.16
Atrium
Stairways
First pause area with interactive light

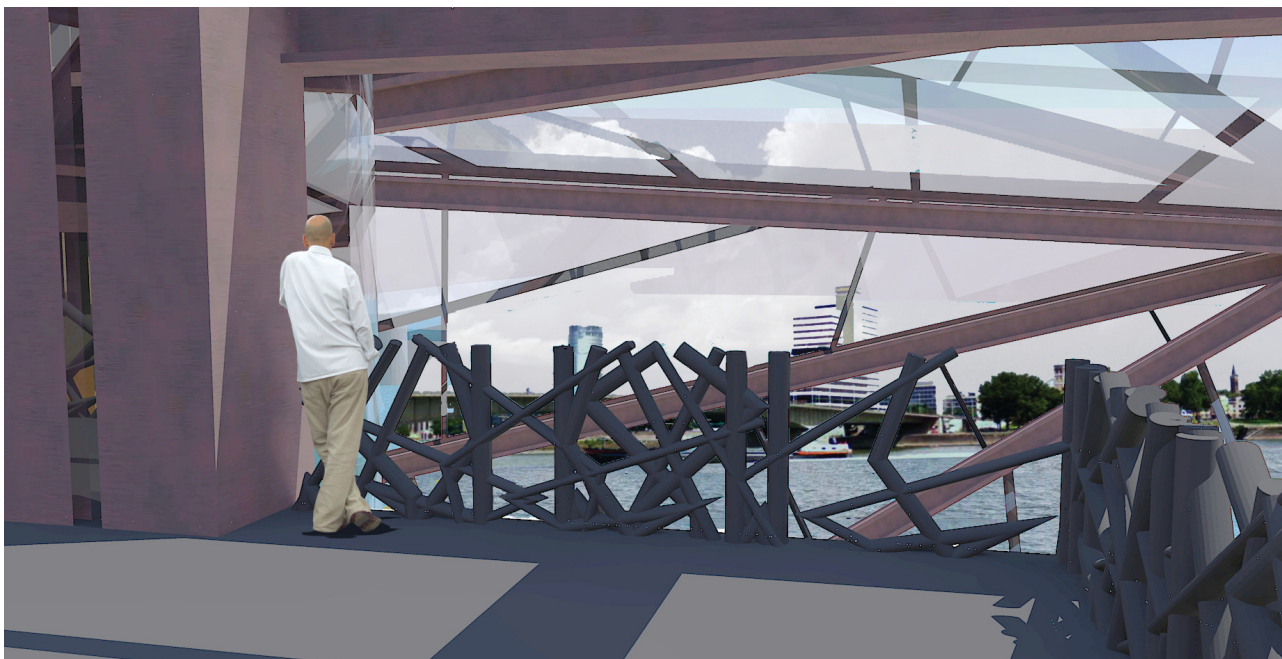


Render 6.17
Atrium
Stairways
Main Pause Area with interactive floor





Render 6.18
Atrium
Stairways
Third pause area
Experiencing architecture



Render 6.19
Atrium
Stairways
Experiencing landscape



Render 6.20
Atrium
Stairways
End of the stairway with corridor going to roof garden





Render 6.21
Atrium
Stairways
Perspective of atrium



The most important element in the atrium is the big sculptural stairway as the last link for the circulation.

However, stairs are not the stairs. They are more than ordinary stairs to get you from A to B.

Structure of the stairs, has created spaces on top, and below them.

These are not free spaces. They have their own unknown capacity which has to be experience.

They create sequence and attention although they are voids and not economical.

They don't have functions, but they are flexible to functions. But yet, the reason for them to be there is experiencing.

The atrium allows the constant change of light condition that gives variety shadows in different time of the day or seasons. This is a very interesting aspect of the space to play with.

Stairway has created a transitional space; connects two spaces but at the same time separate them. These transitional spaces are even more important than destination. It has the life of its own; a pass way which is moving through series of spaces.

The resemble a stage to move through while the art becomes part of the architecture, and the architecture becomes part of art.





Render 6.22
Extroverted public space with
restaurant

The roof bring landscape to point.
Once on top, with having no building blocking the view, The Rhine,
old town shinning with the bridges and churches becomes part of
the design.
The sprite of the city will be grabs attention in a second.

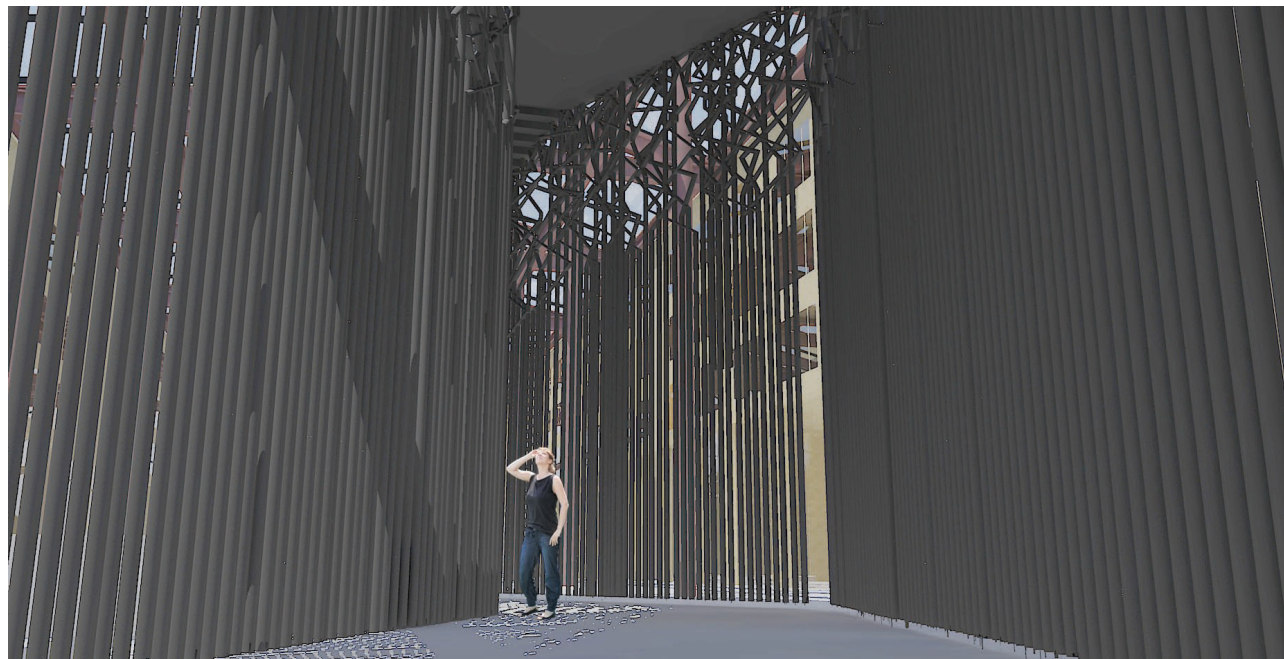


Being a center point of the traffic requires of a natural place to relax. What is better than a green roof and a restaurant with the direct access to the street.
The green space, indeed, is a urban green space and upgrade the quality of Heumarkt.

Render 6.23
Extroverted public space
Roof garden

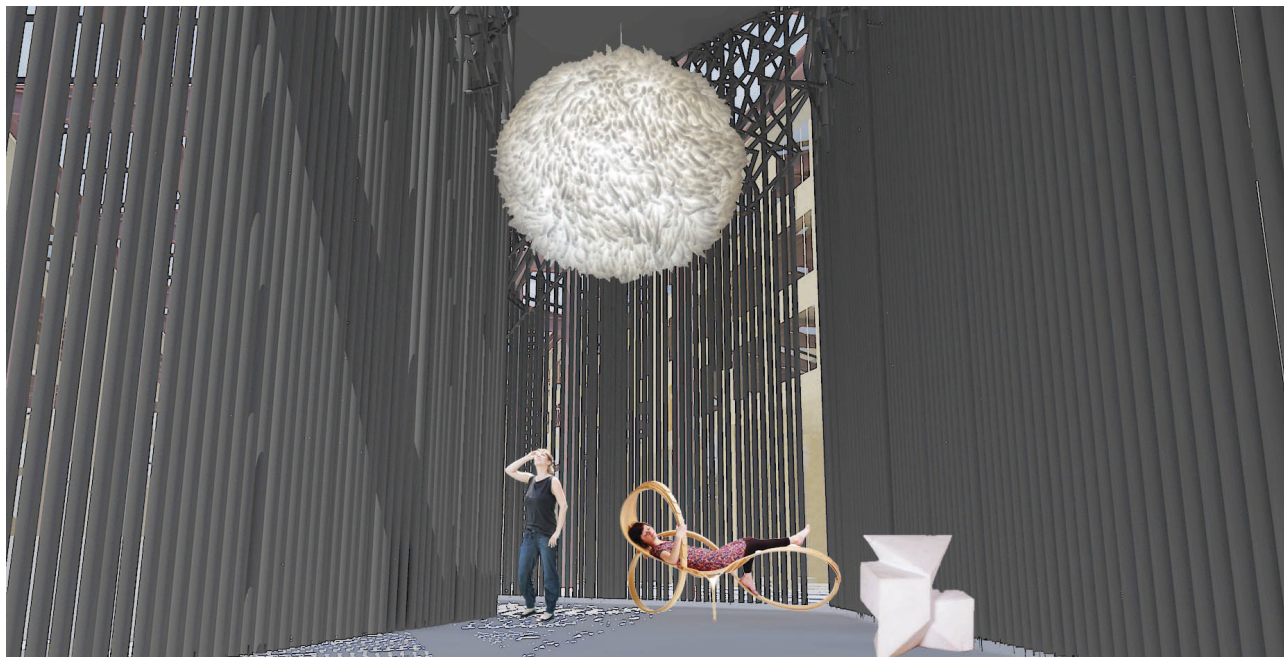


Render 6.24
Atrium
Below Stairways
As a non space

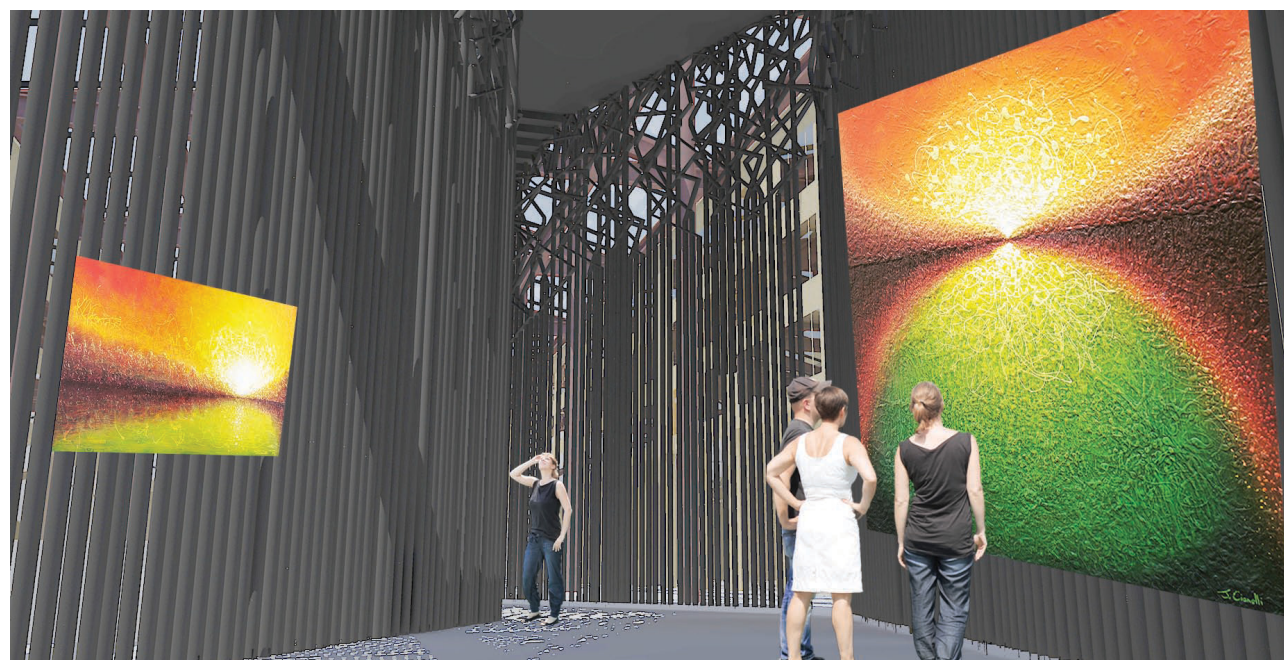


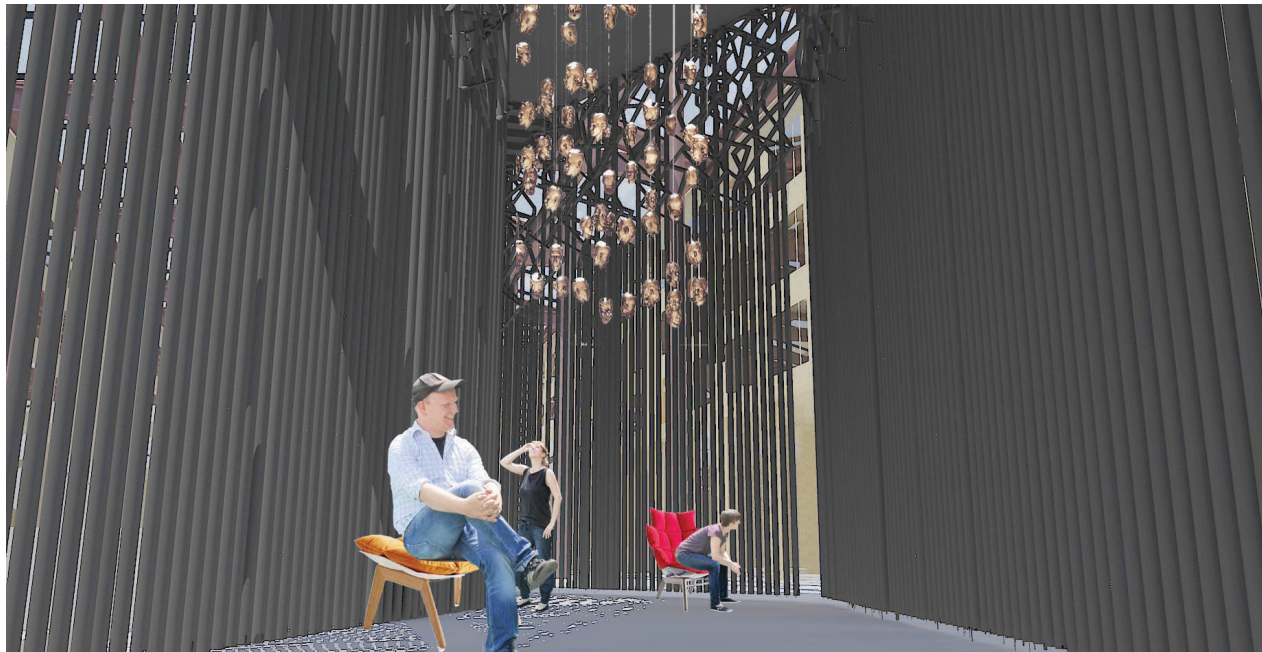
220

Render 6.25
Atrium
Below Stairways
As a relaxation area



Render 6.26
Atrium
Below Stairways
As a exhibition area





Render 6.27
Atrium
Below Stairways
As a relaxation area



Render 6.28
Atrium
Below Stairways
As a space for party

The structure of the stairs create rooms below them. The rooms can be fully functional and flexible. It can be a empty space, mesmerize you by the architecture or a rest area, away from noise and crowd. Since the light is in the control in the space, it can easily become an exhibition space, Or even a space to party with special light effects.





Render 6.29
First floor view
Daytime

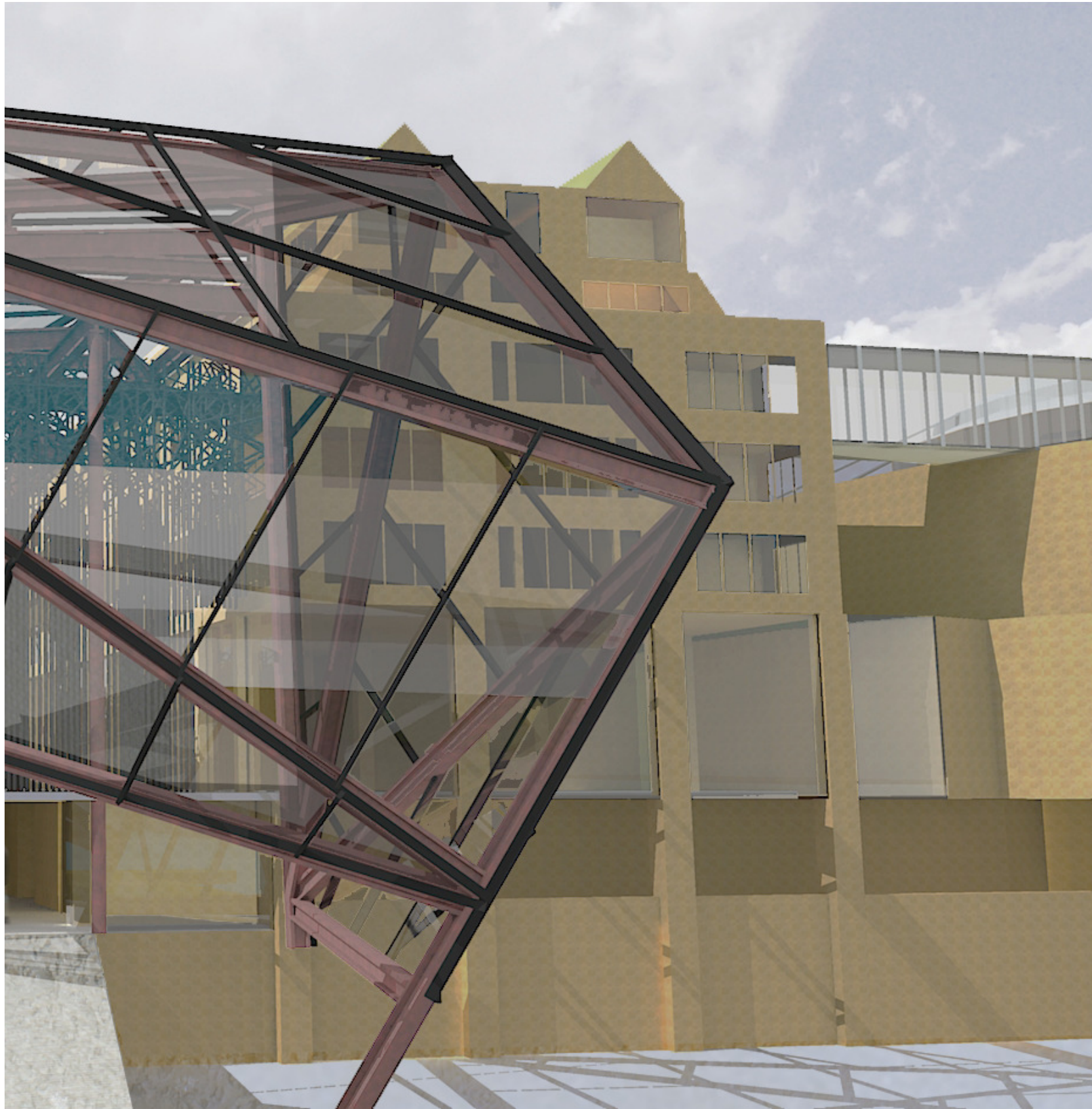


Render 6.30
First floor view
Night time





Render 6.31
Entrance by the
Rhine

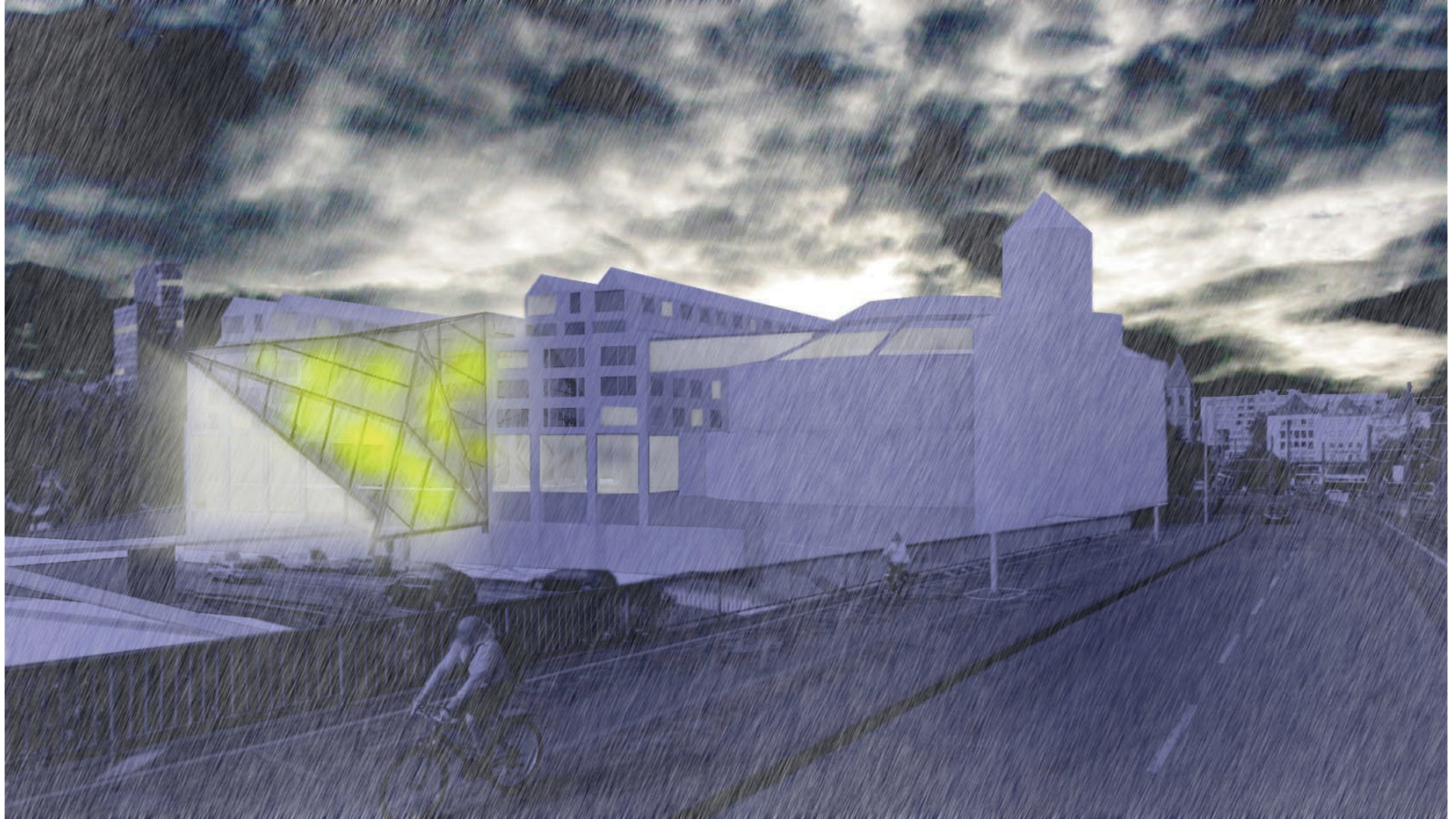




Render 6.32
Entrance by the
Rhine
View from Deutzer Brücke
Daytime

The most memorable part of a experience is the beginning and the end.

The main entrance make the first impression of the building.
The back entrance follows the same rules since it can also be the main entrance.



The entrance by Heumarkt have dialogue with traffic and busy side of the city. The shape of the entrance appears more simple to calm down the atmosphere and also remind people that in the other side, there is tranquility.

The entrance by the Rhine have dialogue with river and natural element.

The shape has more breaks in it to represent the dynamic character of the water and remind people that in the other side, there is the busy city life.

Render 6.33
Entrance by the
Rhine
View from Deutzer Brücke
Rainy night





Render 6.34
Entrance by the
Rhine
View from Am Leystapel street
Daytime



Render 6.35
Entrance by the
Rhine
View from Am Leystapel street
Night time
Environmental conference



6-15 Conclusion

6.1
The Fall of Public Man
Richard Sennett
1992

The project started by “Utopian socialist architecture”, inspired by the book fall of public man by Richard Sennett.

Sennett scrutinizes those problems caused by the imbalance between personal and public life. According to Sennett, the ‘public life’ which is a significant piece of life besides the family and friendships was once so lively and meant much to individuals. There used to be a ‘publicity’ that contributed to the individuals’ skills of ‘play’ through emotional ties with strangers and to the civilization of the individual.

Being a ‘public man’ well expressed in the 18th century European cities has become a gradually weakened phenomenon being replaced with the ‘private life’. And has become as significant as the private life allows it to...Sennett asks, “How has the stranger been transformed into a threatening factor? How is it that today, keeping silent and remaining as the audience is the only way of joining the public life?”^{6.1}

The project is trying to put a first stone of a new form space. The man of 21st century can communicate to one another through a virtual world rather than a real world. By this comment, the design has created a media playground. The audience do not keep silent in order to join the public. They play and interact with each other and architecture. It is the “Publicity” that Sennett talks about: “the individuals’ skills of ‘play’ through emotional ties with strangers and to the civilization of the individual.”

Through this idea, building becomes a collective architecture which bath in fresh air, light and freedom of spaces. By creating the memory, the building becomes part of life of users. It is no longer a solid object but a dynamic memory. Indeed, it is the rise of public man.

This is the way Maritim becomes the new landmark of Cologne. Nevertheless, the building is so huge in physical and functional level that it, of course, a monument.

As the architectural point of view, Maritim is a machine. This machine produces space, naked space, and transitional space.

Transition is a key word for this thesis. Hotel itself is a transitional function. It is nobody’s home and everybody’s shelter. Everyone can come there but no one stays there. It is a blank space which fills and gets empty constantly.

The design is exaggerating on this character. The emphasis

is not on the spaces with function but blank space with their own unexpected value; areas without signs. In the language of architecture means corridors, foyer, lobby and stairs. These areas can gain maximum definite function, for ordinary uses, specifics or even events for future uses that nobody thought about.

An Atrium creates a opportunity for this goal. In the architecture of atrium, circulations elements have always been pushed to side to leave space for economical spaces which are the center of attention.

The building is a public space, rather than a building. It is a shelter from weather surrounded inside out with public uses and indoor and outdoor activities. It is bold and well-adjusted, unique and local at the same time via media.

This way building acts as a reference and a gathering point for the people of city and visitors.

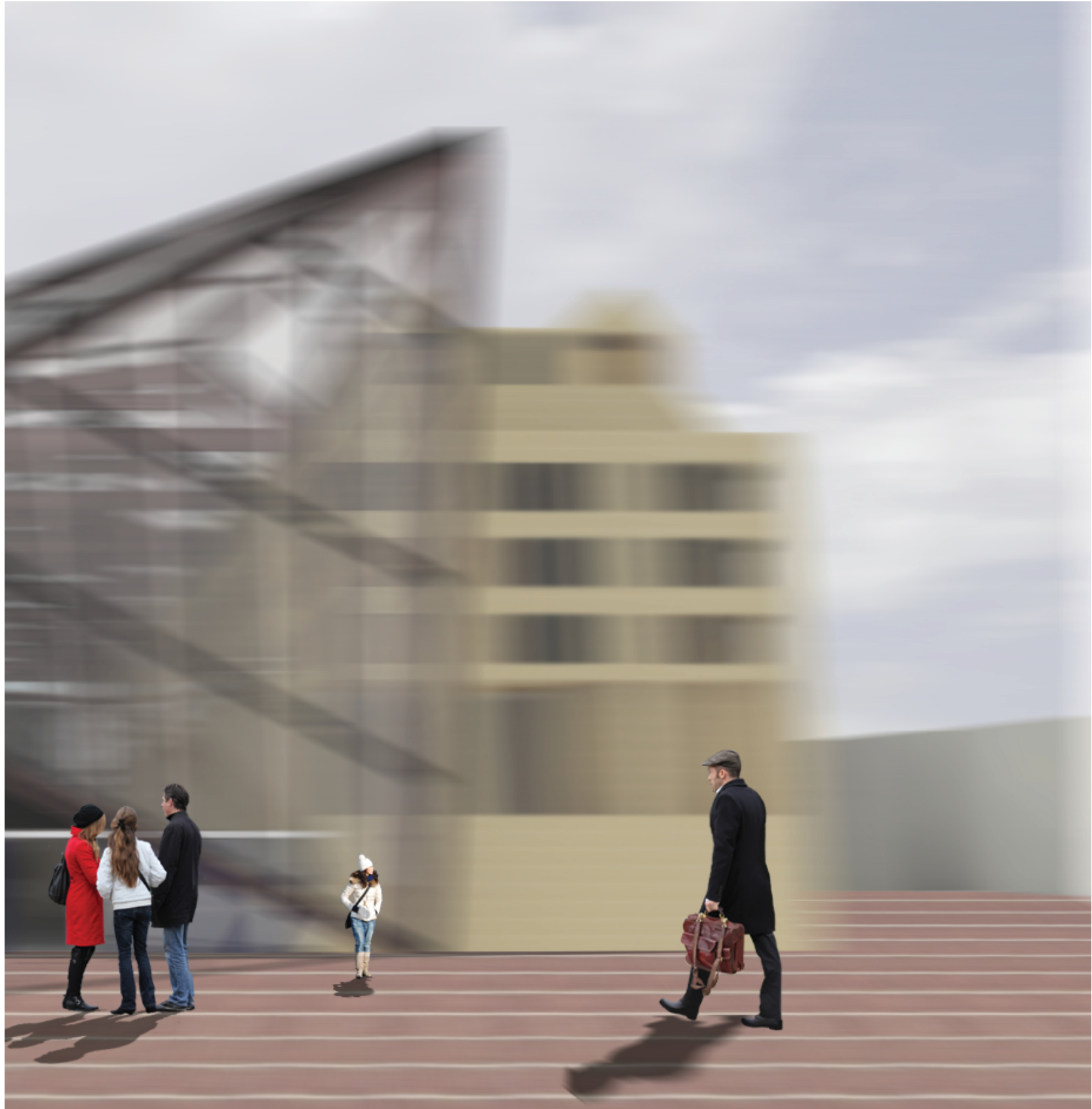
It becomes a view point, a pavilion, a market place, an exhibition space, a conference hall, a river side, a boardwalk, a stage and an audience. But most importantly, by the collective memory of the users, building generates life around and within it. As life in city evolves so will the Maritim hotel. Maritim Hotel becomes a gate because what is a gate, but a significant point you pass?







Render 6.36
Entrance by the Heumarkt
Impression of a
Dynamic/flexible building





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Chapter 1: The Birth

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Matthias Rauterberg
Department of Industrial Design, Eindhoven University of Technology
Published in *Journal of Ambient Intelligence and Smart Environments*
archive
Volume 2 Issue 4,
December 2010
IOS Press Amsterdam
The Netherlands

Images

Image 1.1

Picture of Centre of Cologne
Source:
Koln - Cologne Metropole am Rhein
Max-Leo Schwering
Ziethen Panorama Verlag

2010
Germany

Image 1.2

WDR Building - Cologne
Source:
Koln - Cologne Metropole am Rhein
Max-Leo Schwering
Ziethen Panorama Verlag
2010
Germany

Image 1.3

Old Painting of Cologne
Source:
Koln - Cologne Metropole am Rhein
Max-Leo Schwering
Ziethen Panorama Verlag
2010
Germany

Maps

Map 1.1

Landmarks
by Marjan Mohammadzadeh Sarab
Eindhoven University of Technology
Eindhoven
2011

Chapter 2: The Location

Literature

2.1

Impression Booklet

By the Graduate Class

Master Project 3

2.2

Impression Booklet

By the Graduate Class

Master Project 3

Images

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The public Passages Through Maritim Hotel

By Marjan Mohammadzadeh Sarab

Eindhoven University of Technology

Eindhoven

2011

Image 2.5

Location Maritim Hotel

Bings Map

Image 2.6

Birds eye view of the Markthalle, 1939

image.google.com

Image 2.7

Design of a tower at the end of the Bridge by Böhm.



Chapter 3: In Seek of Logic

Literature

3.1

This chapter is taken from chapter 5 “Rhine promenade” by Bram Chermin in the booklet “METROPOLITAN ENSEMBLE: ANALYSIS OF COLOGNE” made by the students of graduation studio “Metropolitan Ensemble”
This part is summarized of that chapter and the content has been rewritten but the images are exactly the same
Eindhoven University of Technology
Eindhoven
2011

3.2

This- chapter is taken from chapter 7 “Ost-West-Achse and its traffic” by Geert Filippini in the booklet “METROPOLITAN ENSEMBLE: ANALYSIS OF COLOGNE” made by the students of graduation studio “Metropolitan Ensemble”
This part is summerized of that chapter and the content has been changed and the images are exactly the same.
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Eindhoven
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3.3

This chapter is taken from chapter 8 “Heumarkt” by Robin Aerts, Xaviera Burón Klose, Faye Hermens in the booklet “METROPOLITAN ENSEMBLE: ANALYSIS OF COLOGNE” made by the students of graduation studio “Metropolitan Ensemble”
This part is summarized of that chapter and the content has been changed but the images are exactly the same

3.4

by Marjan Mohammadzadeh Sarab
Eindhoven University of Technology
Eindhoven
2011

3.5

Der Masterplan für Köln by
Albert Speer

3.6

In this part of chapter some information from the chapters 6 “Bridgehead” by Yuri Buteijn and Rik van den Elzen
and
chapter 8 “Heumarkt” by Robin Aerts, Xaviera Burón Klose, Faye Hermens
in the booklet “METROPOLITAN ENSEMBLE:

ANALYSIS OF COLOGNE” made by the students of graduation studio “Metropolitan Ensemble”
has been summarized and used with combining conclusions of current writer.

3.7

This part of current chapter is taken from chapter 6 “Bridgehead” by Yuri Buteijn and Rik van den Elzen in the booklet “METROPOLITAN ENSEMBLE: ANALYSIS OF COLOGNE” made by the students of graduation studio “Metropolitan Ensemble”
This part is summarized.
the Drawing and Maps are exactly the same by Yuri Buteijn and Rik van den Elzen.

Images

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Location and its elements

Image 3.2 (first from top)

The use of space by campers and the slow traffic road

Image 3.3 (second from top)

Public space in the direction of the railway station

Image 3.4 (third from top)

The passage with the characterizing wall

Image 3.5 (fourth from top)

The modern urban passage of Cologne

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Rhine River

Cologne

Source:

Koln - Cologne Metropole am Rhein

Max-Leo Schwering

Ziethen Panorama Verlag

2010

Germany

Image 3.7

Pstcard- Heumarkt

image.google.com

Image 3.8

Cologne bombed during WO II, www.de.academic.ru

Image 3.9

Heumarkt 1850

<http://www.bilderbuch-koeln.de>

Image 3.10
Heumarkt 1850
<http://www.bilderbuch-koeln.de>

Image 3.11
Heumarkt 1910
<http://www.bilderbuch-koeln.de>

Image 3.12
Heumarkt 1850
<http://www.bilderbuch-koeln.de>

Image 3.13
Heumarkt 1850
<http://www.bilderbuch-koeln.de>

Image 3.14
Heumarkt 1938
<http://www.bilderbuch-koeln.de>

Image 3.15
Heumarkt 1935
<http://www.bilderbuch-koeln.de>

Image 3.16
Heumarkt 1850
<http://www.bilderbuch-koeln.de>

Image 3.17
Heumarkt 1850
<http://www.bilderbuch-koeln.de>

Image 3..18
Heumarkt 1938
<http://www.bilderbuch-koeln.de>

Image 3.19
Heumarkt 1850
<http://www.bilderbuch-koeln.de>

Image 3.20
Heumarkt
Cologne
Germany
2011

Image 3.21
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Cologne
2011

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1920 The Deutzer Hängebrücke
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Image 3.23
1950 The Deutzer Brücke
www.kölninside.de

Image 3.24
2011
Under the bridge
by Marjan Mohammadzadeh Sarab
Cologne
Germany
2011

Image 3.25
Deutz Bridge
Cologne

Image 3.26
Maritim Hotel
Cologne
1994
<http://www.bilderbuch-koeln.de>

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Table of the percentage of the program along the four parts of the Rhine promenade

Scheme 3.2 (bottom)
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Master plan Heumarkt by
Albert Speer

Scheme 3.8
1921 Map and isometric view Markthalle by Otto Müller-Jena
by Yuri Buteijn and Rik van den Elzen
Eindhoven University of Technology
Eindhoven
2011

Scheme 3.9
Perspective view Markthalle seen from the Heumarkt
by Yuri Buteijn and Rik van den Elzen
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Eindhoven
2011

Scheme 3.10
First Design
by Yuri Buteijn and Rik van den Elzen
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2011

Scheme 3.11
Second Design
by Yuri Buteijn and Rik van den Elzen
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Eindhoven
2011

Scheme 3.12
Third Design
by Yuri Buteijn and Rik van den Elzen
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Eindhoven
2011

Scheme 3.13
First Design
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Scheme 3.14
Second Design
by Yuri Buteijn and Rik van den Elzen
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Scheme 3.15
Third Design
by Yuri Buteijn and Rik van den Elzen
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2011

Scheme 3.16
1980 Map and isometric view
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and Stefan Schmitz
by Yuri Buteijn and Rik van den Elzen
Eindhoven University of Technology
Eindhoven
2011

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Perspective view
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by Yuri Buteijn and Rik van den Elzen
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2011

Scheme 3.19
1998 Map and isometric view
Duftmuseum by LPS+F
by Yuri Buteijn and Rik van den Elzen
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2011

Scheme 3.20
Perspective view
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by Yuri Buteijn and Rik van den Elzen
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Scheme 3.21
2008 Map and isometric view
Masterplan by Albert Speer
by Yuri Buteijn and Rik van den Elzen
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2011

Scheme 3.22
Perspective view
seen from the Heumarkt



by Yuri Buteijn and Rik van den Elzen
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Eindhoven
2011

Scheme 3.23 - 3.27 - 3.31 - 3.35 - 3.39
North Elevation
by Marjan Mohammadzadeh Sarab
Eindhoven University of Technology
Eindhoven
2011

Scheme 3.24 - 3.28 - 3.32 - 3.36 - 3.40
South Elevation
by Marjan Mohammadzadeh Sarab
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2011

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West Elevation
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Eindhoven
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by Marjan Mohammadzadeh Sarab
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by Marjan Mohammadzadeh Sarab
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Maps

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Analysis Area
by Marjan Mohammadzadeh Sarab
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2011

Map 3.2
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by Bram Chermin
Eindhoven University of Technology
Eindhoven
2011

Map 3.3
Arrangement Heumarkt
by Geert Filippini
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Eindhoven
2011

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by Geert Filippini
Eindhoven University of Technology
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Map 3.5
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Map 3.7
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Map 3.8
Pedestrian Crossover and tunnels and bridges
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Map 3.9
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by Geert Filippini
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Map 3.10
Green Structure
by Geert Filippini
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Transformation of Heumarkt
by Robin Aerts, Xaviera Burón Klose, Faye Hermens
Eindhoven University of Technology
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2012

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Heumarkt 1850
by Marjan Mohammadzadeh Sarab
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Map 3.16 (left)
Heumarkt 1935
by Marjan Mohammadzadeh Sarab
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Eindhoven
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Map 3.17 (right)
Heumarkt 1938
by Marjan Mohammadzadeh Sarab
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Eindhoven
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Map 3.18
Heumarkt 1985

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Map 3.19
Heumarkt 2010
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Chapter 4: Chapter of Possibilities

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Images

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Ron Herron,
The Walking City
1964
<http://designmuseum.org>

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Prada Soho Store

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by Marjan Mohammadzadeh Sarab
Eindhoven University of Technology
Eindhoven
2012

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by Marjan Mohammadzadeh Sarab
Eindhoven University of Technology
Eindhoven
2012

Scheme 5.2
First master plan
by Marjan Mohammadzadeh Sarab
Eindhoven University of Technology
Eindhoven
2012

Scheme 5.3
Second master plan
by Marjan Mohammadzadeh Sarab
Eindhoven University of Technology
Eindhoven
2012

Scheme 5.4
Third master plan
by Marjan Mohammadzadeh Sarab
Eindhoven University of Technology
Eindhoven
2012

Scheme 5.5
Fourth master plan
by Marjan Mohammadzadeh Sarab
Eindhoven University of Technology
Eindhoven
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Scheme 5.6
Meaning of elements
by Marjan Mohammadzadeh Sarab
Eindhoven University of Technology
Eindhoven



2012

Scheme 5.7

Volume for redesigning

by Marjan Mohammadzadeh Sarab

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Scheme 5.8

Problem and Solution Tree

by Marjan Mohammadzadeh Sarab

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Scheme 5.9

sketch of new volume

by Marjan Mohammadzadeh Sarab

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Scheme 5.10

Exciting Functionality of levels

by Marjan Mohammadzadeh Sarab

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Scheme 5.11

Exciting Areas of functions on the Ground floor

by Marjan Mohammadzadeh Sarab

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Eindhoven

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Scheme 5.12

Exciting Areas of functions on the first floor

by Marjan Mohammadzadeh Sarab

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Maritim Hotel in its context

by Marjan Mohammadzadeh Sarab

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Chapter 6: Diamond in the Heart

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6.1

The Fall of Public Man

Richard Sennett

1992

Images

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ASI THRU Glass

image.google.com

Image 6.2

Exterior Stone

image.google.com

Image 6.3

Veluna

image.google.com

Image 6.4

Chrome Waxed Leather

image.google.com

Image 6.5

Optical MESH

image.google.com

Image 6.6

Living Floor

image.google.com

Image 6.7

Concrete

image.google.com

Image 6.8

Double Sided Metallic Polyester

image.google.com

Image 6.9

LED PAR Cans

image.google.com

Image 6.10

The Effect of LED PAR Cans

image.google.com

Image 6.11

PAR 64 CAN

image.google.com

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image.google.com*

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Laser Light Device
image.google.com*

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Possible effect of laser Light
image.google.com*

Schemes

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Exciting South Heumarkt
by Marjan Mohammadzadeh Sarab
Eindhoven University of Technology
Eindhoven
2012*

*Scheme 6.2 (down)
New Huemarkt South
by Marjan Mohammadzadeh Sarab
Eindhoven University of Technology
Eindhoven
2012*

*Scheme 6.3
Existing Building
by Marjan Mohammadzadeh Sarab
Eindhoven University of Technology
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*Scheme 6.4
Changes of Volume
by Marjan Mohammadzadeh Sarab
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*Scheme 6.5
Creating the new entrances
by Marjan Mohammadzadeh Sarab
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Eindhoven
2012*

*Scheme 6.6
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*by Marjan Mohammadzadeh Sarab
Eindhoven University of Technology
Eindhoven
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*Scheme 6.7
Components of Stairs
by Marjan Mohammadzadeh Sarab
Eindhoven University of Technology
Eindhoven
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*Scheme 6.8
Form of exciting building, new atrium and stairs
by Marjan Mohammadzadeh Sarab
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*Scheme 6.9
Media of stairs and facade, living floor as the material for the stairs
by Marjan Mohammadzadeh Sarab
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*Scheme 6.10
Exploded view of New structure
by Marjan Mohammadzadeh Sarab
Eindhoven University of Technology
Eindhoven
2012*

*Scheme 6.11
Exciting situation
by Marjan Mohammadzadeh Sarab
Eindhoven University of Technology
Eindhoven
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*Scheme 6.12
First solution for circulation
by Marjan Mohammadzadeh Sarab
Eindhoven University of Technology
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*Scheme 6.13
Second solution for circulation
by Marjan Mohammadzadeh Sarab
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Eindhoven*



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Scheme 6.14
Third solution for circulation
by Marjan Mohammadzadeh Sarab
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Scheme 6.15
Forth solution for circulation
by Marjan Mohammadzadeh Sarab
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Scheme 6.16
Fifth solution for circulation
by Marjan Mohammadzadeh Sarab
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Scheme 6.17
Exploded view to circulation
by Marjan Mohammadzadeh Sarab
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Scheme 6.18
New areas Ground Floor
by Marjan Mohammadzadeh Sarab
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Scheme 6.19
New areas First floor
by Marjan Mohammadzadeh Sarab
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Plans

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Plan 6.1 - Existing Floor plan - Ground Floor
Plan 6.2 - proposal Floor plan- Ground floor

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Plan 6.12 - proposal East Elevation

Plan 6.13 - Existing North Elevation
Plan 6.14 - proposal North Elevation

Plan 6.15 - proposal South Elevation

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Plan 6.18 - 3D Section

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3D Section of glass roof
by Marjan Mohammadzadeh Sarab
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Detail 6.2
Section of glass detail for roof
by Marjan Mohammadzadeh Sarab
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Detail 6.3
3D section of glass detail facade
by Marjan Mohammadzadeh Sarab
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Detail 6.4
Order of beams
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Renders

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Render 6.1
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Entrance in daytime

Render 6.6
Am Malzbüchel axe
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Stairways
First pause area with interactive light

Render 6.17
Atrium
Stairways
Main Pause Area with interactive floor

Render 6.18
Atrium
Stairways
Third pause area
Experiencing architecture

Render 6.19
Atrium
Stairways
Experiencing landscape

Render 6.20
Atrium
Stairways
End of the stairway with corridor going to roof garden

Render 6.21
Atrium
Stairways
Perspective of atrium

Render 6.22
Extroverted public space with restaurant

Render 6.23
Extroverted public space
Roof garden

Render 6.24
Atrium



Below Stairways
As a non space

Render 6.25
Atrium
Below Stairways
As a relaxation area

Render 6.26
Atrium
Below Stairways
As a exhibition area

Render 6.27
Atrium
Below Stairways
As a relaxation area

Render 6.28
Atrium
Below Stairways
As a space for party

Render 6.29
First floor view
Daytime

Render 6.30
First floor view
Night time

Render 6.31
Entrance by the
Rhine

Render 6.32
Entrance by the
Rhine
View from Deutzer Brücke
Daytime

Render 6.33
Entrance by the
Rhine
View from Deutzer Brücke
Rainy night

Render 6.34
Entrance by the
Rhine
View from Am Leystapel street
Daytime

Render 6.35
Entrance by the
Rhine
View from Am Leystapel street
Night time

Environmental conference

Render 6.36
Entrance by the Heumarkt
Impression of a
Dynamic/flexible building



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